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Speech and Language Therapists' Decision-Making Process: Exploring Factors Behind Intervention Decisions for Children with Developmental Language Disorder in Turkey

by

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Abstract

Introduction and Aim: This is a qualitative study which explores how speech and language therapists (SLTs) make decisions. The purpose is to investigate the factors which influence SLTs' decision-making processes when they engage with children with developmental language disorder (DLD). There is a lack of research and evidence about how SLTs come to a decision to administer a particular therapy session. SLTs' therapy practices might vary for similar cases and such diverse practices might stem from SLTs' clinical reasoning processes.

Methodology: This research was based on an interpretivist paradigm. In accordance with a qualitative case-study approach, multiple data generation methods were used in order to gain an in-depth understanding of SLTs' decision-making processes from various perspectives. An inductive data-driven approach was employed to analyse the data generated from sixteen Turkish SLTs.

Results: The findings of this study suggest that there are three main steps by which Turkish SLTs' decisions are formed. The first step is the evaluation of cases. The SLTs' decisions relied on formal evaluation methods such as formal tests and clinical guidelines, and informal evaluations such as the SLT's informal observations, self-made tests, beliefs and intuition. The second decision step which affects the flow of the therapy is whether to administer a child-centred or a therapist-driven approach. The SLTs' past experiences, beliefs, research evidence of which they were aware, and cases with which

they had engaged were found to influence the way in which they designed the therapy. The third and final decision step is whether to involve parents in the therapy. It was found that the SLTs' decisions were affected by the presence and attitudes of parents. Although the SLTs' past practices and their evidence-based knowledge affected their approach to parents, the level of motivation and the willingness of parents did have a significant effect on the SLT's intervention decisions.

The findings of this study resonate with the cognitive continuum theory (CCT). This suggests that professionals' reasoning is of a dynamic nature and continually changes on a continuum, rather than a static process which is completely, for instance, intuitive or analytical. These findings underline that the SLTs' decision-making process drifted within this continuum according to various factors, such as the use of formal/informal resources, parents' motivation, and SLTs' past experience or beliefs. It is recommended that in order to enhance the quality of therapy, SLTs' awareness should be increased by studying the advantages and disadvantages of the steps within the cognitive continuum theory which is formed in this thesis.

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CHAPTER 1. INTRODUCTION

1.1 Research Aims

The purpose of this research is to understand the decision-making processes of SLTs about intervention methods for children who have a developmental language disorder (DLD). It is undeniable that professionals who work in the health sector play an important role in the lives of people who need them. Their decisions about the nature of their treatments might dramatically change the outcome for the client. This indicates that the strategies which they use in the decision-making process behind choosing the treatment are quite important (Peerzada *et al.*, 2004).

It is possible to say that a variety of factors play important roles in the decision-making process, which could be the most important element of interventions. For instance, it has been found that the level of experience and the methods which an SLT uses, play a significant role in the decision-making process (Manning, 2009). Manning provided an example to clarify the differences between experienced and inexperienced clinicians: inexperienced professionals "tend to focus on accomplishing the techniques of the moment rather than the overall long-term strategies and goals", and they rely on techniques and methods instead of considering the benefits and needs of individuals (Manning, 2009, p.18). Since they do not know enough techniques and methods, SLTs might ask themselves 'What can I do in the therapy session today?' rather than 'What does my client need from me now, and how does that fit with our long-term goals of treatment?' (*ibid.*). So the breadth of

experience has an important impact on deciding an action. Jette *et al.*, (2003) suggested that not only clinical experience but also opinion-sharing with other related professionals and colleagues help SLTs to learn and develop their therapy skills and decision-making processes. Togram and Mavis (2009) underlined the importance of parents' role because they are the first people who can notice the needs of their children and can help them in everyday life.

It was also seen in the literature that over the past decade there has been a significant increase in the use of evidence-based practices (EBP) in health-care, which necessitates the consideration of three factors by SLTs: using the best research evidence in the practice, clinical expertise and patients' values as recommended in the US (Zipoli & Kennedy, 2005); Kamhi (1999), however, another researcher in the US, found that clinicians' personal experience and their reflective practices can create the best treatment for a particular case. So rather than relying heavily on formal assessments, more trust can be put on an experienced clinician's intuition.

As can be understood, decision-making in SLT is a complicated task as there are a variety of contradictory elements which affect practice. It is therefore important for SLTs to improve their abilities, be aware of new techniques, follow contemporary intervention methods, and design the most suitable intervention methods because "in speech and language therapy, each decision within the process will affect, and be affected by, other decisions as well as being influenced by the specific setting, the individual child and the context" (Kersner & Wright, 2013, p.5).

1.2 The Significance of the Research

This research is empirically significant because there has been no previous study which has explored SLTs' decision-making processes about intervention methods for children with DLD and how such reasoning processes can be interpreted through decision theories. There are only a few studies which have considered types of language intervention methods so there is a big gap in our knowledge about how intervention methods are chosen by SLTs (Law *et al.*, 2003b).

This current study is methodologically significant, as rather than exploring the basic factors which affect SLTs' decisions, an in-depth understanding will be provided with the help of detailed data collection methods and analysis.

This study is theoretically significant as there is no study which has interpreted SLTs' decision-making processes through decision theory. There has been a considerable number of studies which have shed light on other professionals' decision-making processes through the use of existing decision theories in the literature. This study will be the first to theorise how SLTs' reasoning processes can be understood from a theoretical point of view.

This study is analytically significant as a data-driven approach will be used to analyse the data acquired. To be able to reveal unique aspects which might enlighten Turkish SLTs' decision-making processes, no pre-structured

framework or theory will be used to analyse the data. This approach will enable the data to speak for itself and will form themes which are not forced to fit into a framework. It is hoped that this approach will allow the research to be more flexible and not to be affected by other studies' outcomes. The findings of this study will be interpreted in light of existing theories.

1.3 Research Motivation

Apart from epistemological debates, the choice of methodology and data generation methods, I believe that one of the most important things which makes research good is the researcher's motivation and awareness about the researched topic. A motivated and enthusiastic researcher, I believe, is needed to successfully complete such a long PhD journey. I shall therefore explain why I picked this particular topic to study for four years.

I have undertaken eleven internships in hospitals through my undergraduate education in child development departments over five years and then worked as a child development specialist in private institutions. I have engaged with various children who had different language issues. What I have observed during this time is that SLTs play a vital role in the lives of children who have DLD or other language-related issues. Parents and their children rely heavily on the SLTs, as most of the Turkish mothers whom I met lacked knowledge about why their children were different from others.

During my undergraduate and postgraduate education, I have met many SLTs and what has surprised me most was the way they approached the children and

parents before choosing which intervention method to administer. Although the SLTs were dealing with children with very similar language issues, their evaluation methods, the structure of the therapy and the chosen intervention methods varied. This was also distressing for me as a student. Doctors and teachers tend to recommend parents to see a psychologist, a child development specialist or special need teachers rather than SLTs as it is a new, developing and not a well-known department in the public awareness (Duru et al., 2018). The reason for this is that, in Turkey, there have been quite limited numbers of SLTs and "there are only one or two therapists who provide services to the whole city and sometimes to the neighbouring cities" (Dural & Unal-Logacev, 2018, p.91).

After spending a short period of time as a child development specialist, I completed an MSc in the UK and conducted research into language intervention methods for a module assessment which was called a 'Specialist Essay'. When I was writing this essay, I reviewed a variety of resources about language and saw that deciding how to administer a therapy from beginning to end was an unclear debate. So I started this current research because I am motivated to learn more about the ways in which SLTs make decisions regarding intervention methods for children with DLD.

1.4 Research Structure

This section will present how the research is designed in accordance with the aims. First, a literature review will be presented in Chapter 2. There will be four main parts to this review: the origins of language, decision theories, the

complexity of decision-making processes in the speech and language discipline, and DLD and intervention methods for children with DLD. After presenting the research question which this study seeks to explore, I shall introduce the paradigm of the research in Chapter 3. The four main research paradigms, positivism, interpretivism, pragmatism and critical research, will be discussed and the reasons why an interpretivist approach was taken will be explained. Also in Chapter 3, how the research was designed will be explained. I shall review the literature about quantitative and qualitative research designs and justify my choice of qualitative, case-study research design. After introducing the data collection methods which I chose to employ, I shall discuss how I analysed the data. Finally, in Chapter 3, I shall consider the ethical issues relevant to the study.

The main findings of the study will be set out in the subsequent three chapters. The three principal themes which shed light on the SLTs' decision-making processes will be separately presented in Chapters 4, 5 and 6. Chapter 4 will primarily present the factors which influenced the SLTs' initial approach to the cases which they evaluated. In Chapter 5, how the SLTs decided to structure the nature of the therapy will be discussed. Two approaches – child-centred and therapist-driven – will be considered in order to understand why and how the SLTs changed their therapy decisions. In Chapter 6, another factor, parents, will be discussed; this had a significant effect on the SLTs' decision-making processes.

In Chapter 7 I shall discuss the findings of the research in the light of the cognitive continuum theory. A general discussion will be presented about how the findings in Chapters 4, 5 and 6 shed light on the SLTs' decision-making processes from a theoretical perspective. After that, each of the three main themes presented in Chapters 4, 5 and 6 will be discussed separately through a theoretical lens in order to understand how each theme reflects the SLTs' decision-making processes. In Chapter 8, a brief summary and concluding remarks will be offered. Finally, the limitations of this study will be considered and recommendations for future research will be suggested.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

The purpose of Chapter 2 is to review and critically discuss the research literature that informs the aims of the study. In this section, the strategy used for reviewing literature, a summary of other studies related to this research, and how the literature review leads me to identify the research question will be presented.

2.1.1 Search Strategy

Reviewing the literature is one of the significant steps for creating a strong thesis. It is therefore important to create a search strategy to acknowledge the existing literature about the researched topic. For qualitative studies, there is a difficulty in the use of databases to find relevant qualitative studies (Shaw et al., 2004). These difficulties arise from the variations with the indexing of qualitative studies and the wide range of methods that are used by qualitative studies (Gorecki, Brown, Briggs, & Nixon, 2010; Grant, 2004).

The literature search for this study was conducted using various databases including: Medline; Psychinfo; PsychArticles; Academic Search Complete. Google Scholar was regularly used to find a wide range of articles published in various journals. The following combinations of terms were some of the key words that were used to search articles:

- Decision Making OR Clinical Reasoning and Speech-Language Therapy

- Decision-Making Theories and Speech-Language Therapy
- Decision and Speech-Language Therapy and Intervention OR Therapy
- Developmental Language Disorder and Intervention OR Therapy
- Developmental Language Disorder and Speech-Language Therapy
- Decision Theories
- Decision Making in Health Sector
- Decision-Making Processes of SLTs

After the identification and revision of relevant studies, more studies were reviewed by using references cited by the found articles. Apart from academic articles, Google (search engine) was also used to for informal blogs and articles relevant to SLTs' decision-making processes.

2.1.2 An Overview of Decision-Making Literature in SLT

This section will outline the existing studies that are related to the aim of this research.

> Even when research demonstrates that one approach is more efficient than another, it is not the case that clinicians will choose to use the more efficient approach. Clinicians are not naive research consumers. They know the limitations of research and also know that efficiency is not always the most important factor in treatment (Kamhi, 1999, p.94).

Healthcare professionals are suggested to take a scientific approach to their practices, referred to in the literature as evidence-based practice. However, as it can be seen in the above extract, theoretical, research-based knowledge may not always be seen in practice. There are many factors that affect decision-making processes such as "…personalities, knowledge, beliefs and attitudes, emotions, interpersonal milieu and safety behaviours…" (Waller & Turner, 2016, p.135). Although these researchers were specifically referring to

cognitive behavioural therapy administered by psychotherapists in the UK, their claims can be seen in SLTs or/and other professionals as well. They claimed that EBP is not really effective in practice because therapists' personal factors such as their beliefs, personality and emotions have an important impact on the decision-making process on an intervention method.

As therapy and intervention choices in healthcare have a critical impact on patient recovery, it is quite important to be aware of these possible drifts; why and how to choose a therapy, chosen intervention methods, how to decide which tools and materials to use, and whether it is necessary to involve other professionals, relatives or parents in the intervention process.

In this literature search, small amount of research has been found attempting to explore the decision-making processes of SLTs, and none of the studies has informed SLTs' intervention decisions with theoretical understanding. Related research exploring decision-making processes of SLTs are summarised in Table1:

Table 1: Summary of related studies which explores the decision making the process of SLTs

Authors	Study Design	Aim	Key Findings	Comments
1. McCurtin and Carter (2015)	The qualitative phase of a mixed-method study Focus group design used.	This study aimed to examine SLTs' reasoning for intervention choices and how science affects SLTs' decisions.	Research results suggested that practical evidence is the most important component for decision making. Three key themes were identified: practice imperfect; practice as grounded and growing; and critical practice.	Although scientific (research-based evidence) is an important component of decision making, SLTs fail to use scientific evidence.
2. McCurtin and Clifford (2015)	Questionnaire	The purpose of this research was to identify the factors that have an impacton SLTs decisions and contextualize these factors with EBP.	Findings indicated that in order to improve practice, the practice should stem from a variety of resources and SLTs' needs should be met.	Factor analysis showed that the necessary factors of EBP are not enough to explain clinical decision making. Decisions are pragmatically affected by practical or knowledge-based evidence.

Authors	Study Design	Aim	Key Findings	Comments
3. Law et al. (2015)	Systematic Review of 58 intervention	The aim of this study was to develop and ecologically valid synthesis of the evidence underpinning interventions for children with speech, language, and communication needs, integrating a range of different data sources.	Findings of this study indicated that three studies had a strong level of evidence, thirty-three had moderate evidence and twenty-three had indicative evidence. Five were universal.	Revision showed that there are a number of interventions that some level of evidence underpinned them, but practitioners tend to use familiar programmes to them rather than research evidence.
4. Emanuel, R., Chiat, S., & Roy, P. (2007)	Action Research Follow-up study	To examine the clinical decision-making of an experienced individual SLT by evaluating the extent to which follow-up evidence supported initial evidence	Results indicated that the SLTs' diagnostic and prognostic decision to deliver a therapy has a significant relationship with the initial assessment and severity of follow-up.	The study underlined that SLTs in the UK mainly rely on informal observations and structured and semi-structured tools, during the assessment of cases. It was reported that the SLT's prognosis that is supported by reflective practice and informal judgements is found to be significant in most of the cases.

Authors	Study Design	Aim	Key Findings	Comments
5. Kamhi (1999)	Report	This article discussed the reasons behind certain clinical treatment decisions.	The author underlines that language theories might not always find a place in practice. More informal practices are addressed in the article such as 'because it works'. The author addresses the cycle that the best treatment is considered to be the norm and this norm can only be replaced by a more innovative practice.	Although theories inform practices and offer evidence-based intervention methods, it is the fact that theory does not always work in practice. Clinicians' personal experiences and their reflective practices can create 'the best treatment' for a certain case. Thus, rather than relying heavily on formal assessments, more trust can be put on an experienced clinician's intuition.
6. Zipoli and Kennedy (2005)	Questionnaire	Examining attitudes toward and use of research and EBP	Findings demonstrated that there is a move towards professional training (specific strategies) rather than EBP and science. Another barrier is reported as lack of time.	Authors suggested that there is a need for clinical guidelines and best research evidence. Making these resources available should be a priority of ASHA and other related organisations.

Authors	Study Design	Aim	Key Findings	Comments
7. Roulstone (2001)	Multimethod study design was used. Qualitative data were generated by semi structure interviews and focus group discussions. Quantitative data was generated by case analysis and a card sorting exercise	The aim of the study is to examine consensus between SLTs during the initial assessment of preschool children	It is found that there is a variation in SLTs' decisions in terms of chosen assessment methods and intervention method.	Individual confidence, access to assessments, personal level of concern, SLTs' role in the approach and workplace policy are all identified factors that caused variation in assessment and intervention. Although family history, perinatal history, feeding history or developmental milestones are important, there is no association found between these factors and the SLTs' intervention decisions.
8. Roulstone et al. (2008)	Longitudinal study Quantitative Research Logistic Regression Analysis (SPSS)	The purpose of this study is to investigate predictors of decisions made by SLTs to offer intervention, identify which factors affect decisions and which outcomes lead SLTs to decide not to take on children for intervention.	It was reported that the SLTs were generally successful in their decisions to whether a child needs an intervention. The SLTs were found to base their decision on children' communication difficulties and rarely consider broader factors such as family history.	The authors underlined the difficulties and complexity of SLTs' decision-making processes. The SLTs' decision to offer intervention to children is found to be affected by variables that are associated with children' communication difficulties.

The literature search identified some studies which have a close relationship with the purpose of this study. Eight studies were illustrated in the Table1, showing how the literature review has been conducted. Some studies were excluded or not added to this table as they do not directly meet the purpose of this research.

As it can be seen in Table1, the studies that are related to SLTs' decision-making processes have been explored by using a variety of research designs: qualitative, quantitative, mixed method, longitudinal study, systematic revision and report. Revision indicated that although some studies demonstrated that there is a need for improving EBP and improving usage of clinical guidelines and scientific resources (Zipoli & Kennedy, 2005), some others indicated that EBP is not enough to explain the decision-making processes of SLTs (McCurtin & Clifford, 2015) and theory does not always work in practice (Kamhi, 1999). It was also claimed that clinical decisions are mostly affected by our practical knowledge (McCurtin & Carter, 2015; McCurtin & Clifford, 2015). Furthermore, a systematic review of 58 interventions showed that SLTs tend to use familiar methods rather than scientific ones (Law, Roulstone, & Lindsay, 2015).

There is a wide range of variables that affect SLTs' decision-making processes, and such broad variables make it difficult for researchers to agree on a baseline for intervention decisions (Roulstone, 2001). In Roulstone's study, it was reported that the SLTs' mainly narrow down such variables and rely on children's communication difficulties when making a decision about whether

to offer intervention. Although broader factors are considered to be significant, such as family history, feeding history and children's developmental milestones, Roulstone (2001) did not find any significant relationship between the SLTs' decisions and these factors. As it is difficult to interpret factors like family history, the SLTs were found to be focusing on the factors that are obvious and clear, such as children's communication difficulties.

Such an overview, which outlines the studies that explore SLT's decision-making processes in one way or another, indicates that it is a challenging task to interpret a decision-making process where many variables such as family history, family's socio-economic level, children's cognitive abilities, biological factors play an important role. Not only for SLT, but in many disciplines, understanding decisions requires a close examination. Therefore, in this literature review, the aim is to understand how humans' reasoning processes work, and what theories have been developed to understand such a complex phenomenon.

2.1.3 SLTs in Turkey

In Turkey, there were no dedicated undergraduate degrees for speech and language therapy until 2012. To be able to work as an SLT, it was necessary to complete a master's programme that lasts three to four years and was only available at Anadolu University. Thus, graduates from other related departments, such as Special Education or Psychology, had to complete intensive masters or PhD programmes. Within the last six years (2013-2019), more universities have opened speech and language bachelor's degree

departments, that allow graduates to work as SLTs. Since there was no graduation from these new departments during the data collection process of this study, the participants were chosen from among those who had completed a master's programme to work as an SLT.

There have been no studies found that examine SLTs' decision-making processes in either the Turkish or English language. Only one study was found in the Turkish context that considers the attitudes and knowledge of families, teachers and SLTs towards speech and language disorders (Togram & Mavis, 2009). This research was conducted as a survey study, in which 35 Turkish SLTs were surveyed to find out what they think about the problems that children with language disorders face in their daily and school life. In the survey, there were also some questions about the SLTs' therapy decisions. The authors reported that one of the areas that the therapists are found to show differences is the intervention methods that they use for children with speech and language disorder. It was stated that the SLTs were found to be unsure about what kind of intervention method (such as individual or group therapy) would be beneficial.

The novelty of the speech and language discipline in Turkey, and the lack of research about SLTs and their decision-making processes necessitates detailed studies to be conducted, to understand why and how Turkish SLTs administer certain intervention methods for children who have DLD.

2.1.3.1 Demographic Information about the SLT Profession in Turkey

In this section, I shall provide demographic information about Turkey, including the number of disabled people, how many of them need speech and language services across the whole country and how many SLTs are available to provide these services in Turkey.

According to the Turkish Statistical Institute, the population of the country was 82,003,882 on 31 December 2018 (Turkish Statistical Institute, 2018) and had been 77,323,892 four years previously in 2014 (Topbas, 2014). Increasing international immigration and mobility have been changing the structure of society and the density of the population. There is a lack of information and data about what proportion of this population have disabilities or require special needs care in Turkey (Sen, 2018). One of the widest known studies to understand the disabled population in Turkey was conducted in 2002. The Turkish Statistical Institute and the Ministry of Disability carried out 'Turkey Disability Research' and concluded that disabled people comprised 12% of the whole population, and 9.7% of this group were found to have permanent and consistent difficulties (Tufan and Arun, 2007). The remaining 2.3% benefited from special needs and rehabilitation centres and 0.37% of this 2.3% were reported to have speech and language difficulties.

Topbas (2017), however, stated that these statistics are not reliable and far from the reality because the questions addressed by the Turkey Disability Research study included only some part of visible language dimensions. She added that co-morbidity records were not included in the statistics. This means

that if a child had a disability along with speech, language and intellectual difficulties, this was not included in this statistical report.

Topbas (2017) further claimed that the number of people with speech and language difficulties is higher than expected in Turkey. She emphasised that particularly in some regions of Turkey, the socio-economic and educational levels of parents are significantly lower in comparison with European countries. In addition to that, the lack of parent-child interaction, being bilingual or exposed to multi-language communities as a result of migration, and the lack of early childhood education are some of the factors which are likely to cause more children to suffer from language difficulties. She, therefore, concluded that considering the fact that 5% of the population living in Europe suffer from speech and language difficulties of one kind or another, it is possible to extrapolate that around one million children (aged 0-18) have speech and language disorders in Turkey (*ibid*.). However, it is still unknown how many of this population comprise pre-school children with language delay.

At the time when this current study was carried out, no research or online information was found which reported the number of SLTs who work specifically with children in Turkey. The reason for this might be the low numbers of speech and language therapists in Turkey (even in some cities, it is not possible to find any SLTs) which might have led the existing SLTs to work with all age groups in both private and public institutions. It was said that "… according to the Speech and Language Therapists' Association's 2018 records,

there are only 27 cities which have registered speech therapists in the whole country [out of 81 cities] and in some cities, there are only one or two therapists who provide services to the whole city and sometimes to the neighbouring cities" (1, p.90-91). The Speech and Language Therapists Association's 2018 records showed that there are fewer than 300 SLTs providing services to a population of over 80 million (Turkish Statistical Institute, 2018), which makes it difficult for clients to find an SLP to get access to a speech and language therapy service and also makes the cost so high (Dural and Ünal–Logacev, 2018). Also, the current number of registered members (in 2019) of the Turkish Association of Speech and Language Therapists is stated on the Association's website as being only 64 across the whole country (DKTD, 2019).

The increasing population and the low number of SLTs in Turkey make it hard to for families to receive the needed services for their children. It has been stated that the high prevalence rate of speech and sound disorders in pre-school years may have a negative impact on the everyday life of children which might lead to social and educational difficulties (Dural, and Ünal–Logacev, 2018). In such cases, children need immediate and effective intervention, but "families cannot reach speech and language therapy services as a result of the limited number of speech and language therapists in Turkey" (Dural and Ünal–Logacev, 2018, p.90). Topbas (2014, p. 99) stated that "currently, the vast majority of care providers are non-SLPs with little training in communication disorders" because of the shortage of SLTs in Turkey.

Although the SLT profession is a new area in Turkey, there have been important improvements over the last twenty years. New speech and language departments have been opened at some universities which offer training for those who want to become an SLT. The Anadolu University, which has been offering Master's and PhD courses and was the first university to train SLTs in this area, stated on its website that because of the lack of resources to teach SLT in the Turkish language, a one-year English-language course was offered. Barriers such as this have been reflected in practice as it has been stated that professional SLT diagnosis and intervention has become one of the most neglected topics in Turkey (Dural and Ünal–Logacev, 2018). The intention of this current study is therefore to provide an understanding of how the Turkish SLTs who are currently in practice make intervention decisions in a context in which they might be the leading force for the SLT profession to flourish across the country.

2.1.3.2 The History of the Speech and Language Profession in Turkey

In this section, how SLT departments were established in Turkey will be explained. Throughout the section, I shall benefit from articles by Seyhun Topbas, who constructed the Research, Education and Training Centre for Speech and Language Disorder (named DILKOM) at Anadolu University and worked as the manager of this institution for a long time. She also spearheaded the opining of the first undergraduate degree in 2012 in Turkey when she was the Dean of the Institute of Health Science at the same university. She is currently working as the Head of the Speech and Language Department at Medipol University, in Turkey.

Because of the high interest in communication disorders under special needs categories, the first graduate programme in Audiology (MSc and PhD) was introduced at Hacettepe University in the capital of Turkey, Ankara. The name of the programme was then changed to 'Audiology and Speech Disorders' in 1982 (Topbas, 2014, p.99). Another university, Marmara University, in Istanbul also initiated a similar audiology programme. However, in that programme, students were not given a choice to study audiology or speech and language therapy, instead, they were introduced to audiology only, audiology-related disorders and speech-language training. However, focusing on these two related but different professions caused some issues in terms of the scope of practice in SLT and in audiology (*ibid*.).

Speech and language therapy as an independent discipline was initiated by Professor Ahmet Konrot (who was trained in England) who set up a small speech therapy unit in the Medico-Social Hospital at Anadolu University in 1985. In 1990, a doctoral programme was initiated for the first time in Turkey; however, Topbas (2006, P.79) stated that "… the Higher Education of Board of Turkey soon closed this program as only three students graduated because of the academic reorganisation of the Education faculties in 1996. Thus, these graduates were faced with a difficulty of establishing SLT departments as well as delivering services in communication disorders independently".

As a result of the efforts of a small number of SLTs, a new centre called the DILKOM was opened by permission of the Higher Education Board in 1999 at

the Anadolu University (Topbas, 2006). The objectives of DILKOM are stated to be:

- "Diagnose and assess individuals who have speech and language disorders
- Provide treatment to eliminate or minimize speech, language and related problems
- Arrange educational and counselling programs for the parents or family members of individuals with speech and language disorders
- Organize short-term courses or seminars for special education teachers and other professionals
- Undertake research focusing on the nature, assessment and treatment of communication disorders." (Topbas, 2006, p.79)

The foundation of DILKOM led to the establishment and autonomy of speech and language therapy as a profession in Turkey, and following ASHA principles, the centre initiated an MSc programme in 2000 and a PhD programme in 2004 under the management of the Institute of Health Science at Anadolu University (Topbas, 2006). The first undergraduate programme was also established at the same university in the Faculty of Health Sciences followed by a separate Department of Audiology in 2012 (Topbas, 2014). A second undergraduate programme was introduced in 2013 at Hacettepe University, Ankara. Topbas (2014, p.99) stated that "The students of both of these universities have the advantage of doing practice at university hospitals. Since 2011, the professional laws are governed by the Ministry of Health,

where the diplomas have to be approved". Currently, there are six universities which have SLT undergraduate programmes in Turkey.

2.1.3.3 Structure of the Referral System for SLTs in Turkey

An ideal process of the referral system in Turkey can be summarised as follows:

1- The guardians of a pre-school child with a language issue visit a local GP at a Family Health Centre;
2- The GP (called the Family GP) then refers the child to a hospital for a detailed examination;
3- The child is ideally expected to be seen by a team of medical doctors and they refer the child to relevant departments to run tests such as a hearing test or a neurological test if they think it is necessary;
4- Then the guardians of the child can be advised to see a speech and language therapist.

Although the ideal process which families would go through might be expected to follow the above steps, it might not take place as described here because there are various problems in the referral system. One of the issues is that each SLT and audiologist in Turkey is generally responsible for a heavy case-load and another is that doctors may not refer a child with DLD if the aetiology is unknown until the child is four or five years of age or older (Topbas, 2014). Moreover, Zengin-Akkus et al., (2018, p.170) claimed that "sometimes,

paediatricians may underestimate speech delay". This causes some children`s needs to go undetected. A third problem is that, as explained above, not all hospitals in Turkey have an SLT professional.

Because of barriers such as these, it is likely that families might seek information online or ask for suggestions from other family members or from families who might face similar problems. Rather than following the referral system, they also have the option of seeking support from professionals who have their own private practice. Although this is a costly option, families do have the opportunity to receive direct and quick help.

There is also a specific referral system in Turkey for children under eighteen which was explained by Topbas (2014, p.99):

Children under the age of 18 are then referred to Psychological Counselling and Guidance Centres affiliated to Ministry of National Education in Turkey (MoNE) within each city where intervention decisions are administered and referred to special education schools or private practice/rehabilitation centres for treatment. Other health professionals or schoolteachers often refer clients, or the families seek direct services themselves. If medical treatment is also needed, or if the individual is an adult, usually the services are given within the hospital and/or private practice centres.

Sessions in hospitals or private centres are either individual or in small groups. In order to develop an individualized education plan (IEP), the first formal national individualized education curriculum was developed by a collaborative

team of SLTs, audiologists, special education teachers and staff of the ministry (MoNE, 2009). The curriculum covers general guidelines and procedures for administering assessment and therapy through daily or weekly programmes, but it does not include any special intervention programmes for children with SLI (Topbas, 2014) which is now agreed to be called DLD by the CATALISE consortium (Bishop *et al*., 2017). Furthermore, the number of children who have benefited from this education programme is recorded as being very low. ASPB (2013) records show that the number of special needs and rehabilitation centres was 1732 in 2008/09 and only 115 of them were delivering the MoNE curriculum for children with speech and language disorders, and only 1575 children in total have benefited from the education programme.

The next section, 2.2, firstly discuss the origins of language to introduce debates in this area to understand with what SLTs engage in their profession. Section 2.3 will then outline main decision theories in the literature, which might then allow interpreting this study's data-driven findings and explore SLTs' decision-making process. It should also be noted that this review will not discuss the very details of each decision theories or studies that consider how professionals' decisions are affected as the aim is not to take a decision theory or a framework in the centre and analyse the data accordingly. Sections 2.4 will focus on complexity decision making in SLT and explore the studies that resonate with this research's aim. In section 2.5 and 2.6, I will outline what DLD is and intervention method approaches that were employed by the SLTs. Lastly, concluding remarks will be made and the research question of this study will be introduced in section 2.7.

2.2 Language and the Origins of Language

This section will discuss the origin of language. Such introduction is helpful as language is the centre of speech and language therapy profession. As language is the focal point, understanding the origins of it and how humans learn to use it is vital. This section shows that language is complicated and SLTs deal with something that they even do not know the origin of it.

Humans are different from other species in terms of acquisition of linguistic communication since humans use symbolic, grammatical factors. This means that "language acquisition in humans relies on abilities like abstraction and the use of syntactic rules, which are absent in other animals" (Musso et al., 2003, p.774). Many studies have been conducted to try to understand when, where and how language first occurred. However, it is very difficult to study the origins of language because of the lack of evidence. For this reason, studying this topic has been taboo from time to time, for instance, in 1860s, the Paris Language Union and British Academy banned the study of the origins of language (Bhattacharjee (2004). It was claimed that whoever wanted to study this topic could look at fossil remnants, comparisons of periods of language acquisition, tools of languages and comparisons with primates (Bhattacharjee (2004). Despite the many studies that have been done, it is still not known how and when humans started to use language, although there are many different theories for its origins.

It is important to understand how language is being learned by a typically-developed person, to be able to comprehend what the core issues might be for

children with language impairment. With such understanding, SLTs who are working in this area can develop appropriate therapies and educational intervention programmes. To understand how humans, acquire language, a variety of theories have been developed over the years.

It can be said that to develop and choose a suitable intervention method for children who have DLD, SLTs should be aware of current theories about the origins of language. Whether the origins of language are instinctive (Chomsky & DiNozzi, 1972; Pinker, 1994) or developed through social interaction with the outside world (Bandura and Walters, 1963; Tomasello, 1995; Vygotsky, 1978b), the most important thing should be to separately evaluate each individual child and develop a suitable approach for his/her needs. Hence, in accordance with the context, culture or facilities, while using reinforcements may be the best approach for a specific child in a specific context and time (Reynolds, 1975), another one may need to socialise more with others (Bandura and Walters, 1963), or a specific intervention method should be developed in order for a child to acquire the grammatical structure of their language by using the universal grammar theory of Chomsky (Cook & Newson, 2014).

Such sophistication around the nature of language, and the lack of consensus on how one acquires language might make it difficult to help an individual to improve his/her language skills. Should SLTs think of a normally-developing child's language trajectory when making an intervention decision? Or should they accept children with DLD as a completely different individual, whose

issues could not be resolved through following the stages of a normally-developing child? These and similar questions could be expanded, but the point is such complexity is what makes the SLTs' reasoning process more important.

This section is proved to be helpful to form the research question as it allowed understanding the complexity of origins of language. As it is the fact that there still no agreement about how humans learn to use language, helping individuals who have difficulties to use language might be seen as a mystery. Failing to know an entity's origin could make it difficult to `fix` it. Hence, SLTs' reasoning process becomes significant as they deal with a complex phenomenon. Humans' decision-making process has attracted many researcher's attentions so that various theories have been developed to understand how humans make decisions when they are required to make a choice. The next section will, therefore, briefly introduce some of the dominant theories in decision studies and discuss the implications for speech and language therapy.

2.3 Decision Theories

This section provides an overview and some basic insight about theories, frameworks and literature about decision making so the aim of this section is not to compare, categorise or classify existing decision-making theories. In the literature, it was seen that judgment and decision making have been described with a variety of different definitions and constructs by several researchers (Thompson & Dowding, 2002). While the existence of contrasting views on

decision theories is understandable, as individuals in each discipline perform their tasks in various contexts influenced by different factors, it makes it difficult for studies to conduct research that takes one theory in the centre to analyse and interpret data accordingly.

Considering the complexity of the decision-making processes of individuals, the existence of various decision theories and lack of research in the area of speech and language therapy, this study will take a data-driven approach to be able to better pinpoint how Turkish SLTs make decisions. Therefore, none of the decision theories that will be outlined in this chapter will be taken as a framework to analyse the data. Rather, they will be briefly introduced in this chapter to be able to understand the history of some of the important theories developed in this area. Thus, in this section, firstly I will introduce the complexity of expressions and constructs about decision making in the literature. Later, a history of the development of decision making will be presented, with developed theories and main decision-making models.

2.3.1 Complexity of Definitions

There has been a growing body of research on decision making, and a considerable number of studies have attempted to define its dynamics (Benner & Tanner, 1987; Chapman & Sonnenberg, 2003; Hammond, 2000). There are several terms that have been used to explain the same phenomena (Thompson & Dowding, 2002), so there is no agreement on one 'true' definition of humans' decision-making processes. Some of the terms that have been used to describe this process in the health sector includes clinical reasoning (Grobe S.,

Drew J., & Fonteyn M., 1991; Groves, 2002), clinical judgement (Benner, 1981; Benner & Tanner, 1987), clinical decision making (Field, 1987; Luker & Kenrick, 1992; Thompson & Dowding, 2002), diagnostic reasoning (Carnevali, Mitchell, Woods, & Tanner, 1985; Radwin, 1990) or clinical interference (Hammond, 1964). While various terms have been used in studies, the focus is found to be same—this is to understand how professionals come to a decision about a specific case, and the factors that affect this process. In this study, these terms can be used interchangeably, but I will mainly use clinical decision making or clinical reasoning.

Considering the context in which SLTs work, their judgment can be described as:

> Professional choice rather than tasks: real life practice rather than imagined activities of those who see the professional status as a good in its own right rather than a means to a desirable, namely the higher quality care and treatment of patients. (Thompson & Dowding, 2002, p.7).

Also, it could simply be defined as "the assessment of alternatives" or "the choosing between alternatives" (Dowie, 1993, p.21). There are multiple factors that influence a decision-making process, such as past experience, obtained knowledge or facts, others' opinions or research evidence (Thompson & Dowding, 2002). It could be claimed that there could be no single objectively true decision process, as the truth and the path to reach the truth may always be influenced, or biased to some extent (Shaban, 2015a). There is, therefore, disagreement on a universal decision-making theory (Goldstein & Hogarth, 1997), and there are numerous studies that examine clinical decision-making through the lens of decision theories: (Andrea & Frances, 1982; Benner, 2004;

Benner, Hooper-Kyriakidis, & Stannard, 2011; Curley, Connelly, & Rich, 1990; Hammond, 1964; Leprohon & Patel, 1995; Maxine, 1998; Sonnenberg & Beck, 1993; White, Nativio, Kobert, & Engberg, 1992; Whitney, 2003).

2.3.2 History of the Development of Decision-Making Theories

Although there are some studies about the practical decision process in the area of language intervention methods (Kersner & Wright, 2013), and the impact of SLTs' theoretical perspective on their decisions (Kamhi, 2006), there is no research found in the literature that examines SLTs' decision-making processes from the perspective of decision theories. As the focus of this study is to understand Turkish SLTs make intervention decisions for children with DLD, in this section, I will present the history of general decision theories in the literature and their contribution to this study.

2.3.2.1 Classical Decision-Making Theory (CDM)

The classical decision making (CDM) theory first emerged in the 1950s, through the work of Edwards (1954) and then Hammond and Summers (1965). CDM theory defines the reasoning process in a context that is free from uncertainty (Chapman & Sonnenberg, 2003). This means that humans make decisions about a problem that is clearly defined, all possible actions are known, and all possible consequences can be predicted. CDM theory examines the decision-making process in an ideal environment, where individuals do not confront dilemmas. CDM was used in management and clinical studies, but Chapman and Sonnenberg (2003) underlined that CDM might not be suitable

for explaining real world practices, given their many uncertainties and uncontrollable factors. CDM can be used in lab settings where every possible action can be controlled, so the best decision can be prescribed under such conditions.

2.3.2.2 Information Processing Theory

Another decision theory that emerged in the 1950s is the information processing theory, first introduced by Miller (1956) and developed by Atkinson and Shiffrin (1968). It is one of the first theories that examines how humans make decisions in a manner like computers. The human brain is seen to be like a computer system, where there are rational rules and strategies (Miller 1956). It places humans' memory in the centre of decision making and seeks to examine how humans retrieve stored information and use it to make a decision. There are six stages in the process of decision making (McGuire, 1968), as can be seen in the Table2. Receiving a persuasive message is the first step that triggers the decision-making process.

Table 2: McGuire (1968)'s decision making steps

1	The persuasive message must be communicated
2	The receiver will attend to the message
3	The receiver will comprehend the message
4	The receiver yields to and is convinced by the arguments presented
5	The newly adopted position/attitude is retained
6	The desired behavior takes place

Information processing theory caused new decision studies to emerge. Bransford (1979) examined how people access and use information that is stored in memory. Dreyfus (1979) and Benner (1981) examined the changing nature of professionals' decisions as they became more experienced. Information processing theory is found to be quite analytical, and was criticized for neglecting to understand personal beliefs and specific factors that might affect individual practices (Dreyfus & Dreyfus, 1986).

2.3.2.3 'Naturalistic' Decision-Making Theory

The naturalistic decision-making theory emerged as a result of increasing criticism of CDM theory (Salas & Martin, 2017). In contrast to CDM, this theory relied on people's experiences in real settings where there are uncertainties and difficult tasks. It was claimed that people do not always follow the principals that are supposed to prescribe the best decision-making process. Professionals' tacit knowledge is claimed to be the main source of decision (Zsambok & Klein, 2014). Personal choices play an important role in

the naturalistic theory, particularly in situations where individuals face time pressure and have limited information.

2.3.2.4 Intuitive Reasoning Theories

Although intuition was mentioned in early decision making studies, its impact on decisions was not well addressed (Shaban, 2015b). When there is a lack of evidence-based research, guidelines or frameworks that help practitioners to make an informed decision, they tend to rely on their intuition (Benner & Tanner, 1987). The theory of intuition in decision making has been used in the literature to explain how professionals in the health sector make decisions (Thompson & Dowding, 2002). There is no one definition of intuition found in the literature. It is described as understanding without a rationale (Benner & Tanner, 1987) or knowledge of a fact or truth, as a whole, with immediate possession of knowledge and an independence from linear reasoning process (Rew & Barrow, 1987) or immediate knowing of something without the conscious use of reason (Shaban, Wyatt-Smith, & Cumming, 2015). Despite these varying definitions, there is a common theme that is intuition reasoning happens without any analytical thinking and cannot be explained (Thompson & Dowding, 2002).

Dreyfus & Dreyfus (1986) tried to detail intuition reasoning in six aspects: pattern recognition, similarity recognition, common sense understanding, skilled know-how, sense of salience and deliberative rationality. However, it should be noted that a systematic and deliberate use of past experiences during the decision-making process is not intuition, but the accumulation of

experience (Shaban, 2015a). While understanding intuition in the decision-making process remains significant, it is found to be insufficient to fully explain the professionals' reasoning process (Lamond & Thompson, 2000). It also fails to examine how prior experiences have an influence on decision making (Hammond, Hamm, Grassia, & Pearson, 1987).

Intuitive reasoning has also been linked to the level of experience of professionals (Benner, 1981). The more experienced the professionals are, the greater they use their intuitive judgement. It was stated that expert professionals no longer use analytical reasoning processes such as the use of guidelines or protocols; they rather rely on their intuition which distinguishes them from novices (Thompson & Dowding, 2002). This might mean that intuitive reasoning is superior to analytical reasoning, as experts make better decisions compared to novices. Such notions have been criticized over the last two decades (Crow, Chase, & Lamond, 1995). It is claimed that intuitive reasoning is bound to specific context and cases, which makes it difficult to apply such reasoning process to other contexts (*ibid*). Such reasoning processes cannot be used out of context (Dawn & Carl, 2003), as the health sector basically relies on a positivist paradigm which encourages analytical procedures to be applied in clinical practices.

2.3.2.5 Cognitive Continuum Theory (CCT)

It can be said that there are two main decision-making theories that are described and used in the literature. They can be called System 1 and System 2 (Hammond, 1996). System 1 simply means that professionals use scientific

methods to make decisions. System 2, on the other hand, describes the decision-making process of professionals as an intuitive process where professionals make decisions based on their tacit knowledge. These two mainstream ideas in the literature used to be seen as contradictory to one another. Some studies, therefore, consider how a professional can improve his/her decision making, and make it more scientific, while others claim that experts tend to make intuitive decisions compared to novices, so decisions that are based on intuition are seen to be beneficial. CCT, however, claims that these two poles of the decision-making process—scientific vs intuition—are not contradictory to one another. They can rather be seen in harmony.

Hammond (1996, p. 233) stated that "different modes of inquiry make different demands on human judgement" and identified the six dimensions to modes of inquiry as modes from 1 to 6. He explained that modes 1-3 are biased towards analysis; these are Mode 1: true experiments; Mode 2: control-group; and Mode 3: quasi-experiments with relaxed controls. Modes 4-6 are biased towards intuition; these are Mode 4: computer modelling; Mode 5: data-based expert judgement; and Mode 6: unrestricted judgement.

Hamm (1988) adapted Hammond's (1996) CCT to create six modes of clinically-related inquiry; "He has replaced Hammond's 'modes of inquiry' with 'modes of practice' to emphasize rather their relevance to medical practice" (Cader *et al*., 2004). Hamm (1988) described six steps in which a professional's decision can be positioned within the CCT, as illustrated in Figure1.

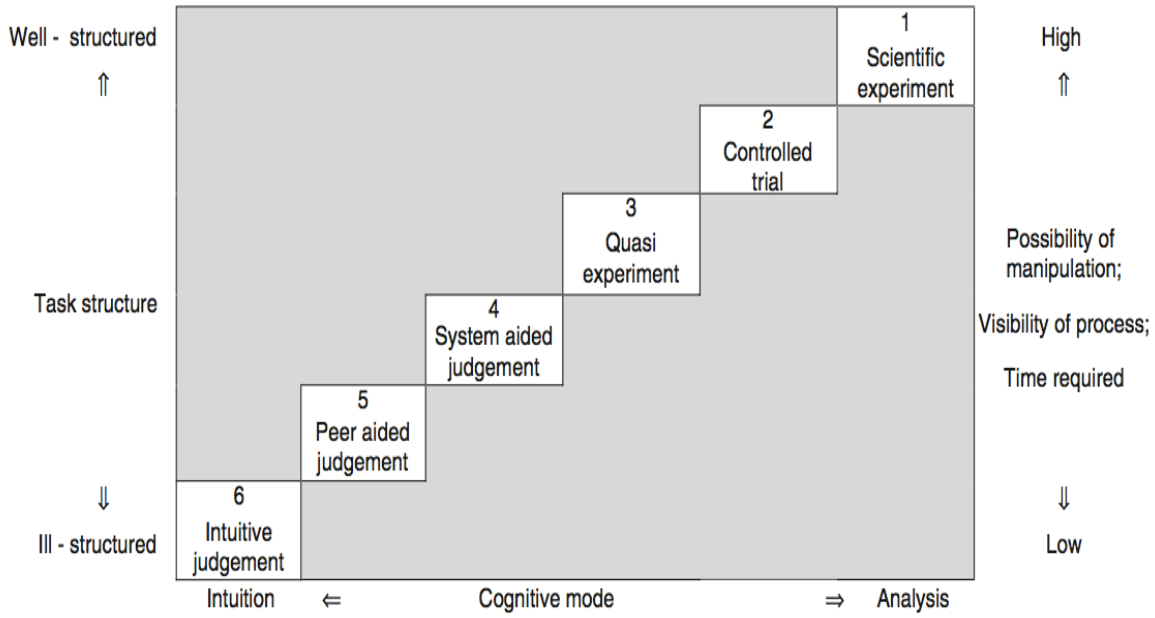


Figure 1: After Hamm (1988, p. 87) Cognitive Continuum Theory

The one pole of the cognitive continuum represents intuitive judgement (step 6), and the other pole illustrates scientific reasoning (step 1). Hamm (1988) states that the nature of the task, whether it is well-structured or ill-structured, determines how the decision-making process works within the cognitive continuum process. If the decision-making process tends to slide towards the intuitive pole (step 6), this signals that professionals face a task that is ill-structured, so that they rely on their intuition to make an intervention decision, which means that the process is less visible and less time is required to come to a decision.

Intuitive reasoning is claimed to be ill-structured as it is based on professionals' instincts and beliefs and cannot be explained scientifically. Decisions that are based on scientific reasoning (step 1) signal that the task that the professionals face is well-structured and allows the administration of a

more scientific method of intervention. This pole of the continuum is well-structured as it is possible to conduct control-trial or experimental research, where evidence and research process is visible and analytical. This enables the process to be more visible, but the time required for administrating such processes is high.

Steps 3 and 4 represent the middle ground, or as Hammond names it *common sense*, where both intuition and scientific reasoning processes work together to come to a decision about a specific case. Such middle ground is also called 'quasi-rationality', where CCT differs from other notions that intuition and scientific reasoning are contradictory (Hammond, 1996, p.184). Quasi-rational decision processes may be an ideal point at which professionals might reach a quality decision about a case (Hammond, 1996).

2.3.2.6 Probability Theories

Another model that has been developed to improve decision making is the probability model. This method uses mathematical models that offer strong analytical and evidence-based data for clinical decision making (Lincoln & Parker, 1967). Probability theories follow a structured scientific method to determine the best decisions for a specific case. Bayes theorem is one of the probability models using conditional probabilities in medical decision making (*ibid)*. For instance, this model was used in research to predict death risk after a myocardial infarction (Hohnloser & Gersh, 2003). The result of such research allowed practitioners to better understand the state of patients with heart disease (Felker et al., 2000). Although this decision-making theory is highly

scientific and analytical in nature, it lacks sensitivity and specificity such as patient history or contextual factors (Karel, van Es, Deckers, Habbema, & Grobbee, 1997).

A set of theories have been briefly presented in this section to understand how studies approached examining SLTs' decision-making processes. Understanding the decision-making process is not limited to these previously-mentioned theories. Decision-making theories are generally categorised under two main models, which are normative models of cognition and descriptive models of cognition (Beresford & Sloper, 2008). Bell, Raiffa, and Tversky (1988) stated that there is a third component, which is the prescriptive model for decision making. These models will be discussed next.

2.3.3 Decision-Making Models

Chapman and Sonnenberg (2003, p.3) stated that while the normative model seeks to answer the question "how can decisions *best* be made?", the descriptive model is related to the question "how are decisions *actually* made?", and finally the prescriptive question "how can decision theory be used to improve decision making?". The next sections will introduce these three decision modules in more detail, along with the insights that they provide for this research.

2.3.3.1 Normative Model

The normative model concerns "how idealized, rational, super-intelligent people should think and should act" (Bell et al., 1988, p.16), so this model helps decision makers to understand *how* should they decide (Oliveira, 2007). Normative models are required to be justified and evaluated in an objective way, without people's pre-conceptions about the situation in which the decision will be made. One perspective of the normative model is utility expected (Baron, 2004). In the utility expected model, a comparison is made among options such as A and B. Even if these two options (A and B) have different features that are not comparable, they should be philosophically and mathematically justified, and the best option should be chosen (A or B). Also, there is transferability in the normative models, such as if A is better than B, and B is better than C, then A is also better than C.

Another idea on which normative models were based is reflective equilibrium. Reflective equilibrium is based on Chomsky's work on syntax in language (Chomsky, 2002). Chomsky claimed that there is a universal grammar structure that each language has. Hence, it is claimed that if there is a universal truth about the structures of language, a universal theory about morality and decision making could also be developed.

However, normative models were criticised because of the above perspective, as a human's intuition might not be always correct; so normative models could prohibit critical thinking and prevent improving our intuitions. Another critique of normative models that is specific to language intervention methods was underlined by Kamhi (2006). He examined the impact of SLTs' perspectives

on their intervention decisions and stated that the normative perspective refers to understanding typically-developing children's language development. According to this perspective, normal language development can be used as a guide to constructing an intervention method. For instance, in speech sound acquisition process, many SLTs are using typically-developing children's speech sound acquisition processes (Kamhi, 2006). Also, there are many language tests developed to clarify children's problems, which are based on the sequence of typically-developing children's language development, so that SLTs can have an idea of their language age and develop an intervention programme according to the needs of this age. These examples show that SLTs consider the ideal and best possibilities—in this case, typically-developing children—before acting and deciding on an intervention method, which is the basic element of the normative model.

Although this model can be helpful in terms of clarifying the needs of the child, it might not be appropriate to make a decision that is based on typically-developing children's stages, because children who have DLD do not follow typical development stages. For example, some children have specific difficulties producing specific speech sounds which cannot be addressed through reference to typical development stages (Kamhi, 2006).

2.3.3.2 Descriptive Model

Descriptive model concerns the understanding of "how and *why* people think and act the way they do" (Bell et al., 1988, p.16). Descriptive models particularly focus on how individuals make one particular decision or

judgement, without attending to the quality of the decision (Shaban, 2015b). In addition, descriptive models do not have any restriction on whether the decision maker is logical or illogical; it is purely based on "how individuals make judgments and decisions in the real world, focusing on the actual conditions, contexts, ecologies, and environments in which they are made" (Shaban, 2015a, p.3).

Bell et al. (1988) stated that descriptive models provide high empirical and clinical opportunities for scholars, who can use this model to understand individuals' decision-making processes without influencing and changing their participants' behaviour. Evidence-based research is one of the descriptive models that deals with realistic reflections in practice. It is, therefore, one of the most utilised research approaches in the health sector. Gillam and Gillam (2006) stated that evidence-based practises have an important role in the decision-making process for a variety of different disciplines. For instance, surgeons and physicians benefit from published research to apply the best treatment for their clients, and then they decide a treatment based on a combination of research results, client's needs and professional experience (*ibid*). Chapman and Sonenberg (2000, p.8) stated that the descriptive decision-making model has a significant role in the health sector, as it "provides the ability to analyse the effects of applying clinical elements (test and treatments) in specific sequences known as clinical strategies which have never been evaluated in precisely the same combination". In addition, other disciplines such as education, psychology and speech and language therapy sectors also

attempted to use evidence-based practices for their decisions (Gillam and Gillam, 2006).

2.3.3.3 Prescriptive Model

As stated previously, the existence of a gap between normative and descriptive models raises the question of how this gap can be closed (Larrick, 2004). The prescriptive model was developed to overcome the gap between how decisions are *best* made, and how decisions are *actually* made (Bell et al., 1988). This model was established to improve the decisions of individuals, through understanding how individuals make judgements and decisions. This means that understanding how people make decisions—which refers to descriptive theory—can guide and help them to achieve the best decision—which refers to the normative model. Hence, the main objective of the prescriptive model is helping and improving people's decisions (Shaban 2012; Bell et al., 1988).

Research shows that prescriptive model is generally used in the health sector in order to enhance clinicians' decision making and judgement (Chapman & Sonnenberg, 2003; Shaban, Khater, & Akhu-Zaheya, 2012; Thompson & Dowding, 2002). One of the reasons for using prescriptive decision-making models in the health sector is to provide better decision-making processes which can provide better clinical interventions and outcomes (Chapman and Sonenberg, 2000). For instance, the use of clinical guidelines and policies are one of the common prescriptive models in healthcare, which might help clinicians to make better decisions (Thompson and Dowding, 2002). These

guidelines and policies provide more quality intervention, decrease the variations in practice.

2.3.4 Concluding remarks

There is a close relationship between the three main decision-making models (Baron, 2012). Research that explores humans' decision-making processes might first analyse the best options to be made by people (Normative). As people might not always make the best decisions, it is then observed that how people make their decision (Descriptive). If there is a difference between the best option and people's ultimate decision, and this difference is purposefully made without error, this is called bias (Baron, 2012). Hence, in such a case, people are biased towards an option which is not considered the best within the norms. In this step, the prescriptive model intervenes, attempting to develop strategies to close the difference (remove the bias) for the people to reach the best decisions according to norms (*ibid*). For instance, some Turkish SLTs may think that the best intervention method could be administered with the help of trained parents (Togram and Mavis, 2009) or involving parents into every phase of intervention process (Diken and Diken, 2008).

While this is the best decision normatively, in practice this may not be the most appropriate, as the parents might be too busy, irresponsible or insufficiently educated to be able to help their children. Hence, what the SLT might actually do would administer the whole intervention process in his/her clinic. In this case, the SLT removed the bias from the options of the available intervention programmes. While there is a transition from the normative perspective to the

descriptive perspective in this case, a prescriptive model could require taking necessary steps to involve the parents in the process.

In the next section, there will be a close examination of the reflections of these theories in practice. To do this, the nature of decision making, its complexity, the factors that influence this process will be introduced, to be able to make meaningful interpretations of Turkish SLTs' decision-making process.

2.4 The Complexity of Decision-making Processes in Speech and Language Therapy

It is important to understand the complexity of decision-making processes for speech and language therapy before conducting this research. The factors that cause DLD might often be difficult to interpret, so that SLTs just use what can be seen and known in order to make an intervention decision (Roulstone, Peters, Glogowska, & Enderby, 2008). Roulstone et al. (2008) state that demographic and medical variables (such as family history or genetic) might not be visible, or be difficult to understand, so it might be suggested that SLTs focus on communication variables. Roulstone et al. (2008, p.2) found that six variables were associated with SLTs' decisions: "being a quiet baby, not using two-word utterances or making comments on their play, being unintelligible to strangers and the child's score on auditory comprehension and expressive language scales of the Preschool Language Scales (PLS-3)". Such an approach would change the decision-making processes of SLTs as it considers fewer data and relies on the most obvious problems.

On the other hand, the Royal College of SLTs' Clinical Guidelines suggests otherwise (Taylor-Goh, 2005). They recommend SLTs to consider various ranges of factors by conducting a broad initial case history evaluation. In this approach, many factors such as environment, family background, socio-economic status or medical history are required to be examined to make a better intervention decision for each individual. Such an approach goes beyond what is practical, and what is already seen and requires SLTs to make a more

evidence-based intervention decision. To understand, this section will mainly present the complexity of decisions in speech and language therapy and factors that influence SLTs' decision-making processes will be discussed. Finally, how SLTs' decisions show differences in similar cases will be presented.

2.4.1 Complexity of SLT Professional Decision Making

It is a fact that decision making in social sciences is a complicated process, as there are few facts and little evidence which makes SLTs' intervention decisions complicated. Speech and language therapy can be explained via theories and methods primarily developed in other disciplines, such as linguistics, psychology or medicine (Lum, 2013). It may be expected that there are differences in how these disciplines approach an issue, which might lead SLTs to adopt different decision-making processes in diagnosis or determining a specific intervention. For instance, if we compare psychology and medicine, there might be certain discrepancies, as a psychologist basically considers social elements behind a particular problem and looks for flexible solutions, whilst a doctor would heavily rely on scientific evidence.

Considering speech and language therapy, there are diverse cases where SLTs face clients whose DLD issue is rooted in social issues and requires the therapists to consider all social factors that surround their patients and administer a flexible intervention method. There are also cases where the SLTs engage with clients who just have biological issues, that require the therapist to take a more direct intervention approach. Such diversification requires speech and language therapy to create its own theory and practice research database,

which can explore various aspects of speech and language therapy that are independent but might be in harmony with other disciplines. So, therefore, the purpose of this section is twofold: first explaining the complexity of speech and language therapy, and how existing learning theories in the literature affect SLTs' decisions.

The complexity of Intervention Decisions

It is clear that making a certain decision about a case in speech and language therapy is a challenging task (Roulstone et al., 2008). Roulstone et al. (2008) underline two fundamental reasons for this. First, they state that there is no sufficient scientific research about the outcomes of certain intervention methods, and a clear set of predictors. For instance, Law, Garrett, and Nye (2003c) reported that there is a lack of scientific evidence about the best timing of intervention—whether it should be early or later. Second, such a lack of evidence-based research in speech and language therapy might lead SLTs to act on their intuition and rely on trial and error methods. In the absence of scientific research, it is expected that their decisions to administer a certain intervention method could be influenced by various unknown factors.

The existing research in the literature also differs regarding making intervention decisions (whether or not administering an intervention). Olswang, Rodriguez, and Timler (1998) reviewed the literature and identified 27 predictors of a language delay, some of which are social skills, gesture, characteristics of play, family background and so on. On the other hand, Cummins and Hulme (2001) focused on children's communicative intention,

pragmatic skills and negative interaction patterns. There is still no clear, longitudinal study that allows SLTs to make a better intervention decision (Weismer et al., 2000), as existing research concludes different outcomes regarding the academic and social skills of children, some of whom had an intervention, and some not (Bishop & Edmundson, 1987; Stothard, Snowling, Bishop, Chipchase, & Kaplan, 1998). Such vague outcomes from scientific research are reflected in practice and create challenges for SLTs to make a certain decision about a case. The questions that are posed at this stage is how they eventually deal with such complicated decision-making processes, or what factors influence their decisions? And, how do SLTs justify the impact of such factors when it comes to practice?

As DLD could occur for various reasons; it is difficult to make a certain judgement about the cause of a DLD issue. This makes this decision-making process more complicated. Lum (2013) gave an example that one could conclude that poverty causes poor education. However, the author posited that poverty could be the cause of many problems, such as low self-esteem or low-motivation, which would be responsible for poor education. If we consider DLD issues, it would be tempting to say that a family with low socio-economic status could result in a lack of quality childcare, or paucity of vocabulary to which a child is exposed. However, as Lum (2013) underlines, there are many unknown factors that lie behind such language issues, and socio-economic status may not be directly related to the language problem of a child. Such complexity requires a careful examination of a case, to be able to make a quality intervention decision.

It is underlined that in such a complex discipline, SLTs might face another challenge when they try to adjust such research findings to individual children (Roulstone et al., 2008). For instance, Emanuel, Chiat, and Roy (2007) followed a single SLT, and reported that there is a close interplay between the initial assessment of a child and the decision to administer a certain intervention method. The nature of the assessment phase, therefore, has a significant impact on SLTs' decision-making process. However, the authors reported that there is still a complex relationship between the assessment and intervention decision, as although most of the children had mild language delay, they were still offered an intervention by the SLT. This shows that it is still unclear what factors affected this therapist's intervention decision, as s/he applied the same intervention procedure to those who have different levels of language deficit according to his/her assessment.

Another example that indicates the complexity of speech and language therapy is that in the case of a failure of an intervention method, an SLT might conclude that the intervention method might be unsuitable or the chosen intervention method was not administered properly (Lum, 2013). However, the real problem of such failure could also stem from the patient's lack of trust or respect for the therapist. This factor cannot be revealed until the process of the therapy is investigated thoroughly, "Indeed, with communication disorders, in many instances, it is simply not possible to explain why things happen the way they do" (Lum, 2013, p.73). Hence, the speech and language therapy discipline could differ from other disciplines, as they try to make difficult decisions with

limited evidence. In the next section, how existing learning theories used in speech and language therapy will be presented.

Using Learning Theories in Speech and Language Therapy

Diverse learning theories, such as behaviourism, constructivism or cognitivism have influenced the speech and language therapy discipline (Lum, 2013). Lum (2013) states that during the 1970s, taking a behaviourist approach regarding making intervention decisions was common. Such an approach consisted of some principals of learning, such as reinforcement and punishment, and administered a *structured* therapy in speech and language discipline. While behaviourist approaches now claim to consider the cognitive side of learning more, some practices in speech and language therapy still rely on behavioural accounts rather than cognitive ones (*ibid*).

Constructivism has also influenced many areas, including speech and language therapy. Vygotsky (1978a) underlines three fundamental elements of learning: social interaction, a knowledgeable other, and zone of proximal development. Considering speech is an act of social interaction, it is undeniable that constructivism found its place in many speech and language intervention methods. This kind of learning theories show that there is a need to understand why and how the nature of intervention decisions of SLT are influenced by such theories, and how they are seen in practice. It is also important to understand what factors could have prevented or encouraged SLTs to adopt today's principals of such theories.

Apart from the influence of learning theories, there are other knowledge sources that found their place in speech and language therapy. For instance, the theory of holism which is defined as the theory that certain wholes are to be regarded as greater than the sum of their parts (Allen, 2014). For instance, in medicine, taking a holistic approach requires professionals to consider alternative treatment choices, examining environmental factors that affect patients' daily life (Lum, 2013). Such a holistic approach led practitioners to consider patients' interests, family life, their expectations and hopes. The consideration of such elements that surround patients is believed to create a sense of care and healing quality for those patients (Davies, Laker, & Ellis, 1997); a holistic approach is also believed to be beneficial for various reasons for speech and language therapy (Lum, 2013).

For instance, administering a *functional intervention therapy* is considered to be a holistic approach (*ibid*). Lum (2013) states that in functional therapy, SLTs form intervention methods that resonate with patients' daily life, such as using the telephone, reading a book or making an emergency call. These would be some of the practices that SLTs might make use of in their therapy. The decision to choose activities such as a patient would face in their daily life stems from these therapists' theoretical beliefs; however, it is still unknown how such theories would be seen in practice, and how SLTs make intervention decisions that are parallel to their theoretical beliefs. For instance, Hopper and Holland (1998) claim that creating a role-play about an emergency phone call cannot be considered as a functional therapy, as such events do not often occur

in daily life. Thus, it is important to understand how SLTs make sense of such theories and form intervention methods.

2.4.2 Factors that Influence Decision-Making Processes

In this section, factors which had an impact on SLTs' decision-making processes will be introduced in two sub-sections. In the first sub-section, how the international classification of functioning (ICF) is used as a framework to identify issues and set goals in the SLT profession will be introduced. In the second sub-section, studies of decision-making conducted in other health professions will be explored in order to understand how they could be related to speech and language therapy practices.

2.4.2.1 International Classification of Functioning (ICF): Framework for SLTs

The International Classification of Functioning, Disability and Health (ICF) was designed for understanding health and health-related states, outcomes and determining factors in a scientific manner; to structure a common language for explaining health and health-related situations in order to improve communication between different users; to see and compare differences across countries, health-care disciplines and services; and to provide a systematic coding scheme (WHO, 2001). Although the ICF was originally established for health and health-related conditions, it is also used in many other areas. It is important to note that the ICF was not formed only for people with disabilities or issues; it can be applied to all people. ASHA (2019) reported that "The ICF is stated as the framework for the field in both the Scope of Practice for

Speech-Language Pathology (2001) and Scope of Practice for Audiology (2004)".

The ICF structures information about health in two parts: Functioning and Disability, and Contextual Factors. Each of these parts has two components as described by WHO (2001, p.10):

"Part 1. Functioning and Disability

a) Body Functions and Structures

b) Activities and Participation

Part 2. Contextual Factors

c) Environmental Factors

d) Personal Factors"

By introducing these features, the ICF provided a framework by incorporating both social and impairment-based factors to establish appropriate goals to help children with language difficulties (McLeod & Bleile, 2004). 'Body structures' refer to parts of the body such as nose and mouth, and 'body functions' describe "physiological functions of body systems" (McLeod & Bleile, 2004, p.203). Some examples of impairment of body structures can be cleft palate, ankylosis or a malformed cochlea which necessitate surgical intervention to repair a cleft, or a cochlear implant (*ibid.*). Impaired body structure can negatively affect body function. For example, tongue tie (body structure) can result in difficulty with diadochokinesis, which is rapid speech movement

(body function); or a person who has a cleft palate (body structure) might have nasal emissions during speech (body function). The ICF model also considers "activities and participation" to facilitate health and well-being. Some examples relevant to speech-language activities and participation include "Speaking; conversation; learning and applying knowledge; interpersonal interactions and relationships; community, social and civic life" (McLeod & Bleile, 2004, p.208).

Environmental factors which were specified by WHO (2001) for children with DLD include support and relationship, services, policies and technology. It is undeniable that some of the most important environmental factors for children with DLD are parents' support, the family's socio-economic status and societal attitudes towards children. Also, the policies and systems of each institution and country have an impact on interventions and the progress of children. For example, the amount and type of support which children receive, teachers' attitudes and communication with children who need language support are some of the important environmental factors. There are also personal factors such as gender, age, education, culture, religious background and health conditions, all of which must be considered in order to develop the most suitable intervention method. As can be seen, there are various factors which might cause DLD. It is the SLTs' job to identify the issue by considering that all of these factors and new emerging ones might have a role. This raises the question of how Turkish SLTs deal with such a complicated process and arrange therapy for an individual child whose DLD might be caused by a combination of these factors.

Although it is not directly related to the speech and language therapy profession, there are some other contextual factors which are relevant to other professions. For instance, Rose and Mackenzie (2010) conducted a study on occupational therapists' clinical decision-making and Wolff (1989) on physicians' decision-making processes; they found that resource accessibility and availability can affect professionals' decisions, which can be counted as contextual factors, and Jette *et al*. (2003, p.229) conducted a study to understand clinical decision-making over recommending discharge after physical therapy and found that participants' "functioning and disability, wants and needs, ability to participate" have an impact on decision-making processes, which can be seen as patient-based issues. These factors might also be seen in the SLT profession. It is therefore important to take contextual factors into account when evaluating the choice of a language intervention method made by SLTs because whilst an intervention method might be appropriate in a Nottingham-based clinic, the same intervention method might be ineffective in a clinic located in Turkey.

In the next section, other factors which have important impacts on other professionals' decision-making processes will be examined as they might have an important impact on SLTs' decision-making processes.

2.4.2.2. Factors that Affect Other Professionals can also Influence SLTs

Numerous studies have been conducted to understand the decision-making processes of professionals in broader areas in various countries, such as

Nursing, Medicine and Psychology outlined the factors that influence clinical-reasoning processes. A brief review of these factors in other disciplines might also shed light on how and why professionals, in general, make a certain decision. The factors which affect SLTs' reasoning processes can also be practice-based factors, as was claimed by a study which was specifically conducted on SLTs in the UK (Law *et al.*, 2003b); theory-in-practice factors in a study conducted on nurses in Australia (Higgs *et al.*, 2001) and professionals' belief which was the topic of research conducted on physicians in the US (Wolff, 1989). Although these factors do not directly relate to SLTs -except Law et al.'s study-, they can act as a guide in this current study in the process of data interpretation.

Practice-based Factors

Practical experience may have a significant impact on the decision-making processes of SLTs. According to Law et al. (2003b), SLTs' use their practical experience to decide which intervention method to administer. While some professionals choose methods in accordance with their own practical experiences like an occupational therapist in Australia (Bennett et al., 2003), others might benefit from their colleagues' experiences; such as SLTs in the USA (Nail-Chiwetalu & Ratner, 2007). Mackenzie, Muir, and Allen (2010) state that more experienced SLTs are more likely to be affected by their own practical experiences.

Education and quality of training can also have an impact on their decisions. Studies show that health professionals' intervention method decisions depend on their university education (Mackenzie et al., 2010) and their continuous education (Bennett et al., 2003). In other words, the training quality they have received might influence their decisions, in terms of administering less or more evidence-based intervention approaches. This shows that academic background and the resources (seminars, internet etc.) that professionals utilise in their professional lives have an important impact on their decisions.

Theory-in-Practice Factors

Friel-Patti (1994) also stated that theory is a basic factor for efficient intervention methods. However, theoretical understanding and the explanation of its relationship with intervention methods cause some issues.

First, although many new intervention techniques are based on theories, they have not been explained well enough to practitioners, or they are not consistent with the intervention process (Creaghead, 1999). This means that choosing related theories and explanations of their relationship with intervention methods is important. Second, there are a variety of possible options which are not theoretically consistent with each other. This leads to confusion for professionals, in terms of deciding which method may be the best option (Kamhi, 1994). Third, Dean (2009) suggested that SLTs do not tend to rely on theory when administering an intervention method. For instance, Law et al., , Campbell, Roulstone, Adams, and Boyle (2008) conducted a study with practitioners in order to identify the relationship between their theoretical

perspectives and the intervention they provide to children with receptive language disorders. They found that only one-third of SLTs in the study used their knowledge of theory, and there might be no connection between the theory and their practice.

It is, therefore, crucial to understand whether or not SLTs have a theoretical perspective when dealing with children who have DLD; it is also important to observe whether or not their theoretical perspective is seen in practice.

Beliefs of SLTs

The beliefs of SLTs might also have an impact on the selection of intervention approaches. Lof and Watson (2008) conducted a study with randomly selected SLTs who have ASHA membership and reported that the beliefs of SLTs have a significant role in terms of deciding an intervention approach. For instance, they posit that the majority of SLTs believe in the effectiveness of oral-motor practices to improve speech abilities and use this intervention method in their therapies.

Wolff (1989) examined physicians' medical decision making in a studyconducted in the USA and stated that professionals' views about the effectiveness of intervention methods have a significant impact on the decision-making process. In another study, it is found that if professionals believe in the effectiveness of one method, it is likely that their clients make progress Gee (1992). It is also claimed that "the problem is heightened by the fact that most treatments for most disorders tend to work when tested by

investigators and conducted by therapists who believe in them" (Westen, Stirman, & DeRubeis, 2006, p.168). Hence, it is possible to say that the beliefs of professionals may be one of the most important factors in terms of choosing an intervention method and having a successful outcome.

To conclude this section, it can be said that there is a need for in-depth research to understand the decision-making processes of SLTs, and theorise it through a data-driven approach. There is a need to explore a research question that explores how SLTs deal with such factors and come to a decision about certain therapy session.

2.4.3 Similar Cases Different Decisions

SLTs' decision-making processes play a crucial role in every phase of the therapy. One of the phases is whether a child should be accepted into therapy. The studies that were conducted in the UK shows that there are geographical differences, and referred to the postcode lottery (Enderby & John, 1999). Whilst a child is required to have more severe language issues to be offered intervention in some health care trusts, this is different in other trust areas where mild language problems might be considered for intervention. It, therefore, depends on the practices of the trust where the children are diagnosed. It was also reported that such differences in practice are also related to individual professionals (Records & Tomblin, 1994).

Records and Tomblin (1994) asked 27 SLTs to evaluate various cases (some of which were uniquely considered by one of the therapists, some of which were

considered by them all). The study showed differences in the SLTs' approach to cases. For instance, while one SLT diagnosed 89% of the children as language impaired, another found 20% of the children as having a language development issue. Such differences will eventually be reflected in further practice, when SLTs decide whether these children need an intervention or not. Even if they need intervention, the nature of the intervention might show variation, depending on SLTs' opinion about the severity of language impaired.

Roulstone (2001) also stated that although SLTs may agree about the nature of the child's issue, they may conduct different sorts of assessments and therefore administer different intervention methods. The author explored the agreements and disagreements among the therapists. She used mixed methods to investigate SLTs' decisions to include pre-school children in speech and language therapy. Although it was reported that the SLTs agreed on similar categories in relation to children's language impairments, they differed in their diagnostic approaches, and the severity of language impairment that required intervention. These studies show that the factors that lead an SLT to make a decision on a case requires a significant investigation, because every single decision of an SLT can affect a child's progress. For instance, Lum (2013, p.73) illustrates two SLTs' decision-making processes, as follow;

> Jane might argue that it is therapeutic to tell a patient that what he is saying does not make sense, because it helps him to self-monitor his speech and this will increase the likelihood that he will self-correct his speech. Sue, however, thinks that helping a patient acquire insight into his speech problem is not desirable, because this will cause the patient to become depressed and remain so, as there is no guarantee that his speech will improve.

The above example illustrates two approaches that are opposite to one another, although the author underlines that Jane has more experience than Sue, so that Jane's approach might be more acceptable because of the experience gap. Lum (2013), however, claims that a decision that is justified by the experience of the decision maker cannot be always correct, as Sue will never be more experienced than Jane. Thus, there should be another justification base, which is claimed to be the scientific evidence behind a method. The important point in the example of Jane and Sue is that we do not know the factors that lead Jane and Sue to make a certain intervention decision about a case. Could they both be right? Could their patients' personalities or social life require Jane and Sue to differ in their decisions? Or could Jane's and Sue's prior experiences or beliefs lead them to make such intervention decisions? Such questions underline the importance of factors behind certain intervention decisions, as they are the main triggers for Jane and Sue to act in the way they do.

This variability brings about difficulties in selecting a suitable intervention method. For instance, although Nippold and Schwarz (2002) underlined the importance of intensive and early intervention methods for children who have SLI and language delay, Paul (1996) proposed that SLTs should be cautious and use a wait-and-see approach.

A survey study also confirms the importance of understanding the dynamic process of how professionals' values, beliefs and knowledge directly affect their intervention decisions. For instance, Weinsier (1987) reported that 74 percent of first-year medical students considered the knowledge of nutrition as

an important element of their professions, however, only 13 per cent gave importance to such knowledge by the time they are in their third-year. While it is expected that professionals' beliefs towards a particular topic are affected by various factors, there is little information about the hidden factors that provoke a change in an SLT's decision-making processes (Lum, 2013).

Once the reasons behind such fundamental reasoning are understood, it might be easier to arrange better training programmes in universities, and create workshops and seminars, all of which could raise the awareness of SLTs when they make decisions.

As can be seen, dealing with language and helping individuals to improve their communication is a complicated process. To understand the reasoning process in speech and language therapy is quite challenging; the DLD will be discussed next. Exploring what the SLTs face through their profession in terms of language development could better shed light on the importance of their reasoning process.

2.5 Identifying a Language Disorder: Developmental Language Disorder (DLD)

In the previous sections, the theories about typical language acquisition, decision theories and the complexity of the decision-making process were discussed. In this section, identification of language impairment and then DLD will be discussed in order to answer the question about how SLTs decide intervention methods for children with DLD.

2.5.1 Identifying Language Impairment

In this section, how assessment material affects the chosen intervention method will be discussed as the identification of a problem is the first step to conducting an intervention.

McLaughlin (2011) stated that typical language development includes some milestones which are used to detect speech and language issues in children, these are shown in Figure2.

Age	*Receptive*	*Expressive*
6 months	Turns to rattling sound*	Laughs*
		Vocalizes (cooing)*
	Turns to voice†	
9 months	—	Babbles, single syllables*
		Says "mama" or "dada," nonspecific†
		Waves "bye-bye"†
12 months	Follows one-step command[15]	Babbles*
		Imitates vocalizations and sounds*
		Says one word†
		Waves "bye-bye"†
15 months	—	Says one word*
		Says three words†
		Waves "bye-bye"*
18 months	Points to at least one body part†	Says three words*
		Says six words†
2 years	Points to two pictures*	Combines words†
		Names one picture†
	Follows two-step command[15]	
2.5 years	Points to six body parts*	Knows two actions†
		Names one picture*
		Speech half understandable†
3 years	—	Knows two adjectives†
		Names four pictures*
		Names one color†
		Speech all understandable†
4 years	—	Defines five words†
		Names four colors†
		Speech all understandable*

Figure 2: Developmental Milestones for Speech and Language in Children (McLaughlin, 2011, p.1184)

These milestones are helpful for SLTs and parents in terms of identifying the language difficulties which children face. However, it is important to note that when a child does not show the expected language development, it is crucial to carry out a comprehensive developmental assessment because language impairment or abnormalities can be seen as a result of other physical or developmental problems, and are called 'secondary language problems' in the

literature (Law *et al.*, 2000; Law *et al.*, 2003b; McLaughlin, 2011). Secondary language impairments can be seen as a secondary issue of another condition, such as "hearing loss, intellectual disability, autism spectrum disorder, physical speech problems, or selective mutism" and these factors are actually the main reason for the language impairment (McLaughlin, 2011, p.1183).

There are different factors which can cause developmental language disorder, such as genetic and socio-economic factors (Damico & Simmons-Mackie, 2003), oral-motor difficulties (Lof & Watson, 2008) and problems during pregnancy (Roth *et al*., 2011). Also, McLaughlin (2011) suggested that there are risk factors related to gender; for instance, it has been found that males show more language delay risk than girls. Family history is another factor, so that if parents or close relatives had language delay issues, then their children may be at risk of language delay (*ibid*). Another risk factor is identified as parent-child interaction (Thorpe *et al.*, 2003); it has been found that there is a significant correlation between a parent-child relationship and a child's language abilities. In addition, the education level of parents, childhood illness and the size of the family have all been identified as risk factors (Force, 2006). In brief, each child shows different symptoms, has a different background and various factors can cause their DLD.

A variety of language screening tests have been developed over the years in Turkey to identify children's language issues. Topbas (2014) provided a table which shows the recently developed assessment tools in Turkey. She stated

that many studies have been routinely conducted at DILKOM at Anadolu University in Turkey to develop new resources for Turkish SLTs.

Tools	Authors	*Norms*
Ankara Articulation Test (Ankara Artikülasyon Testi-AAT)	Ege, Acarlar, & Turan (2005)	+
Turkish Articulation–Phonology Test (Kit) (Türkçe Sesletim-Sesbilgisi Testi-SST)	Topbaş (2004)	+
Test of Early Language Development (TELD-3, Hresko, Reid, ve Hammill, 1999*) Turkish version (Türkçe Erken Dil Gelis¸im Testi)*	Topbaş & Güven (in press)	+
Test of Language Development (TOLD-4,Primary; Hammill & Newcomer, 2008): *Turkish version (Türkçe Okulçağı Dil Gelişim Testi)*	Güven & Topbaş (in preparation)	+
MacArthur Communicative Inventory (CDI- Fenson) Turkish (TI˙GE-Türkçe I˙letis¸im Gelis¸im Envanteri)	Aksu-Koç et al. (2013)	+
Aphasia Language Assessment Test (Afazide Dil Deg˘erlendirme Testi-ADD)	Maviş & Toğram (2009)	+
Gülhane Aphasia Test-2 (Gülhane Afazi Testi-GAT-2)	Tanrıdağ, Mavis¸, Topbaş (2010)	+
Systematic Analysis of Language Transcripts – (SALT), Turkish (Version9) [Computer Software]	Acarlar, Miller, & Johnston, (2006)	N/A
TI˙FALDI˙ – Turkish Expressive and Receptive Language Test of Vocabulary	Güven & Berument (2010)	+
Maternal Behavior Rating Scale (MBRS- Mahoney, 2008) and Child Behavior Rating Scale (CBRS-Mahoney & Wheeden, 1999)	Diken, Topbaş & Diken (2011)	N/A
GOPDÖ-2-TV-Gilliam Autism Rating Scale-2-Turkish Version	Diken, Ardıç, & Diken (2011)	+
LARSP – Language Assessment, Remediation and Screening Procedure (Crystal, 1982) - Turkish	Topbaş, Cangökçe-Yaşar, & Ball (2012)	N/A
Turkish Nonword Repetition Test	Topbaş, Kaçar-Kütükçü & Kopkallı-Yavuz (2014)	N/A
LiTmus-Sentence Repetition Test: Turkish	Topbaş, Aydın, Kazanoğlu, & Tadıhan-Özkan (submitted)	N/A

Figure 3: Recently developed assessment tools in Turkey (Topbas, 2014, p.100)

The screening tests listed above were developed to identify whether or not children showed the expected performance according to their age. Also, these tests help SLTs to diagnose children's language issues and administer suitable intervention methods to overcome their problems.

2.5.2 Developmental Language Disorder: Aetiology, Identification and Outcomes

Developmental language disorder (DLD) is a term which was known as specific language impairment (SLI) in the past, but the term was replaced by the CATALISE Consortium (Bishop *et al*. (2017). DLD refers to children who have difficulties with learning and using language in the long term, but these difficulties are not associated with other conditions such as autism, Down's syndrome, hearing problems or physical disability (Bishop *et al*., 2017).

There is no known aetiology for a significant number of children with a language problem (Bishop *et al*., 2017). More importantly, professionals who work with children with language problems have little agreement about the identification and classification of language problems. This issue can be seen in both research and practice *(ibid).* Terms such as SLI, language delay, developmental language disorder and developmental dysphasia can be seen in the literature, which might create confusion (Bishop, 2014). Moreover, the term SLI was being used for children who have unexplained language problems (Bishop, 2014), but was excluded from DSM-5 (Diagnostic and Statistical Manual of Mental Disorders) (American Psychiatric Association, 2013), and the term 'language disorder' is used rather than SLI, as recommended by the ASHA. However, using 'language disorder' terminology was also found to be extremely wide-ranging and confusing.

Because the terminologies which have been used to describe language problems are inconsistent, this has led to inequity in services and confusion

over evaluating research. Bishop *et al*. (2017, p.1068) stated that "lack of agreement about criteria and terminology for children`s language problem affects access to services as well as hindering research and practice".

Thus, Bishop *et al*. (2017) tried to address this issue by using the Delphi method. In this method, a set of statements were rated by a panel of experts (the CATALISE Consortium) to understand the potential reasons for disagreement about the terminology for language disorders and they tried to provide standard definitions to improve the quality of service. They concluded that the term DLD (Developmental Language Disorder) was used by professionals when children have language issues which cause problems in their everyday communication or learning. It is also used "when the language disorder was not associated with a known biomedical aetiology" such as brain injury, genetic conditions, autism and Down's syndrome (Bishop *et al*., 2017, p.1068). The professionals in the CATALISE consortium also agreed that neurobiological or environmental factors do not preclude a diagnosis of DLD. It can co-occur with other neuro-developmental disorders such as ADHD. Moreover, the child`s language problems are unlikely to resolve by five years of age (*ibid*.).

Although the term DLD has been used for many years, it is less common than SLI (Bishop, 2014). SLI overlaps with DLD but was rejected by the CATALISE panel as restrictively referring to the fact that a child has pure language problems in the absence of any other impairments. Such children are

quite rare and it is difficult to understand whether they have a different aetiology from other children with language problems (Bishop *et al.*, 2016).

It has been stated that the effect of DLD can be seen differently from child to child and can affect different areas of language and the degree of impairment in different areas (Weedenburg *et al*., 2006). The CATALISE panel recommended that specific areas of language problems should be assessed against each individual child as the impairment might be different and each child's language impairment may have different combinations, such as that the affected areas can be grammar (Leonard, 2014), semantics (Rice & Bode, 1993), pragmatics (Adams, 2001), discourse (Van der Lely, 1997), verbal memory (Gathercole, 1993) or phonology (Rvachew & Brosseau-Lapre, 2012).

Considering that the aetiology of DLD is unknown and the fact that there are limited numbers of SLTs in Turkey, SLT services might not be properly delivered in Turkey (Topbas, 2014). Topbas (2014) stated that each SLT tries to cope with a heavy case-load and a physician might not refer a child with a developmental communication disorder if the aetiology is unknown. This situation may lead children with unknown aetiologies such as DLD to remain undetected (*ibid*.). This can bring difficulties in children's lives if it is not noticed. For example, studies have shown that language disorder can negatively affect children's social and emotional development *(Law et al.*, 2003b) and academic life (Bickford-Smith *et al.*, 2005) over a long period. It is therefore important to identify children's language problems and initiate the most appropriate intervention method as earlier as possible. In the next

section, I shall review the literature which has considered intervention methods in the area of DLD.

2.6 Intervention Methods for Children with Developmental Language Disorder (DLD)

> [A] therapist examines patients and collects information about their functioning and disability, wants and needs, ability to participate, and the context in which they live their lives. This information is synthesized and considered in light of the therapist's experience to derive an initial impression of what the recommendation should be based on the examination. The therapist then considers the effects the regulations imposed by the healthcare system place on options for recommendations and shares opinions with other team members before deriving a final recommendation. (Jette et al., 2003, p.229)

Jette et al. (2003) provided detailed information about synthesizing in the decision-making process for physical therapy before administering an intervention method. Barrows (1991) also proposed that the decision-making process should include data collection and synthesizing collected data. Similarly, for SLTs, after data collection and identification of the language problem, the next step is to decide which intervention method to use. Thus, in this section, intervention methods will be introduced.

DLD intervention methods might be seen in a variety of different forms in terms of intervention environment, the policy of the country or institutions, and materials and resources (Law et al. (2003b). This means that interventions may be administered at home, in a clinic or a school, and the duration and the nature of intervention depend on the needs of the child and the perception of SLTs

about the suitability of language intervention methods. Law et al. (2003b) reviewed the literature and found that intervention methods fall under three main umbrella terms: direct-indirect, individual-group and interactive-directive intervention methods. Exploring the mainstream methods that SLTs decide to follow is crucial to understand their perception of ways to approach children who have a developmental language disorder.

2.6.1 Direct – Indirect Intervention Method

While it is possible for therapists and professionals to administer an intervention method directly, it can also be applied indirectly in a home environment by parents who are trained by therapists (Law et al., 2003b). While direct intervention includes therapies and activities that are carried out by professionals, indirect intervention is a more naturalistic approach, which facilitates and extends children's communication with an adult within the children's natural environment. Moreover, some SLTs "may use an eclectic approach and adapt interventions according to the response of the client" (Law et al., 2003b, p.3) so that in some cases it is possible to see the combination these methods.

However, there are not enough evidence-based studies to guide SLTs in terms of deciding which method is the best for individuals (Franken et al., 2005; Frymark, Venediktov, & Wang, 2010). Frymark et al. (2010) compared the effectiveness of direct versus indirect intervention methods for preschool children with fluency disorders and found that there was not enough evidence to indicate that one was better than the other. It is safe to say that the same

result might be seen in intervention methods for children with DLD, as choosing which one to use (direct or indirect) depends on the needs of the individual child. Moreover, Franken et al. (2005) also compared direct and indirect approaches, and concluded that there were no significant differences in terms of children's outcomes. Therefore, it is not an easy task to decide which approach should be used for each individual.

2.6.2 Individual – Group Intervention Method

While individual intervention methods are applied on a one-to-one basis, in group intervention methods the child meets and socialises with his/her peers with the aim of overcoming their issues as a group. As such, there is a big difference in choosing one of these methods, and it is the professional's responsibility to choose the most suitable method for the child. According to Law et al. (2003b), a small number of studies have compared the effectiveness of individual or group intervention methods. Wilcox, Kouri, and Caswell (1991, p.1) examined interventions for preschool children with language delay and found that "children in the classroom intervention condition demonstrated a greater degree of productive use of target words". However, they also noted that there was no difference between the two groups in terms of learning the targeted words.

Another study reported that children's involvement in play sessions with those who have typical language development can provide significant improvement in language-impaired children's language acquisition (Robertson & Weismer, 1997). This means that interactions with peers who are developing normally

can enhance their language skills. This result may suggest administering inclusive intervention methods, rather than individual sessions, or grouping all language impaired children together. As can be seen, there are various intervention methods, and their advantages and disadvantages should be evaluated carefully by SLTs.

2.6.3 Interactive – Directive Method

Interactive and directive intervention methods show very different behavioural strategies. While in a directive intervention method, the process and control of the intervention will be carried out by SLTs; in interactive intervention methods, it is based on creating opportunities for the child to use targeted vocabulary or sentences through natural adult-child interaction. Cole and Dale (1986) compared these two methods in order to assess their effectiveness and found no significant differences between interactive and directive intervention methods for preschool children who have a language delay.

However, interestingly, another study showed that while children who had higher functioning in terms of expressive language but had a learning impairment were more likely to benefit from interactive learning; children with severe expressive difficulty who had normal intelligence benefited more from a directive method (Yoder, Kaiser, & Alpert, 1991). It was also found that encouraging the child to use targeted words related to the child's current activity were likely to have more positive outcomes (Mahoney & Neville-Smith, 1996). However, there is still not enough evidence about how SLTs

should decide which approach to take, so it is important to consider individual needs before administering interactive or directive intervention methods.

In conclusion, there are various types of intervention methods (direct-indirect, group-individual or interactive-directive) for children with DLD. This indicates that:

> There are no universal guidelines on what type of intervention to offer children with language delay or on its timing, nor is there consistent evidence upon which to base a decision, meaning that the decision is often left to individual therapists and services (Law et al., 2003b, p.3).

Hence, it is important to understand how SLTs decide which type of intervention methods to administer.

2.7 Conclusion and Research Question

One of the aspects of speech and language therapy that requires in-depth research is to explore factors that lead SLTs to administer an intervention method for children with DLD. While there is a considerable amount of research in other disciplines (such as nursing) about the importance of the decision-making process, speech and language therapy is neglected by such research interest.

As I stated in section 1.3, my previous internships during university education and later work experiences led me to learn more about speech and language therapies, but the main question in my mind arose when I was writing my specialist essay for my MSc degree. The literature that I was engaged with

showed that there were various intervention practices in speech and language therapy for similar cases. I wondered how an SLT comes to a decision? Another important reason to conduct such a study is that DLD has a big impact on children's life. Vygotsky (1978b) defines language as the tool of tools, an important part of a human being, as it allows for interactions with the outside world and the sharing of feelings and thoughts with others. As language is a priceless skill, the lack of it has a dramatic effect on the lives of human beings. As I stated before, issues in language development might affect children academically (Bickford-Smith et al., 2005), socially and emotionally (Law, Garrett, & Nye, 2003a).

Regarding the importance of SLTs' decision-making processes, in Chapter 2, I first have reviewed the literature that considers the theories of the origins of language in order to understand what causes deficits in language, and how these deficits may be addressed. It can be said that language intervention methods have been developed in accordance with theories that address the nature of language acquisition, so it was important to examine the principle theories of the origins of language. Secondly, I have discussed the literature about decision theories and the decision-making processes of SLTs. Then, the complexity of the decision making process in speech-language therapy is presented. Finally, as this research has the specific aim of focusing on DLD, the characteristics and nature of DLD were presented. Lastly, intervention methods for children with DLD were presented.

As it is evident in the literature, the process of choosing and administering an intervention method is a complex task, and there are many aspects to consider when evaluating the approach of SLTs in choosing a suitable intervention. As discussed in sections 2.3, there are various theories about decision making and the origin of language, and as language intervention methods are based on these theories, it requires language therapists to make distinctive choices between the intervention methods. Additionally, it was introduced in section 2.5 that children with DLD have various issues and needs in terms of improving their language abilities, so this brings about another aspect to be considered by language therapists. In light of the literature review, this research will try to answer the following research question:

How do Turkish SLTs make intervention decisions for children who have developmental language disorder?

Hence, it is believed that asking the above research question will allow the exploration of this process in a detailed way, which then could make contributions to academic literature, as there is a lack of research that specifically considers SLTs in relation to developmental language disorders (Law et al, 2003).

CHAPTER 3. RESEARCH METHODOLOGY

Introduction

In this section, the research paradigm and the theoretical perspective of the study will be introduced. Firstly, what is epistemology, and how a researcher's belief system and theoretical perspective affects research will be presented in section 3.1. I will then discuss four main paradigms, which are positivist, interpretivist (also known as anti-positivism), pragmatism and critical research in section 3.2. I will introduce how and why the interpretivist paradigm has been chosen as the foundation of this research, in accordance with the research question that this study proposed. I will later discuss quantitative and qualitative research designs and the reasons for choosing qualitative research design in section 3.3. Then, I will introduce possible research designs and why case study approach was chosen and how it matches with the aim of this study in section 3.3.3 Then, the sampling procedure (section 3.4) and data collection methods (3.5) will be introduced. In section 3.6, how the pilot study was conducted will be explained. Finally, data analysis (3.7) and ethical considerations (3.8) will be introduced.

3.1 Epistemology and Researcher's Beliefs

In research, there are various steps that require a researcher to justify and evaluate his/her findings, in a manner which enables the reader to see on what bases the knowledge is generated and presented. The source of knowledge and how one can reach it have been discussed by many scholars through the ages, because human beings must prove what they say is true by justifying their

methods and methodology. The process of this justification of knowledge is the main concern of epistemology and ontology.

Hence, in this section, the importance of ontology and epistemology and their impact on research will be presented. As Carter and Little (2007) highlighted, there are three basic elements of research: epistemology, methodology and method. These elements are crucial for "planning, implementing, and evaluating the quality of qualitative research" (Carter & Little, p.1316), but among these elements "epistemology is foundational and will directly influence methods and methodology" (Carter & Little, p.1325). There are three different parts, which will be introduced in this section: first, how an epistemological stance influences research, second, the impact of the perspective of the researcher, and third, how the method and methodology of research are affected by individual beliefs.

3.1.1 How do Beliefs Affect or Mediate the Research?

The epistemological side of research is considered crucial, because this affects what kinds of methods will be used to uncover specific knowledge, and how this will be interpreted and presented as justified outcomes. Researchers need to take an epistemological stance to obtain knowledge of the world. If one does not have any consistent epistemological position, one cannot distinguish truth from error. Additionally, without epistemology, a researcher cannot choose the most effective and correct research design. It can be said that "personal epistemological beliefs reflect an individual's view about what knowledge is, how knowledge is gained, and the degree of certainty with which knowledge

can be held" (Brownlee & Berthelsen, 2006, p.1). Hence it is important to understand how epistemological beliefs emerged and how these beliefs can affect research.

One of the studies which introduced epistemological beliefs were conducted by (Perry, 1970). Perry (1970) conducted long-term research with university students during the 1950s-1960s, to find an answer to the question of how university students come to learn knowledge. He found that students have nine different beliefs about knowledge, which can be grouped under three different categories. The first one is dualism modified, the second is relativism discovered and the third is commitments in relativism (Perry, 1985). After Perry's study, other researchers also explored the beliefs about knowledge, and found parallel results with Perry's categories (Belenky, Clinchy, Goldberger, & Tarule, 1986; King & Kitchener, 1994). According to these studies, epistemology has an important role in terms of understanding how individual beliefs are related to the individual's view of reality, and how these beliefs are constructed in a social context.

Although various epistemologies have been identified, it could be said that basic epistemological beliefs are social constructivism (interpretivism), social realism and positivism (Cohen, Manion, & Morrison, 2013). While positivists view reality as objective, universal, and the same all over the world, according to social realists, reality can be obtained through people's viewpoints and empirical means. When it comes to the constructivist view, knowledge is neither homogeneous nor absolute; it is constructed by human beings and it

exists in different forms according to different people's interpretations (Roots, 2007). Constructivists claim that reality can be different and changeable from person to person, in terms of an individual's understanding of the world, their experience and culture (Berger & Luckmann, 1966). Therefore, the reality is subjective, and it does not have to be shared by all humans. Individual reality is true for the individual person, as their truth depends on their experience. Each human being, therefore, has a unique and different interpretation of reality.

There are some critical factors that affect our view of the world. According to Roots (2007, p.24), "gender, age, ethnicity and different cultural norms of each society" havea significant impact on our understanding of the reality. He gave an example to clarify this claim: in Asia, students are more passive than those who live in western countries. Asian students see their teacher as very knowledgeable, so asking a question of their teacher to clarify something may be seen as disrespectful. It may mean that the teacher did not explain well enough and therefore he/she is not competent. Conversely, in western schools, students are encouraged to ask questions and join discussions, and so different perspectives on a topic are welcome and have critical importance in the western education system. Hence, if a researcher wants to explore how students' activeness in the classroom affects the quality of education, s/he will likely to have very different findings between Asian and western countries. In the same way, the same research's outcomes would be interpreted differently depending on which culture the researcher is coming from.

Therefore, it is possible to say that our view of the world and perception of reality is shaped by socio-cultural values, and epistemological stances play a critical role in terms of accessing accurate knowledge. Furthermore, Gettier (1963) critiqued that one's belief might be accurate and justified, but it may not be counted as knowledge. He illustrates as follows: we assume that two men will apply for a job. Man A has a strong belief that Man B will get the job, and additionally, Man A knows that Man B has 10 coins in his pocket. Thus, Man A will think that the one who will get the job has 10 coins in his pocket. However, Man A got the job, and then found out that he also has 10 coins in his pocket. In this situation, the hypothesis "The man who will get the job has 10 coins in his pocket" (Gettier, 1963, p.2) is accurate and justified, however, the knowledge the hypothesis is based on is not true. Therefore, it is possible to say that the researcher's beliefs have an important effect on accessing accuracy, but there will always be some suspicion over whether s/he properly justified what they saw and understood.

3.1.2 The Impact of the Theoretical Perspective of the Researcher

Identifying a suitable theory is vital, as how the researcher will collect data and how this data will be presented depends on the theoretical perspective of the researcher. Thus, in this section, the perspective of the researcher and its role in terms of how it affects research design and methodology will be presented. Defining the aims of the researcher is crucial, as the researcher should consider how s/he can find answers to these questions. Then there is the question of which methods and methodology would be suitable to accomplish such aims. This leads the researcher to think about his or her theoretical perspective, so

the starting point should be the questions themselves, rather than how in general the researcher views the world, as Crotty (1998, p.13) expresses it:

> Not too many of us embark on a piece of social research with epistemology as our starting point. 'I am a constructionist. Therefore, I will investigate ...' Hardly. We typically start with a real-life issue that needs to be addressed, a problem that needs to be solved, and a question that needs to be answered. We plan our research in terms of that issue or problem or question. What, we go on to ask, are the further issues, problems or questions implicit in the one we start with? What, then, is the aim and what are the objectives of our research? What strategy seems likely to provide what we are looking for? What does that strategy direct us to do to achieve our aims and objectives? In this way, our research question, incorporating the purposes of our research, leads us to methodology and methods

However, it should be noted that a researcher's view of the world will inevitably affect the chosen methods to answer a question. For instance, a researcher may choose the method of the survey to investigate whether or not parents find language intervention methods helpful, whereas another researcher may choose to conduct interviews with parents to understand their views about intervention methods. Hence although the starting point of choosing the method and methodology of research depends on questions, the theoretical perspective of the researcher has also a crucial impact on these decisions.

Regarding the research questions stated above, it may not be possible to answer these questions with a positivist belief, since each language therapist, each psychologist, and other related professionals may have different knowledge and experience about intervention methods. Each of them may apply different intervention methods for children who have the same language disorder. For example, to decrease the problems of children with DLD, while some of the professionals apply one-to-one intervention therapies, others may do group

therapies; whereas some of them apply pre-planned therapies, some others apply reorganized therapies; whilst some of them apply direct intervention, some others apply indirect intervention. Therefore, there is no one universal truth and reality to solve DLD according to professionals. Furthermore, Bracken (2010, p.3) stated that positivist epistemology fails to show differences between "knowledge about humans and knowledge about things". Thus, it is not possible to use the same methods in natural and social science, as each human shows differences in different contexts.

Constructivists, on the other hand, underlined that constructivism can provide a deeper understanding of social phenomena (Ladson-Billings, 2003). In constructivism, it is believed that research can be affected by various factors because it depends on the situation (Kim, 2003a), which suggest that exploring social phenomena is complex and requires in-depth explorations. Hence as Gage (1989, p.5) states "the effects on people's actions of their interpretation of their world create the possibility that people may differ in their responses to the same or similar situations". As a result, the constructivist approach can be appropriate to answer the questions of this study, since according to the professionals there is no one universal truth to solve children's language issues. After determining the theoretical side of the research, it is important to comprehend the relationship between methodology, method and epistemology, so in the next section this importance will be discussed and a choice of methodology, methods of the present study will be presented.

3.1.3 The Impact of Epistemology on Methodology and Methods

Epistemological beliefs can help the researcher to follow the sort of procedure or strategy that is needed to find the answer to research questions. According to Carter and Little (2007, p. 1316), our methodological choices and axiology are guided by our epistemology, and "methodology shapes and [is] shaped by research objectives, questions, and study design". The methodology is a tool to justify, explain and describe the methods of research (Kaplan, 1964). Thus, it could be said that methodology is a guide for researchers to analyse and evaluate the methods of study. Then, "procedures, tools and techniques" (Schwandt, 2001, p. 158) or "techniques for gathering evidence" (Harding, 1987, p.2) can be determined as a method of research. Therefore, it is possible to say that while methodology provides the justification of the method, the method can be thought as the practical part of the study. In addition, as stated before, individual epistemological values have an impact on choosing the methods of the research, because our belief about how to acquire reality and knowledge affects our choices. This situation can directly affect our method and research design.

Research methods consist of the practical parts of the study such as data collection, data analysis and reporting. The method of study which has been formed in accordance with research questions and epistemological beliefs of the researcher can directly affect the results of the study (Carter & Little, 2007). For example, conducting focus-group interviews or individual interviews, observation, or collection of documents will provide different sorts of data.

Thus, different investigations of the same event with different data collection can lead to different results from the same event. Moreover, according to Carter & Little, (2007, p.1316) epistemology shows three basic impacts on the method of research "particularly in the participant-researcher relationship, measures of research quality, and form, voice, and representation in analysis and writing" so epistemological beliefs will inevitably affect data collection process. For instance, while a researcher sees participants as active, and interacts with them freely during data collection, another researcher might want to stay passive to see the world through his/her participants' eyes. Another example is that while some researchers use multiple sources to prove the accuracy of the research, some others may use it to produce more data. Also, whilst some researchers report their own experiences, since they see themselves as a part of the study, others may find this unscientific and dangerous, so they try to keep their conceptions away from the data (*ibid*).

Epistemology has critical importance in terms of research design and the final results of the research. Epistemology shapes the methodology of research; methodology justifies the method of study, and the method is the action part of the research; finally, knowledge can be obtained through a good justification of these steps.

3.2 Research Paradigm

A paradigm acts as a guide for each action of a researcher throughout the research process. It is a belief system that helps the researcher to choose the methods of data collection, analysis and presentation (O'donoghue, 2006). A research paradigm "is something that reaches into the assumptions about reality that we bring to our work" (Crotty, 1998, p.2). The choice of research paradigm depends on the focus of the research, and each paradigm has different advantages and challenges (Gage, 1989). The outcome of the research is likely to be affected by the researcher's belief system. Therefore, researchers need to "look at how the people perceive their world (individually or groups) and try to understand the phenomena through the meanings and values that the people assign to them" (Oates, 2005, p.292). Hence, the dominant paradigms in academia will be considered in relation to the research question, and one of them will be adopted by the present study.

Table 3: Selection of research paradigms and research methods (Dash, 2005)

Research paradigms	Research approach	Research methods	Examples
Positivism	Quantitative	Surveys: longitudinal, cross-sectional, correlational; experimental, and quasi-experimental and ex-post facto research	- Attitude of distance learners towards online based education - Relationship between students' motivation and their academic achievement. - Effect of intelligence on the academic performances of primary school learners
Anti-positivism	Qualitative	Biographical; Phenomenological; Ethnographical; case study	- A study of autobiography of a great statesman. - A study of dropout among the female students - A case study of a open distance learning Institution in a country.
Critical theory	Critical and action-oriented	Ideology critique; action research	- A study of development of education during the British rule in India - Absenteism among standard five students of a primary school

As can be seen in the Table3, while the positivist paradigm takes a quantitative approach and employs statistical methods for data collection and analysis, the interpretive paradigm takes a qualitative approach and deals with specific cases in a detailed way. On the other hand, the critical paradigm is action-oriented and is more concerned with social change and improvement.

3.2.1 Positivism

According to the positivist paradigm, truth is objective. It is based on facts which should themselves be based on evidence that can be obtained by observation and experiment. Oates (2005) underlined the importance of evidence when exploring a fact which cannot be interpreted through human judgement. Additionally, Guba and Lincoln (1994b) addressed the ontology of positivist approaches, as reality is structured and based on unchangeable laws that are free from researchers' values. Kim (2003b, p.11) also suggested that "social reality exists independent of people and can be objectively investigated by employing valid and reliable measurements". This means that researchers with a positivistic view of the world should be value-free, i.e. they should not involve their feelings, pre-conceptions and interpretations when they do research.

From this perspective, Kim (2003, p.11) pointed out that in positivistic research, "empirical methods for the process of verification should be employed because these methods are objective and do not influence what is being investigated". For this reason, positivist researchers should follow highly systematic procedures; these are categorized under quantitative methods.

There are some limitations identified in the positivist paradigm: first, there might be missing variables in the data which would change the findings and influence the research outcomes (Kim, 2003); second, the truth in a positivist paradigm is contradictory for social sciences because it generally depends on "probabilistic inferences of the truth" (Kim, 2003, p.12); third, social science includes human experiences and values, so it is a subjective area rather than objective. Conducting an experiment to understand people's values and experiences can be very difficult, and in some cases impossible.

There are also some researchers who criticize the positivistic paradigm as it is inadequate to explain social phenomena. For example, Dash (2005) criticized the positivistic paradigm because it does not consider the importance of individual's subjective states, as human beings are treated as objects without considering their independence and individualism in understanding and interpreting social reality. This means that it is not possible to use the same methods in natural and social sciences, as each human shows some difference in different contexts.

Since the aim of this research is to examine the decision-making processes of Turkish SLTs over intervention methods for children with DLD, it would be difficult to comprehend such processes by taking a positivistic view, because human beings are complex, and they may not be understandable without interpretation by both the researcher and participant about how their actions take place in the real world. Therefore, the positivistic paradigm is not suggested for the present study.

3.2.2 Critical Research

According to the critical paradigm, truth is subjective, and social, economic and political situations have a significant impact on society in terms of perceptions of truth. For instance, unbalanced power in society can enhance the risk of creating inequitable social classes (Gage, 1989). Because of this inequity, humans may want to modify the social system. According to critical researchers, a researcher should have a social stance and take responsibility for social change in order to provide a better environment for society (Kim, 2003b). This means that the aim of critical research is to change the world for the good, and try to perform in the best way to enhance facilities in every phase of life. Mackenzie and Knipe (2006) suggested that the purpose of critical theorists is to remove inequity issues in society, such as by improving facilities for disabled people, solving gender-related problems and protecting the rights of marginalized groups.

Moreover, according to Wardlow (1989, p.4), critical researchers should have "an understanding of our society and its institutions, through which the individual can and will decide to act upon the injustices of our society in order to change them". Hence, it is possible to say that critical researchers should consider and examine the available situations by regarding the social, political factors of the context, and can offer changes within society for the better.

There is a challenge in the critical research paradigm as the "critical science approach also advocates a process of research that yields social change rather than a pure knowledge generation" (Kim, 2003, p.13). Thus, there is an issue

about whether this paradigm focuses specifically on knowledge production. Nevertheless, critical research gives importance to awareness of values and beliefs. Wardlow (1989) pointed out that understanding the need for beliefs and values can help the researcher to produce knowledge which will help him/her to create social change. The aim of this research is not to make changes in SLTs' decision-making processes, but rather to understand and generate knowledge from it, and so this paradigm is not considered here.

3.2.3 Pragmatism

Although interpretivism and positivism have been dominating the researchers' main stance in academic studies, pragmatism also offers an important insight into scientific research. The main concern of pragmatism is stated to be action and change. Blumer (1969, p.71) posits that:

> …the essence of society lies in an ongoing process of action—not in a posited structure of relations. Without action, any structure of relations between people is meaningless. To be understood, a society must be seen and grasped in terms of the action that comprises it.

Pragmatism has similar characteristics to interpretivism. However, when talking about qualitative research, interpretivism is seen as one of the dominant approaches that researchers take. For instance, Eileen (2001, p.7) says that "interpretivism is the lens most frequently influencing the choice of qualitative methods". However, Myers and Avison (2002, p.5) underline that: "It should be clear from above that the word 'qualitative' is not a synonym for 'interpretive'. Qualitative research may or not be interpretive, depending on the underlying philosophical assumptions of the researcher."

Hence, pragmatism has also found a place in qualitative research, particularly in studies where researchers design intervention and evaluate whether an improvement is seen. While interpretivism aims at understanding a phenomenon through interpretation, pragmatism's purpose is to asses a phenomenon, and change it through action. The inquiry might be claimed to be the main methodological approach in pragmatism. Interpretivism, on the other hand, is associated with field study (Klein & Myers, 1999). In pragmatism, the researcher's role is to promote and encourage change, so intervention is designed the improve the situation. In interpretivism, however, the researcher's job is to understand and interpret the researched topic through the participants' eyes.

Pragmatism might be an ideal approach, if the aim of this study would be to improve Turkish SLTs' decision-making process. Thus, after understanding how the SLTs make decisions, an intervention could be designed to improve the participants' reasoning process and assess whether the intervention has any positive affect on intervention methods. However, this research aims at understanding how Turkish SLTs make decisions, so there is no intention to take any action and change the SLTs' reasoning process. When considering this, there has been no research regarding SLTs' clinical reasoning, and so understanding such processes is an important focus. As Sun Yat Sen (1866–1925) said "To understand is hard. Once one understands, the action is easy".

3.2.4 Interpretivism (Anti-Positivism)

In contrast to the positivistic paradigm, interpretivists reject the idea that truth is the same for everyone in a context and will be seen in exactly the same way at different times. According to this paradigm, truth is subjective, related to individuals' experiences and their perceptions about the world.

Cohen, Manion, and Morrison (2000) stated that reality is complex and includes different interpretations because reality can be influenced by various factors. Researchers play an important role in the process of research as (Denzin & Lincoln, 2005, p.22) underlined, by stating that interpretivist research is "guided by the researcher's set of beliefs and feelings about the world and how it should be understood and studied". This means that truth primarily depends on the researcher's experiences, background and relationship with participants of the study. This idea is also supported by Weber (2004) when he stated that reality cannot be separated from the one who does the research. Furthermore, Guba and Lincoln (1994a) pointed out that meaning can be constructed through interaction between the researcher and the participants. Thus, all these factors show that constructing meaning from social reality is complicated and needs to be evaluated in relation to various factors such as context, culture, the participant's background, the researcher's knowledge and his/her role in the research.

As the researcher has an important role in every process of the research, his/her view about the world and values influence the study's methodology and research design. Interpretivist researchers tend to use qualitative methods,

which are developed to understand complex social phenomena in a more detailed way, even though quantitative methods can also be used to support the qualitative data (Lather, 2006; Weber, 2004). As understanding human beings' actions is a complex task and includes many variables, the most appropriate data collection and analysis methods should be employed. These should then allow the researcher to consider different types of variables, especially the different experiences and ideas of the participants in different contexts. Finding meaning in one situation or event that includes human beings depends on a successful data generation process, which then needs a careful and close analysis through the researcher's interpretations, with the aid of a suitable theory or theories.

As stated, the researchers' values and conceptions about the study affect the outcome of the research. As such, several criticisms have been levelled at the interpretivist paradigm. It is claimed that researchers' perceptions, biases, backgrounds and other factors related to him/her may affect the method of data collection and evaluation of the data; this would result in having a biased outcome (Kim, 2003b). In this situation, it is possible to say that research is not reliable. Nevertheless, Weber (2004) posited that researchers can overcome this difficulty through evaluation of knowledge with credibility, transferability, dependability and conformability, all of which should be well justified to ensure the validity and reliability of the research design.

My position in this study is that the interpretivist paradigm seems to be the most suitable approach, since the aim of this study is to understand the

professionals' decision-making processes and hence is about perceptions (i.e. interpretations). According to Dash (2005, p.1), "while positivism stands for objectivity, measurability, predictability, controllability and constructs laws and rules of human behaviour, non-positivism essentially emphasizes understanding and interpretation of phenomena and making meaning out of this process". Thus, interpretivism will allow making sensible judgements about professional's decision-making processes in a detailed way.

3.2.5 Interpretivist Research Paradigm and SLTs' Decision-Making Processes in Language Intervention Methods

In the previous sections, four paradigms—namely positivist, critical research, pragmatism and interpretivist—were discussed. The interpretivist paradigm was found to be suitable for this research as it helps to answer the proposed research questions. Hence, in this section, a closer examination of the interpretivist paradigm will be made in accordance with the aims of this research.

The goal of an interpretivist study is to understand social phenomena through the perspective of the participants within their environment. It is a meaning-making process that requires the researcher to construct knowledge about complex situations. As the aim of this study is to understand the decision-making processes of SLTs, the interpretivist paradigm will be employed because it "discovers the specific ways in which local and non-local forms of social organization and culture relate to the activities of specific persons in making choices and conducting social action together" (Erickson, 1986, p.36).

Although the children in this study have similar issues, SLTs need to consider which intervention method should be administered, and in what ways, because there are various factors, such as children's family life, culture and age that can have an important impact on their DLD. Also, there are other factors, such as the professional's background, knowledge and views, that influence the decision-making process. Hence, it can be claimed that deciding what kind of intervention method is suitable for children who have DLD is not a straightforward task.

Due to its complexity, a close examination of the decision-making process is needed. Parallel to the aim of this research, "interpretive research is appropriate when one wants to find out more about certain structures of experience, the meaning-perspectives of the actors, and specific interrelationships between actors and environment" (Vrasidas, 2001, p.8). According to Gage (1989, p.5), "the effects on people's actions of their interpretations of their world create the possibility that people may differ in their responses to the same or similar situations". Thus, the interpretivist researcher should be aware that examining an event can provide a variety of different meanings.

In the present study, it can be claimed that each SLT may have different knowledge and experience about intervention methods, which may lead them to administer different intervention methods for children who have a similar language disorder. For example, while some SLTs may administer one-to-one intervention therapies, others may do group therapies; where some administer pre-planned therapies, others reorganise their therapies during the session;

whilst some administer direct intervention, others apply indirect intervention, and some others do mixed approaches. As can be seen, there is no single universal truth and reality to solve the issue of DLD. Vrasidas (2001, p.7) pointed out that "an interpretivist researcher can never get to the one complete "truth" and obtain a complete understanding of the setting she is studying". Hence, in my study, the interpretivist paradigm will be used in order to identify multiple meanings from my participants' views, interpretations and actions.

In speech and language studies, there are many reasons for the increase in the employment of the interpretivist paradigm. For instance, Damico and Simmons-Mackie (2003) underlined five important factors that explain why the interpretivist approach would be useful in speech and language research. First, as language acquisition is a complex process, qualitative methodologies can help the researcher to "richly describe phenomena within authentic contexts and fill a void with respect to the description and interpretation of complexity in communication disorders" (Damico & Simmons-Mackie, 2003, p.139). In the cases that this study will explore, there will be a variety of elements that need to be discussed and evaluated by the researcher. These include the professionals' background, education level, culture and factors related to the children and their families.

Second, there are studies that considered the quality of clinical services and their outcomes in speech and language therapy. This requires asking various "why and how" research questions that explore social, cultural and contextual aspects (Damico & Simmons-Mackie, 2003). The present study is one of them,

as I plan to explore the decision-making process of human beings which is affected by many variables and requires the researcher to interpret the participants' actions and words in a systematic and detailed way.

Third, there are various factors that cause language disorder, such as having genetic defects or socio-economic problems (Damico & Simmons-Mackie, 2003). Hence, examining disorders from only one aspect—biological, cognitive or social—will be insufficient (Morton & Frith, 1995). As this study aims to understand this complex process, factors such as the context of the treatment, the background and knowledge of the SLTs should be well understood. To do this, as a researcher I need to employ various suitable data collection and analysis methods. Therefore, as qualitative research history is rich and has been used for a long time by various disciplines, it appears possible to adapt the methods and methodology of the other studies and modify them for the purpose of the present study's aims (Damico & Simmons-Mackie, 2003).

Fourth, as stated before, although the SLTs' qualifications and background are important in the decision-making process, the background, culture and socio-economic status of parents and children are also crucial in making decisions about which method should be applied and how (Damico & Simmons-Mackie, 2003). Hence, in the present study, a qualitative approach is considered suitable to understand whether the SLTs take these factors into account and if they do, then how these factors affect their decision-making processes.

Lastly, it is considered that there should not be a big gap between researchers and SLTs in terms of recognising the challenges in practice and theory of speech and language development (Damico & Simmons-Mackie, 2003). Hence, only applying tests to children and distributing questionnaires may not provide a strong link between theory and practice. It is therefore suggested that empirical research is needed which would allow the researcher to engage with the participants, their context and culture. This is another reason that leads this study to take an interpretivist paradigm.

In conclusion, the interpretivist paradigm will be the foundation of this research, so data generation and analysis methods will be chosen in accordance with this paradigm's belief system.

3.3 Research Design

3.3.1 Introduction

In the previous section, three main paradigms were discussed, and the interpretivist approach was chosen. Related to the questions of this study and the paradigm chosen, it could be said that this study leans towards a qualitative approach, which will allow an in-depth understanding of the questions that this study has proposed.

In this section, what research design is, and the choices of research design approaches will be discussed. In accordance with the aims and the research question, the rationale for a qualitative, case study approach will be presented.

After discussing the case study approach, other qualitative research design choices will be discussed. Lastly, to answer the questions of this study, the most appropriate data collection methods and data analysis process will be introduced.

3.3.2 What is Research Design?

Research design is described as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings" (Burns & Grove, 2003, p. 195). Polit and Hungler (1994) stated that research designs set out how the research will be carried out and help the researchers to find the answers to their research questions. Hence, it could be said that before collecting and analysing their data, researchers need a design in order to evaluate how well they can explore the aims of the research. De Vaus (2001) illustrated this in the following way: before constructing a building, architects must know what kind of building will be built so that they can order necessary materials and start the construction. De Vaus stated that, in the same way, social research requires a plan and design, because methods of data collection, such as observation, interview and/or questionnaire, will be selected in accordance with the research aims. If research design is not established at the beginning of the study, the outcomes of the study may not be valuable and reliable and, most importantly, the research questions will not be able to be answered.

It is suggested that "research designs are types of inquiry within qualitative, quantitative, and mixed method approaches that provide specific direction for procedures in a research design" (Creswell, 2013, p.5). These approaches are

called “strategies of inquiry” by N. K. Denzin and Lincoln (2008) and can be seen in Table 4.

Table 4: Research design approaches in quantitative, qualitative and mixed method (Creswell, 2013, p.5)

Quantitative	Qualitative	Mixed Methods
• Experimental designs • Nonexperimental designs, such as surveys	• Narrative research • Phenomenology • Grounded theory • Ethnographies • Case study	• Convergent • Explanatory sequential • Exploratory sequential • Transformative, embedded, or multiphase

In the next section, quantitative and qualitative research design approaches will be discussed and the reasons for considering qualitative research design will be introduced.

3.3.2.1 Quantitative and Qualitative Research

Quantitative and qualitative research approaches have a number of differences, but “each approach has its strengths and weaknesses and each is particularly suitable for a particular context” (Bell & Waters, 2014, p.9). While quantitative research aspires to be objective, includes a large number of participants, requires statistical analysis and is a suitable means to evaluate the cause and effect relationship between variables, a qualitative study is subjective, generally includes a small number of focus groups or cases and provides an in-depth understanding of the context. Anderson, Herr, and Nihlen (2007, p.4) pointed out that, “which methods to choose will depend on the nature of the project, the type of information needed, the context of the study and the availability of resources (time, money, and human)”. When considering the

nature, context and type of information needed for this study, it is necessary to lean towards a qualitative approach.

While quantitative study examines a large but superficial data set, a qualitative-dominated approach provides a deep understanding of the phenomena. Since this study seeks to examine the SLTs' decision-making processes, one of the qualitative research designs could be helpful in terms of answering my research questions. Therefore, the intent of this section is to provide the basic characteristics of the qualitative approach and discuss the reasons why a qualitative approach best meets the needs of this study.

Qualitative research is used to explore feelings, perspectives and behaviours of people. Burns and Grove (2003, p.19) explained qualitative research as "a subjective approach which is used to describe life experiences and situations to give them meaning". Denzin & Lincoln (2005, p.3) described a qualitative study in the following way:

> Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recording, and memos to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them.

In this definition, the authors used words such as "interpretivist" and "naturalistic approach" to emphasize the importance of subjectivity in qualitative studies. Creswell (2012) proposed other characteristics of qualitative research. First, qualitative researchers tend to gather their data in a

natural setting, rather than conducting their research in a lab. Second, researchers collect their own data through interviews, observations or by interpreting documents, so the data is gathered directly by the researcher instead of relying on instruments such as questionnaires. Third, qualitative researchers generally utilise different sorts of data collection methods within one study, such as interviews, observations and documentation rather than employing one method for the whole process. Fourth, qualitative research requires an inductive, recursive and interactive process for data analysis. This means that researchers establish their process and themes as an inductive process and they can shape their themes until they have a comprehensive set. Fifth, in a qualitative approach, researchers try to understand the participants' meanings and their subjective views rather than being objective. Sixth, the qualitative research process is emergent, which means that the process of a study may be modified after a researcher starts the data collection process; for instance, research questions may change, the data collection process might be modified, and the studied area or person might shift. Finally, a qualitative study reflects the researcher's interpretation of participants' views or behaviours, so the researcher plays an active role in the process of analysing the data (*ibid*).

In the light of these factors, the aims of this study intersect with the principles of qualitative research, because this study will be conducted in natural places, i.e. in clinics where the SLTs decide which intervention methods are to be applied to children with DLD. As Creswell (2012, p.40) states, "we cannot separate what people say from the context in which they say it". A qualitative study can allow us to see the relationships and associations in context. Also,

the data collection processes will be pursued by myself, and different data collection methods will be used. I will focus on SLTs' perspectives, subjective ideas and the process of choosing intervention methods; the research process then may be adjusted if needed. Additionally, rather than focusing on cause and effect relationships, my aim is to explore the decision-making processes of SLTs from different perspectives and identify the complex interactions of factors within these.

In summary, I plan to take a qualitative approach, because the proposed questions require a deep understanding of how and why SLTs decide to administer an intervention method for children, all of whom have DLD. There are different research designs within the qualitative approach so that in the next section I will discuss which research design would be suitable for the aims of this study.

3.3.2.2 Qualitative Research Design

There are variety of different qualitative research designs and which one to choose depends on the nature and needs of the study and research questions. Some of the most frequently used qualitative research designs are stated as "case study, conversation analysis, ethnography and grounded theory" (Damico & Simmons-Mackie, 2003, p.133). I begin by presenting a brief review of qualitative research designs and justifying my research design choice that distinguishes itself from other approaches. Secondly, I will discuss the suitability of the chosen research design approach to this research.

Conversation Analysis

Conversation analysis allows for the explanation of the complexities of conversations during social interactions (Bell, 2014). This means that although everybody might know what is happening during a conversation, nobody may be able to explain why, so that conversation analysis can help the researcher to understand this complexity. Additionally, Have (2007, p.4) stated that "Conversation analysis is involved in the study of the orders of the talk-in-interaction, whatever it's character or setting". Therefore, it could be said that conversation analysis provides the researcher with the opportunity to investigate what participants said, why and how it was said.

Although conversation analysis would give new insights about how professionals build a conversation with children and parents in the process of determining the type of intervention method, this research design is not considered as suitable for answering the questions of this study, because the aim of this study is not to explore the usage of language.

Ethnographic Approach

The ethnographic approach was founded by anthropologists, because it is used to study one group, society, culture or some particular aspects of these groups (Bell, 2014). The ethnographic approach generally depends on observation methods; researchers may observe the participants as an outsider, or they can integrate themselves into the society to obtain information as an insider. Researcher's role is to enter in the setting and collect almost everything rather than having a specific focus. This approach allows researchers to share the

experiences of the participants and helps to understand them in a detailed way. In this way, ethnography helps researchers to observe or interact with their participants in order to understand their environment.

There are some issues with this approach: time limitation and generalisation (Bell, 2014). Obtaining consent for participants can be difficult, and doing observation takes a long time. Additionally, this method requires a considerable amount of time. Also, if the researcher examines one particular small group in a detailed way, this does not provide sufficient data for generalisation; however, it should be noted that generalisation is already not the main concern in ethnography.

Grounded Theory

Although most of the research designs generally depend on a literature review which then leads to setting up a hypothesis, grounded theory research design generally begins with a question or data collection (Allan, 2003). Glaser and Strauss (1967), who are the founders of this theory, stated that grounded theory design does not include any preconceived hypothesis or theory. Hence, data is the most important source for generating a theory, which is then developed with more data that is collected from different contexts about the same phenomena. Although the grounded theory may be considered for this study to find new insights about how the decision-making processes of SLTs works, applying the grounded theory approach for the whole process requires a great deal of time that the duration of this Ph.D. degree might not fulfil. Also, in

grounded theory, it is suggested that research should start without a literature review. However, in this study, a literature review was conducted to be able to better understand existing studies and their outcomes. Reviewing the literature also helped to create the interview questions that better address the proposed research question. Although the grounded theory approach might not be employed for the whole research process, its core perspective, which is to conduct a data-driven research approach, might be adapted for the data analysis process. This will be discussed in 3.7.

Narrative Inquiry

Narrative inquiry involves the stories, which depend on the participants' interpretation of personal experience. Narrative inquiry is a design that "can involve reflective autobiography, life story or inclusion of excerpts from participants' stories to illustrate a theme developed by the researcher" (Gray, 1998, p. 21). This approach can be useful for those who want to examine the impact of social structures on an individual. As there is no such aim in this study, this research design was not considered.

3.3.3 **The Choice of a Case Study Research Design for the Turkish Context**

Case study design can be used when research questions include *how* and *why* questions (Yin, 2003). This shows that the goal of a case study is to understand the way things happen (how) and the reasons behind what happens (why).
A researcher should be able to use various information sources to understand a case or multiple cases in a detailed and focused way.

The knowledge acquired from a case study is different from that gained through other approaches (Stake, 1981). First, case studies provide more concrete knowledge rather than abstract, because they provide more detailed, vivid data about a case. For instance, the details about the context and feelings of participants should be presented in a concrete way in order it to be a case study, rather than giving an abstract and general overview. Second, case studies are more contextual. This means that our experiences, feelings and judgements might depend on a context, culture and the time that the study is undertaken, so that the case study aims at understanding this complex phenomenon within its own conditions. Then, it allows researchers to examine one specific event or problem within its own context, to identify the interaction processes of an event. Damico & Simmons-Mackie (2003, p.134) supported this claim and stated that case studies can be used "when the focus is on a specific 'object' as a case, whether it is a person, a group of people, a topic, a location, or an event". Third, case studies are more developed by the interpretation of the researcher. Researchers bring new data for a case through their own experience, understanding and judgement.

The case study includes some special features, which are stated as "particularistic, descriptive, and heuristic" by Merriam (2014, p.43). 'Particularistic' refers to a case which can be an object, event, phenomenon or situation, and the case itself is essential to get knowledge about the phenomenon. Since the basic aim of a case study is to obtain detailed

knowledge about a phenomenon, the case should be particularistic. Descriptive means that the outcome of a case study should provide a rich and detailed description of the phenomenon (*ibid*). Case studies include a variety of resources and variables and describes their interaction. The 'descriptive' side of a case study also includes the researcher's understanding of the phenomenon, which is an important source to make interpretations about the case.

The 'heuristic' part of a case study, on the other hand, helps researchers to enhance their understanding of the phenomenon. It contributes to the case in terms of bringing them new meaning or increasing the researcher's experience (*ibid*). Hence, the case study requires researchers to capture the complexity of phenomenon to bring them new perceptions and interpretations, because "unknown relationships and variables can be expected to emerge from case studies leading to a rethinking of the phenomenon being studied. Insights into how things get to be the way they are can be expected to result from case studies" (Stake, 1981, p.47). As Merriam and Tisdell (2014) underlines, this study will be able to choose a particular focus and describe it thoroughly, while learning from the specific practices that could make heuristic contributions to the academic literature.

Bearing in mind the aim of this study and the context of the participants, employing the principles of case-study research design will well suit the nature of this research. First, this study is intended to explore a focused process which is the decision-making process of choosing a therapy design for children with a

DLD in Turkey. Narrowing down the focus of the research to a specific process led me to adopt a case-study design approach. It was important for this research to focus on one issue in order to be able to be consistent throughout the study.

Second, the decision-makers – the participants – in this study consisted of a group of Turkish professionals who had graduated from the same university's MSc degree programme to be SLTs in Turkey. The fact that they were trained in the same institution and educated through the same curriculum makes this a good case study which will enable me to carry out detailed research into this group of professionals' decision-making processes regarding the specific language delay case of children with developmental language delay.

Third, there is no research about the decision-making processes of Turkish SLTs reported in the literature to date. This study seeks to fill this gap, but it is a fact that there is no reference point from which this study could benefit. Because this study is the first to address this particular area, it is significant to give priority to the participants' voices and to explore the research topic from a variety of aspects. A case-study research design is predominantly used in such circumstances. It has been suggested that in case-study research design, a phenomenon should be investigated through multiple data-generation methods and that analysis of such data can be performed using an inductive thematic analysis method which allows a data-driven approach to be employed to reveal unique themes about the researched topic.

It should be noted that some of the main principles of the case study show similarities with other research designs, so that it is sometimes difficult to separate a case study approach from others. According to Damico & Simmons-Mackie (2003), this confusion can be seen especially between case studies and biographical or ethnographic studies. Four points distinguish a case study from other research designs: first, a case study must include a clear object and focus; second, after data collection is completed, the data must be specific to the targeted object, person, event or location instead of focusing on diverse objects; third, a case study should be conducted within a short period of time (etc. less than twelve months); and fourth, since a case study has a particular focus and objective, specific outcomes and results should be presented (*ibid*). For instance, Smith et al. (1995) conducted a case study as they focused on one child and their data collection was based on interviews, observations and reports. Also, their study was completed within a short period of time and specific outcomes about ADHD could be derived from the research. Thus, these principals of case studies should be considered in order to distinguish the approach of this study from other inquiries.

Another important aspect of a case-study research design is to determine the unit of analysis (Baxter & Jack, 2008). Baxter and Jack (2008) proposed several questions for better identifying a unit of analysis in a case study, for example, "… do you want to analyse the individual, programme or process?" and "what do the research questions aim to answer?" The answers to such questions will guide this study to perform a more robust analytical process.

Because this study will explore Turkish SLTs' decision-making processes over their intervention choices for children with DLD, the unit of analysis should cover any factors which could affect these processes, such as a professional's background, education, theoretical and practical knowledge, beliefs, diagnosis process, past practices, the institution in which they work, parents of the children and the personality of the children. As factors such as these cannot be determined beforehand, I shall employ various data-generation methods, as suggested by the case-study research design, such as interviews, observation, audio-diary and vignettes (*see* section 3.5), in order to be able to capture as many aspects as possible. Such rich data will enable me to better determine the unit of analysis which could show variations from moment to moment, such that it could be a participant's statement in an interview, a physical or a communicative act which might be captured by me during an observation, an expression from the participants' audio diaries, or a word which might be used in response to the vignettes. The flexibility which the case-study research design provides will enable me, as the researcher, to take a holistic and iterative approach to the research process (particularly for data generation and analysis) rather than following a linear one.

The case study has been criticized, as the outcomes of the study cannot be generalized as Bassey (1981, p. 13) stated "the reliability of a case study is more important than its generalisability". Moreover, according to Yin (1993), a case study provides an opportunity for researchers to apply their theories to real life. Hence, in a case study, there is no effort to make generalisations about a phenomenon, but it can be done if the data allows for such generalisation.

To sum up, the principles of conducting a case study resonate with the aims of this study, because case study is suitable if "researchers are interested in insight, discovery, and interpretation rather than hypothesis testing" (Merriam, 2014, p.42). As this research seeks to answer the question of how Turkish SLTs determine which intervention methods to administer with children who have DLD, and the reasons behind these decisions, taking a case study approach will allow comprehension of this process in a successful manner.

3.4 The Sampling Procedure

Sampling in qualitative research is flexible and depends on various factors. Sample of a study should reflect "…the emergent design of qualitative research, that is, the freedom it affords researchers to develop and adopt methodologies in order to gain new insights into the phenomena being studied" (Gall et al., 1996, p. 231).

There has been an ongoing debate over how many participants are needed for a qualitative case study. Gall et al. (1996) stated that once a researcher gains new insights about his/her research area then s/he can terminate the data collection process. However, the term 'new insights' is quite abstract, and it might be difficult for a novice researcher to understand whether enough data is collected to accomplish this. Data saturation is one of the most important signals that might indicate the generated data could shed light on new insights on the topic (Mason, 2010; Morse, 2000).

Morse (2000) underlines elements that could help a researcher to determine the sample size and whether data saturation is accomplished. These are the quality of the data, the scope of the study, the nature of the topic, the amount of useful information and the number of interviews per participant. As all these factors could change in each study, there is no one true sample size that could reveal new insights in a researched topic (Morse, 2000, Gall et al., 1996). Guest, Bunce, and Johnson (2006) state that when there is no new information nor themes that reveal a different aspect of the researched topic, it means that data is saturated. However, the authors claim that data saturation still remains as an abstract concept. They analysed a data set that was collected from 61 in-depth interviews, to explore how many participants are needed to reveal themes that reflect all participants' opinions about a particular topic. They reported that although the basic ingredients for the main themes are formed with as few as six participants, 12 participants were needed to reach the data saturation (Guest et al., 2006).

As Morse (2000) underlined, a researcher should consider various factors and determine the sample size accordingly. As this research explores a complex decision-making process, a prior determination of sample size was not possible, but I aimed at involving at least 12 participants as Guest, Bunce and Johnson (2006) suggested.

In this study, I first identified the cities. In order to increase diversity and representation of different regions, I chose five big cities in Turkey: Istanbul,

Bursa, Eskisehir, Izmir and Hatay. These cities, altogether, represent most of the population in Turkey. Another important reason for choosing these locations is that I have relatives in these cities, so I solved one of the main challenges which were accommodation. As data collection is a long process, I had to minimise my expenses and remove some of the challenges, such as accommodation, to be able to better focus on data collection. I then used the Google search engine to find SLTs in these cities. I initially contacted 19 SLTs via e-mail, with a brief description of the study, a participant information form and a consent form. 16 SLTs replied to the e-mail. I then contacted the participants via phone to give more details about the data collection method and timing of the interviews and observations.

Travelling across and within the cities was one of the most challenging parts of the data-collection process. For instance, I had to travel almost eight hundred miles from Istanbul to Hatay. Some of the clinics and the state institutions were located away from the cities' centres so this also took much time. Due to travel and time restrictions, three participants were interviewed via Skype. These participants had sent me the vignettes responses via e-mail, and audio recordings through WhatsApp, as using digital tools was the fastest and the most convenient way for the participants and the researcher.

Managing Participation

After each interview and observation (see section 3.5), I familiarized myself with the data by reading and coding them. This procedure allowed me to decide whether I should continue collecting additional data and explore which

data collection methods provide more quality data and useful information for the scope of the research, as Morse (2000) suggested. Overall, 16 semi-structured interviews were held, although there was no new information revealed that is significant for the research after the number of interviews reached to 11.

As will also be presented in the findings chapter, interview data was not sufficient, and, in several instances, they were misleading. This was revealed during the observation. After each observation, a follow-up interview was held to understand why the participants decided to act in a certain way. As the participants also reported, there were several differences between their actions and their statements in the first interviews. We discussed these differences, as they revealed important insights about the SLTs' decision-making processes.

As suggested by Morse (2000) participants were asked whether they are comfortable to be observed during the therapy, as observation data revealed useful information. Ten participants out of 16 agreed to be observed and interviewed after the observations. Necessary arrangements were made such as informing parents, institutions and obtaining their consent. I followed the same coding and thematising procedure after each observation and interview. Overall, eight out of ten participants' sessions were observed, as the data saturated. This means that data became solid, as the same or similar data was elicited from different participants, and new data did not reveal any significant or different aspects to research results. To enrich the quality of the data, all participants—no matter whether their sessions were observed or not—were

asked to provide an audio diary for their future therapies, and also were asked to complete vignettes.

Demographics

In this section, the demographic information of the participants will be presented. 16 participants were involved in the study. Table5 below presents these participants' area of practice, the setting they work in, the academic qualifications to be an SLT in Turkey and data that was collected from them:

Table 5: Area of practice, setting, academic qualification, collected data from participants

SLT	Area of Practice	Setting	Academic Qualification	Data that Collected from Participant
P1	SLT and Other Disabilities	Private Clinic	3 Years of Master's Degree	Interview, Audio Diary, Vignettes
P2	SLT Only	Private Clinic	3 Years of Master's Degree	Interview, Observation, Audio Diary
P3	SLT and Other Disabilities	Private Clinic	2 Years of Master's Degree	Interview, Observation, Audio Diary
P4	SLT only	State Rehabilitation Unit	3 Years of Master's Degree	Interview, Audio Diary
P5	SLT and Other Disabilities	State Rehabilitation Unit	3 Years of Master's Degree	Interview, Observation
P6	SLT	Private Clinic	3 Years of Master`s Degree	Interview, Observation, Vignettes
P7	SLT only	Private Clinic	3 years of Master's Degree	Interview, Audio Diary
P8	SLD and Other Disabilities	State Rehabilitation Unit	3 Years of Master's Degree	Interview, Observation, Audio Diary
P9	SLT and Other Disabilities	Private Clinic	3 Years of Master's Degree	Interview, Observation, Audio Diary, Vignettes
P10	SLD and Other Disabilities	Private Clinic	3 Years of Master's Degree	Interview, Audio Diary, Vignettes
P11	SLD and Other Disabilities	Private Clinic	4 Years of Master's Degree	Interview, Audio Diary
P12	SLT Only	Private Clinic	3.5 Years Master's Degree	Interview, Audio Diary
P13	SLD and Other Disabilities	State Rehabilitation Unit	4 Years of Master's Degree	Interview, Audio Diary
P14	SLT and Other Disabilities	Private Clinic	3 Years of Master's Degree	Interview, Observation
P15	SLT and Other Disabilities	Private Clinic	3 Years of Master's Degree	Interview, Observation
P16	SLT and Other Disabilities	State Rehabilitation Unit	3 Years of Master's Degree	Interview, Audio Diary, Vignettes

P: Participant*

As can be seen in the Table5, all participants completed at least a master's degree to bean SLT in Turkey, as I stated before. The reason is that there was not a dedicated undergraduate degree to recruit SLTs, so people who completed an undergraduate degree in a different discipline had to complete a master's degree (lasting three to four years) to be able to serve as an SLT. For instance, a psychologist can become an SLT once s/he completes a four years' master's degree.

3.5 Data Collection Methods

In this section, I will introduce the data collection methods of this study that were chosen in alignment with the qualitative inquiry of the case study. However, it should be noted that choosing one research design does not mean that the researcher cannot support his/her claims by employing other data collection methods, especially within case studies. As Yin (1993) underlines, choice of data collection method can be:

> …a point of confusion ... [as there] has been the unfortunate linking between the case study method and certain types of data collection – for example, those focusing on qualitative methods, ethnography, or participant observation. People have thought that the case study method required them to embrace these data collection methods ... On the contrary, the method does not imply any particular form of data collection – which can be qualitative or quantitative. (Yin, 1993, p.32).

This claim is also supported by De Vaus (2001). He pointed out that it is crucial to distinguish differences between research design and method, which is a common mistake of researchers in their studies. As can be seen in Figure4, different research design approaches may employ similar data collection methods in a suitable manner in line with their own principles.

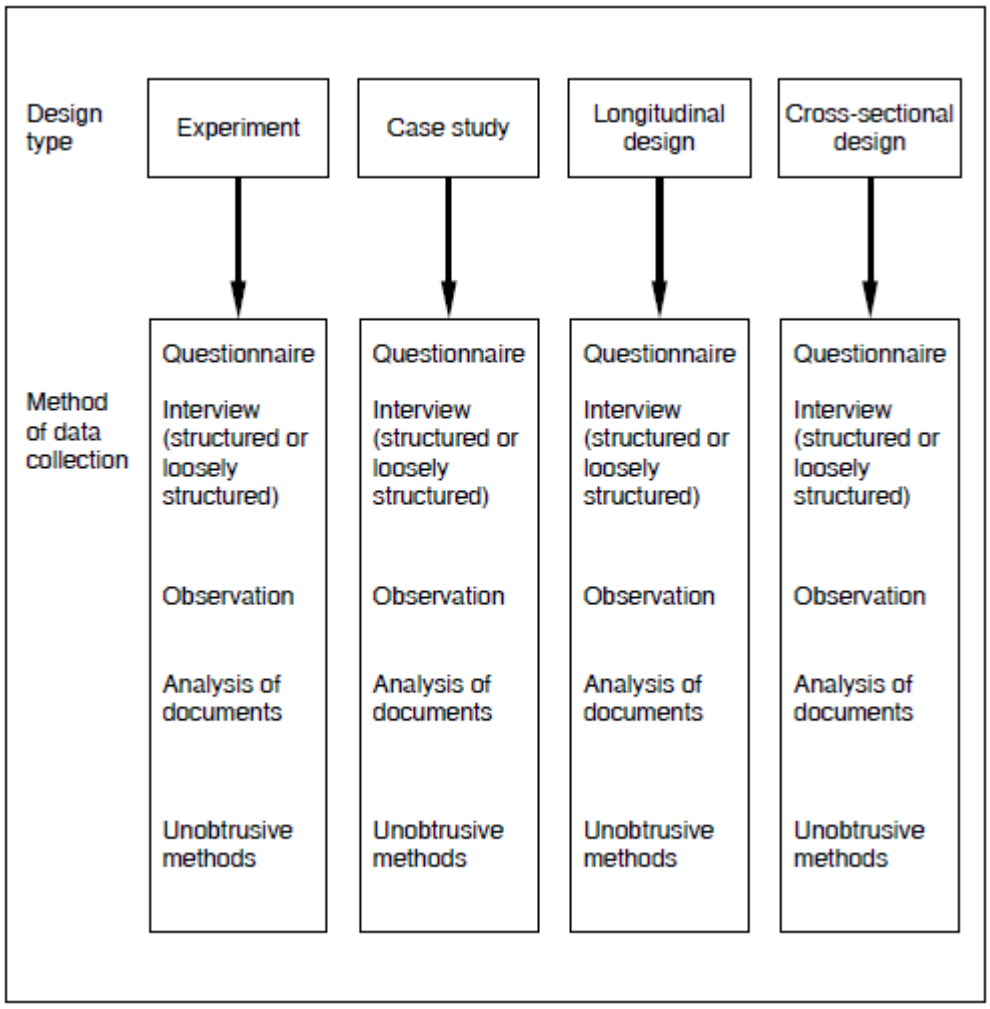


Figure 4: Relationship between research design and particular data collection methods (de Vaus, 2001, p.10)

It is important to understand that different approaches can be carried out by the same data collection methods. The crucial factor is choosing the most appropriate research design and data collection methods according to my research questions. In the previous section, I presented the case study approach as the most suitable design to answer the question of this study, and "case study does not claim any particular methods for data collection or data analysis. Any and all methods of gathering data, from testing to interviewing, can be used in a case study, although certain techniques are used more than others" (Merriam, 2014, p.42). As a result, the triangulation method was used

in order to increase the reliability and validity of the research, so there were four different data collection methods used in this study. O'Donoghue and Punch (2003) stated that triangulation provides crosscheck information which is helpful for determining whether or not the outcomes of research are accurate. Cohen et al. (2000, p.254) also described triangulation as an "attempt to map out, or explain more fully, the richness and complexity of human behaviour by studying it from more than one standpoint". In this study, semi-structured interviews, observation, audio diaries and vignette data collection methods have been used. These will be explained in the next sections.

3.4.1 Interviews

In this section, what constitutes an interview, types of interviews, the selection of semi-structured interviews and the challenges of conducting interviews will be introduced. Interviews provide rich and detailed information about the experiences of individuals. Since the aim of this study is to understand how SLTs decide when to administer an intervention method, interviews can provide deep insight into their decision-making processes. According to (Yin, 2014, p.85), interviews are important for those who are planning to take a case study approach because "case studies are about human affairs… These human affairs should be reported and interpreted through the eyes of specific interviewees, and well-informed respondents can provide important insights into a situation". Also, Patton (1990) suggested that an interview can help a researcher to collect information when the researcher cannot directly observe the issue.

There are three different types of interviews: unstructured, semi-structured and structured interviews (Woods, 2006). In an unstructured interview, the researcher has some general opinions about the content and topic of the interview, but the aim is to facilitate the emergence of important points during a natural conversation. However, Mason (2002, p.62) stated that the terms "structured" or "unstructured" are misnomers, because neither can unstructured interviews be completely lacking in some form of structure, nor would structured-interviews be able to simply follow a rigid structure, because if they are completely structured, then it would be a survey rather than an interview. Therefore, an interview should have a fluid and flexible structure in order to generate unexpected themes. As for semi-structured interviews, these have some predesigned open-ended questions, but they can be extended in accordance with the process of conversation. In this study, the semi-structured interview method was used to be more flexible and collect deep knowledge about the research questions.

Prior to the interviews, I visited each participant to create a warm environment. It was an important process both for the researcher and the participant to feel more relaxed during the interview. Interviews were audio-recorded, and each lasted nearly 50 minutes. The interviews were conducted in private (in the participants' room). None of the interviews was interrupted for any reason. Participants were asked 21 semi-structured interview questions (see appendix). These questions were created with the help of the literature review and my discussions with my supervisors. Additional questions were included when necessary, to reveal the decision-making processes regarding intervention

methods. The interview questions comprised four sections with several questions within each. These sections include participants' backgrounds, their expertise in DLD, intervention methods they use, and decision-making processes of intervention methods.

The participants were well informed about the aims of the research and how their data will be used, stored and then destroyed. They read the participant information form and gave their consent. The interview atmosphere had a quite conversational and friendly nature. I had lunch with some of the participants before or after the interviews, which allowed us to hold an informal chat about the challenges of their job. Such informal conversations enabled them to be more relaxed during the interviews. The time that I spent building a relationship made participants be more natural and outspoken. Most of them shared with me their experiences about some specific cases which were just for conversation and not related to this study. Also, most of the participants asked me what SLTs in the UK do in their therapies, what kind of interventions they administer, and even some of them asked me to email them useful articles to read, specifically practical ones. Therefore, spending some time with SLTs not only allowed them to feel relaxed, but also it built a relationship between us.

It should be noted that there are difficulties in qualitative interviewing and how such interviews should be conducted (Mason, 2002). Mason is against the idea that interviewing is an easy option, and suggests that "qualitative interviewing is difficult intellectually, practically, socially and ethically and that all researchers should be aware of the kind of challenge they are taking on in

choosing to use this method" (Mason, 2002, p.82). She underlined the importance of some factors for researchers who are planning to conduct interviews. First, she stated that conducting a semi-structured interview is more than a form of conversation, and it requires a purpose and plan. If a researcher has no sequence of questions, they should be able to generate related questions in a quick and effective way. Second, it is important to be prepared for what sorts of phrases and words to use. This means that the researcher should know how best to ask questions to stimulate responses from research questions. Another important point is that a researcher should be able to present the participants' views in a correct manner, because there is a risk that an interpretivist researcher may not truly reflect the opinions of the participants in the research (Mason, 2002). Hence, the interview method necessitates researchers to be aware of all these factors before conducting the interview method.

3.4.2 Vignettes

A vignette is a method that can reflect perceptions, views and ideas of participants through the representation of short stories, scenarios and situations. According to Barter and Renold (1999, p.1), in qualitative research, vignettes allow participants to describe the phenomena in their own terms, "to allow actions in context to be explored; to clarify people's judgements, and to provide a less personal and therefore less threatening way of exploring sensitive topics". Thus, the aim of a vignette is to create some scenarios that people may face in real life and see how they react to them. In the light of the literature review about decision-making theories, I created some short

scenarios in which there will be children with DLD. Children in these scenarios have different backgrounds, so the first aim was to see how SLTs would approach children whose language problems are caused by several reasons such as socio-economic, biological or psychological problems. The second aim was to understand how different SLTs approach the same cases.

In this study, three vignettes were introduced to the participants. These three cases (see appendix) consisted of imaginary cases which give brief information about three children who have DLD. The participants were given a flexible time frame to provide their responses to each case. Each participant wrote what they would do if they were faced with the children in the stories. As they know the aim of the research, they mainly expressed the action that they would take and the reason behind such a decision.

3.4.3 Observations and Stimulated Recall

This method of observation can provide researchers with an opportunity to understand the participants' practices in their natural setting, and it can yield rich qualitative data which is stated as a thick description (Geertz, 2008). A researcher can observe a phenomenon at first hand and describe it in a detailed way, so that observation method "is the best technique when an activity, event, or situation can be observed first hand, when a fresh perspective is desired" (Merriam, 2002, p.13). However, some observation techniques might not provide enough information to describe decision-making processes or thoughts. For example, Calderhead (1981, p.211) criticized the observation method, as "the restricted form of the description provided by systematic observation and

the limited insights resulting from participant observation". After research in the area of decision making emerged, the method of "stimulated recall" developed (*ibid*). This method can be employed in a variety of different ways; but it can generally be done as replaying a video or audiotape of a session and taking notes on specific actions to obtain relevant thoughts, decisions, and perspectives of participants by asking questions after the observation (Moreland and Cowie, 2007). This helps participants to remember their actions.

Although observing the therapy sessions provided important data for the research, it lacked the ability to reflect the participants' opinion about why they acted the way they do. As I am interested in exploring their decision-making processes, their voice was needed to shed light on the underlying reasons for their action. For instance, one of the SLTs asked many questions to parents about their child's likes and dislikes. I was not able to fully understand whether such information has an impact on her reasoning process, if yes, how so. Thus, I took detailed notes during the observation. Immediately after observation, an interview was held with the SLTs to understand why they administered or used one specific method. In this way, the participants were able to explain their specific actions and the reasons that led them to take such positions in the sessions. Thus, I conducted a stimulated recall research technique after each observation, to capture SLTs' decisions when they administered an intervention method.

In this study, observations were conducted with eight participants overall. To be able to capture how the SLTs make decisions from the beginning of the therapies, a purposeful selection was made. The therapy sessions where the SLTs engaged with the children for the first time were chosen. Such purposeful selection allowed the SLTs to form their decisions through evaluations of the cases and formation of the therapies. The first two sessions of the SLTs were observed. Within the first two sessions, it was observed that the participants seemed to make significant decisions about the assessment and the nature of the therapy. One more therapy session was observed of four randomly selected SLTs, to assess whether there were significant changes in the way that the SLTs make decisions. It was revealed that the third sessions were basically the stage that the SLTs applied what they have decided to apply so I had the chance to see their evaluation methods and interaction with the children with DLD in these two sessions, and the collected data had similar outcomes with each other.

To increase the reliability of the research, the method of audio diary recordings was also used. This allowed an insight into how the SLTs continued their therapy sessions, and the decisions that they made in the long term. This will be discussed in the next section.

3.4.4 Written or Audio Diary

In this section, what constitutes the diary method and how it should be conducted, including the difficulties of conducting the diary method and how I used the diary method in this study will be presented.

In qualitative research, diary methods offer the generation of significant data as they "are flexible, heterogeneous, have the potential to yield rich qualitative data and unlike methods which rely on retrospection, offer the potential to ensure that accounts are sequentially ordered and reduce the likelihood of feelings or events being forgotten" (Williamson, Leeming, Lyttle, & Johnson, 2015, p.2). A diary can be created by an individual which should include some specific features which are being regular, personal, contemporaneous (Alaszewski, 2006). Regularity means that a diary should be organised so that it is recorded at fixed time intervals such as each week or depending on specific events. A diary should be personal, so that a diarist may or may not permit to access the recorded information, and if researcher access is permitted, the diary should be kept securely to prevent a breach of confidence. Lastly, a diary should be contemporaneous, which means that entries should be made when the events happened to recall them easily.

However, diary methods include some difficulties which are reported by Alaszewski (2006). He stated that requesting a qualitative diary is an expensive form of data collection, because the researcher has to design specific materials according to the nature of the study, and then should provide support during the data collection period. Additionally, asking participants to record entries over time may exhaust them and cause attrition (*ibid*). Hence, as this method includes some difficulties, the participants of this study were offered two options: keeping a written or auditory diary. The auditory diary was the first option given to the participants as it is quicker to keep and could be done

simultaneously during the events. The participants were contacted weekly in order to encourage them to keep the diary and receive the recorded ones.

After the participants read the participant information form, they were informed about the aim of collecting audio diaries; none of the participants rejected this idea. All the SLTs already had an instant messaging app, called WhatsApp, on their smartphone. WhatsApp allows voice recording and users can instantly send these voice recordings to another user. I asked for the participants' mobile numbers to be able to contact them through WhatsApp. We made a trial. Each participant was asked to send a 10-second voice recording to me. All the participants were very familiar with WhatsApp, so there were no issues. The participants were asked to send voice recordings about what they do in the therapy sessions and the reasons behind such actions. I gave an example and sent them voice-recordings as follows: "I will no longer administer one-to-one therapy with this child. I think he needs group therapy. He seems more relaxed with his peers. I should follow what he wants more closely"; or "I was spending so much time training these parents, but they never practiced what I taught them. I guess I should focus on alternative methods that I can do during the therapy."

Giving such examples was quite beneficial, as some of the participants were unsure about what they should share with me. Overall 12 participants sent audio records. The lengthiest audio diary record that was sent around four minutes and the shortest one was 23 seconds. To encourage the participants, I sent appreciation messages via WhatsApp each time I received a recording

from the participants. In several instances, I asked additional "why" questions, to be able to understand the participants reasoning process. As mentioned earlier, the use of an audio diary method was challenging, because extra motivation is needed for the participants to do these.

To sum up, the method of audio diary recording provided an opportunity to understand whether participants'' decisions changed over time, and which factors have an impact on their decisions.

3.6 Piloting

The purpose of this phase was mainly to test the interview questions and vignette methods as data generation instruments of this research. Most importantly, as a researcher, I needed to ensure that the participants of this study would understand the questions which would lead them directly to provide information about my research questions. Bryman (2008) underlined the importance of the validity of the interview questions, which should be tested to see whether the questions achieve the aims of the study. According to Yin (2003), a pilot case study is a crucial step before initiating the data collection process. Before initiating the real study, a pilot study can provide a lot of information for the real research data, so that the researcher will have the opportunity to refine data generation instruments before conducting the fieldwork (ibid). Therefore, conducting a pilot study is important in terms of recognising whether there are any unclear questions, double-barrelled words or other issues on data generation methods. Yin (2003) even posits that pilot

studies are more important than main fieldwork, as they have a vital influence on the reliability of the research. Yin (2003, p.79) suggests three principles to consider when conducting a pilot study. These are "the selection of pilot cases, the nature of the inquiry for the pilot cases, and the nature of the reports from the pilot cases".

a) Selection of pilot case

There are various factors to consider while selecting the pilot cases. These factors depend on the nature of research and data generation methods that will be used. For instance, Yin (2003, p.79) suggested that "convenience, access, and geographic proximity can be the main criteria for selecting the pilot case or cases". In this study, one of the pilot cases, therefore, was chosen from the SLT in Nottingham, UK, as setting up a meeting and accessing the participant were easy to do. This allowed spending more time conducting the interview and focusing on the study, as there was no hardship regarding travelling and arranging a time.

However, as this study will focus on Turkish SLTs' experiences, there was only one Turkish language-based therapist in Nottingham. To retest the functionality of interview questions, another participant was sought. Thus, a Turkish SLT was recruited from Turkey, as there was no one found in the UK. To overcome geographic distance, as Yin (2003) addressed, Skype, an online communication tool, was used to conduct the second case. Necessary precautions were taken to ensure the naturalness of the interview. For instance, any technical issues such as sound problems were designed out. We could also

see one another through webcams, so the researcher's opportunity to build rapport was increased in that way.

There was also the opportunity to conduct a pilot study with English-speaking SLTs but doing the pilot cases in the Turkish language was found to be more productive in terms of wording issues (choosing most suitable words in Turkish, preventing participants from misunderstanding). For example, in my pilot study, when I asked the participants a question including the term "developmental language disorder", they asked for me to explain it to avoid any misunderstanding about the term.

Another factor in selecting the pilot cases was based on the interviewees' experiences of qualitative research methods. While this was not necessary, it was thought that their feedback about the questions would be more valuable. Thus, both pilot interviewees were PhD students who also used the qualitative interviewing method in their research. After the interviews, their opinions were asked about the structure of the questions, the content of the questions, the duration of the interview, my body language and so on.

b) Nature of the Pilot Inquiry

The pilot study can provide an opportunity for the researcher to see his/her study's 'big picture', because "the inquiry for the pilot case can be much broader and less focused than the ultimate data collection plan" (Yin, 2003, p.80). This means that the pilot study should be less structured than the real study. In this way, issues of the study can be revealed, unexpected instrument

items can be added, and unnecessary items can be removed. In this less-structured pilot study, participants may talk about different dimensions of the experiences they have had as a professional. These different dimensions might happen to be related to the actual research aims, which will allow adding more interview questions to see whether these dimensions are also reported in the main study.

In my pilot study, I asked some general questions about the main topic of my study, and it was like a conversation rather than research. This led my pilot participants to be more open, and they made some unexpected statements. For instance, both of my pilot researchers stated that SLTs in Turkey are unlikely to share their knowledge with each other and other related SLTs. They think that as there are a small number of therapists in Turkey, there is competition rather than collaboration among them. This situation might have an important impact on their intervention decisions, because, as mentioned in Chapter 2, one of the factors that influence SLTs' decision-making processes is sharing their knowledge with their colleagues. The competition among SLTs may lead them to benefit from another professional's experiences rather than their colleagues in Turkey, which may lead to different intervention methods to be administered. This collaboration process may also come up in the main study, so I might ask more detailed questions depending on the conversation.

c) Reports from the Pilot Cases

According to Yin (2003), the pilot case should be written clearly and "if more than a single pilot case is planned, the report from one pilot case also can

indicate the modifications to be attempted in the next pilot case" (p.80). This means that if a researcher plans to conduct more than one pilot case, s/he can use each of them as the pilot for the next one. Then a final one can yield a good research design for the actual study. For instance, in my pilot study, after I interviewed my first participant, I modified my interview questions. And then, I conducted another interview with another participant, a modification was again made after the second interview. This gave me a chance to revise my questions once more and strengthen the data-generation methods. For instance, in the first pilot study, the participant was asked the question "How confident are you when using the methods/tests/ measurements that you use to diagnose children with DLD?" He asked what I meant by 'confident', as it was not clear whether it refers to confidence in the instruments, or their confidentiality. I then modified my wording to make my question clearer. There was no misunderstanding in the second case study, so the first pilot was used as the pilot for the second case.

3.7 Data Analysis

In this section, I will present the data analysis procedure that was followed, and the underlying reasons for this selection. Data analysis was performed to explore how SLTs orchestrate their therapy decisions with children who have DLD. As stated previously, multiple data collection methods were utilised, including interviews, observation, vignettes and audio diaries, and a vast data set has been generated. Approximately 13 hours of interview records, 13 pages of observation field notes, six hours following interviews (after observation),

an hour of audio recording, and 15 pages of vignette reports were generated. Detailed information about the collected data presented in Table6.

SLTS	INTERVIEW (IN-DEPTH)	OBSERVATION+FOLLOW-UP INTERVIEW		VIGNETTES (THREE SCENARIOS)	AUDIO DIARY	
		First two sessions	Third session		First month	Continued for three months
P1	✓			✓	✓	
P2	✓	✓	✓		✓	✓
P3	✓	✓			✓	✓
P4	✓				✓	✓
P5	✓	✓	✓			
P6	✓	✓		✓		
P7	✓				✓	✓
P8	✓	✓	✓		✓	
P9	✓	✓	✓	✓	✓	
P10	✓			✓	✓	✓
P11	✓				✓	✓
P12	✓				✓	
P13	✓				✓	
P14	✓	✓				
P15	✓	✓				
P16	✓			✓	✓	✓

Table 6: Details of the sources of the data

Table6 shows the details of the sources of the data. From the left-hand side, the participants are matched with the data collection method(s) in which they participated. For this study, I initially contacted nineteen randomly selected SLTs but only sixteen of them were willing to participate.

In-depth, semi-structured interviews were conducted with all of the participants in order to seek detailed knowledge about SLTs' intervention processes (*see* Appendix). After conducting interviews with eleven participants, I realised that saturation had been achieved because there was no new significant information, themes or data being revealed, but I continued conducting the interviews with the remaining five participants in order to ensure that sufficient data were generated for each theme/code.

Ten participants agreed to participate in the observation and follow-up interviews but only eight of them were available during the data collection period. The first two sessions of these eight participants were observed, and then another session of four randomly selected participants was observed. After every observation, a follow-up interview was conducted in order to understand the details of their actions in the therapy sessions.

The vignettes consisted of three short stories which presented three different DLD cases (*see* Appendix). These scenarios were prepared in order to see how the SLTs would approach children who have the same disorder but different aetiologies. As can be seen from the table, five participants provided their responses in relation to the cases.

The method of keeping an audio-diary was used in order to understand whether the SLTs' decisions changed over time and, if they did, which factors might have affected their decisions. Twelve participants shared their audio-records with me on WhatsApp for the first month. Although the participants were contacted weekly and encouraged to keep on with the audio-diaries, five of them stopped sending audio-records but the remaining seven continued to send weekly audio-records for nearly three months.

After data collection, extracts were coded participant by participant. These codes were then revisited and categorised across other participants. In this way, initial sub-themes emerged, by identifying similarities and differences between the participants' responses. Lastly, the main themes emerged from the sub-themes. For example, the interview records were transcribed and then re-listened to. After that, records that would not meet the aim of this research were eliminated, and lastly, the rest of the data was defined. Yin (2008) suggested that large data sets need deep exploration to answer the research questions. Therefore, I will present the overview of the data analysis strategy that I chose, and then give more detailed information about the reasons behind these choices to answer the research questions.

As I explained in previous chapters, the thematic inductive analysis was used to be able to reveal unique concepts in the data generated. This method of analysis shows parallels to the grounded theory that is developed by Glaser and Strauss (1967). Glaser and Strauss (1967) defend the importance of conducting

research in a data-driven manner, which might allow theorising findings in a more creative and independent way. Glaser and Strauss (1967) emphasized the importance of this approach especially for novice researchers as they state that a novice researcher might be easily affected by pre-developed theories and frameworks and force their data to fit in these pre-established structures. Hence, the authors suggest, unlike the deductive approach, all data should be analysed without using any pre-defined framework. This approach is based on categorising the data together to create codes. In this research, codes were defined initially on a question by question basis for each SLT, then I compared each person's codes across others. As Braun and Clarke (2006) suggested, themes were created by giving full and equal attention to each data to ensure that important themes are not missed.

Braun and Clarke (2006)'s steps were followed during the data analysis, but it should be noted this was an iterative process, meaning that I regularly went back to each step to be able to better present what the data reflected about the aim of this thesis.

Table 7: Phases of inductive thematic analysis (Braun & Clarke, 2006, p.87)

Phase		Description of the process
1	Familiarising yourself with your data	Transcribing data (if necessary); reading and re-reading the data; noting down initial ideas.
2	Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set; collating data relevant to each code.
3	Searching for themes	Collating codes into potential themes; gathering all data relevant to each potential theme.
4	Reviewing themes	Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2); generating a thematic 'map' of the analysis.
5	Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story which the analysis tells; generating clear definitions and names for each theme.
6	Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples; final analysis of selected extracts; relating the analysis back to the research question and literature; producing a scholarly report of the analysis.

On reading the paper by Braun and Clarke (2006), two factors led me to choose inductive thematic analysis for analysing the data for this research. First, it provides a guideline for analysing the qualitative data more systematically. Secondly, this approach requires the researcher to be flexible during the coding process. For instance, since this study explores the decision-making process, coding was evolved throughout the analysis process. What this means is that after I had completed the one phase, I revised other phases rather than completing one phase and continuing with the next one. So, the creation of codes was an active and reflexive process. It should also be noted that there is a close relationship between the data-generation phase and the data-analysis phases; especially when creating codes from audio diary data, since some audio records were sent to me continuously, there was a continuous and repetitive analysis process until the generated codes and themes were saturated.

Familiarisation

The first step of the six phases of thematic inductive analysis is familiarisation with the data. In this section, I will present how I actively engaged with the data by listening to the recordings, writing and translating the transcripts, reading and re-reading the transcripts.

Interviews and audio diary records were transcribed verbatim by me from a digital recorder. This increased my familiarisation with the data. All transcripts were written separately for each SLT in a word document. Personal names and places were also transcribed to provide a full understanding of the content.

However, irrelevant conversations, comments or repetitions (phrases meaning the same thing in different words) were excluded, as Anderson and Felsenfeld (2003) suggested. Each transcription was read again against the recorded data to complete and add missing parts to ensure the accuracy of the transcribed data. To remember each case and person easily, I used their real names during the analysis. After the analysis was completed, the necessary data was anonymised using the replacement option in the Word document.

Data transcription was challenging. Transcription of the records took a long time, as each interview was around 45-50 minutes. I spent three to four hours transcribing each record. Following the interview and audio records also took a considerable amount of time. Another challenging part of transcription was that as I conducted this study in Turkey, transcriptions had to be translated from Turkish to English. The translation was not easy, as I had to find the most appropriate expressions which could convey to the reader the meaning that the SLT intended. So, it was more than just changing words and sentences. I was also aware that some words or phrases of the transcriptions may not be translated in another language because they could not be used or conveyed in another language. However, I tried to present transcriptions as accurately as possible. To ensure the data translation process was accurate, I employed another Turkish PhD student who also had conducted similar data analysis and translation process for his work. He checked 30 per cent of the translated data, and we discussed potential problems that could occur due to translation issues. After this discussion, I re-phrased some of the sentences to reflect the true meaning that the SLTs had intended.

In order to increase the reliability and accuracy of the transcribed data, audio records were listened to in the following stages:

- Records were listened to a couple of times to be familiar with the data (without transcribing)
- Initial transcription was created. When I was not sure about what the participant said, or I missed a point when typing, the playback button was used to listen again to be sure.
- Records listened once more while reading the transcriptions (corrections made if necessary)
- A randomly selected five-minute record from each data sets was listened to by another PhD researcher to check the reliability of the transcriptions.
- Transcriptions were sent to the participants to get their agreement about their statements.

At the end of each observed therapy session, I showed my notes to the SLTs to get their agreement about my notes. None of them wanted to make changes to the notes, but some of them wanted to add additional sentences or extend some of my notes by explaining why they did an action/activity in a more detailed way. Then, these notes were transferred into a Word document along with more details and my notes.

Vignette responses were read a couple of times to see if there was a difference between the SLTs' approaches, activities, actions through different scenarios.

Generating Initial Codes

Identifying initial codes is the second step of Braun and Clarke's (2006) inductive thematic analysis process. According to their guidance, extracted themes must capture significant points from the data to answer the research questions. In order to achieve this goal, coding was performed separately for each data set. Basically, coding means organizing data into categories which have similar characteristics.

First, interview data were coded for each participant and then compared across participants to create initial themes. After I familiarised myself with the data, I firstly identified the initial codes manually, following which I used NVIVO 10 software for the rest of the analysis process for the interview data. Since I have vast data sets from interview data, NVIVO software helped me to better organize and visualise the interview data set.

Then the same process was done for the other collected data, which were stimulated recall, vignettes and audio diaries: Each data set was coded manually for each participant and then compared across other participants. Lastly, similar or different codes were organised across all data sets to see if there was any difference in SLTs' therapy decision processes, such as SLTs' opinions (interviews), their actions (observations), their long-term actions (vignette and audio diaries), and their actions across different cases (vignettes and audio diaries). In order to make it clear, identification of codes and creation of themes will be shown in the Figure5:

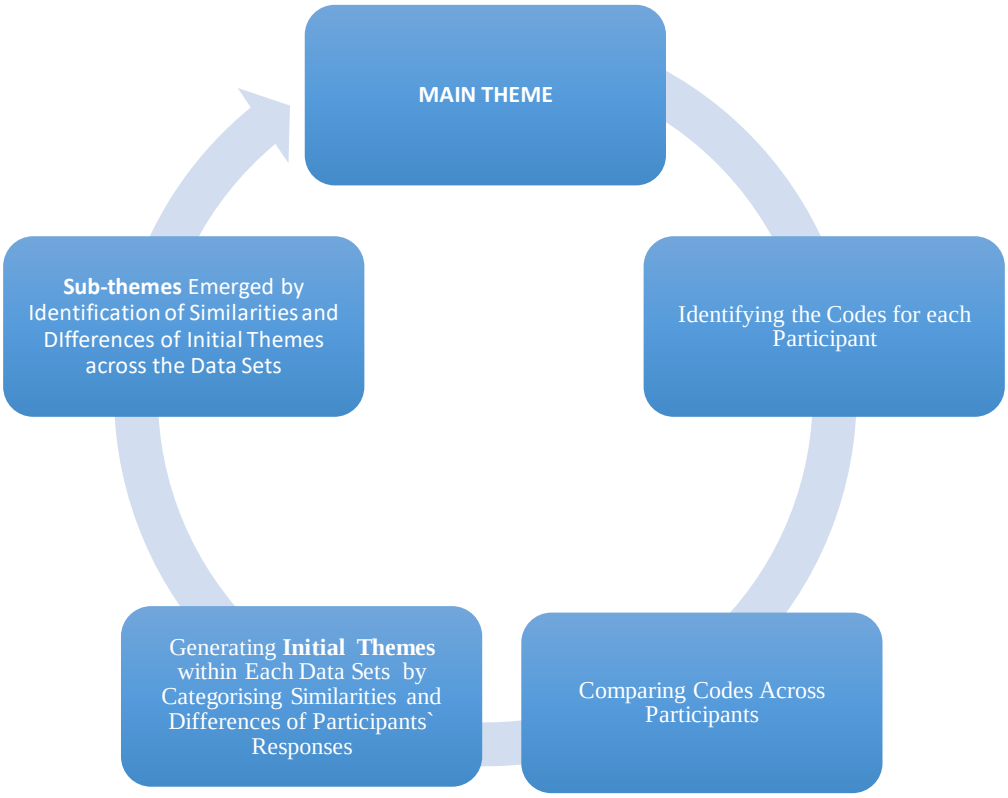


Figure 5: Graph shows the identification process of main themes

The searching for codes and themes in this study was a cyclical process, as suggested by Saldana (2013). He stated that it also not just labelling, it is linking. Thus, generating more data led me to go back to the analysed data, and try to link the data sets and make meaning out of them to answer my research question. For instance, when more data was brought in from the audio diaries, revision, refinement and recoding were made continuously. So that, rather than analysing a data set and moving on to the next one, an iterative analysis process was performed.

Searching for Themes

Braun & Clarke (2006) suggested that extracted themes should be identified carefully because these themes will allow the researcher to answer the research

question, and they will allow the researcher to communicate with the reader about the essence of the data. For this reason, after initial codes were created, I looked for the themes that reveal important aspects of the research question. This process was based on categorizing the codes that had a relationship with each other. Also, identifying how many times a specific code (strength of themes was identified through the number of mentions) was used to help me to extract initial themes. After the codes of this study were saturated and a sufficient amount of evidence had been collected from the data (when there are no new emerging codes and themes), a couple of revisions were performed to capture the important details about the study.

Reviewing Themes

This step involved checking if the themes represented the entire data set. When reviewing the themes, Braun and Clarke's (2006) guide was followed:

- I checked the quality of a theme by considering if it is a response to my research question and if it reflects what the data sets stand for
- Inclusions and exclusions of the theme were checked
- I reviewed if there is enough evidence that had been sought to form sub-themes and the main themes
- I checked if the data that I picked to create codes and sub-themes helped me to extract coherent key themes

This process allowed me to evaluate the significance of themes regarding the research aims and literature.

Defining and Naming Themes

This is the last phase before producing the study report. Themes were defined with reference to how they reflected the entire data set and answered the research questions. After that, themes were named as relating to the SLTs' intervention decision-making processes.

Producing the Report (Development of Themes)

The last phase was producing the report. This involved deciding what sorts of data would be used to clarify each theme to reflect the goal of the study. In this study, quotations from the participants that best represented the data set were used. Additionally, in order to make it easier for the reader to understand how I engaged with the data, some photos from manual analysis and NVIVO analysis were added Figure6 and Figure7:

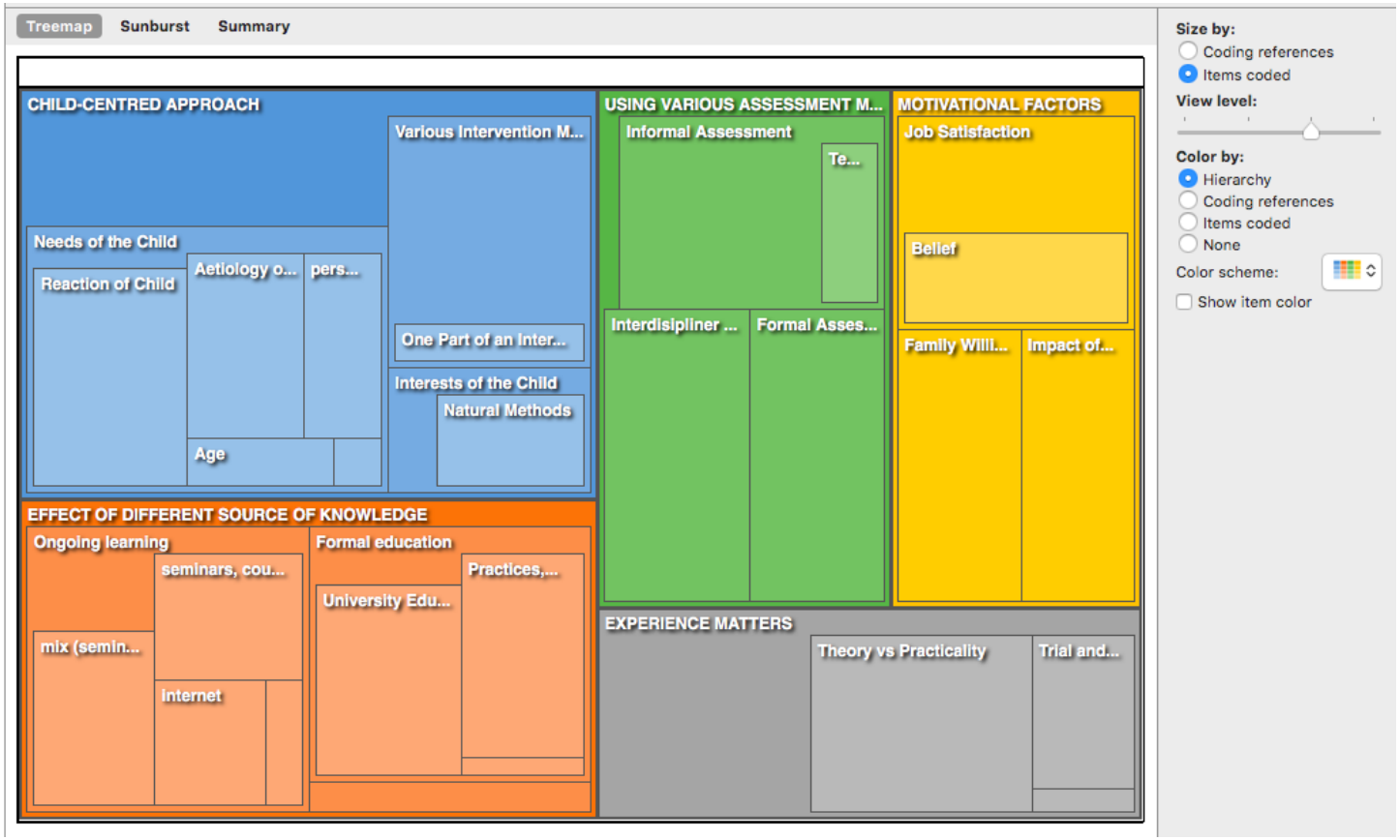


Figure 6: Screenshot demonstrates the child-centred sub-theme that were created from interview data

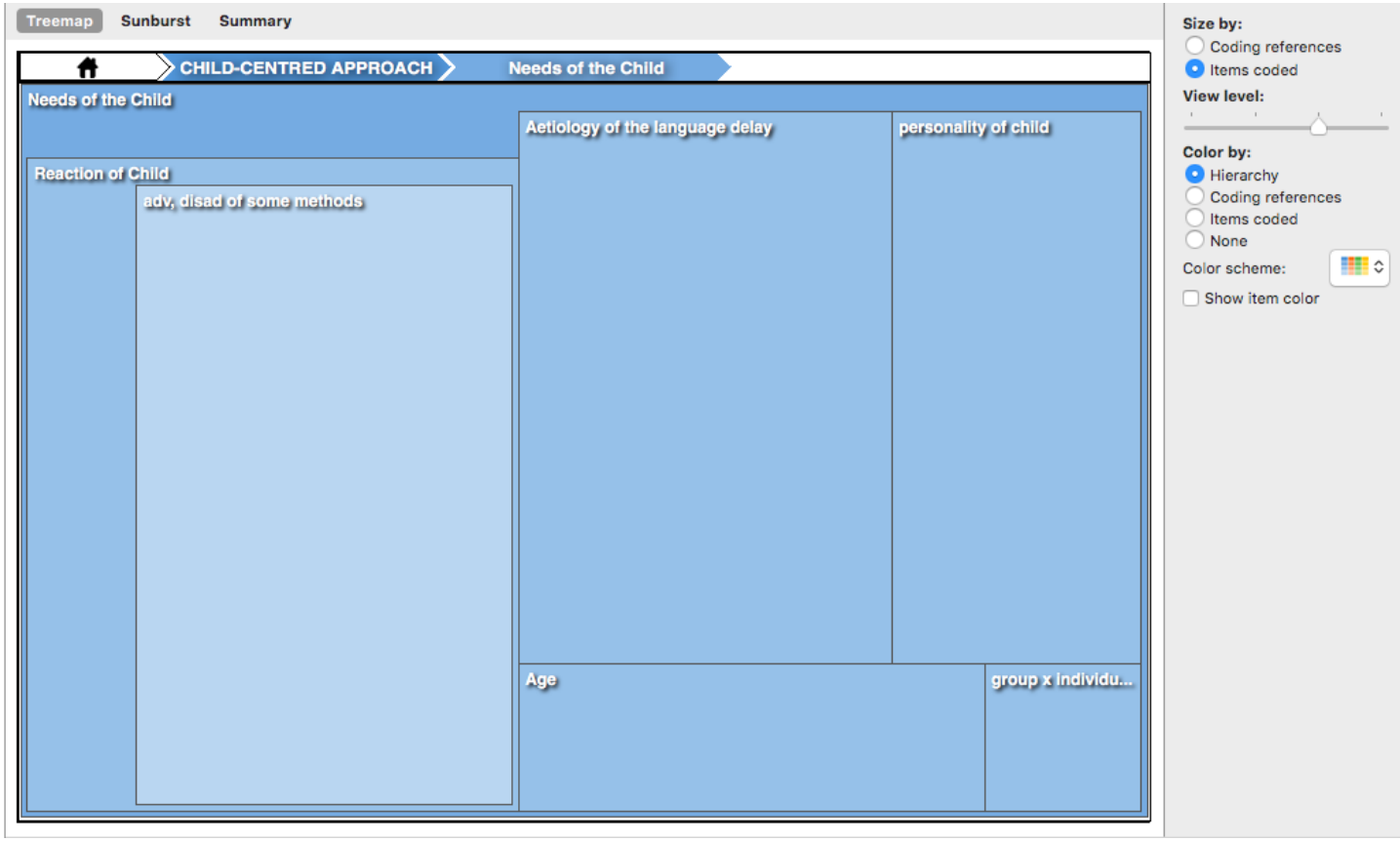
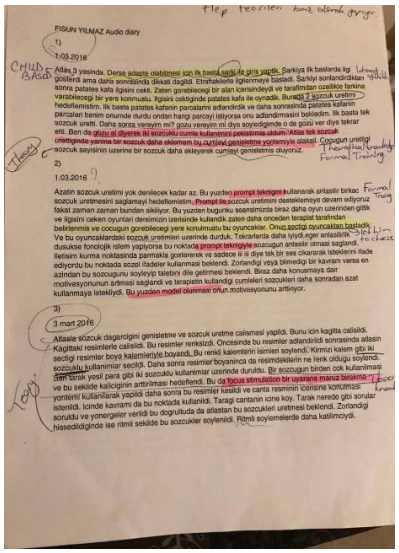
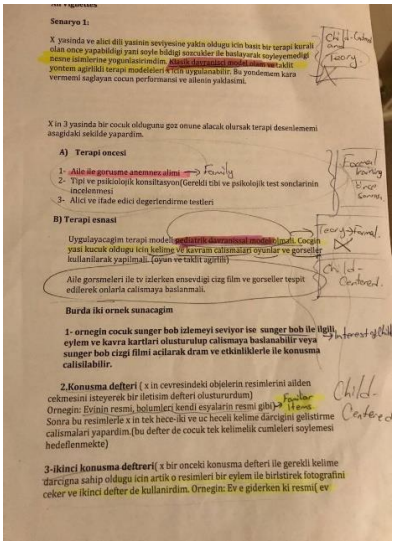


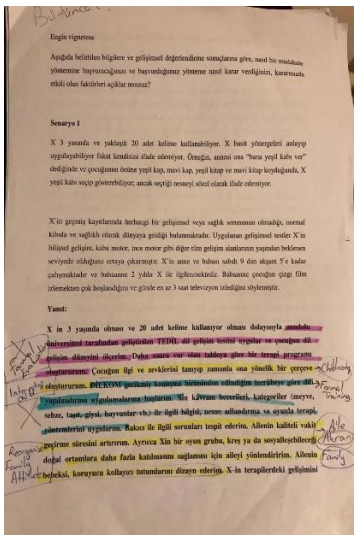
Figure 7: Screenshot demonstrates the initial themes that were created child-centred sub-theme

Figure6 and Figure7 show the initial attempts at organising and categorising the related codes within sub-themes and the main themes from the interview data set. The codes which had similarities or differences were categorised together. As can be seen in the figures, items that were coded or had coding references can be visualised according to their size, and each category can be coloured by hierarchy, coding references, and items coded. NVIVO provided an opportunity for me to see all the data, or parts of them, with different kinds of graphs. It also allowed me to see the amount of data that each sub-theme and the main theme includes. For instance, the blue area represents a sub-theme that was called 'Child-centred approach' which has seven initial themes, called *needs of the child*, *interests of the child*, etc.; each of these initial themes has codes. For instance, as it can be seen in the figure: *needs of the child* initial theme has codes which are; *aetiology of the DLD*, the *reaction of the child*, *age*, the *personality of the child* and *group-individual therapy*. Thus, these initial themes were the result of an initial attempt to make meaning out of codes. They then have been reformed, renamed and regrouped in accordance with the further data generation, analysis and discussion with another researcher.

The analysis process was not always performed through NVIVO. To be able to immerse myself in the data, I often worked with coloured pens and the transcripts. This method seemed to allow me to be in more control over the data.







Hep teorileri baz alarak [illegible]

FISUN YILMAZ Audio diary

1)

1.03.2016

CHILD BASED

Atlas 3 yasinda. Derse adapte olabilmesi icin ilk basta sarki ile giris yaptik. Sarkiya ilk baslarda ilgi gosterdi ama daha sonrasinda dikkati dagildi. Etraftakilerle ilgilenmeye basladi. Sarkiyi sonlandirdiktan sonra patates kafa ilgisini cekti. Zaten gorebilecegi bir alan icerisindeydi ve tarafimdan ozellikle farkina varabilecegi bir yere konmustu. Ilgisini cektiginde patates kafa ile oynadik. Burada 2 sozcuk uretimi hedeflemistim. Ilk basta patates kafanin parcalarini adlandirdik ve daha sonrasinda patates kafanin parcalari benim onumde durdu ondan hangi parcayi istiyorsa onu adlandirmasini bekledim. Ilk basta tek sozcuk uretti. Daha sonra vereyim mi? gozu vereyim mi diye soyledigimde o da gozu ver diye tekrar etti. Ben de gozu al diyerek iki sozcuklu cumle kullanimini pekistirmis oldum. Atlas tek sozcuk urettiginde yanina bir sozcuk daha eklemem bu cumleyi genisletme yontemiyle alakali. Cocugun urettigi sozcuk sayisinin uzerine bir sozcuk daha ekleyerek cumleyi genisletmis oluyoruz.

Interest of child

Theory

Theoretical knowledge
Formal Training

2)

1.03.2016 ?

Azatin sozcuk uretimi yok denilecek kadar az. Bu yuzden prompt teknigini kullanarak anlasilir birkac sozcuk uretmesini saglamayi hedeflemistim. Prompt ile sozcuk uretimini desteklemeye devam ediyoruz fakat zaman zaman bundan sikiliyor. Bu yuzden bugunku seansimizda biraz daha oyun uzerinden gittik ve ilgisini ceken oyunlari dersimizin izerisinde kullandik zaten daha onceden terapist tarafindan belirlenmis ve cocugun gorebilecegi yere konulmustu bu oyuncaklar. Onun sectigi oyuncaktan basladik. Ve bu oyuncaklardaki sozcuk uretimleri uzerinde durduk. Tekrarlarda daha iyiydi.eger anlasilirlik dusukse fonolojik islem yapiyorsa bu noktada prompt teknigiyle sozcugun anlasilir olmasi saglandi. Iletisim kurma noktasinda parmakla gostererek ve sadece iii iii diye tek bir ses cikararak isteklerini ifade ediyordu bu noktada sozel ifadeler kullanmasi beklendi. Zorlandigi veya bilmedigi bir kavram varsa en azindan bu sozcugunu soyleyip talebini dile getirmesi beklendi. Biraz daha konusmaya dair motivasyonunun artmasi saglandi ve terapistin kullandigi cumleleri sozcukleri daha sonradan azat kullanmaya istekliydi. Bu yuzden model olunmasi onun motivasyonunu arttiriyor.

Formal Training

let him to chose

3)

3 mart 2016

Atlasla sozcuk dagarcigini genisletme ve sozcuk uretme calismasi yapildi. Bunu icin kagitla calisildi. Kagittaki resimlerle calisildi. Bu resimler renksizdi. Oncesinde bu resimler adlandirildi sonrasinda atlasin sectigi resimler boya kalemleriyle boyandi. Bu renkli kalemlerin isimleri soylendi. Kirmizi kalem gibi iki sozcuklu kullanimlar secildi. Daha sonra resimler boyanınca da resimdekilerin ne renk oldugu soylendi. Sari tarak yesil para gibi iki sozcuklu kullanimlar uzerinde duruldu. Bir sozcugun birden cok kullanilmasi ve bu sekilde kaliciginin arttirilmasi hedeflendi. Bu da focus stimulation bir uyarana maruz birakma yontemi kullanilarak yapildi daha sonra bu resimler kesildi ve canta resminin icerisine konulmasi istenildi. Icinde kavrami da bu noktada kullanildi. Taragi cantanin icine koy. Tarak nerede gibi sorular soruldu ve yonergeler verildi bu dogrultuda da atlastan bu sozcukleri uretmesi beklendi. Zorlandigi hissedildiginde ise ritmli sekilde bu sozcukler soylenildi. Ritmli soylemelerde daha katilimciydi.

Teory

Senaryo 1:

X yasinda ve alici dili yasinin seviyesine yakin oldugu icin basit bir terapi kurali olan once yapabildigi yani soyle bildigi sozcukler ile baslayarak soyleyemedigi nesne isimlerine yogunlasirimdim. Klasik davranisci model olam ve taklit yontem agirlikli terapi modeleleri x icin uygulanabilir. Bu yondemem kara vermemi saglayan cocun performansi ve ailenin yaklasimi.

Child-Centred and Teory

X in 3 yasinda bir cocuk oldugunu goz onune alacak olursak terapi desenlememi asagidaki sekilde yapardim.

A) Terapi oncesi

1- Aile ile gorusme anemnez alimi → Family
2- Tipi ve psikiolojik konsiltasyon(Gerekli tibi ve psikolojik test sonclarinin incelenmesi
3- Alici ve ifade edici degerlendirme testleri

Formal training

B) Terapi esnasi

Uygulayacagim terapi modeli pediatrik davranissal model olmali. Cocgin yasi kucuk oldugu icin kelime ve kavram calismalari oyunlar ve gorseller kullanilarak yapilmali. (oyun ve taklit agirlili)

Teory → Formal.

Aile gorsmeleri ile tv izlerken ensevdigi cizg film ve gorseller tespit edilerek onlarla calismaya baslanmali.

Child-Centered.

Burda iki ornek sunacagim

1- ornegin cocuk sunger bob izlemeyi seviyor ise sunger bob ile ilgili eylem ve kavra kartlari olusturulup calismaya baslanabilir veya sunger bob cizgi filmi acilarak dram ve etkinliklerle ile konusma calisilabilir.

→ Interest of Child

2.Konusma defteri (x in cevresindeki objelerin resimlerini ailden cekmesini isteyerek bir iletisim defteri olustururdum)
Ornegin: Evinin resmi, bolumleri kendi esyalarin resmi gibi) → Familiar Items
Sonra bu resimlerle x in tek hece-iki ve uc heceli kelime darcigini gelistirme calismalari yapardim.(bu defter de cocuk tek kelimelik cumleleri soylemesi hedeflenmekte)

Child-Centered

3-ikinci konusma deftreri(x bir onceki konusma defteri ile gerekli kelime darcigna sahip oldugu icin artik o resimleri bir eylem ile birlstirek fotografini ceker ve ikinci defter de kullanirdim. Ornegin: Ev e giderken ki resmi(ev

Bütünce

Engin vignetess

Aşağıda belirtilen bilgilere ve gelişimsel değerlendirme sonuçlarına göre, nasıl bir müdahale yöntemine başvuracağınızı ve başvurduğunuz yönteme nasıl karar verdiğinizi, kararınızda etkili olan faktörleri açıklar mısınız?

Senaryo 1

X 3 yasında ve yaklaşık 20 adet kelime kullanabiliyor. X basit yönergeleri anlayıp uygulayabiliyor fakat kendisini ifade edemiyor. Örneğin, annesi ona "bana yeşil kabı ver" dediğinde ve çocuğunun önüne yeşil kap, mavi kap, yeşil kitap ve mavi kitap koyduğunda, X yeşil kabı seçip gösterebiliyor, ancak seçtiği nesneyi sözel olarak ifade edemiyor.

X'in geçmiş kayıtlarında herhangi bir gelişimsel veya sağlık sorununun olmadığı, normal kiloda ve sağlıklı olarak dünyaya geldiği bulunmaktadır. Uygulanan gelişimsel testler X'in bilişsel gelişim, kaba motor, ince motor gibi diğer tüm gelişim alanlarının yaşından beklenen seviyede olduğunu ortaya çıkarmıştır. X'in anne ve babası sabah 9 dan akşam 5'e kadar çalışmaktadır ve babaanne 2 yıldır X ile ilgilenmektedir. Babaanne çocuğun çizgi film izlemekten çok hoşlandığını ve günde en az 3 saat televizyon izlediğini söylemiştir.

Yanıt:

X in 3 yaşında olması ve 20 adet kelime kullanıyor olması dolayısıyla anadolu üniversitesi tarafından geliştirilen TEDİL dil gelişim testini uygular ve çocuğun dil gelişim düzeyini ölçerim. Daha sonra var olan tabloya göre bir terapi programı oluştururum. Çocuğun ilgi ve zevklerini tanıyıp zamanla ona yönelik bir çerçeve oluştururum. DİLKOM gecikmiş konuşma biriminden edindiğim tecrübeye göre dili yapılandırma uygulamalarına başlarım. Xin kavram becerileri, kategoriler (meyve, sebze, taşıt, giysi, hayvanlar vb.) ile ilgili bilgisi, nesne adlandırma ve oyunla terapi yöntemlerini uygularım. Bakıcı ile ilgili sorunları tespit ederim. Ailenin kaliteli vakit geçirme süresini artırırım. Ayrıca Xin bir oyun grubu, kreş ya da sosyalleşebileceği doğal ortamlara daha fazla katılmasını sağlaması için aileyi yönlendiririm. Ailenin bebeksi, koruyucu kollayıcı tutumlarını dizayn ederim. X-in terapilerdeki gelişimini

Formal Evaluation

Interest of Child

Reorganise Family Attitude

→ Child-centred

→ Formal Training.

→ Aile Akran Family

Figure 8: Manual analysis of vignettes, audio diary transcripts and observation notes

Figure8 indicate how I manually engaged with the participants' audio diary transcripts, observation notes and vignette scenarios. I used different coloured highlighters to mark similarities. This helped me to group similar statements, meanings all together and categorize them. I used similar colours to the ones in NVIVO to be able to make the links easily. In the end, there were a considerable amount of codes from each of the data sets, so that expressions,

extracts, notes that directly related to a theme were cut and sorted; data were narrowed down. In the next table I shall present how “Child-Centred or Therapist-based Intervention Therapy” was revealed from the data, to exemplify the data analysis procedure in a detailed way:

Table 8: Data Analysis Procedure

Data Sets	**Data extract**	**Codes**	**Initial Themes**
Interview	P7: "… special therapies for each child. … every single child has something very special…" P16: "depends on the child… we would not be trying to put the child into therapy, instead, we make therapy for the child"	• Special • Individuality • Specific • Every single child • Cannot be seen in others • Therapy for a child not the child for therapy	Needs of the Child
Stimulated Recall (Observation + Following Interview)	P9: "…What I mean is that each DLD child has different reasons and/or different outcomes…Can we use the same therapy for those kids? Absolutely not. There is no fixed therapy for all kids" P2: "I first conduct some informal and formal evaluations, so I chose the materials accordingly"	• Individual-therapy • No same / fixed therapy for all kids • Choosing materials regarding evaluation outcomes of the child	

Data Sets	Data extract	Codes	Initial Themes
Vignettes	P10: "I design my therapy, considering the child's age, child's language development, environmental factors"	• Child's Age • Individual Development • Environmental Factors	Needs of the Child
Audio Diary	P13: "Language evaluation scales helped me to identify the needs of the child. It shows in which area the child needs support. So, outcomes of evaluation scales help me to decide what to do in my sessions."	• Evaluation scales help SLTs to clarify the needs of the child	

Data Sets	**Data extract**	**Codes**	**Initial Themes**
Interview	P16: "…Most of the time I try to understand *what kind of games the child likes* and then I use these games as an opportunity to help the child. For instance, *I use cartoons that s/he likes, materials, toys*…" P2:" Of course, each therapy has some aims to bring the child to the next level but I consider *children's interests* first instead of worrying about these aims"	• Using the games materials that the child likes • Children's interests	Interests of the Child
Stimulated Recall (Observation + Following Interview)	Observation Notes from P2's Session: "The therapist *got involved in child's play* …" P2: "…It is important to *follow* their interests and adjust the therapy rather than forcing them"	• Follow the child • No force • Using Toys materials that child likes • Child cannot focus on anything other than they want to play	

Data Sets	**Data extract**	**Codes**	**Initial Themes**
Vignettes	P9: "I would try to understand what he likes and his interests, and then I prepare a therapy over the time" P9: "I would choose activities that will attract the child's attention. I would use puppets, play therapies, creative drama method" P1: "…for instance if the child likes to watch Sponge Bob, I can prepare cards of Sponge Bob…"	• Likes/interests of child • Choosing attractive activities	Interests of the Child
Audio Diary	P16: "… what I did is that I extended his expressions as my aim was helping him to make 3-words sentences. So that, I extended his expressions as "My car stopped", "I passed by the bridge" P2: "… I followed him, and I encouraged him to make two-word sentences. By the way, teaching children by following their interest is the method that I learned from Hanen"	• Following child's direction and interests • Following the child	

Data Sets	**Data extract**	**Codes**	**Initial Themes**
Interview	P1: "…instead of following a rule-based method, it is more about *picking little bit from one method and little bit from another*… Then, *mixing* them *all together*" P14: "Sometimes I use only one or some steps of an intervention method and mix this with other methods, which completely depends on the personality of children" P5: "I would use only one method or mix couple of different methods together"	• Do not stick to one method • Picking from different methods • Mixing • Diverse methods • Individual differences • Using combination of some parts of some methods • No one true method	Being Flexible (Eclectic Approach)
Vignettes	P1: "I would start my therapies with basic communication skills…. Also, I would work prompt technique, PECS and other alternative communication techniques together with oral motor techniques"	• Using various methods all together	

Data Sets	**Data extract**	**Codes**	**Initial Themes**
Stimulated Recall (Observation + Following Interview)	Observation Notes from P14's Session: "The SLT *did not follow the child's interests in the practice*" P14: "*To make some progress*, I need to *follow a schedule* that was planned beforehand. In the end, *we have limited time* and *parents want to see some progress* that is why I am trying to follow the schedule" P15: "When it comes to practice, *it is sometimes difficult to control the session*. Especially when you think you have *limited time* and *lots of things to do in your schedule*... That is why I have a certain way of a doing things"	• Parents' expectations • Following Schedule • Previous experiences • The idea of controlling the session • Organise before the session • Time pressure	Therapist-Based

Table8 illustrates how the 'initial themes' of the main theme that is called "Child-Centred or Therapist Dominant Intervention" emerged from the data. The creation of other main themes "Formal Informal Resources" and "Parents Matters" is also illustrated (see Appendix).

It is important to point out that the most representative extracts have been chosen to create the above table. More extracts and details of related themes will be scrutinised in the results chapter. After extracting initial themes, they were reformed considering the data sets altogether, and the sub-themes were created as illustrated in Figure9:

Figure 9: Creation stages of initial themes, sub-themes and main themes

Considering the illustrated theme, there were four initial themes that emerged from the codes: *the child's needs*, *the child's interests*, *being flexible*, *therapist-*

based therapy. When comparing these initial themes across the data sets, it was seen that the initial theme of *therapist-based therapy* came solely from the observation data set. During the observation, it was seen that some SLTs administered a therapy that did not follow the child's interests. Although these SLTs stated in their interview data that they prefer to choose a therapy regarding the child's interests and needs, in the session, they seemed to dominate the flow of the therapy. So stimulated recall data set contributed to this study by showing there might be a difference between what SLTs say and what they do.

Performing the analysis in a cyclical manner and across all data sets that were generated through different data collection methods allowed me to see different aspects of the participants' actions. As illustrated in this section, if the analysis of observation data had not been performed, it would not be possible to see how some of the SLTs dominated the sessions and followed their pre-arranged intervention decisions, despite their claims that they were fundamentally flexible and shaped the therapy in accordance with children's interest.

Reliability of the analysis process

There has been a discussion among researchers about the scientific reliability of the qualitative analysis process. As qualitative data sets and analysis process is less structured than quantitative research methods, this raises questions about the trustworthiness of the results found. It should be noted that the qualitative research approach cannot be taken into account as some results are found to be false. As most qualitative research considers human beings, there are many

variables that could affect the outcome of the research, and the truth is constructed through the engagement of humans with these variables. Thus, the truth cannot be collected or found, it is built within the context of the researched topic.

In qualitative research, participants' opinions and actions matter when making justifications about the proposed research questions. Qualitative research is subjective rather than objective, so researchers' opinions and justifications eventually take place when evaluating the explored topic. A researcher should be aware of the subjective nature of the research and take precautions to be able to make more objective and unbiased interpretations. Being aware of the subjective nature of qualitative research is better than ignoring it, as it allows the development of some methods to increase the reliability of the research.

One of the most common ways of securing the reliability of the analysis process is to employ another researcher to follow the same analysis procedures. Thus, in most of the qualitative research, an inter-rater reliability rate is calculated, considering the similarities of the coding trajectory of each researcher. However, as this research followed an inductive thematic analysis, Braun and Clarke (2006) claim that calculating inter-rater reliability is against the nature and aim of the qualitative research and thematic analysis. They state that the focus should be on making meaning out of the data, rather than trying to produce a mechanic analysis procedure in which two researchers produce an identical procedure. What they propose is that each researcher could follow the same data analysis procedure and then discuss and negotiate what they found

from the raw data. As they emphasize, the process should be performed to extract meaningful outcomes, rather than trying to match the selection of the code and calculating an inter-rater reliability score.

As Brian and Clark (2006)'s suggestion was followed, another Turkish-speaking researcher who is familiar with qualitative research methods was employed to analyse a significant amount of data set. After separately following the same steps for analysis, we discussed the codes and the meaning behind them, rather than trying to create a rigid structure of coding and calculating the similarities. These discussions and negotiations have been performed until we formed a meaningful cluster of codes. It was found out that in the majority of the coding, we came to similar conclusions about the underlying meaning of the data, but we phrased them differently. Employing another researcher in such an intensive data analysis procedure could raise some questions such as 'why or how did this researcher spend a considerable amount of time?" To eliminate such questions, it should be noted that there was a reciprocal relationship as I gave the same amount of my time to analyse his qualitative data, to ensure his analysis procedure was reliable. This ensured that his effort in my research was robust and valuable. Another advantage of employing a Turkish-speaking researcher was that he was able to understand the underlying meaning of some expressions that could otherwise pose translation challenges.

To conclude, the analysis process of the data sets that were generated through interviews, stimulated recall, vignettes and audio diaries was presented. As the

data analysis process is a significant part of qualitative research, a detailed process of how a theme has been extracted from raw data was explained. The inductive thematic analysis approach has been followed. This allowed me to take a bottom-up approach, meaning that a data-driven approach was taken during the analysis, rather than following a framework or theory. As speech and language therapy is a new area in Turkey, and Turkish SLTs would have different experiences considering the context and culture they live in, a data-driven analysis approach has been found beneficial to reveal the unique nature of the data.

3.8 Ethical Considerations

The data of this research was mainly collected by two methods, interview and observation. It is suggested that since it is not possible to estimate the nature of the data that will be collected through interview and observation (Speziale & Carpenter, 2011), it is the researcher's responsibility to anticipate any possible risks that participants may face (Orb, Eisenhauer, & Wynaden, 2001). Before conducting the research, the British Educational Research Association's (BERA) ethical guidelines for educational research, and the University of Nottingham's ethical guidelines were both closely followed. As the aim of this research is to understand SLTs' decision-making processes, only SLTs were contacted and interviewed in the data collection process. As "an interview is usually equated with confidentiality, informed consent, and privacy" (Orb et al., 2001, p.2), an information sheet was given to the SLTs, and the aim of the study was explained verbally.

After receiving their consent to participate in the study, interviews were carried out. It should be noted that if "a concept or a heading of the report will be based on the contribution of a particular participant, ethically the researcher should request permission to use such a concept or at least discuss the issues with the participant" (Orb et al., 2001, p.4). Hence, after transcribing the interviews, these transcripts were sent to the SLTs for their opinion and confirmation about their own statements, which would both ensure the reliability of the data and remove additional ethical considerations.

Apart from conducting interviews, participant observation was carried out in the natural settings of SLTs' offices and clinics, after necessary permissions were granted. The aim was to see whether the SLTs fulfilled in practice their statements given in the interviews. There are strict procedures to be able to observe client-therapist interactions in Turkey. First, I had to obtain permission from the Turkish Ministry of Health and the Turkish Ministry of Education. After these permissions were obtained, the governors of the institution and the SLTs' permissions were sought. After that, parents of the children were informed about the aim of the study, and their permission and consent were received. Patton (1990) suggested that the very details of the purpose and procedure of the study should be well explained to avoid stress in the process of participant observation. Hence, as the vulnerability of children who have DLD is high, extra precautions were taken during the process of observation and data collection.

There were possible risks in conducting observations of this group of children. Firstly, parents and children were not identified, because in Turkey there is a flawed perception that children who have a DLD might be considered to have a more serious disability and labelled in public, which may negatively affect their social, emotional and academic life. This perception places a great deal of pressure on parents and they do not want to share their children's problems with others, so the protocol of the research was fully explained to the participants with "details of access to participants, informed consent, and access and storage of data" (Orb et al., 2001, p.3).

Hence, the parents were informed that no data would be collected about their children, and no digital device for recording the session would be used in the period of observation. I only took notes, and these notes were shown to parents if they wished. I also tried to document the important points *after* the session, in order not to distract the SLTs' attention from the session whilst it was ongoing. Secondly, the children may not have felt comfortable if an outsider (researcher) was watching them during the session. One of two solutions to this issue was to observe the intervention session from behind a one-way window (that only allows the person on the outside to see the inside of the room), in those institutions / private clinics with this facility. Another option was, were available, permission requested to view video recordings of the sessions for research analysis.

3.9 Conclusion

In this chapter, I have first introduced epistemology and impact of researchers' beliefs and theoretical perspective on methodology and methods (section 3.1). I

then discussed the meaning of ‘paradigm’, and the four paradigms in the literature, namely positivism, interpretivism (anti-positivism), pragmatism and the critical research paradigm (section 3.2). I justified why taking an interpretivist paradigm could better guide the aims of this research, which is to explore a complex decision-making process that might be affected by various factors such as beliefs, culture or research evidence. As suggested by the interpretivist paradigm, a qualitative case study design approach is considered to be suitable.

I then discussed the differences between quantitative and qualitative research approaches, justifying the choice of qualitative research design. As the research topic considers human beings and aims at exploring their decision-making processes, it was discussed that using multiple data collection methods could better answer the research question. Therefore, four data collection methods were used: interviews, observation, vignette and audio diary. The justification of using such data collection methods was introduced, and their possible limitations and challenges were discussed. Lastly, appropriate ethical considerations and limitations of the research have been discussed.

It was revealed in this chapter that, since human decisions are subjective and require a close examination to understand, taking an interpretivist approach was found to be beneficial to answer the proposed research question. To design this study, there were two main options that this study considered: quantitative and qualitative designs. Since the research topic has many elements that have a subjective nature, and the interpretivist approach requires the research to be

designed from the perspectives of participants, a qualitative research design was chosen. Various design choices such as ethnography, narrative inquiry, conversation analysis and case study were reviewed, and it was decided to take a qualitative case study approach, as this study aims at understanding a 'case'—that is, the decision-making processes of Turkish SLTs.

It was decided that a case study approach might allow a close examination of such a process. As the qualitative case study approach requires the understanding of a case from different points of view, four different data generation methods were used: interviews, vignettes, observation and audio diaries, such diverse data collection methods revealing different aspects of the SLTs' reasoning.

Last but not least, the data analysis process is quite significant for this research, as the research topic is quite complex, and there were no previous studies that explored SLTs' decision-making process for reference or precedent. Furthermore, Grant & Osanloo (2014, p.21) stated that "in some instances, the pre-determination of a theoretical framework would be the antithesis of the very nature of the method itself" in qualitative research. Thus, it was important to find an analysis strategy that might create its own framework and theory, instead of copying other studies that examined different professionals' reasoning processes. As Grant & Osanloo (2014, p.16) underlined:

> Qualitative research designs may begin with a structured, or perhaps less structured theoretical framework to keep the researcher from forcing preconceptions on the findings. In the latter case, the theoretical framework often emerges in the data analysis phase.

It was therefore decided to take a data-driven approach and apply an inductive thematic analysis strategy, where participants' opinions and actions are the most important data source.

Prior to Presenting Findings

The main findings of this thesis could have been presented in various ways in order to understand the decision-making process of Turkish SLTs. One way might be that a detailed analysis of an individual SLT's practices could be presented as separate chapters. Thus, in this study, three SLTs' individual practices might have been explored without thematising all their data together. While this was one of the options for this study, it became clear that the data gathered from the participants had many common themes, and therefore focusing on individual SLTs' in separate chapters could result in unnecessary repetition. Therefore, this study will consider the decision-making process of the participants as one case and form the chapters on findings accordingly.

After a rigorous analysis (discussed in the Methodology Chapter), three main themes which are named as 'formal/impersonal and/or informal/personal resources', 'child-centred or therapist-based intervention', and lastly 'parent matters' were revealed in relation to the proposed research question. In the following chapters (Chapters 4-6), I will present each of these themes. The main themes represent how Turkish SLTs decide their therapy interventions with children with DLD. The rigorous analysis of the data allows an understanding of the factors that affect the therapists' decision-making process. The initial themes, the revised and edited form of initial sub-themes and the main themes can be seen in the Table9:

Table 9: Identified main themes from the data

Initial Themes	Sub-Themes	Main Themes
Formal Education Ongoing Learning Impact of Colleagues Formal Evaluation Informal Evaluation Trial and Error Previous Experiences Instinct Opinion Sharing with Others Motivational Factors	*Practices stem from Formal/Impersonal Resources *Habitual, Intuitive and Past Practices: Informal/Personal Resources	**Theme 1** FORMAL/IMPERSONAL AND/OR INFORMAL/PERSONAL RESOURCES THAT AFFECT SLTS' JUDGEMENT
Child's Needs Child's Interest Being Flexible (Eclectic Approach) Therapist Dominant Therapy	*Child-Centred Approach *Administrating a Therapist-Based Intervention	**Theme 2** CHILD-CENTRED &THERAPIST BASED INTERVENTION THERAPY
Parents' Motivation and Willingness Supporting Parents to Increase Motivation Involving Parents into the Session as Passive Involving Parents into the Session as Active No Parents No Mess Distance Communication with Parents: Technological Tools	*Parental Willingness and Expectations *How to consult Parents: Involving Parents into the Practice	**Theme 3** PARENTS MATTERS for SLTs

The first theme that was identified from the data was ‘formal/impersonal and/or informal/personal resources that affect SLTs’ judgement’. This theme has two sub-themes:

- Practices based on Formal/Impersonal Resources
- Habitual, Intuitive and Past Practices: Informal/Personal Information and Resources

The second theme was identified as ‘Child-Centred & Therapist Based Intervention’, which has the following sub-themes:

- Child-Centred Approach
- Administrating a Therapist Based Intervention

Lastly, the third theme is ‘Parents Matters for SLTs: The Role of Parents in SLTs’ Intervention Decisions’. This theme had two sub-themes:

- Parental Willingness and Expectations
- How to Approach Consultation with Parents: Involving Parents into the Practice

CHAPTER 4. FORMAL/IMPERSONAL and/or INFORMAL/PERSONAL RESOURCES THAT AFFECT SLTs' JUDGEMENT

Introduction

Before presenting the findings, what formal and informal means in this research's context will be introduced. Considering the collected data and descriptions in the literature, this theme is labelled as formal/impersonal and informal/personal sources of information. The terms formal and informal can be distinguished as:

> Everywhere throughout the world, there are two sorts of resources that influence information seeking behaviour of the research scholars. The above all else is the formal source, which is a kind of source which is well planned and paid for example books, periodicals, research papers etc. The second source is informal which is a kind of source which is not pre-planned and non-paid like reference groups, conferences etc.
> (Akhter & Kaur, 2016, p.449)

The SLTs in this study were found to use various resources to make an intervention decision. It was revealed that while, on some occasions, the SLTs give more importance to formal resources and use well-known standardized measurement tests, most of the time they tend to give more value to evaluating the children through informal sources such as SLTs` self-made information sheets, tests, informal observations or informal chats with other professionals. The formal resources in this study are mostly impersonal, the informal is inherently related to therapists' personal opinion, as Kaye (1995, p.16) explained:

> Formal sources may be defined as those which are constituted in some regularized or legal manner in relation to the user, whereas informal sources have no such basis. Formal sources are often also impersonal, and informal sources are likewise often personal.

In this study, formal/impersonal sources refer to formal assessments (such as standardized tests, clinical guidelines), formal training (university education and theoretical knowledge), ongoing learning (academic seminars, conferences and workshops). It should be noted that although some studies recorded conferences as an informal resource (Akhter &Kaur, 2016), in this study, these resources were found to be quite formal as they aim to learn new methods or standardized tests that are introduced by academicians and based on published or evidence-based sources. Turkish therapies attend most of these seminars and workshops with the aim of learning an intervention or evaluation methods and receive a certificate.

On the other hand, informal/personal sources of information briefly consist of informal evaluations (self-made information sheets), trial and error (trying a method if it works, sticking to it), previous experiences (prior experiences affect later practices), instinct (feeling, cannot explain why they choose a particular method or action), conversation with other professionals (using professionals' ideas and methods without considering proofs) and interpersonal factors (motivation, job satisfaction). However, this categorisation—formal/impersonal and informal/personal—does not imply any comparison between the usefulness and benefits of taking a specific approach, but it shows that the SLTs decisions are affected by such approaches. Figure10 illustrates the main themes and the sub-themes.

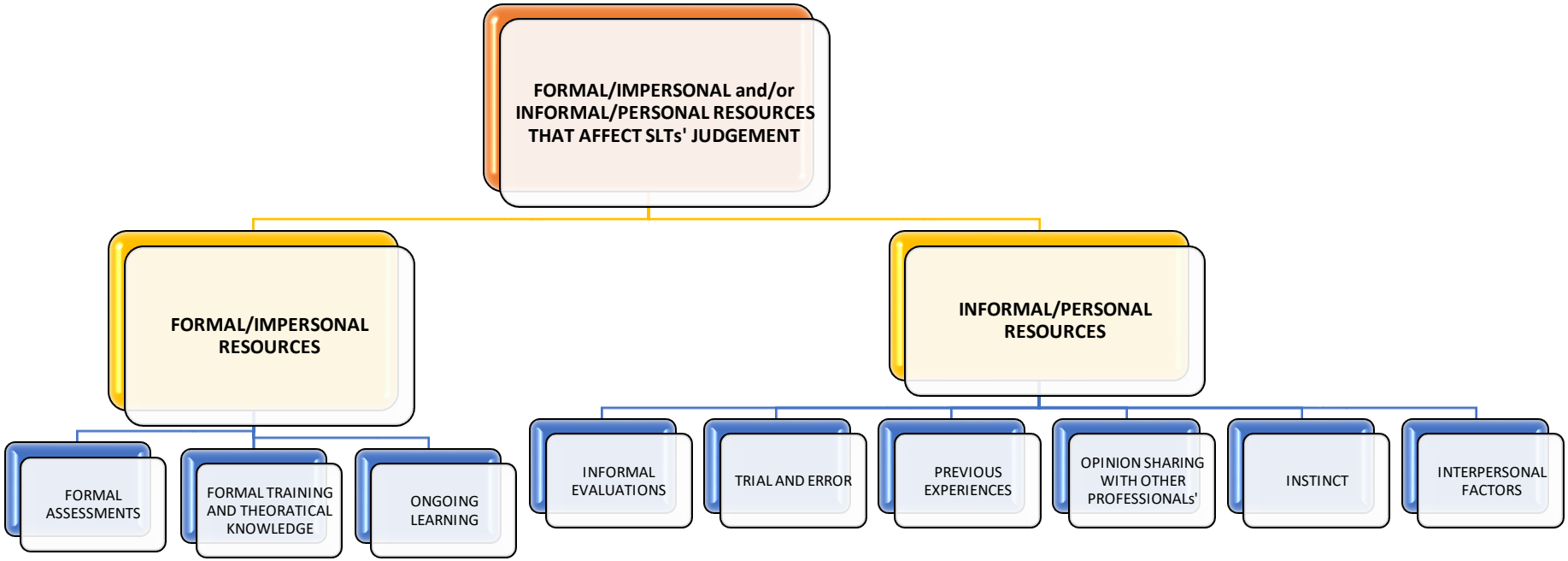


Figure 10: The main theme and sub-themes and initial themes that emerged from the data

Figure10 visualises the main theme, sub-themes and initial themes that were revealed from the data. The data that contributed to the first theme will be presented as sub-themes in the following sections. While the data that belong to the formal/impersonal resources will be presented in section 4.1, the data related to informal/personal resources will be introduced in section 4.2.

4.1 Tests, Trainings, Guidelines, Protocols, and others: The Impact of Formal/Impersonal Resources on the SLTs' Decision Making Process

This sub-theme was revealed from the participants' statements that indicated the impact of resources which help the SLTs to determine intervention methods that are based on formal/impersonal procedures which are formal standardized tests (4.1.1), formal training (4.1.2) that they learnt through university education which refers to the theories and evidence-based resources. Thirdly, following the latest academic articles, seminars, and workshops which will be presented in the ongoing learning (4.1.3).

4.1.1 The Use of Formal Assessments to Make a Confident Decision

Formal assessments were found to be one of the most important factors that affect SLTs' decision about designing a therapy. Formal tests are tools that help professionals to see the development of children. Law et al. (2015, p.173) explained formal assessments as "measures are usually norm-referenced and standardized, enabling children's scores to be compared with data from

typically developing, same-aged peers". So, this helps them to understand what to expect at a specific age, what is children's developmental age for each developmental area (language, motor, social) or what children would be expected to do next.

Most of the participants expressed in the interview that they use formal tests to understand the level of DLD that a child has. Although they stated that they do not follow these tests "religiously"—meaning that they also use informal evaluations; their own observations, checklists etc.—these tests have a significant impact on their action. Tests seemed to help them to focus on the skills that the child needs to improve. P4 stated that;

> Formal tests give us important knowledge as these tests had been evaluated in terms of reliability and validity. Also, our therapy is affected by these tests because it is a tool that shows us where the child is in terms of language development and where s/he should be normally. They give me an idea about the child's development and needs. For example, I can see the language age of a child. If a child is 4 years old but his language age is 3, then it helps me to see on the scale that what he can do in normal conditions and this, of course, affects my decisions… (P4, Interview)

The reason for P4's use of formal tests is twofold; first, she determines the language age of the child in accordance with these tests, which might completely affect the type and the nature of the selected intervention method. Second is that reliability and validity of these tests are well informed. P13 is an another SLT who also use standardized tests for the same reason: "I use two tests for all children with language difficulties; TEDIL and Ankara Articulation Test; these two tests' validity and reliability is very good and also they are

created by well-known professionals" (P13, Interview). There are other participants who share the same idea about using formal tests:

> to be sure (P12),
> to see the language level of the child (P1),
> to have an idea of the general development of the child to design therapy (P3),
> confirmation of my own ideas (P2)

So, it was found that the participants want to be sure and support their reasoning with something more scientific rather than only their own ideas. This not only enhances their confidence, but they also use standardized tests for convincing parents:

> Parents want to see something official, formal evaluations and results rather than just our thoughts. This is also good for me to see what these tools say about a case. So, it is beneficial in many ways… (P11, Interview),
> … These tests are a good reference point for me when we explain to parents why we think their child needs support as they are based on research evidence and standardised forthe Turkish language… (P4, Interview)

> When we have some scores that determine the level of the child; it gives me confidence and helps me to convince the parents as they tend to believe these kinds of scientific tests…I can say that these tests make us look like doctors (laughs) as it is the most analytical process… (P12, Interview)

The extracts above indicate that the participants use formal evaluation methods in order to have an evidence base upon which to follow a certain direction. Using standardized tests seem to make the SLTs feel more confident about their practices and more efficient when explaining their reasoning to parents. Not only in-depth interviews but also other data collection methods supported these results. After each observed session, I conducted a follow-up interview with the participants and if they used a standardized test, I asked why they use it. Some of the responses can be seen below:

> Language tests help me to understand the child's receptive and expressive language skills. By using these tests, I can see whether the child has the language skills for his age. I can see how the child uses a suffix, how length sentences he can form, word counts in his expressive language, categories, concepts etc. So, standardized tests are a good reference for my decisions without them you might not say much about a case… (P2, Follow-up Interview)

> I use TEDIL and AGTE; I feel safe when I use standardized tests as it generally is a kind of confirmation of my own thoughts about child's needs. At the end, they are more scientific than what we believe is the truth... (P5, Follow-up Interview)

> We use PLS4 to understand the level and source of the language DLD. These tests are standardized, and reliability and validity of these tests have been done so, it is scientific and reliable; makes me feel comfortable when I design my therapies (P14, Follow-up Interview)

> I give a copy of the test sheet, checklist and other evaluations to parents. They always want to see something reliable rather than just our experience. They want to keep and document outcomes. I do not know if they are scientific or just look scientific, but they always add something useful… they kind of guide you… (P9, Follow-up Interview)

The participants made similar expressions in the follow-up interviews: "good reference", "feel safe" and "confirmation", "feeling comfortable", "scientific" or "guide you". This shows that the SLTs seem to support their decisions with a scientific procedure. However, it is important to note that using formal tests does not mean that the SLTs in this study solely use formal tests. Although all participants in this study are found to be aware of the importance of standardized tests, they use both formal and informal procedures together. In addition, most of the time, they were found to be relying on informal ones (see section 4.2.1). For instance, P12 expressed that:

> "…but of course, I make some informal evaluations as well, like I consider 'What kinds of cases I have seen like this, what are my initial observations and hunches tell about the case'…but I think without these standardised tests, I would not be sure about

> how I should choose an intervention method. As I said, it is about confidence" (P12, Interview)

As can be seen from the above statement, P12 is aware of the importance of formal tests but uses both formal and informal evaluations together to design his therapy. He pointed out another important aspect of the formal tests, that is confidence. It seemed that formal tests help the SLTs because they have a statistical test result that reports the level of a child's DLD, and makes the process of choosing an intervention method more scientific.

P4 stated that she used to decide her actions through her first impressions and experiences beforehand, but now she gives importance to using formal tests as she seemed to in need of a more formal and scientific procedure to increase her confidence about her decisions;

> I was designing my therapies after I only spend an hour of talking, observing the child and talking with caregiver of the child. Then, it is just a feeling, may be experiencing that tells me what the child needs. However, what I have noticed over the years is that this is not enough; I must underpin my thoughts with some evidence to be sure. Now I use various evaluation methods like tests and guidelines for all cases (P4, Audio Diary)

This statement is confirmed by another audio diary of P4; it was seen that she evaluates different cases with standardized tests, and collects some other informal information by herself. The participants design their therapies based on formal developmental and language tests, but also they use their own observations and some practical methods as well:

> I would conduct the language development tests to see the difference between what the child's developmental language age is and the real one. Then, considering the child's developmental language age and the age that he should be in, I

> can see the needs of the child and design my therapy. At the same time, I would do a family meeting and try to find out whether there is a problem with their attitudes. And of course, I will observe and decide what he needs based on my all experiences (P9, Vignette 2).

P9's response in other scenarios is also reported to be similar. Vignette data that were collected from other participants also indicated that the participants used to follow the same process to decide what to do with different children. For instance, P16's records showed that she preferred to use the same evaluation tools "TEDIL" and "AGTE" for three different cases and she suggested administering "Hanen Program" for three scenarios.

It was seen that the decision-making process of the participant SLTs is affected by the evaluation methods they use before applying intervention methods. While participants in this study stated in the interview that using standardized tests is very important and they use formal tests to be confident in their practice and convincing parents, all participants in this study found to be heavily using informal evaluations (see section 4.2.1) as they believe that standardization of these tests are not "that" trustable, and humans cannot be tested. Most of the standardized tests in Turkey were developed in other languages and standardised for the Turkish language. Although the participants reported that the tests contribute to their decisions and they seemed to find confidence with such tools, there still seems to be a lack of trust in these assessment methods, as they were developed for other languages and there would be issues in adopting them for the Turkish language, as the participants reported.

4.1.2 Formal Training / Theoretical Knowledge

> I learnt most of my practices from the university, of course. There was a practice class for students and a language unit in the university. These units received children who attend therapies and developmental checks. We were directly taught diverse intervention methods under a supervisor… So, this is my background and of course, it is the main thing that drives my decisions… (P9, Interview)
>
> …What I am doing in here completely comes from training that I have got and my readings (P11, Interview)

It was revealed from the interview data that formal training plays a central role in the process of choosing an intervention method. Formal training which helps SLTs to obtain clinical expertise includes university education, internships, readings and academic qualifications. The above quote demonstrates how P9's university education affected his therapy intervention decisions. Additionally, vignette data that was obtained from him supported this claim. Three different short scenarios had been presented to him (see appendix) and he referred to his formal education when explaining how he decides his therapies:

> According to my experiences from the university education and the practice unit named 'DILKOM', I would start my therapy by practices of structuring language; I would initiate my therapy by working with concepts, naming objects, categories—for instance; fruits, vegetables, vehicles, clothes, animals etc.—to structure language basics and then I would use play therapy (P9, Vignette 1)
>
> I would do the same thing with the first case. I would try to structure the language by categorising, naming the objects because he needs to increase the quantity of words that he knows. As I learnt it at the university, this is the first step for speaking (P9, Vignette 2)
>
> ... I would conduct some developmental tests to understand whether the child has mental retardation, specific learning difficulties or specific language impairments. I think these tests that we learnt during our university education would be a good

> starting point to evaluate this child's language issues (P9, Vignette 3)

The data which was gathered from the interview and vignettes demonstrated that P9 addressed his university education when evaluating the cases. In the interviews, P9 constantly referred to the concepts that he obtained from formal trainings. Like P9, other participants also seemed to stick to the methods that they learnt from formal training. For example, according to vignette data that was gathered from P10, she answered all three scenarios by sorting cases as direct or indirect intervention, which she learnt from her university education:

> First, I would consider that I should initiate direct or indirect therapy intervention. In this case, environmental regulation needed so that an indirect approach will be beneficial. This is all about training parents, creating a rich environment and exposing child more stimulus. But at the same time, the child's language seemed to be severe so that direct intervention method would be helpful too (P10, Vignette 1)

> Again, I suggest parents arrange their child's environment to stimulate communication between parents and the child, which is an example of indirect intervention. The mother of the child needs to spend some quality time with the child. However, the child also needs a direct intervention when considering his age which is 4 (P10, Vignette 2)

> There is no environmental issue on this case so that because of the receptive and expressive language disorders on the child, I will start the direct intervention therapies as soon as possible (P10, Vignette 3)

The above extracts well illustrate how P10 structures her practices. As can be understood from her statements, although all vignettes represent unique cases, P10 would design the therapies by considering a direct or indirect approach. After she completed the vignettes, I asked her (in an informal telephone

conversation) why she only mentioned about direct/ indirect approach when explaining her reasoning as she said;

> This is one of the main steps before starting a therapy... These were the two main approaches that I remember we dwelled on a lot at the uni… I think it is kind of a protocol that I follow whenever I evaluate a case (P10, Informal interview)

So, P10 consistently used the approach that she learnt from the university. She seemed to follow a structured protocol to evaluate and act on a case. She does not seem to change the intervention approach and follows a guideline that is based on her university education. The vignette data gathered from P1 also shows that he seemed to base his decisions on theoretical knowledge which he learnt from the university education and the articles that he engaged with:

> ...I might use a classical behavioural model and imitation focused therapies. I would use visual materials and play activities... (P1, Vignette 1)

> In this case, the child has an expressive language problem so that I would administer a therapy that activates the Broca region of the brain according to published documents that I read. Especially, I would mostly support the child with motor cortex studies and the therapies that bases on Wernicke practices. The Logopedic model can work here… (P1, Vignette 2)

> As this child has communication difficulties, I would start my therapies with basic communication skills. Eye contact steps, imitation, attention and effective listening practices can be my preferences. Also, I would work prompt technique, PECS and other alternative communication techniques together with oral motor technique …These techniques have good scientific bases... I studied such methods during my internships at the uni... (P1, Vignette3)

As it can be seen in phrases, P1 also constantly referred to theories, scientific sources and formal training that he acquired through theory formal training,

like P10. He also stated that he has been taught such theories, methods during his formal training and internships.

The participants' statements above reveal that formal training and theoretical knowledge have an important impact on the SLTs' decision-making process. However, the collected data indicated that the SLTs have been using only a part of theories or some part of research evidences when explaining their reasoning; rather than explaining in a whole sense. The same attitude was also seen in the follow-up interviews. After observation, I asked some deeper questions about SLTs' reasoning. They referred to their university education and some theoretical knowledge but seemed to fail to explain why in particular they follow what they were taught at the university.

Another participant, P2, also seemed to give the importance of theoretical knowledge that she learned from university education. She prepared the therapy room before taking the child into the therapy (materials and activities were organized). During the therapy, she completely followed the child's interests in the room. In the following interview, when I asked why she arranged her materials to teach the child the same word, she stated that:

> This is called focused stimulation; it means exposing the child to some stimulant multiple times in a conversation…I learned this method when I was doing my MA degree. I think it is a very effective method (P2, Follow-up Interview)

P2 referred her MA degree education when explaining why she chose 'focused stimulation' for her session. She clearly followed the child's interest in her

practices. Her audio diary records also confirmed that she continuously used the theoretical knowledge that she learnt from formal training:

> I designed the classroom and all materials according to needs of the child before he came in, and what I did was only following wherever he went and trying to find a good time to use the word that I was planning to teach him. I think, this is all about knowing the child-centred approach (P2, Audio Diary)

> I used the extension method. For example, when we play with a potato man, I said to him 'do you want me to give you the eyes?' and then the child said 'give eyes' then I said 'take eyes', so in this way I reinforced his use of two-word sentences by doing more activities (P2, Audio Diary)

As she used some terms such as child-centred approach or extension method, immediately after I listened to this audio recording I asked her why she particularly mentioned and used these approaches through phone conversation; she said that;

> Well, to be honest, you are taught some knowledge that you need to follow at the university. Another therapist would follow a completely different approach regarding her background. Of course, we take children's needs into account, but you can only decide what to administer to the extent of what you were already taught (P2, Informal Interview)

P5 is another SLT that emphasized her formal training when she was asked about her actions in the interview. During the observation it was seen that she taught the child new words through one-to-one, interactive and natural play:

> If the child uses his body language when he wanted something, the therapist encouraged the child to speak. For instance, the child said, "ii ii" and nodded his head instead of saying "No", the therapist asked him "Do you want to say No?" This went on for a long time. Whenever the child wanted to do something or asked for something, the therapist observed him and kept asking: "Do you want to do this or that?", "Do you want …? Or …?", "Do you want to say…?" For instance, when the child lost

> his interest in the matching board, she gave him two different options to choose his activity. The therapist put bubbles and some cotton on the table, and asked which one he wanted to blow. And when the child was trying to say something, the therapist was saying the same word again. For example; "bub" (child), "yes, it is a bubble; a big shiny bubble." (Therapist). (P5, Observation Notes)

After observation, when she was asked to comment on her actions in the therapy, P5 explained this as;

> First, I give the child the opportunity to choose his interest, and then what I did was called expansion in the literature. I complete the child's words or sentences by adding more words… This is one of the things that we learned at university... What I observed so far is children who have DLD constantly use their body language, and if you do what they want without talking, this is wrong. This was one of the first rules that one of my tutors at the university emphasized all the time. I think this is the right thing to do (P5, Follow-up Interview)

P5 seemed to apply an intervention method that she learned from her university education and based her decisions on theoretical knowledge. In her action, it was seen that even though she pre-arranged materials and actions that she would use in the session, she controlled the flow of the session. She proposed two options for the child to select. In this way, she seemed to allow the child to follow her own interest, but this was not like P2's session. While P2 let the child follow her own interest and choose any activity toys that were distributed in the therapy room, P5 was sitting with the child, in a face to face position and only offering two options to the child. So, the session was more under the control of P5. This will be discussed more in Chapter 5.

P6 was also found to be emphasizing her formal training to explain her actions. She stated that she did internships and administrated some practices when she

was at the university, and seemed to be heavily influenced by another SLT during her formal education:

> I did my internship which was a part of my formal education with a very helpful SLT who taught me every single thing that I am using in my practices now…without her, I think I would be a different therapist… (P6, Interview).

Observations of practices and following interviews supported this statement. These are some notes that were taken by me from her sessions:

> She encouraged the child to imitate sounds of animals, vehicles etc. during the therapy: "Let's make a snake [sound]." If the child can make a correct sound, the therapist told her "Perfect, well done." And then the therapist imitated a snake sound in a different tone… If not, she included the mother of the child into the therapy and encouraged her to make a snake [sound]. Then the therapist did the same process for other [sound]s…The child then wanted to stand up, but the therapist no longer allowed him, she controlled the rest of the session (P6, Observation notes).

P6 did not use any material in her session, but did one-to-one interactive therapy during the session. She encouraged the child to imitate some animals, vehicles and some other [sound]s. In the following interview, when I asked why she voiced different tones of the same sound and kept doing this activity for a long time, she said that: "I learned this during my internship back in the university" (P6, Follow-up Interview). P6 explains her actions by referring back to her university education and theoretical perspectives.

4.1.3 Ongoing Learning that Reshapes Decisions (Conferences, Seminars, Workshops, Published Documents)

> University education was okay, but not enough to be a good speech and language therapist. I mean, we should follow the latest intervention methods, we should learn what others are doing in their therapy, we should follow academic workshops, seminars and so on…if you keep doing the same thing, you can't say that 'I decide to do that' but rather 'I used to do that…' (P6, Interview)

Another sub-theme that was revealed from the statements of the participants was on-going learning. "We should follow researches to learn novel practices. Being an SLT necessitates learning continuously. Researches, articles, journals are easy to access in today's world otherwise our practices become dull…" (P7, Interview). On-going learning includes following latest published articles, scientific journals, attending academic seminars, workshops and lastly using internet sources.

According to most of the participants, workshops and educational programmes seemed to be one of the main channels by which the participants keep pace with the developments in their area. It was found that attending seminars and workshops seem to be quite common, and something that has great value among the SLTs:

> I have learnt this method from a seminar (P3, Audio Diary)
> I regularly attend workshops and learn lots of things from experts; one of them is Ibrahim Diken who is an academician. I use his methods in my therapies (P8, Follow-up Interview)

> Every single theory can be used in a child. When deciding which one to do…It just depends on individual needs. Alone or mixing with other methods… For this reason, I am trying to learn more methods as much as I do, and I attend educational programs,

> seminars and workshops. I try to refresh my knowledge by attending various seminars. Some of them are organised by academics or practitioners in Europe. These seminars and workshops really affect my practice (P2, Follow-up Interview).
>
> Well, the workshops I think are the most beneficial ones because the creator of the workshops gets different practices across the world, refines them and presents to us. Fifty per cent of my practices I can say come from these workshops (P12, Interview).

The participants are found to be explaining the reasons behind their actions by referring to seminars and workshops. The vignette data that were gathered from P16 is another example. She mentioned the importance of increasing mother and baby interactions in different scenarios, and suggested using the Hanen program, which she stated she had learnt from a workshop:

> In this case, deficiency of environmental stimulus, lack of mother and child interaction and being exposed to television too much could be the reasons for the DLD. So that, I would apply the Hanen Program (P16, Vignette 1)
>
> This case also looks like lack of mother and child interaction. The mother has lots of housework to do and has a little baby. So, my understanding is, she could not play effectively and could not spend quality time with her child. These might be some of the reasons for DLD. So that Hanen program which I learnt from workshops can be used here... (P16, Vignette 2)

When P16 was asked why she referred to Hanen program for both cases, she stated;

> I was already doing some activities to improve mother-child interaction but this is something new that I recently learnt from a workshop. This programme gives you some kind of guideline that you can follow. I think it would be useful to follow such a structured tool to keep track of the progress. These kinds of guidelines make the process a bit more organised (P16, Informal Interview)

P16's statement about the benefits that the workshop she attended illustrate how such ongoing learning opportunities reshape the SLTs' decision. P16

reported that she learnt an intervention programme, and this guided her decisions towards a direction that makes the intervention decision more formal/impersonal and organised. Other participants also stated that they used what they have learnt from seminars, workshop or a training programme. It was seen that all these ongoing learning sessions provided some kinds of tools and guidelines that ensure the intervention process to be more formal:

> Firstly, I would evaluate each child's needs by using PLS-4 test which is a newly standardized test and seemed to be quite good to evaluate these cases (P4, Audio Diary)

> I have decided to try DIKTE for this child, as parents look quite motivated. This method necessitates parents to use given materials and planned activities. I just learnt this method from a workshop so this will also be good practice for me… DIKTE method seems quite good to follow and clear about what to do next, but it is quite challenging for parents to apply… (P3, Audio Diary)

The observations and the following interviews also indicated that in many instances, the SLTs referred to methods that they learnt form workshops. It was seen that ongoing learning resources, especially workshops and internet sources, heavily shape and revise the SLTs' decision-making process. One of the participants underlined how workshops and the internet completely changed his practices:

> I am now more aware of the things on the internet and the workshops that were arranged by people who have lots of experience. So… most of the intervention methods decisions that I made now is coming from the internet and the workshops that I attend. They are really valuable. They give me some kind of path to follow rather than dwelling on my own judgements… they somehow push me out of my comfort zone and force me to revise some of my therapy decisions… (P15, Interview)

> "Most of my practices basically have some roots that are linked to workshops…They are helpful as you can't always improvise,

> you should be fed by other more experienced academics…" (P9, Follow-up Interview)

Both P15 and P9 underlined similar points regarding how their decisions are led by such ongoing resources. P15's statements such as "they give me some kind of path... rather than dwelling on my judgements", "push me out of my comfort zone" and P9's statements like "they are helpful as you can't always improvise", "you should be fed by…" indicate an important outcome for this study. Such tools, guidelines and methods that are taught by academics or SLTs in workshops seemed to have a balancing role between the therapists' personal/informal practices (comfort zone, improvisation) and impersonal/formal resources.

Other resources that help the SLTs during their decision-making process are articles, books and academic resources. P11, P6 and P4 are some of the SLTs who follow the latest articles in the literature:

> …I was reading lots of English language articles when I was a student; I am still reading because there were not any articles written in Turkey, and unfortunately there are still not enough resources available in the Turkish language. So… I read English articles, publications to learn and follow the latest practices. I can download any articles, books, resources, videos from the internet but none of them is enough to make an SLT. You should create something yourself … using all knowledge that you have… These readings always helped me when I feel stuck and don't know what to do… We are new in this field and we do not have enough background practices… (P11, Interview)

> I also read some articles that stated using different tones for the same word improves the child's auditory perception and opening breath which are the primary necessities for talking. This is on of the main activities that I always use in the sessions, so I can say that these articles change my intervention decisions time to time… I think articles give you clear and easy-to-apply activities and they are scientific… (P6, Follow-up Interview)

> "…I created a scale myself to evaluate a child's language development by using my own readings from the latest publications and journals" (P4, Interview)

To conclude this section, it can be said that the SLTs' therapy decisions are found to be affected by the tools, guidelines, protocols, workshops that could be categorised as scientific/formal resources. While the formal resources are diverse, they seemed to yield similar outcomes when it comes to decision-making, notably the SLTs' need of a formal and impersonal basis for a therapy decision, that helps them to be more confident and organised. It was found that such tools enable the SLTs' decisions to be more objective and rational, rather than subjective decisions that depend solely on personal opinion/choice.

4.2 Habitual, Intuitive and Past Practices: An Informal/Personal Decision-Making Process

The second main sub-theme of this chapter is related to the data that revealed how the SLTs' decision-making process is shaped in accordance with their habitual and informal practices. Contrary to the data that was presented in previous sections, it will be introduced that there is an important amount of decision-making factors that stem from the practices that lead the SLTs to form their own route in therapies. Thus, this is where an important drift is seen in the SLTs' decision-making process, compared to what previous sections presented.

Analysis of the data identified that there were occasions that SLTs tend to implement informal practices and the intervention methods that they have tried beforehand (and consequently believe will work). The sub-themes of this

sections are identified as informal evaluation (4.2.1), trial and error (4.2.2), experience over theory (4.2.3), other professional's ideas (4.2.4), instinct (4.2.5), and interpersonal factors (4.2.6).

4.2.1 Informal Evaluation

> I do not always use language evaluation scales, standardized tests to understand the necessities of a child. I always collect information from parents, teachers, whoever surrounds the child, and then I talk with the child, ask some questions to the child—from easy to complicated—observe the child informally, then I decide the needs of the child and design a therapy; so I can say that my observations are more important than what tests say… (P6, Interview)

As previously presented, evaluation methods that the SLTs use have an important impact on the decision-making process. Although there are formal assessment tests to evaluate a child's level of the language issue, the SLTs seemed to like using formal tests as a supplementary tool to support their informal evaluations. It was revealed that the SLTs rather prefer to make informal evaluations by observing children and talking with parents. It was also found that although there was a common agreement that formal tests yield certain and reliable results (as was mentioned in 4.1.1 Formal Tests section), conversely, a lack of trust in formal tests was also reported. The SLTs reported that formal assessments generally fail to determine the level of language problem for Turkish-speaking children, so this would lead to applying counter-productive intervention methods.

As it was mentioned in the 4.1.1 section, P12 was one of the participants who uses both formal and informal evaluations and gives more importance to using informal evaluations:

> P12: Informal evaluations are very important to know a child. The interaction with children and having a conversation with parents gives you a clue about the characteristic of the child and language skills s/he has. In a very short conversation, you might understand the level of child's age but as I said before, I again want to give the formal tests a go too, although they are not very good (P12, Interview)
>
> Me: What do you mean by informal evaluations?
>
> P12: I mean it develops naturally. You observe children and parents in an informal way and have an opinion about them. You listen to parents and ask some questions that you think that is important to know [the answers to]. Over the years, you pile up lots of experiences and so your judgement skills improve… (P12 interview)

Although P12 gives more importance to using informal evaluations, the reason for using formal tests together with informal evaluations is explained by him as "confidence" and "convincing parents", as parents give more importance to evidence and standardized tests. P12's statement "informal evaluations are very important to know a child" is widely accepted by most of the participants. As P12 pointed out, participants seemed to have a negative attitude to basing their intervention method decisions on only formal tests. More importantly, P12's definition of informal evaluations illustrates the SLTs' approach when they evaluate a case. It was seen that the SLTs could not explain their judgement process in detail when it is based on "informal evaluations". Thus, such informality could be interpreted as their experiences and intuition. P16 stated that:

> Formal tests could give different results depending on when and how you apply them. Sometimes children do not want to do

> anything at all, sometimes they just want to play, sometimes they are sleepless and don't do what they normally do at home. That is why formal tests do not affect my decisions, I never trust them. What I do is that I want videos from parents. When the child in his/her natural setting, I ask them to record some videos. I make little use of formal tests, generally to see the very general picture. So, I can say that my informal observations, parents' opinions and videos are more important to make a decision. (P16, Interview)

P16 underlined the importance of children's mood during formal tests, and she seemed to rely on her observations and children's long term behaviours. P16's approach to assessing children's level of language problem seemed to be the general tendency among the participants. During one of P16's session, she explained what she does for what reason;

> During the therapy, P16 showed me some visual cards that she had prepared for children. She showed me some of them and told me that she would not dwell on these cards as she knows that the child can voice all these objects names already. She stated that she knows this from the videos that the parents sent to her. She said that 'now if I did not have these videos, I would probably force the child to do something he already knows which is time-wasting and boring for him. I will just skip doing next step now' (P16, Observation Notes)

Vignette reports also supported this finding. P9 wrote down that informal evaluation are as important as conducting formal tests:

> After I would conduct formal evaluations with the child, I also meet with the child's parents to have detailed knowledge about the child. To make this conversation easier and quicker, I have a form which includes some questions about the child and parents' attitudes. I created this form myself. Family meetings also can give me an idea about their attitudes to the child. I think gathering detailed knowledge about the child from parents is as important as conducting standardized tests (P9, Vignette 2)

As can be understood from P9's statements, he created a form himself to obtain information about the child and parents. When I asked him why he created

such a form himself and how useful it is, he stated that in standardized tests, gathering information from parents is about filling in a checklist or very formal way of gathering information. However, he stated that he fills in his form after he conducts a natural conversation with parents. In this way, parents feel comfortable and express themselves well. P4 also stated that she created a scale herself;

> … As evaluation is the primary condition of therapy, I created a checklist myself. This list includes lots of variables such as child's attention, imitation ability, how frequently child changes his/her attention to another toy, can child state imaginative play by himself, can he continue the conversation that I am focusing on, is he coherent? etc. (P4, Audio Diary)

P7 and P16 also underlined in the vignettes that they rather prefer to observe the children in their natural environment in an informal way, instead of administering some formal tests;

> Although the given information about the child indicates no problem at home, I would rather like to see what activities he does at home. Parents may say that they provide a good environment for their child but our "good" and their "good" might have a conflict. The nature of the interaction between child and parents is very important to me and I cannot see this by trusting formal tests (P16, Vignette 3)

> Children who have problems in socializing outside are generally victims of their parents. It was stated that his parents are having quality time with their children but this could also mean that they would be over protective and do not let their child express or be independent by himself. This would be one of the reasons for DLD or could be irrelevant as well. What I am trying to say is it is very important to observe the child's and parents' behaviours and have some information about their natural environment. I would include parents into the therapy and see how they do. This is a good start (P10, Vignette 2)

As also can be seen from P7's and P10's response to the vignettes, they seem to prefer to do informal evaluations to be able to have a better understanding of the cases. An important reason for the need for informal evaluations is the lack of trust informal assessments, as expressed by P1. He stated that:

> The data we get from formal tests are not trustworthy. It generalises the outcomes but I know that even if the results of two different children are the same, there could be major differences. More importantly, I don't think the tests are very well standardised for the Turkish language, they are copied from the ones that were developed in English-speaking countries. This could create big issues because there are phonological contradictions between Turkish and English. There are issues in reliability. For these reasons I use the information sheets and checklists that I have created myself. (P1, Interview)

As previously stated, formal tests were developed in other countries and then standardised to the Turkish language. This seemed to lead some participants to become suspicious and use their own judgments to decide the nature of intervention methods.

Another important reason for making informal evaluations is that the majority of participants see language acquisition as a social phenomenon. This leads them to avoid making structured evaluations when the problem is caused by social events. This seemed to affect their intervention decisions, as illustrated from P8's statements in the interviews and his response to the vignettes:

> What we evaluate are human and language. They are both social. You cannot measure these things. They are changeable. There are lots of things to observe. You should observe the family, their attitude, education or way of life. You need to understand what kind of environment the child is raised in. As I said, what you measure is human and he is not measurable, that is why you cannot trust tests. You need to have a holistic

> approach then you can see what is wrong and right. That is how you make a decision (P8, Interview).

What P8 said above is expressed by other participants as well. The general tendency to choose an intervention method depending on informal data that the participants generate through observation, children's videos and audio diaries in their natural settings, parents' opinion, the statements of children's teachers. According to P8, in this way, he can obtain more detailed knowledge about the child.

Thus, relying on only standardized tests were seen as not trustworthy by most of the SLTs. For this reason, they use both evaluation methods or only based on their own observations and evaluations. Since each child needs to be examined deeply to administer the best intervention method for him/her, the informal way of collecting knowledge was also seeming as valuable for them. The participants also emphasized that relying on formal tests led them to apply similar intervention methods to children; however, informal evaluations require the application of dynamic and varying intervention methods with children who have similar language issues.

4.2.2 Trial and Error (It Works)

> We try something and if it does not work, we try another (P12, Interview)

There was a common understanding among the SLTs that theories do not always work well in practice. They stated that they prefer to do a therapy either based on their experiences (which will be touched on in section 4.2.3) or whatever works for an individual child at the moment that they are in therapy.

Although the SLTs want to find new ways of working with children with DLD, they tend to use the methods that they believe the most effective ones. This can be called trial and error, as P8 stated;

> I design what to do in each therapy sessions, then modify and reshape it according to the outcome. So, if the child is okay with it and s/he makes some progress then I stick to the method. This also gives me confidence for future practices if I face with similar things with different children… It makes me more confident for my next actions. (P8, Interview).

P8`s extract demonstrates why the SLT relied upon a specific method for his future therapies. Observation data below that gathered from P3's session also provided a similar example:

> P3 followed the interests of the child during the therapy. For instance, the child first started to play with a figurine toy, and then he went to play with cards, then he moved onto a dolls' house. In this process, the SLT completely followed the child's interest. When the child was taking something in his hand, the therapist was starting to talk about the object. Also, when he was saying some words, the language therapist was extending his words (P3, Observation Note)

On the following interview, when I asked her how did she decide her practices, P3 explains her reason for using trial and error method:

> It depends on the child. I try a method; if the outcome of the method is fruitful I keep on… If not, I am changing it. That is what I did today. Some children like it; but this child cannot sit and do what you want. It is impossible to keep them in one place, so I saw that what I was doing was not working, so I started to follow the child as you saw, and chat about what he got or did… It worked before and I think this child will also like this kind of therapy (P3, Follow-up Interview)

As P3 reported, the therapists tended to give priority to the intervention methods that they found beneficial. Instead of making structured, rule-based evaluations about what children need and the background of the family, the therapists seemed to first start with the methods they are confident with. This

approach was also confirmed by P6's response to the three vignettes, each of which is about different children whose DLD issues were caused by different reasons. She gave the same respond to three different cases:

> …Then I continue using some cards to see if the child is able to repeat what I say. These cards include basic words that all these children at this age are expected to vocalize. Then, if they fail to [sound] some of them, I help him to practice them by repeating over and over again (P6, Vignettes)

After receiving her response to the vignettes, she was contacted again to ask why she gave the same response to all three cases. She stated that:

> Actually, I found this therapy schedule effective, as I tried before and helped some children to overcome their language difficulties. This is what I do, I start with this way with all children, if it does not work for the child that I work with, then I look for other things. (P6, Informal Interview)

As can be understood from P6's statement, feeling confident about an action is the basic factor in P6's decision. It was seen that some other therapists also seemed to use a method that they feel confident with. Vignette data from P9 also indicated a similar approach. He also underlined using most benefited activities that he tried beforehand:

> In order to attract the child's attention, I would use drama activities, puppets and play therapies. After each session, I evaluate the child's attention, concentration and attendance. Regarding these criteria, I try new practices. Then, I would use the most benefited activities in my practices. Also, I want parents to repeat benefited activities at home (P9, Vignettes)

P9 pointed out the above statement for all three vignette scenarios. P9's statements showed that his therapy base on evaluating the child's necessities through natural play and then trying some activities. Then, he continues his actions by the most benefited one that he tried.

It was also gathered from the interview data that when SLTs feel stuck and do not sure what to do, they search the internet to find to different types of methods and activities -mostly YouTube videos and blogs- seemed to have a clear effect on the participants' decision-making process. When the participants were asked the main sources that they benefit from, they made the following statements:

> Whenever I am faced with a problem, I generally go to the internet and look for blogs and videos so not all the time but it generally affects my practices right away (P1, Interview)

> Well, the internet is always… There no need to say (laughs) (P8, Interview)

Internet is found as one of the most important factors that has an impact on SLTs decision-making process. The basic reason is found as 'it is easy to access new resources' (P1, Audio Diary), 'provides quick solutions when we are stuck' (P14, Interview) and 'theories do not always work' (P3, Follow-up Interview). Although they seemed to aware that using more scientific, evidence-based resources is important, most SLTs underlined the difficulty of using theoretical knowledge in their practices, which will be touched on in more detail in the next section:

> …Readings, theories are okay, but for me, it is really difficult to materialise them. Even if everything is explained in every detail, I need some hands-on interactions or watch it. I also try to find lots of videos from the internet or from other colleagues. I have already made quite a video archive (P14, Interview)

During one of the observation sessions, it was also seen that P14 followed a pre-structured intervention method that she learned from one of her colleagues.

However, in the second session, she adopted a new intervention method. In the following interview, I asked the reason for this change, she said;

> I found out this method from foreign sources on one of the blogs. I really liked it and wanted to have it a go. I think it perfectly matches with this child's needs. We will see (P14, Follow-up Interview)

So, the internet is one of the most important sources for SLTs when they are not sure what to do. When they need something different than that which they already know, they search for some activities, methods on the internet—which is the easiest way to learn what others do. As these activities do not underpin evidence-based resources, they try and see if it will work. If it works, they might use it in another case.

It was seen that the therapists feel confident applying a certain set of intervention methods that they are not only familiar with, but also with which they have had positive outcomes in some cases. This seemed to lead to follow direct and structured therapy sessions, giving little attention to the formal resources. This indicates that practice-based intervention methods become superior to the theories that the therapists claim to follow.

4.2.3 Experience over Theory

> The child-centred approach seems nice in theory, but I saw that it does not always work (P14, Follow-up Interview)

It is found that participants feel more confident when they rely on their past experiences. This seemed to lead the participants to use similar intervention

methods that were found beneficial before, and ones that they feel confident to use. So the participants seemed to be more dependent on their experiences rather than following structure, framework or scientific sources to apply a certain intervention method.

> I think, in our job, decision-making for therapy is based on our experiences. Of course, theoretical aspects are so important and all language therapists follow conferences, courses, literature—but I choose intervention methods depending on my previous experiences (P16, Interview)

> The more experience you have, the easier to decide on an action (P11, Interview)

As can be seen above, most of the SLTs stated that practice is more useful than the theoretical knowledge in real life. It seems like practical knowledge gives a therapist an idea about what to do when they are faced with a child who has similar difficulties to the ones with whom they have engaged with before. Furthermore, participants could not have explained well when they were asked how they use theories in their practices. They seemed to be unaware of how to use theory in practice. P12 explained it as;

> We learnt the theories, but I can assure you that almost all theories are too abstract for practice. There are some theories that have an important impact on our therapies, easy to understand and use, like Skinner's behaviourism, but I cannot say any other specific theory to use in our practices to overcome DLD (P12, Interview)

Some other participants also underlined the difficulty of using theoretical knowledge in practice:

> I think it is necessary to know the theories. I cannot explain now how to use it on my practice but surely theories help us (P14, Interview)

> I do not think that theories can directly help our practices. Theory's good for having the knowledge, but not for practice (P3, Follow-up Interview)

> I know the importance of letting a child… learn by his interests, but theory does not always work in practice… a child-centred approach is necessary and beneficial as I told you before, but when it comes to practice, it is sometimes difficult to control the session (P15, Follow-up interview)

Similar to the above quote, all the participants hesitated when they were asked about the impact of theories on their decision-making process. They could not explain clearly which theory they use or how they use the theories for their practices. However, this does not mean that the intervention methods they use are completely dissociated from theory. They stated that they know the theories, but they do not know how to integrate these theories into their practices or how to explain them. It was seen that some therapists who have higher academic degrees have knowledge about theories related to the origin of language, but this does not seem to affect their real-life practices. P11 stated that:

> Learning theories is so important for practice, but I am not sure how I use them in my therapies. For example, we all know a human is born with a language capacity as Chomsky said, but I do not think these kinds of knowledge are useful in practice (P11, Interview)

Another participant stated that there is no benefit to theories in practice, but he believes that theories become useful to explain practice. He believes that all practices can be explained through a theory or knowledge:

> Theories are not really useful in practice but if you want to use a practice in academia, you can link your practice with theory; so, you try to explain practice with a theory for academia but not theory really help you in your practice (P1, Interview).

Similarly, P14 is another therapist that bases her practices on previous experiences. She believes that all her actions come from theoretical knowledge, even if she is not aware of which one she uses:

> "She strictly administered the program that she planned. She prepared some visual cards for the child and she spelt the name of each picture for the child" (P14, Observation Notes)

When I asked why she used visual materials and was there any theoretical knowledge behind this action, we had the following exchange:

> P14: I have experienced that using visual materials is very effective for children who have DLD. They should see and hear the same objects over and over again to get used to them. Repetition is one of the most important things. Then speaking starts.
>
> Me: So, how did you decide to use the visual cards?
>
> P14: In similar cases, my previous practices worked.
>
> Me: Do you base on any theory for your action?
>
> P14: We should know the theories. I cannot name the theories now. Actually… we should learn, digest all theoretical knowledge and then fix them into our actions in a way. I generally do not base my actions on theories but what I realized is that whatever I am doing that somehow belongs to a theory, even if I am not aware of it (P14, Follow-up interview)

P14 clearly stated that she forms the therapies in relation to her experiences when deciding her actions. She also implied that theoretical knowledge is important, but she does not seem to relate her actions to theories. P8 was another language therapist that based his approach on his previous practices and experiences rather than theoretical knowledge. Although P8 stated in the interview that he follows a child-centred approach and refers to the theories,

the observation notes indicated that P8 did not seem to follow child's interest, and the therapy room was not including any toy or material for the child. It was observed that he just did oral-motor exercises with the child, although the child did not look happy as the therapist was forcing him to shape his tongue. These are some notes from the session:

> The therapist used a spoon or a wooden stick to shape the child's tongue. The therapist wanted him to make "ss" sound after he shaped his tongue. The child could not make the "ss" sound. The therapist said, "Blow, do not close your mouth". And then the therapist continued his session in the same way by asking him to do another [sound]. When the child could not produce the correct [sound], the language therapist was using a rather loud voice and saying to him; "Look at me", "I can see your tongue, pull your tongue, do not do it like this… (P8, Observation notes)

In the follow-up interview, when I asked:

> Me: why did you use this method during the whole session?
>
> P8: I think oral-motor exercises are important for initiating talking in this group of children, not only articulation problems. I tried this method on my previous children and it worked well.
>
> Me: Can you relate this method to any theoretical knowledge?
>
> P8: I think theories are not helpful in practice, but I find Chomsky's perspective very close to me. I do believe that all human beings are born with an ability of language. Some children are not quite able to use this; but, this ability can be improved depending on the environment of the child. Another theory…Piaget staged language development, as you know, but I do not know how to use this for my therapies. Or Vygotsky implies the importance of the social environment for language acquisition. But… If you ask me how this knowledge helps my practice, I cannot say this help my actions (laughs) (P8, Follow-up interview)

As can be understood from his statements, P8 could not link and explain with a theory the reason for using oral motor exercises in his practice. Although P8

seem to have knowledge about theories, he stated that theories are not useful in practice or he does not always know how to use them in practice. He administers what works for the child when deciding what to do in his actions. Also, observation notes indicated that he fails to follow the child's interests and the emotional status of the child.

Similarly, P15 is another therapist who reported in the interview that she administers child-centred activities. However, during the observation, it was seen that P15 was eager to control the session although the child wanted to play with a toy or wanted to engage with a storybook. P15 ignored the child's interest and continued with her pre-planned therapy. On the following interview, she was asked why she ignored the child's interest and did not interrupt her therapy plan;

> P15: Yes, I know theories say that a child-centred approach is necessary and beneficial as I told you before; but when it comes to the practice, it is sometimes difficult to control the session. Once you let them engage whatever they want, then it becomes endless wishes. They even want to go out and play. That is why I have a certain way of doing things. Everything should be organised beforehand…
>
> Me: Why do you think everything should be organized?
>
> P15: When I organize what to do in my actions, I feel more confident. The child needs to be exposed to the words that I would like to teach him. More control, better results… (P15, Follow-up Interview)

P15 pointed out that child-centred approach is beneficial, and she linked this approach to theories, but observation data indicated that there are some difficulties in applying this in practice. P15 seemed to base the therapies on her previous experiences rather than theories when deciding her next actions. She

believes that arranging materials and planning what to do in the session make her sessions more efficient. So participants seemed to arrange their future practices depending on their previous experiences rather than theoretical knowledge. This again does not mean that they underestimate the theories, but they rather could not explain the relationship between the theories they learnt and their practices.

As explained in the Methodology Chapter, an in-depth interview was carried out prior to performing observation, and a follow-up interview was conducted with the SLTs. Multiple data generation methods were found useful, as this section showed that although the therapists reported in the first interview that they are aware of theories and administer their therapies accordingly, the method of observation and follow-up interviews showed that the therapists' decisions are mainly shaped by their previous practices, rather than following theories and applying them into practices. It was seen that there were a few instances when a child's emotional needs or interests were ignored for the sake of an intervention method that was previously found beneficial.

4.2.4 Opinion Sharing with Other Professionals

> Sharing knowledge with others before administering an intervention method is the basic thing that I do here. For example, for DLD it is very important to learn whether a child has any physiological issues such as mouth palate, hearing issues or any psychological issues. To learn this, it is necessary to direct the child to related professionals and get information from other colleagues. However, my colleagues—SLTs—do not want to share anything, unfortunately (P11, Interview)

Another source of knowledge that was revealed to have a vital impact on the participants' decision-making process was the professionals that they collaborate with. The participants seemed to be interested in what others are doing in their therapies; especially their colleagues. All the participants underlined the importance of sharing information with one another. However, it was revealed that this knowledge-sharing practice is limited among Turkish SLTs. The only participant who is working at another language therapist's private clinic stated that she learned "lots of things" (P3) from her colleague. However, all other participants stated, SLTs in Turkey do not want to share their knowledge with others. This seemed to be a common problem—and the reason for not revealing what they are doing is the competition amongst them. As most of the language therapists work in private clinics, they want to be unique in what they are doing. P3 stated that;

> When I first started this job I was keeping a blog about what I was doing, but when I realised there is such a competition and no one shares anything, I just stopped blogging. It seems to be ridiculous—but it is what it is, I think people want to be unique about what they are doing and that is how they are marketing themselves. I now just share things with one of the language therapists that I think we have similar approaches (P3, Interview)

P3's claim supported what happened during one of the observations. P6 approached me and asked me whether I would share what she does in her practices with other language therapists, as she was worried about others copying the intervention methods that she learnt from seminars (which were expensive to attend, as she stated). P1 is another who mentioned why Turkish SLTs do not want to share their knowledge with another colleague:

> I think sharing information with one another is very important, and I do this with a couple of colleagues, but I have to say that

> not all of us want to share. I guess it is because of money, they or we don't do anything novel or magical but when it comes to marketing and money; they use it… like they say 'no one uses these intervention techniques…' (P1, Interview)

The extracts above indicate that although all Turkish SLTs mentioned the importance of sharing knowledge with one another, they are not open to sharing their own practices with one another for the reasons of wanting to be unique in their area, marketing and money. Rather than sharing knowledge with their colleagues, it was seen that some SLTs stated that they shape their practices by sharing the opinion with other professionals from different sectors (e.g. special needs, child development specialist, physiotherapists). Although this interdisciplinary approach is only used as an additional support to formal and informal evaluations, these participants, who receive help from other professions, expressed that there are instances when their decisions were completely changed in some cases:

> The institution I work in is a rehabilitation centre. There are people coming from different backgrounds. You then have conversations about your cases and get their opinion. There are physiotherapists, special needs educators, child development specialists etc. I think this feeds me a lot. The good thing is that these people are familiar with DLD issues, so, for instance, our psychotherapists widen my knowledge about biological issues, another one gives interesting information about children with special needs, so that when I share some of my cases with them they help me to see the parts that I did not see before. This helps a lot (P8, Interview)

Although what P8 expressed is not a collective, formal and structured interdisciplinary approach, he seemed to benefit from the conversations that he had with other professionals. P1 also stated that he tries to share the opinion with other professionals as he thinks that shared opinion from different disciplines can bring a new aspect to overcome the issue of a child:

> …Opinion sharing with other professions is crucial and that is what I try to do. Not collaborating with others might harm children. You might apply a wrong intervention method, there may be no life-death situation, but it could leave significant damage (P1, Interview).

P16 is another SLT who seemed to be in a more relationship with other professions. She stated that:

> I think other professions are very important. The decisions I make about what to apply as an intervention method are hugely affected. There are two psychiatrists, one psychologist, and me as a language therapist in this institution. I generally get psychiatric consultations about my cases to see if there are additional issues that I don't see. I also consult with the psychologist; I mean we share information. If I see any need I also consult with the neurologist. When there is such a collaboration, you see different aspects, and this affects your practices.
>
> When you discuss with others, you get better results; I mean it clears your mind about what to apply as an intervention method. Instead of working alone, I would prefer this as it really helps me (P16, Interview)

The SLTs' interview data indicated that all the therapists believe in the importance of with other SLTs, however, it was seen that there is a competition among SLTs, and that this competition negatively affects language therapists sharing knowledge and improving their practices.

On the other hand, sharing their opinion with other professions seems to be more common; but it was quite informal as SLT were talking about a child's issue one-to-one with each professional rather than arranging an interdisciplinary meeting. Although taking an interdisciplinary mentioned by most of the participants, it was seen that this approach is not used in practice.

4.2.5 Instinct

> "It is just about feeling. When you see and observe a child, you can guess what to do to overcome his/her difficulties in a short time... With your experience, you can decide your practice in a very short time." (P11, Interview)

The majority of the participants stated that choosing an intervention method became automatic after a certain time. They rely on their feelings when approaching a child. This might be the reason why they could not have explained the theoretical aspects of their reasoning. Data suggests that after university education, the SLTs try to improve their practical skills through joining training, seminars or watching YouTube videos, or sharing knowledge with others; they also use other opportunities. However, after gleaning all this knowledge, it was seen that they generally use a method that they felt would be the best one for an individual child. They use a method alone or mixing together regarding the child's needs.

> You know all kids love playing with water. I feel that this child will also like to play with it; that is why I chose water play as a tool in this session (P2, Audio Diary)

> I will prepare another activity that includes car toys for next session. I am sure it will take his attention and he will like it (P16, Audio Diary)

The SLTs often used terms like "I feel", "I am sure… he will like it". They feel it, and then decide what to do by using their knowledge. This is about automaticity that can be used by synthesising all information and practical knowledge that they know, as P9 states:

> No single method, theory or technique can overcome the issue of language problems, or none of them is enough to explain our practices. A mixture of multiple methods and interventions can work, which comes from individual therapists' knowledge and instinct (P9, Interview)

According to P9, practice is not based on one single pure intervention method or technique. Rather, most of the time where the intervention comes from is "not clear" (P9, Interview). Even some participants are not aware of why they decide to do an action or method:

> I can guess what can work for this child and what could not. This ability comes you after you see lots of similar cases (P7, Interview)

> …After a little conversation with the child and his/her family, I can see where the problem is, and how to intervene… without collecting lots of information and without conducting any standardized tests. I think the more you see the similar cases beforehand makes you more automatic (P6, Interview)

Above extracts indicate how participants' decisions come from a mixture of methods, knowledge and techniques that lead SLTs to create the most effective approach based on their instinct.

4.2.6 Interpersonal Factors

> I think in the end it all depends on you as a therapist. I mean if you love your job and children you probably make better decisions (P5, Interview)

The sixth theme that was revealed from inductive thematic analysis of interviews is interpersonal factors. Most of the participants described the existence of factors that have negative or positive effects on their motivations. These factors seemed to lead the participants to change their practices. The majority of the participants emphasized the importance of the nature of their

job. They seemed to be aware that they have a crucial impact on people's lives as they help children to speak. This notion seemed to create job satisfaction. So, motivational factors and job satisfaction have an important effect on SLTs' decisions. P5 stated that:

> It is very difficult to teach a word if a child has DLD issues, but it is worth [it] because the fruits are delightful at the end. When a child says 'mom' for the first time, the happiness of the mom and child makes me so happy and motivated (P5, Interview)

When P5 was asked whether or not such happiness affected her practices, she said that:

> Of course, actually this is so important because you know there are some really challenging intervention methods, and there are somewhere you just leave everything to the parents. So, if you know there will be a great outcome, you force yourself to choose the challenging one because you know it will be worth it (P5, Interview)

The majority of the participants expressed similar thoughts to the above statement. They seemed to find the energy to choose the best / the most challenging intervention method when they were motivated. P8 also confirmed this notion, as:

> It is very important to see the fruits of your efforts. This affects your perspective and motivation. As I stated before, I was a psychologist before being a language therapist, and what I noticed that I am so happier with this job than being a psychologist. This job gives you more positive responses. It is a demanding job, but surely, it gives you more positive feedback. Also, because you change people's lives, people respect you. All of these things affect my satisfaction, and in one way or another my therapy decisions… (P8, Interview)

It was seen that the participants feel satisfied with their job as they are able to see the outcome. The positive reactions of parents and children also motivate

them. P8 was also asked whether such satisfaction affect his practices; he stated that:

> As I said, I used to be a psychologist. There was no such satisfaction, because you barely see the differences. It is so abstract; you don't have a visible outcome. This really discourages you and sometimes, unfortunately, you don't spend enough effort. In this job, I feel that they will speak, so this encourages me to try different intervention methods that were not even on my mind at the beginning (P8, Interview)

P8 also emphasized the importance of motivation to spend extra effort in therapies. This extra effort seemed to have a vital impact on the therapists' decision-making process, as they seemed to be open to trying different intervention methods. P9 also underlined the impact that a language therapist has on others' life:

> People come to us with a DLD or any other language difficulties, which affects their relationships, social life, jobs, their whole life. When you help them to overcome these problems, there are not only visible language improvements in their life but also their mood, their perspective about life change. This forces you to do your best (P9, Interview)

After the above statement I wanted to learn more detailed knowledge from P9. So I asked: "Does this affect your decision to apply or not to apply a certain method? Could you elaborate on this please?"

> It definitely affects your decisions as a professional. For example, my brother is a math teacher and there are lots of ways to teach geometry to the children such as using real objects, telling them the importance of shapes in our lives, using some digital tools such as whiteboards and so on... but what he does is just using chalk and board, and using just a book as a resource. He can do more than this, but it is really difficult for him to see some outcomes and there are no parents who are so excited because their children solve a math problem (laughs)… so: no motivation, no effort…

> But in our case, we know that if these children start speaking, it will be a life-changing event for themselves and their parents, so you search and try to find the best methods or use diverse methods. There needs to be a real motivation to do that (P9, Interview)

As can be understood by the above statements, P9 thinks that being an SLT brings a big responsibility as they can change a child's life for forever. Another participant, P11, gave similar examples from her cases. She was talking about the factors that affect her selection of intervention methods, she describes why she tries to find different solutions/intervention methods:

> What we do is helping people. We change people's lives; you see the happiness they have; this makes me super happy. For instance, there was a family who wanted to send their child to a private school, but they could not because the school was not accepting children with DLD. So they came to me and after an intensive therapy now she will start at the school that they want. Their happiness makes you research, learn and find out more about your profession. I always tell myself that if a child's problem is noticed earlier and if my early intervention programme works for the child, then a different life is waiting for them. Then I just imagine how that child's life would be if I applied a wrong intervention method or did not show enough effort. This might affect a child's whole life, his friendship, academic situations etc. (P11, Interview)

P11's statements that "their happiness makes you research, learn and find out the best intervention method", and "I just imagine that how that child's life would be if I applied a wrong intervention method or did not show enough effort" signal that her decision to choose a certain intervention method and application of it seemed to be shaped by the satisfaction that she has with her job.

Thus, all language therapists seemed to appreciate what they do as a profession. This seemed to be an important factor in deciding to apply various intervention methods and spending a greater effort to improve professional knowledge.

4.3 Concluding Remarks

This chapter introduced the theme labelled as formal/impersonal and/or informal/personal resources that addressed the nature of resources that the SLTs use while making an intervention decision. The findings in this chapter revealed an important outcome that resonates well with the overall interpretation of how Turkish SLTs' decision-making processes. In this chapter, it was seen that the therapists' decision-making process is supported by various form of resources that can be contrasted as formal and informal. This was particularly seen during the evaluation process. Formal resources that lead the therapists' decisions consist of formal/standardized tests, the participants' theoretical knowledge, formal training, and ongoing learning opportunities such as seminars and workshops. Such formal/objective resources seemed to help the therapists to be confident about their decisions, as they believe that their practices are supported by evidence-based research. It was found that such formal resources help the therapists to follow an objective guideline, protocol and make intervention decisions accordingly.

Although the therapists emphasized the importance of such formal/objective decision-making processes, it is also found that the SLTs' beliefs, instincts, informal observations, self-made tests and their previous experiences also

dominate their reasoning process. It was found that formal/impersonal and informal/personal resources work in harmony when the therapists come to a decision. However, it was seen that the therapists' previous experiences and beliefs/instincts were found to be the dominant ones, compared to other factors.

CHAPTER 5. DECISIONS ARE AFFECTED: HOW THE NATURE OF THE THERAPY DRIFTS IN-BETWEEN CHILD-CENTRED and THERAPIST-BASED INTERVENTION

Introduction

This chapter will present one of the three themes that was revealed as a result of various data generation methods: interviews, observation, vignette and audio recording. A detailed inductive thematic analysis of the interview data showed that the SLTs' decision-making process was underpinned with a child-centred approach that aims to observe the individual child and organise a therapy session accordingly. However, the observation and follow-up interviews indicated that this is not always translated into practice, as the SLTs reported in the interviews. This difference showed that the therapists seemed to fall into a dilemma in their decision to design the nature of the therapy. Such a dilemma indicated that there is a decision drift: whether to design the intervention methods according to their theoretical knowledge, or rely on more practical methods due to several factors.

The data related to this theme will be presented in two sections. In this study, while it is found that although all participants in this study stated in the interview the importance of child-centred practices (section 5.1), it was seen in the observation that SLTs use more therapist based approaches in some cases. They tend to direct the child, and apply more therapist-based intervention as

outlined in section 5.2. Figure11 illustrates the main themes and sub-themes. Before presenting the data, it should be noted that the observations notes in this chapter were not shortened to better understand the flow of the therapists' actions as observation data is the main source from which the main theme of this chapter revealed.

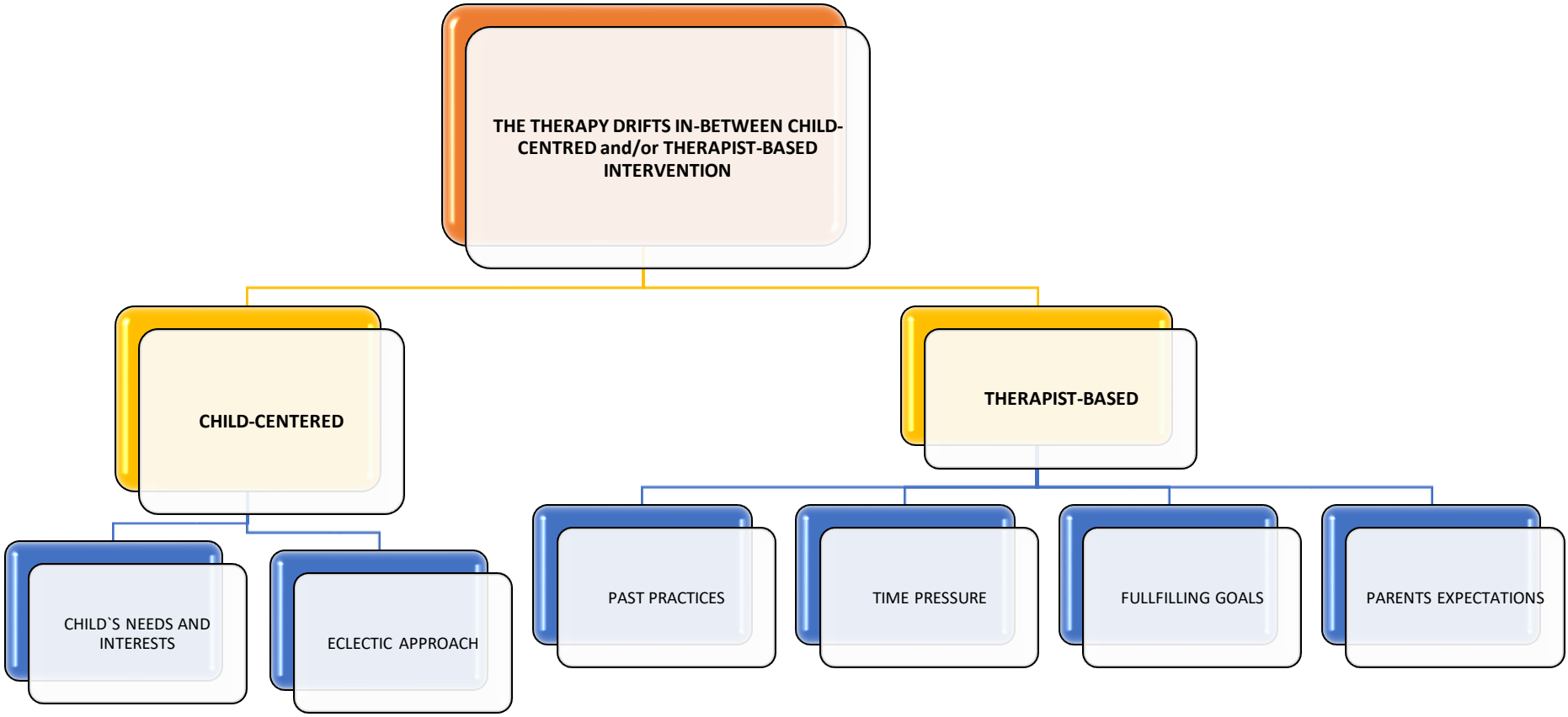


Figure 11: The main theme and sub-theme and initial themes that emerged from the data

5.1 Child-Centred Approach

The creation of this theme is based on the centrality of individual needs and priorities. Every single child has different characteristics, needs, and interests, so that therapy decisions might not be divorced from the individual child. Child-centred play therapy was originally developed by Axline (1969) who adopted Rogers's (1951) client-centred therapy. The idea behind this approach was that if adults could reflect their problems in a safe environment where therapists approach clients with full acceptance and empathy, then it is possible to help children in the same way. Axline (1969, p.73) developed some principles for child-centred play therapy:

> "Therapist must develop a warm, friendly relationship; accepts the child exactly as he is; establishes a feeling of permissiveness; uses emphatic recognition and reflection of feelings; respects the child`s ability to solve problems; lets the child to lead the way; treats therapy as a gradual process that cannot be hurried; establishes only those limitations that are necessary to anchor the therapy to the world of reality and to make the child aware of his responsibility in the relationship".

When the SLTs design their therapy model, they addressed theories that they learnt and training that they received when underpinning their claim about the significance of applying a child-centred intervention method. They take into account each individual child's personality, age, source of language issues, their reactions and individual/group therapy necessities. This means that SLTs take into consideration of individual child`s needs and interest, then structure an environment where they do not limit the child; but support his/her interests and provide some guidance. This leads the SLTs to be flexible and use multiple intervention methods depending on individuality which will be presented in the next section.

5.1.1 Making Decisions Based on Children's Interests and Needs

> "We create special therapies for each child. Of course, we have some children who have similar issues, but every single child has something very special, specific which cannot be seen by others... That is what drives our decisions…" (P11, Interview)

The idea of giving control of the session to the child revolves around the human element, which is constantly considering individual differences in each and every intervention decision. As P11 pointed out, the uniqueness of each child determines the flow of the intervention. Similar statements were made by most of the participants, as can be seen below. Another language therapist, P7, stated that the content of the therapy "depends on the child… we would not be trying to put the child into therapy, instead, we make therapy for the child", and she made a link between children's interests and creating a sense of the bond between her and children. She stated that: "If a child likes music, I do start with it because there should be a bond and interaction between [the] child and me. Then he can trust me and my action would be easier" (P7, Interview). She was asked if there were any examples she could give. She said:

> Nearly six months ago, I had a child for therapy. They were coming from a different city, so I wanted to make the therapies as productive as possible. I tried to learn what the child likes and I found out that she loves Tarkan (a popular singer in Turkey). So you know there are certain words that you want them to say in the first couple of months. What I did was that I googled Tarkan's songs and found them as texts. Then I made a playlist. I always played the parts of the song that includes the words that I want her to say. She loved it, and our therapies were completely different when compared with others, but as you see you cannot do this with another child who loves, let's say, cars (P7, Interview)

As can be seen from P7's statements, decision-making for a therapy intervention is constructed on the basis of each individual child's characteristics. This makes each intervention unique. When P7 was asked for the reasons behind such an approach, she underlined that she considers the case from various aspects and finds a middle ground: "I don't think I can say one reason for it, but it is the fact that you have to consider everything together. Our education, the context that we work in, the latest theories and so on…" (P7, Interview).

P9 was another language therapist who also favoured the child-centred approach. He stated that "there is no one stable intervention method to use for all kids", and he stated the practice as "inconstant" in the interview. During the session, he used a power point presentation which he prepared himself for the child. Below is an extract from notes that I had taken from his session:

> The therapist used PowerPoint software to show pictures of some fruits and vegetables to the child. When the child pointed [to] a picture, he talked about that object. When the child wanted to do another activity, the therapist followed him (P9, Observation Notes)

After the session, when I asked why he used PowerPoint software, and why he used this specific presentation, he stated that he prepared this presentation "just for this child". He said:

> I think there is no sickness but there is a sick person. What I mean is that each child has different reasons or/and different outcomes. When people see a child who cannot speak yet, everybody says 'this child has a language delay', but this is just the big picture of the problem. When you examine the case in detail, you can see there is a completely different picture. Let me give you an example; let's guess you are testing two

> different children with the Peabody test, and you get 2.3 developmental stage for both of the children. Can we say that these children have the same problems as they have the same scores? Can we use the same therapy for those kids? Absolutely not. There is no fixed therapy for all kids (P9, Follow-up Interview)

P9 underlined the importance of understanding the individual needs of each child and planning a programme regarding his/her needs. The vignettes that were obtained from P9 also supported his statements in the interview:

> …Afterwards, I would try to understand what he likes and his interests; and then I would prepare a therapy over the time" (P9, Vignette 1)
> … When I structure the language by categorizing, naming; I would consider the child's interests and abilities. Then I prepare a therapy program (P9, Vignette 2)
> …In the therapies, I would choose activities that will attract the child's attention… (P9, Vignette 3)

As can be seen in the above statements, P9 takes into account the child's individual needs and attention. He was contacted by phone and asked why he constantly referred to the children's needs when he was asked about his therapy decisions. He stated that:

> We have to consider everything, but the most important one is what is the child's needs. Decades ago, it was different. Children were always supposed to listen and obey, but you know the trend, if you like this term, is to focus on individuals. It is the right thing to do (P9, Informal Interview)

The extracts above and other data sets showed that when P9 makes decisions about his therapy interventions, he first refers to his university education, training, then he uses standardized tests, and then tries to understand the child's interests; lastly, he also considers the attitudes of the parents which will be mentioned in the next chapter (Chapter 6). He seemed to take advantage of using all the evidence to overcome the difficulties of the child.

The interview and vignette data from P10 also demonstrated that she prepares her practices based on children's needs. She stated that: "There is no perfect one intervention method. The selection of the method based on every single child which makes each intervention unique" (P10, Interview). When she responded to the vignette scenarios, she made the same statement for all three scenarios: "I design my therapy, considering the child's age, child's language development, environmental factors…" (P10, Vignettes).

P1 also implied in his responses to the vignette data that he prepares his therapy materials regarding the interests of the child, and he gave some example practices that he might do:

> …I would use visual materials and play activities to teach the child new words and concepts as this child is so young. I will give three examples for this scenario:
> First, for instance if the child likes to watch Sponge Bob [a children's cartoon], I can prepare cards of Sponge Bob which includes actions and concepts of him, or we can watch a part of the cartoon together and then talking about the activities [and] actions of Sponge Bob might be useful.
>
> Second, parents of the child can take the photo of the objects which he engages in his everyday life, and then they can create a book for the child; for example, they can take the house's pic, then the parts of the house and then the objects, furniture. With the aid of these pictures, I would aim to improve his word count with this book.
>
> Third, after he learned enough words, I would suggest parents combine these words' pictures with action and create a new book for their child. For instance, when the child goes home, they can put the home picture and the picture that shows the child is walking towards home or a picture of an apple and when he is eating that apple. This book can help the child to how to construct a sentence which includes an object and a verb from his own life (P1, Vignette 1)

The extracts sought from P1 demonstrated that he uses the materials that the child engages within his daily life and prepares his materials using these opportunities. P1 was asked why his approach to his intervention method revolved around children; he stated that:

> I think you also know that this should be the norm. I would decide to apply a different intervention method, but the centre should be always the child. Theories, academic articles or well-known internet blogs always suggest taking a child-centred approach. It might be like that in the past such as taking a behaviourist approach. I think we should all learn from the mistakes that we made in the past and refresh ourselves (P1, Interview)

P1 seemed to be aware of the importance of the latest developments in the field and believes that language therapists should improve themselves by constantly questioning their therapy decisions. P16 also underlined the importance of interests of children and she used the term 'holistic' when she was asked the reasons behind her decision approach:

> I generally use natural language learning methods in my therapies. Most of the time I try to understand what kind of games children like and then I use these games as an opportunity to help them. For instance, I use cartoons that s/he likes; materials, toys…I believe this approach (child-centred) gives me the flexibility of considering every factor together. You kind of take a holistic approach. I mean you do not just focus on several things; you need to take everything into account. You just can't trust tests and protocols... (P16, Interview)

As was also seen from P16's statement, the reasons behind administrating a child-centred approach stem from the belief that an eclectic approach is needed—that the therapists are expected to consider both scientific, theoretical facts along with more observable and practical factors. Taking a holistic decision-making approach seemed to lead the therapists to put children in the

centre of the therapies. P16's audio diary recordings also supported this claim. It was seen that she consistently uses a child-centred approach in her therapies. She sent weekly audio records after she conducted her therapies with a child who has DLD. The data showed that she administered all of her sessions considering the interests of the child:

> X is five years old, but his sentences are limited by two words. He loves playing…He does not like structured, rule-based therapies. He is very energetic. He especially likes playing with cars and any kind of game which includes cars. For this reason, in this session, I made a road, bridges, lights, with a cartoon before the session. When he was playing with the toys, he was using sentences which consist of two words such as "car stopped", "passed the bridge" etc. What I did is that I extended his expressions as my aim was helping him to make three-word sentences. So… I extended his expressions as "My car stopped", "I passed by the bridge" (P16, Audio Diary, week1)

When she was asked why her aim was helping him to construct three-word length sentences and the reasons behind playing a game that he likes, she responded:

> Well, as I mentioned before, I do some tests and evaluations so that is why we work around these kinds of things. When it comes to playing games that he likes, I think this is what we need to do. Of course, we run some tests and sometimes administer quite structured intervention methods, but we deal with children, and you need to find a middle ground. When you look at where all the disciplines are moving, you see that you become a guide rather than an authority… (P16, Informal Interview)

The above quote summarises the decision-making process that leads the therapists to administer a flexible, child-centre approach. Finding a "middle ground" as P16 stated, seemed to enable the therapists to consider various factors and arrange a suitable intervention method for the individual child. The previous quotes illustrated that P16 pre-arranged an environment (materials,

toys, environment) considering the interest of the child. On the following weeks, it was seen that she continued to use car toys in the session as the child loved and insisted on playing with cars:

> He always wants to play with cars, I try to find different activities about car games. My car toys and games started to be boring for him to help him because I noticed that we have been talking about same things every week like "my car stopped, I crashed the wall, bla, bla". So… I searched the internet and I came across some games which were related to the Montessori method. I decided to use this method in the following therapy. In that session, we made a car with paper with the child. When we were cutting, pasting the papers, he started to use different structures, different words and sentences. So… the session was successful in terms of achieving the goals. (P16, Audio Diary, week2)

It can be understood from the above statements that she tries to find different activities regarding what the child likes (cars) and produce three-word sentences (the aim of the session). And she prepared the next sessions in this way as well:

> I tried to find different activities from the internet and I found some finger songs about cars. I tried to get the attention of the child during the session by using funny gestures, movements. He imitated my movements and tried to sing the songs with me. He used different words this week within three to four-word sentences. The session was active and effective. (P16, Audio Diary, week3)

> After I searched the internet, I decided to study with story sequence cards—which includes cars—this week to help him to construct sentences that include three to four words. However, this activity did not engage him. So, I decided to find a cartoon which is about cars to watch together. I stopped the video from time to time and I asked the child some questions about the story of the cartoon. He responded to the questions well and he produced some sentences which include three words. (P16, Audio Diary, week4).

As can be understood from above recordings, P16 consistently followed the interest of the child and prepared her actions, structured the environment

accordingly. In this case, therapist used ‘car’ as the main resource in her intervention, as the child is very interested in cars. Audio-recorded data yielded an opportunity to explore whether or not the practice of the therapist is consistent over a long-term period. The last audio diary showed that she changed the activity to be able to attract the child’s attention. This data was also supported by a statement she made in the interview; “Our practices are open to modification according to interests of the child. I can move from one activity to another within a planned, arranged environment” (P16, Interview).

As P16 stated, searching the internet to find various activities was common. Particularly, audio diaries showed that the therapists regularly consulted the internet. When P16 was asked whether or how the internet affects her intervention decisions, she said:

> When you are stuck with what you know or what you learnt at the university, you just go around the same things over and over again. You need to follow the latest and creative practices… There are very helpful blogs and YouTube channels. When you read, watch and follow them you see your mistakes or the things that you learned at the university are not quite acceptable now…It is like every profession, we need to refresh our knowledge, so of course, it affects my decisions… (P16, Interview)

The internet also played an important role in pushing the therapists to consider various factors before administrating an intervention method. As P16 pointed out, other practices on the internet seemed to function as sources that help the therapists question themselves. P14 and P15 also underlined how the internet served as a “jury” that helped them to critique themselves:

> It is difficult for people to criticize themselves or your colleague to tell your mistakes, so quality sources on the internet help me in this sense. Sometimes you just do what you did before … what you feel … is right. But the good sources on the internet help you to see different aspects and they are quite accessible… When you follow such sources, you see how important and crucial it is for us to arrange a patient-centred therapy (P14, Follow-up Interview)

> …Yes, videos and blogs on the internet are quite useful and you see the importance of considering individual differences… but today it is the internet, tomorrow it could be something different. As you research our decision-making process, I think the internet offers us many practices and helps us to judge our practices like a jury. If you visit other language therapists, you probably will see the same activities again and again. They are so used to do[ing] what they know and taught, they hardly try something novel. I think this is an important thing about the internet when it comes to my decisions (P15, Interview)

P15 and P14 emphasised a significant point about how their decisions are affected by questioning their practices and finding novel activities, which lead them to consider designing more child-centred activities in some cases. Another therapist, P2, also explained why she uses a child-centred approach and the importance of balancing it:

> I generally put the child in the centre before I choose an intervention method to apply. I try to follow each child's interests, needs. Of course, each therapy has some aims to bring the child to the next level, but I consider children's interests first instead of worrying about these aims. I think there should always be a balance between our role as a profession and the fact that we deal with children… (P2, Interview).

As P2 also expressed, the therapists seem to emphasize that they try to "balance" their actions by considering theories, guidelines or protocols along with a more flexible approach which gives them the flexibility of arranging the therapies according to children's needs and interests., Observation data that

were gathered from P2's session supported this claim. It was observed that she pre-planned the therapy room before the therapy, and she followed the child's interests during the session:

> When I entered the therapy room there were different materials in different parts of the room. In one of the corners of the room, there was a big washtub that was filled with water and some figurine sea animals, in another corner, there were some cars on a mat which has road pictures on it, on another corner, there were wooden matching boards etc…
>
> The child preferred to play with water and sea animals. He wanted to take the sea animals and drop them in the water. The therapist got involved in his play and said "hoop" whenever he threw an animal to the water. The child said the same word and continued to play in this way. Then the therapist also took an animal and started to turn it inside the water and said "turn, turn, turn", but the child did not imitate her, he only screamed. Then the child went to the therapist's rotating chair, the therapist took him on her lap and started to turn around with the child and said the same words "tuuuurn" in each turning. The child seemed to enjoy it and laughed so that the therapist continued and started to count their turns such as "1-2-3 tuuuurn". Then the child wanted to play with cars. He went to the mat and took a car, the therapist came and took another car and said "viiiinnnn" (P2, Observation Notes)

During the therapy, I tried to focus on the therapist's actions and her reasoning to understand her decisions. It was observed that P2 was actively following the child's interests. Instead of following a *structured* therapy, she closely examined the child's actions. This data supported the interview as she stated that *"our practice is dynamic, needs to be continually engaging" (P2).* Immediately after the observation, I asked why she spread different materials into the room, she said that;

> We have a storage room; full of toys and materials. I first conduct some informal and formal evaluations, so I chose the materials accordingly. For instance, this child loves cars and sea

> animals. His parents mentioned that whenever he sees a sea animal or car on the Tv he becomes so excited, so I chose these toys just for him... I decided to use these toys with a method called focus stimulation, so I try to consider what I should do according to tests and these guidelines and try to fit these methods considering what the child enjoys most… so a bit from this and a bit from that… (P2, Follow-up Interview)

P2 statements such as "a bit from this a bit from that", or the fact that she considers her theoretical and professional knowledge along with more social-oriented thinking indicate that there is a decision process that works on such a "balance" when administrating an intervention method. When she was asked about her actions in the therapy, she stated that;

> To be honest it is quite difficult to keep pace with the child. They easily lose their attention and you have to follow them, otherwise, it is really hard to teach them anything. In my first year in this job, I was trying to keep children seated and was not allowing them to engage with other things. But this did not work. It is important to follow their interests and adjust the therapy rather than forcing them; that is why I said a bit from this and a bit from that, I guess this summarises my thinking… (P2, Follow-up Interview)

The other week, P2's session was observed again with the same child, and it was seen that she was consistent with what she was doing. It was observed that she pre-arranged the therapy room, and then followed the child's interests during therapy, and tried to teach pre-planned words in this way to the child:

> … The child took the potato man and started to take out the parts of it. The therapist asked the child "Where are the hands of the potato man?" He pointed to the hands of the toy and took out the hands of the toy. Then the therapist asked the child about the arms, legs, eyes and all other parts of the toy. The child took out all the parts of the toy in this way and then made it again in the same way… Then the child lost his attention and started jumping. The therapist came and counted "1-2-3" then she jumped too. The child stopped jumping and started to play with

> the cars. The therapist followed him and took another car and started to play with him (P2, Observation Notes)

P2 also provided long term (four weekly sessions) audio-diaries which supported observation data and interviews:

> Y is three years old and he has nearly 50 words at the moment, but he cannot construct three-word sentences now. I initiated my session by singing some songs that he likes. When we were singing, the potato man toy took his attention which I put on the table, and some other toys in different parts of the room on purpose. When he split the potato man into its pieces we talked about the parts of the body. Then I took all pieces in front of me and when he pointed to a piece, I asked him "Do you want his hands?" then eyes, feet and all other pieces and I waited for him to say "Give the hands". He just said "hand" but when I told him "give the hands" he imitated me… This activity was about extending the words that the child said (P2, Audio Diary, week 1)

> I continued to exercise producing and extending words. This week I brought some drawings for him to paint them. When he came to the room, he sat in the chair and looked at the drawings and colouring pencils. We started by naming the drawings and then the drawings that he painted. Then, we named the colours in the pictures. Then, I tried to engage him by producing two-word structures such as "yellow comb, green money, red apple". Afterwards, we cut out these pictures and put them in a paper bag. When doing this activity my aim was twofold: Repeating the sound of same objects to make it catchy for him and using two to three-word sentences such as "where is the comb?" and respond as "inside the bag", "what colour is the comb?", "yellow comb" etc. He repeated them, but he was more willing to say them when I was saying the words in a rhythmic way (P2, Audio Diary, week 2)

> I continued my session with the similar activities we did last week; combining the colour and object name to produce two-word structures. I put boxes in different corners of the room, which have different objects with the same colour. One box was just filled with yellow objects in it; in the same way others with green and red. When the child came to the room, I followed him and I encouraged him to make two-word sentences. By the way, teaching children by following their interest is the method that I learned from Hanen (P2, Audio Diary, week 3)

> I kept focusing on the same aim: combining two words by using cards. I prepared some cards for this session. I used three different cards for him to produce two-word structures. What I mean is that for instance, I prepared a card which has just red colour, another one just an apple picture and a third card has a picture of a red apple. I prepared 25 different objects in the same way and put them in different parts of the room. Then I just followed the child (P2, Audio Diary, week4)

As can be seen, by all data collected from P2's sessions, she pre-planned what to do in her sessions according to the needs of the child and then followed child's interests in a prepared environment. It was also seen that her weekly activities were consistent with one another. After the findings of audio diaries from P16 and P2, I noticed that they seem to prepare their materials and activities weekly according to their aims. This might show that they have long-term goals to achieve, but they shape their therapies weekly according to the interests of the children and the flow of the session. It does not mean that they do not plan a short-term schedule immediately after they conduct formal and informal evaluations, but their decision is continuous and functional. They can change their activity, plan and adapt it regarding the interests and needs of the children. The underlying decision-making process of such actions seemed to be stemming from the notion of seeking a balanced approach. In relation to the child's needs and interests, the therapists' decision-making process seemed to be flexible and dynamic. In the next section, I will reflect on how such flexibility occurs in practice.

5.1.2 Being Flexible in Practice: Eclectic Approach

> "My therapies completely depend on human differences. I think, the more different intervention methods you know, the

> better it is. We should make use of various intervention methods, if necessary, at the same time, depending on the needs of children" (P1, Interview)

Individual differences seemed to play a central role in the decision-making process. The majority of the participant language therapists reported that the diverse needs of children encouraged and forced them to learn and use various intervention methods in one therapy or across therapies. As P1 stated above, human differences (as he calls them) are the main trigger that determines his actions during his therapies. He also stated: "…instead of following a rule-based method, it is more about picking a little bit from one method and a little bit from another… Then, mixing them all together" (P1, Interview). Vignette data gathered from P1 supported this claim. He stated that he would use different techniques together for scenario 3:

> I would start my therapies with basic communication skills. Eye contact steps, imitation, import queue, attention and effective listening practices can be my preferences. Also, I would work prompt techniques, PECS and other alternative communication techniques together with oral motor techniques (P1, Vignette 3)

Similarly, P1, the vignette data that P9 provided also underlined the importance of mixing a variety of techniques and theories in decision making. He evaluated each case from different perspectives: the theoretical information, evaluation of the child's environment, family support, opinions of other professionals, concluding: *"… an eclectic approach is needed"* (P9, Vignette 2).

As P9 stated, the term *"eclectic"* was also used to name the theme of this chapter. It was seen that the fundamental reasoning to administer a child-centred approach is based on the thinking that middle ground and balanced

intervention methods are needed. Such reasoning enables the therapists to blend theory, hand-on practice and guidelines altogether. Thus, the therapists tend to use "*mixed methods*" (P3, Interview) creating a *"unique"* (P10, Interview), *"special, specific"* (P11, Interview) therapy sessions for individual children. As P3 also stated in the interview *(see the previous section),* she seemed to examine the child's behaviours and immediately switched the nature of therapy. Another observation note from P3 also confirms this:

> The therapist gave some colourful chalks to the child. The therapists started talking about the colours of the chalks. She was also drawing some shapes on a small black board… The child started to change his facial expressions… He started to play with his mouth… The therapist put the chalks aside and she also showed her tongue to the child and started to make some noises such as "aaa", "aaanneee", "baa", "baaabaaa" … (P3, Observation Notes).

The above observation note was one of the interesting things that attracted my attention. I read the note to P3 and I asked her to comment on her actions. She laughed and stated that*;*

> It could seem a bit weird, but I do not want to focus on only one aspect of an intervention method. I mean the child needs to play and learn but also he needs to do some physical exercises and practices. I was going to do this in the previous session but he did not want to do that. He rejected repeating the [sound]s. So once I noticed that he remembered the last session just now (laughs), I wanted him to do some physical practice. I think it worked well…So if we are going to talk about my decision to do such activities or switching from one to another, I guess I can say that it is adjustable. I mean tests and other tools guide me to do a certain thing, but I need to continually question them and my practices, such as if it is the right thing to do at that moment or can I change it a bit for the child? Things like that… (P3, Follow-up Interview)

P3's reporting in the interview and my observations showed that there is no one type of intervention method that P3 adopts in her therapies. She administers a dynamic intervention method that is arranged in accordance with the child's needs. She also underlined that her decision is affected by self-criticism, and with a critical view of the tools she uses. Administrating an 'adjustable' intervention method resonates with other therapists' statements such as finding a middle ground, being holistic, eclectic and so on. Such decision-making processes seemed to lead the therapists to consider children's needs and interests.

Another factor that leads SLTs to administer an eclectic approach is 'personality':

> Each practice teaches me new things because my therapies are based on individual differences, so the selection of intervention methods depends on children's differences. Yes, we use natural teaching methods, floor time or all other methods, but we shape them in accordance with children's needs. Sometimes I use only one, or some steps of an intervention method and mix this with other methods, which completely depends on the personality of children… I don't think there is one true intervention method, but there is always some way that children are attracted and make progress. It is our job to find that 'tune' (P5, Interview)

When P5 was asked what she meant by personality and tune, she answered:

> Some children are introvert, but some are extrovert. There are some who would like action, but some who just wants to sit and play. I mean they have certain characteristics and I try to understand these differences. Even if I had twins who have the exact [same] issues, I would still try to understand what they like or not, I mean I would not blindly go for the same intervention method over and over again… And by 'tune' I mean that you mix notes and create music. Like that, I try to

> consider every aspect of a case and mix them all together so it sounds right for the children and their parents… (P5, Interview)

The given example by P5 is very clear in terms of indicating the personality differences and the reason behind such decision, and she believes that *"SLTs should not use rule-based therapies if it is not suitable for a child"* (P5, Interview). P14 also emphasized the importance of personality:

> The intervention methods that I would choose completely depend on each child's individual needs and personality. I would use only one method or mix a couple of different methods together depending on the child's needs. Sometimes we are criticized that we cannot decide on one proper intervention method and apply that for the whole session. I find it quite wrong. Making decisions about using an intervention method is complex and changeable. I mean you cannot make a decision like, let's do this. It is changeable because we engage with children and they are changeable. You have to observe them and force the therapy to fit with their needs, not the other way around… (P14, Interview)

P14 and P5 addressed the nature of children's 'personality' when justifying their use of diverse intervention methods. During the observation of P5's session it was seen that she frequently asked questions to the child to understand his interests and encourage him to speak:

> She continued the therapy with some visual cards (each card hasa picture of fruit) which were chosen and put on the table by the therapist before the therapy. The therapist talked about the cards when the child put his finger on any card. When the child lost interest in cards, she asked the child questions such as "do you want to play with … or …?" "Why do you want water?... For painting or for drinking?" … with those questions, the therapist seemed to encourage the child to speak and understand what the child enjoys most… (P5, Observation Notes)

It can be said that although P5 follows a child-centred approach, her style was slightly different from others. She did not put different materials and toys different in the parts of the room; she often controlled the therapy by offering two options that the child might enjoy. When P5 asked what she thinks about this, she stated that;

> Well, although I believe that it is important to allow children to choose what to do, there are limits. You cannot let the child do whatever they want. I am flexible but there are rules as well. I do not know if it is the right thing to do, but I like to balance the therapy, a bit of control and a bit of flexibility. But again, I never offer children something they don't like...This was is a bit more practical and realistic; not everything written in books is practical… (P5, Follow-up Interview)

Although P5 follows the children's interest with prearranged materials regarding the needs of the child, it was seen the session was more controlled by her. She underlined the importance of 'balancing' the therapy and emphasized that theories are not always practical. Such thinking was found to be common amongst the SLTs, so this revealed a theme that was significant for this thesis, which will be presented in section 5.2.

In this section, it was found that decision-making is dominantly constructed on prearranged, flexible and individual basis of each child. The direction of the therapy intervention is under the control of the child. SLTs try to catch the correct moment to enter into their play and encourage them to communicate in a prearranged environment. It was also found that the therapists often emphasized the importance of individual differences and take a child-centred approach. The reason behind this would be twofold: firstly, the therapists expressed that each child is different, and they needed to apply different

methods to meet the needs of children. The second reason was that during their education (which lasts three to four years), language therapists receive intensive training. This training, as will be mentioned later, has two parts: theory and practice. In the theory part, the curriculum emphasizes the importance of individual differences and child needs. Thus, the therapists seemed to think that they follow these principals. They also tend to make intervention decisions using various elements such as theories, guidelines, past practices, and their beliefs—and these factors lead them to be more aware of individual needs and interests.

Although in-depth interviews are an important source of data, observing the sessions and conducting follow-up interviews provided an opportunity to make a more robust interpretation of Turkish language therapists' decision-making process. The observation data indicated that in some instances, the SLTs tend to use intervention methods that are based on their previous experiences—which were pre-planned, structured and therapist-driven rather than child-centred as was presented in this section. Hence, another subtheme of this chapter emerged after generating the observation data. This theme is called therapist-based intervention: past practices, time pressure, fulfilling goals and parents' expectation. The following section yielded a significant outcome for this study as it shows how and why the therapists' decisions drift from what they believe is to be correct. Such a drift was not obvious from the interview data, as it was revealed when the therapists were questioned about their actions.

5.2 Decisions Drift towards a Therapist-Based Intervention: Past Practices, Time Pressure, Fulfilling Goals and Parents' Expectations

In the previous section, it was seen that the therapists tend to design flexible therapies in accordance with children's needs and interests. Such decisions seemed to originate from the therapists considering various factors such as the context of the therapy, children's interest, tests results, guidelines and resources on the internet, all of which enable the therapists to question and update their practices. This decision-making process was found to be eclectic in its nature; meaning that the therapists try to find a middle ground that is neither solely based on tests results and guidelines, nor they completely dwelling on their own opinions or the children's interests. Such a process seemed to create an ideal therapy environment.

However, this was not always the case, so that there were instances where the therapists had to make different decisions that are not parallel to the findings in the previous section. These findings were not revealed during the in-depth interviews. Observation data and follow up interviews seemed to open up more opportunities for the therapists to talk about the challenges of their profession, and how their decisions drift towards administrating more habitual and structured therapies due to accustomed past practices, time pressure, parents' expectations and fulfilling goals.

5.2.1 Structured Therapies: Accustomed Practices, Time Pressure, Parents' Expectations and Goals

> The child-centred approach seems nice in theory but with trial and error… I saw that it does not always work for me... To make quick progress, I sometimes need to follow a schedule that was planned beforehand. In the end, we have limited time and parents want to see some progress, that is why I am trying to follow the schedule (P14, Follow-up interview)

P14 had stated in our first interview that she follows children's interests and adjusts her therapy accordingly. As P14 also agreed, a child-centred approach was seen as beneficial, but she did not seem to believe that it is always feasible. Time pressure and following the schedule seemed to prevent her from applying a more child-centred intervention method.

P14's therapies were organized beforehand, and she was not allowing the child to engage with other things. Some notes from the session:

> The language therapist and the child sat face-to-face on a child-sized table and chairs. The therapist was showing some cards, and asking him "what is this?" for each card. Then the therapist was spelling the word that she wants to teach the child. When the child seemed to get bored and wanted to stand up, the therapist said to him to sit down. This happened a couple of times. Although the child did not seem to be interested in the cards, the therapist continued to show the cards and spell the words. The child was taking each card from the therapist's hand quickly and putting them in its box. It seemed like he focused on taking and putting the cards inside the box, rather than engaging with the pictures on the card...
>
> The language therapist did not follow the child's interests in the practice. She only used some cards which had pictures of animals, furniture, vegetables etc. ... (P14, Observation Notes)

In P14's therapy session, a rigid intervention method was observed. Each material was chosen beforehand and every activity that had been organised

beforehand was strictly followed. When P14 was asked about why she focused on cards a lot, although the child did not seem to be interested, she stated that:

> I often use these cards to help children to spell some words. I did this before and even though they seemed to be uninterested, I witnessed that they somehow listen and learn them. They suddenly say the words on another occasion. I know it seems a bit boring for the child, but as I said, if it works and takes little time then there is no harm to do something more direct… (P14, Follow-up Interview)

As P14 pointed out, most of the therapists referred to their past practices and their own beliefs when I implied that they administered a more structured approach, rather than allowing children to find their interest. Due to time pressure, parents' expectations and fulfilling goals, the therapists seemed to focus on the methods that they are accustomed to and believe to work. P15 is another therapist that controlled the flow of the session, like P14. Rather than following the child's interests, she chose herself what to do during the session:

> When the child entered the room, there were some figurine toys on the table (tree, house, man etc.). When the child took a toy in his hand, the therapist asked him to give it or take it. In this way, the therapist seemed to teach him "give" and "take" words. When the child lost interest and wanted to stand up, the therapist changed the material and told the child to remain seated.
>
> The therapist removed the figurine toys and put them under the table, and brought colourful cloth pins with a matching board on the table. She told the child that "now we will learn some colours together". The child seemed to enjoy playing with these pins but then the therapist took them from the child. After this activity, the therapist started doing mouth and lip exercises; she shaped the child's tongue and mouth with the aid of a stick to obtain a correct [sound] from him (ff, bb, taa, tii) (P15, Observation Notes)

It was observed that P15 used different materials during the session. When the child lost his interest, she changed the material; she removed the existing ones.

All the materials and activities were chosen by her; she did not follow the child's interests, nor did she give him any choice of activity. In the first interview, she had underlined the importance of children's interest in arranging intervention methods during the therapies. However, it was revealed from the observation data and the interview that was held right after the observation that this was not always the case. I asked her whether she thinks that her intervention decisions consider children's interest first, or do they have a more rigid nature; we had the following exchange:

> P15: Actually, I cannot quite say so. It is not always ideal and practical to let the children play and follow them. I know the importance of letting the child to learn by his interests but theory does not always work in practice… a child-centred approach is necessary and beneficial as I told you before, but when it comes to practice, it is sometimes difficult to control the session. Especially when you think you have limited time and lots of activities in your schedule... That is why I have a certain way of doing things. Everything should be organized beforehand…I don't think this is bad. There should be a balance, so as long as I maintain this balance, there is no problem.
>
> Me: What do you mean by balance?
>
> P15: I mean I sometimes follow the children's interest and design the therapy accordingly, but every child is different, so sometimes you have to take control of the session. Also, we do not have infinite time and resources, so I sometimes just initiate activities and encourage children to follow me. I have seen that children make good progress before in this way… (P15, Follow-up Interview)

As P15 also agreed that although she told me in the interview that she administers a child-centred approach, she does not always reflect her decision in her practices. She underlined the difficulty of applying the theory into practice. P15 reported that allowing children to do whatever they want does not work in practice, because of time pressure and fulfilling the schedule. It should

be noted that this did not seem to be perceived as a flaw or an issue for the therapists. Relying on methods that were proven to be beneficial in the past and their judgements seem to be an acceptable way to design the therapies.

Another therapist, P6, also controlled the whole therapy session, although she had also emphasized in the interview that she bases her decisions in accordance with children's interests. As I presented the extracts of P6 in section 4.1.2, she tried to keep the child's attention on her planned activity rather than following the child. She encouraged the child to imitate [sound]s of animals, vehicles etc. during the therapy. She almost never changed the flow of the sessions, and followed a pre-planned schedule that she prepared. When I implied that the therapy I observed seemed to be structured, she stated that:

> P6: I think it is good to be organized and have a road map of what to do in the therapy otherwise we may waste our time and cannot reach our goals…
>
> Me: So, what if a child wants to play with something rather than what you want them to do like what happened in this therapy, I think he really wanted to play with the toys in that corner…?
>
> P6: Yes, as you see if you let them do whatever they want, they will want to do one thing and after a minute they will want to do another thing… I think it is normal as a child is a child. You are also the mother of a toddler; you can imagine what I am talking about. That is why I am trying to control the session, not to waste time and reach our goals… To be honest, it would be enjoyable and beneficial to be flexible in therapies, but parents want to see what we are doing; if we just wander around and switch from one thing to another I think this will look unprofessional for them… Of course, not only this, but it is also my experience, so I know that the child will improve in a short period of time… but as we spoke last time, I am not always that rigid. There are many instances that I let the child to do whatever they want and try to adjust the therapies accordingly, but this is not always feasible… (P6, Follow-up interview)

Time pressure to reach the goals, parents' expectations and her past experiences with other children seemed to be important factors that affect P6's intervention decisions in her therapies. Although she underlined the importance of following the children's interest in the in-depth interview, other factors intervene and change her therapy decisions.

Another language therapist who also was observed to follow a rigid therapy session in some instances was P8. He was found out to be administrating the strictest intervention method, compared to other observed language therapists. An important part of his session was very formal and strict. It was observed that the therapy room was very formal. There was a desk, three chairs, a big metal cupboard, and a computer on the desk. There was not any toy or any therapy material in the room.

> When the child came to the room, the therapist told the child to sit down in a large chair. The therapist sat in another chair in front of the child and asked him to imitate some animals' [sound]s. The therapist used a stick to shape the child's tongue to create the correct [sound]. When the child could not shape his tongue, it was observed that the therapist forced him to shape his tongue with a stick. All the vocabularies had been chosen by the therapist without using any toys, cards etc. When the child could not shape his tongue, the therapist told him that "do not move your tongue", "I saw your tongue, do not do it like this", "not up, down", "do not push my finger with your tongue" (P8, Observation Notes)

P8 was asked why he focused on one activity, and how he decided to use this intervention method in the therapy:

> P8: When this child came to me, he just had three to four sounds and he was using these sounds when he tries to say something.

> After I administered some language development and articulation tests, the roots of the problem and needs of the child were detected. And then I designed a therapy model.
>
> Me: Can you please give more details about your method?
>
> P8: My method is based on using a wooden tongue depressor or another material, such asa teaspoon, or finger, to produce the desirable sounds. Which one to use completely depends on the child at the moment. For instance, if I want to produce "k" sound, I touch the front part of the child's tongue with either my finger, tea spoon or tongue depressor. I decide to administer such things based on my experience and previous sessions. For example, this child was very uncomfortable when I was using my finger and he was about to retch most of the time; but he was okay when using a teaspoon. So, I decided to use this therapy based on my experiences and the needs, sensibilities of the child.
>
> Me: Do you always apply this method?
>
> P8: I had tried this method with other children who came with similar issues. It worked well, I think. Teaching them how to shape their tongue helped them to learn how to produce a correct sound. I think there is a link between mouth movement abilities and language abilities…I think playing games or using toys are important too, but this method provides more progress in a short period of time (P8, Follow-up Interview)

P8 stated that he structured his therapies according to his previous experiences. However, he did not provide a child-centred environment in this session and did not let the child to choose his own interest during the observed therapy, although he had underlined the importance of a child-centred approach in the interview.

Designing a therapist-based intervention method that is fundamentally based on the therapists' past experiences were seen in almost all participants' practices. It was found that there is a transition between administering a child-centred and therapist-dominant approach within the therapies. When the therapists have less time pressure and make intervention decisions by

evaluating a child's interest, utilising existing theories and sources such as the internet and continually questioning their practices, a more flexible child-centred intervention method is seen. Otherwise, the participants seemed to make use of their instinct and past practices to make quick progress, which results in administrating a more structured therapist-dominant intervention method.

P3 and P7 also underlined that it is not always feasible to spend a lot of time on a case and design a flexible therapy:

> As you saw in the therapy, I sometimes need to speed up the activities to make use of every bit of time. I can't always spend time on what the child is interested in as we have a duty to complete, so especially towards the end of the session I take control and do some one-to-one exercises. Of course, if we had the time then I would probably adjust these activities according to the child's interest… According to my experience, I make more progress when I lead the therapy… (P3, Follow-up Interview)

> … We generally produce a report about what we did during the week, and parents really look forward to seeing their children's improvement. So, in such a context, you do not have much choice but to administer a more direct intervention method. But I think it is not an issue if you also give children some room to do what they want… At the end, we have accumulated a lot of experiences and I control the session when I need to, based on my previous therapies… (P15, Follow-up Interview)

After conducting observation and follow-up interviews, it was seen that there was a consensus among the participants, as P3's and P15' statements illustrated. Such consensus revolves around the fact that apart from theories, guidelines, protocols and children's interest, the therapists have a belief system that has been constructed over the years. Such a belief system leads the participants to rely on the methods that they believe to be beneficial rather than

following a certain method. The challenges that they face during their profession such as time pressure seemed to encourage them to reflect their experiences on a new case. P16 also confirmed this:

> P16: I know I am not a surgeon, so we do not have to make decisions in seconds without thinking much about a case, but we have some experience, and over the time you somehow know what would work in a short period of time and directly start administrating the methods that you know well. This gives you confidence and earns a lot of time, so it is sometimes normal to design less flexible therapy. This is not always the case, but we come and go between these edges.
>
> Me: By edges you mean?
>
> P16: I mean, of course, the ideal would be to be flexible and take everything into consideration, particularly the children' needs, but there is also the other edge that we control the session and do what works best for the time being (P16, Follow-up Interview)

P16's statement that they *"come and go between these edges"* reveals an important aspect of the therapists' decision-making process. It was seen that the therapists' decisions to evaluate a case and design therapy has a dynamic nature. It not only changes from case to case, but also within a case. Observation notes from one of P2's sessions well illustrate how such a transition occurs, and some factors behind it:

> …She put a small amount of chocolate at the outside of the child's mouth and showed him how to clean it, without using his hands, with his tongue and lips in front of a mirror. After a little lip and tongue movement, the child wanted to play with the toys, but the therapist tried to attract his attention with different funny face shapes… Then, the therapist did some tongue practice with a stick, but the child did not seem to be content…His parents arrived and the therapist told them what they did in the session… Parents asked for P2 to teach them how

> to do lip, mouth and tongue exercises and massages. They want to do the same things at home. (P2, Observations Notes)

After the parents left, I asked P2 that what she thinks about mouth, tongue, lip exercises that the child did not seem to like. She stated that:

> Well, it is not a surprise that children do not like such activities, but I need to administer such intervention methods as it seems to be working. You never know what works best so you just trust your hunch… you heard the parents, they also want to see something that looks like a treatment. Some parents do not like to see me playing with their children all the time. They think that we are like doctors and want to see some 'doctor things', so such methods also satisfy them that I am doing something worthwhile… (P2, Follow-up Interview)

P2's practices and statements illustrate an important hint, signalling how the participant therapists' decisions to administer an intervention method drifts. As P2 stated, the therapist has a "hunch" that lead them to do a certain activity, but they do not seem to be able to explain why such a method based on their hunch would work for a particular case. It was seen that such reasoning processes, based on the therapists' hunch, belief or instinct as the participants reported, seemed to lead the therapists to design more structured and therapist-based therapies. Also, P2 underlined that parents have a set of expectations from SLTs, as they see them as a doctor who is administering highly scientific and visible treatment protocols. It was seen that the therapists seemed to feel pressure and make an effort to satisfy parents, which also leads to administering rigid and structured intervention methods where the therapist controls the session.

5.3 Concluding Remarks

This chapter responds to the research question that aims to explore how Turkish language therapists decide the nature of intervention methods that they administer to children with DLD. This chapter presents one layer of three main findings to the research question. It was found that there are two main therapy paths the SLTs follow. While children's interests and needs are two of the most important factors that not only affect the type of the intervention method, but it also leads the SLTs to administer a dynamic and flexible therapy session. The SLTs seemed to be concerned about a pre-arranged environment where children are encouraged to follow their interests, on which the therapists build their intervention methods.

However, while all the participant therapists expressed the benefits of considering children's interest and needs and making intervention decisions upon them, this was not always seen in practice. Employing various data generation methods allowed me to explore how the participant SLTs make decisions and how these decisions are built in the therapies. Thus, the observation data and the follow-up interview (directing questions about the participants' actions directly after the observation) revealed that there are other factors that cause the therapists to administer a more structured therapist-based intervention method. Time pressure, the need to follow the schedule, parents' expectations, past practices and the therapists' beliefs seemed to influence the participants' decision-making process.

These two poles of the reasoning process seemed to be based on the factors that drive the therapists' decision-making process. When the therapists take the latest developments, theories, various resources such as the internet into consideration and continually refresh and question their practices, they tend to design a more flexible and child-centred approach. The decision to administer such approaches, however, shifts due to time pressure, parents' expectation, the therapist's past practices and beliefs, which result in designing a structured therapy environment. It should be noted that this outcome does not imply any comparison between the two reasoning processes and their quality.

CHAPTER 6. PARENTS MATTER: THE ROLE OF PARENTS IN SLTS' INTERVENTION DECISIONS

Introduction

In this chapter, the third main theme—parents matter—will be presented. It was revealed from the inductive thematic analysis that parents have a significant impact on SLTs intervention decisions for two different reasons. First, the results indicated that parents' willingness to learn and support their child at home affects SLTs' motivation and their therapy choices. Thus, parents' willingness leads SLTs to find new approaches, new activities; and they try to find easy and effective activities to do at home. Second, although all the participants mentioned the importance of training and involving parents into the therapies, it was gathered especially from observation data that the SLTs' involved parents into the therapies in different ways.

It has been repeatedly reported in studies that the quality and quantity of parent-child interaction has an important impact on children's language acquisition (Safwat & Sheikhany, 2014; Schoon, Parsons, Rush, & Law, 2010; Topping, Dekhinet, & Zeedyk, 2013). It is also found that inconsistent parental behaviours and parenting problems could affect parent-child interaction and lead children to have language difficulties and developmental disorders (Campbell et al., 2003). These similar outcomes in the literature might SLTs to give extra attention to parents. In this way, parents may "carry over" the

interventions at home and then “maintain” to support their child’s language development (Law et al., 2007, p.4).

To improve parent-child interaction, parent education programmes have been developed and it has been found that these programmes are useful. For instance, Lindsay (2011) examined the effectiveness of the three evidence-based parenting programmes and found that parenting programmes can improve parenting skills and reduce the child’s difficulties.

Although interventions for younger children mostly involve their parents and parents are actively involved in the intervention process (Law et al., 2017), there is not much research found in the literature about the content of whether and how professionals’ practices are shaped by parents’ presence or absence. This study, therefore, reveals another important aspect of the parents’ role, which affects SLTs’ intervention decisions.

In this study, it is found that although all SLTs acknowledged the importance of training parents, their decision to involve parents into therapies showed differences due to some factors such as parents’ motivation and willingness, and their attitude towards the SLTs’ profession and their availability. While on the most of occasions the SLTs preferred to involve parents into therapy as active (section 6.2.1), there were times that the parents passively took part in therapies (section 6.2.2). Also, it was seen that some others preferred to do therapy one-to-one, only with the child, and they arranged appointments to talk about the session with the parents (section 6.2.3). Moreover, data showed that

SLTs used online tools to communicate with parents in some cases (section 6.2.4). Training and involving parents in the practice depends on the SLTs' conception about their own role into the practice and "their own sense of values and worth" (Byng, Cairns, & Duchan, 2002, p.92). Figure12 illustrates the main themes and sub-themes.

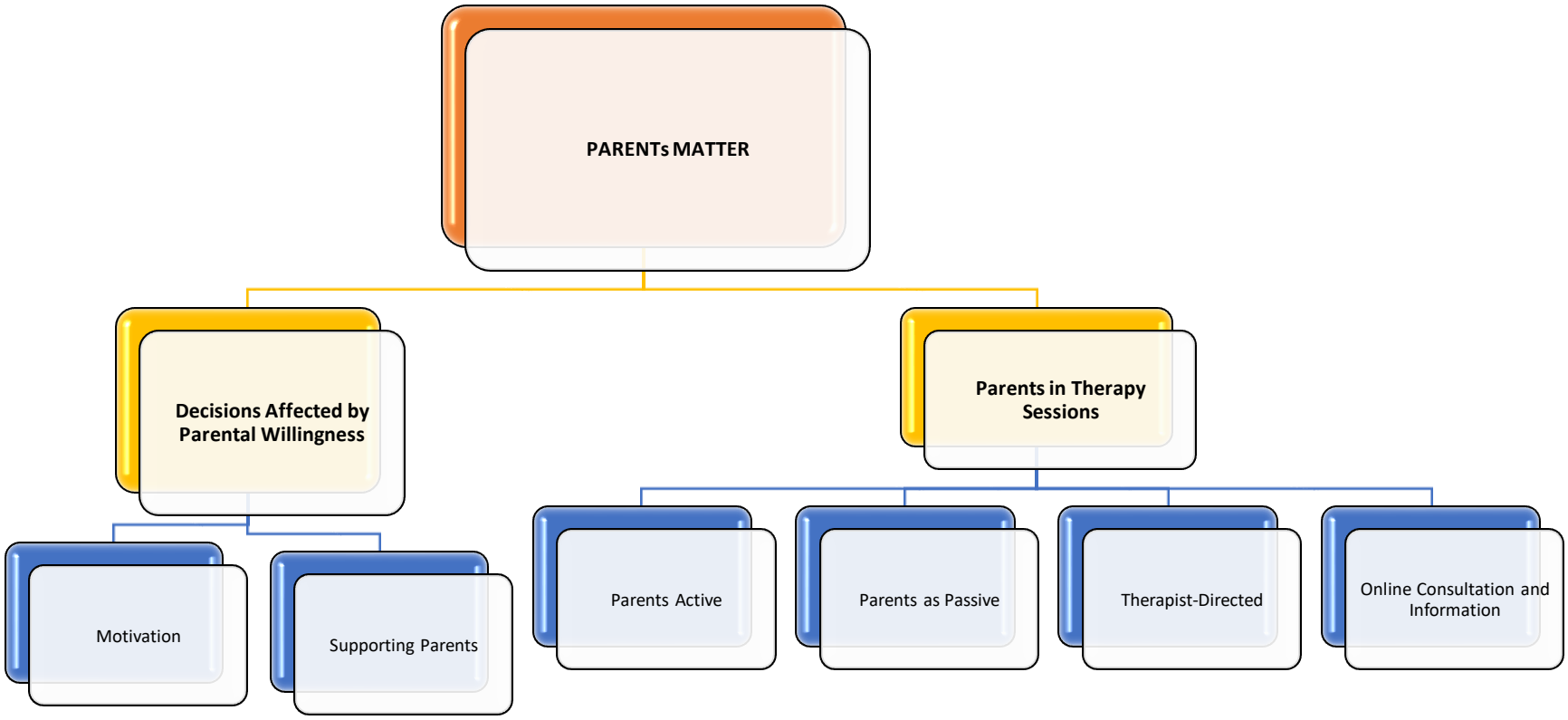


Figure 12: Graph illustrates the main theme and sub-theme and initial themes that emerged from the data

6.1 SLTs Decisions Affected by Parental Willingness

> Without parents, you can't do much. If parents start doing our suggestions at home, we see that children progress quickly. This is because it is the parents that have negative or positive impacts on their child's language disorder. So, I want parents to repeat my actions at home. I provide them with materials, suggestions, everything to support them… The more they are into it the quicker we see some results…" (P2, Interview)

According to P2, parents play an important role in terms of improving their children's language development. When P2 was asked whether there were instances that parents affected her selection of an intervention method. She said:

> Yes, it happened and happens all the time... I cannot say that most of the Turkish parents are educated about how to behave, what to do with their kids in their daily life. Most of them are not aware of their child's needs. Or they are aware, but lazy when it comes to playing with them. But there was a case where the parents were so motivated and eager to help their children… At least they were researching. When you see such a motivation you, of course, feed the parents in terms of applying different intervention methods. They always applied what I told and showed them, so I was trying to find out various methods that put the parents in the centre. You cannot do this with parents who are not interested or so busy with their work (P2, Interview)

P2's statements above illustrated the general approach that the participants SLT take. If parents seek to learn more about their child, she tries to find different methods to teach them. So that parental willingness directly has an impact on her motivation and variety of chosen method. P3 also made a similar statement. She exemplified how parents' willingness has an impact on their intervention decision:

> After I attended a workshop, I learnt a method named DIKTE to intervene with children who have a language disorder. This

> method is based on teaching parents to do some planned, structured activities at home together with their child. They should do three different rule-based activities by morning, noon and evening, every day. I trained some parents to do this method at home. However, while some of them did not do it, some others only had done some part of that method. However, this method only can work if they do everything by following the rules of the method. So, I decided not to use this method again with parents who are not really motivated… so as you can see, we try to update our knowledge and learn new methods, but it is not always up to us. In the end, you need parents who collaborate. Otherwise, you just improvise and do things in your own time rather than dealing with parents…" (P3, Interview)

The example given by P3 indicates how parental willingness has an impact on SLTs decision-making. After she experienced that some parents did not follow the rules of the method or did not do anything at home, she decided not to use this method again. P3's statement also addressed a significant point that was also seen in previous chapters. It was found that P3 and other therapists seemed to improve their knowledge by attending seminars and workshops where they support their practices by research evidence that has a scientific basis. However, it was reported that what works in academic articles and workshops does not always seem to work in practice. Thus, as P3 underlined, on some occasions, the therapists have to switch to another intervention method and *"improvise"* instead of administrating the *"ideal"* intervention method.

Another therapist, P11, implied that she considers parents' engagement with therapy and make a judgement afterwards whether they are active or not. She reported that she was not happy with some parents and *"had to find something else to do"* in her future therapies. She was asked, through WhatsApp, how and why her therapy is affected:

> After my first sessions, I ask parents to do some homework with their child. All they need to do is play 5 different games a day and take a note about what they did for what reason when playing these games. A week later, if they come to me with nothing, I do not administer such kind of methods which necessitates some rules to follow because after a while you know or—how can I say—[you] feel the good and bad parents. I do not want to be that harsh, but unfortunately, there are parents who have no idea about how to play with their child at all… I know it is quite important to train parents and increase their awareness but sometimes it is so difficult so I keep changing the structure of therapies so I can give my best to these children… (P11, Audio Diary)

As can be understood, P11 does not prefer to continue certain intervention methods if parents fail to show that they spend quality time with their child at home. P11 pointed out that her experiences and instinct help her to understand "bad" and "good" parents as she *"feels"* it (*also stated in section 4.2.5*). Although she underlined the importance of training parents, her own observation of parents seemed to lead her to focus on children rather than training parents.

P4 also claimed that parents' willingness to participate in therapies and learn what to do at home has an important impact on children's progress. She underlined that this feeds her, as the child is progressing well, and keeps her motivated when working with enthusiastic parents.

> Children spend all his/her time at home, so the attitudes of parents are a key factor to overcome their problem. Interaction is so important, and the child needs to interact with his/her parents. I suggest them to let their child to help them in the kitchen or cleaning home etc. because most families do not know how to play and how to interact with their child. When I compare parents who follow our suggestions and repeat my actions at home with those parents who do not consider my suggestions, I can surely say that there is a big difference

> between these children in terms of improvement. So, working with an enthusiastic family increases my motivation and forces me to find new methods so I can teach these methods to them (P4, Interview)

So the data demonstrated that while the family willingness increases the motivation of SLTs and leads them to find different methods, working with unwilling parents makes them unmotivated and feel under pressure. P9 gave an example of this:

> …if I do all the things and parents are still not willing to do anything then I have to do it myself in the therapy. I must find a different approach or a different intervention method that parents would find it easier to apply. I have lots of cases that both parents work and cannot spare time to do the methods. Nannies do not understand and cannot apply [them]. What I do is I spend more time with these kinds of cases and try to find a different approach so that I can include all the family in the therapy. This is not always easy. It is sometimes so discouraging to work with these kinds of parents because instead of spending my time and effort on children, you find yourself doing different things… (P9, Interview)

P9 clearly expressed the importance of family members in his therapies. From his statements, it was seen that he finds alternative methods to involve families. He tries to make everything easier for parents which necessitate an extra effort from him. Thus, regarding all excerpts above, it can be safely concluded that parents' willingness has a significant impact on Turkish SLTs' decision-making process.

The vignette data that were received from the participants revealed that even if parents are unmotivated and passive, some SLTs still try to motivate parents, as they believe that their willingness plays a crucial role in terms of improving child's development. For instance, P9 stated in vignettes that:

> …I would help parents to learn how to spend quality time with their child…" (P9, Vignette 1)
> …I would change parents' overprotective behaviours…" (P9, Vignette 1)
> I would suggest parents take their child to playgroups, nursery and other places which will provide the child with the opportunity to interact with their peers and socialise them… (P9, Vignette 1)
> I would guide parents to do activities at home, spending quality time with the child, and I would provide parental counselling to modify their attitudes… (P9, Vignette 2)

These abstracts from P9's vignette data demonstrated that although the interview data showed that the chosen therapy method is affected by parents' enthusiasm, some language therapists feel responsible to train and motivate parents and spend an extra effort on this. They seemed to train parents, increasing the awareness of parents, as they think that training is a part of their job, as P6 stated: *"I feel like it is my responsibility to train them and make them active"* (P6, Follow-up Interview).

P5 also stated in the follow-up interview that she always tries to motivate parents and train them. She explained the reason for this with an example: if she was planning to apply a long-term, parent-driven and intensive therapy method, this would not be possible with an *"unwilling and hopeless parent"*, and she believes that instead of blaming the parents, therapists should train and motivate them:

> "Parents might be hopeless, unmotivated, but it is our job to convince them about how their child can progress; we should not give up applying an intense and beneficial method just because parents are not motivated" (P5, Follow-up Interview)

However, she stated that in some cases, it is very hard to convince parents that their child needs therapy: *"…but some parents do not want their child to start therapy as they believe that people will label their child as disabled…" (P5, Interview)*. Moreover, in some cases, although one of the parents really seeks assistance from a professional, the other parent does not want their child to receive therapy. For instance, P5 told me that the child that I observed was not supported by his dad and grandparents for these interventions; but his mother came to the centre and asked for a professional's help:

> We tried our best to explain how important starting therapy is for this child to his grand mom and dad, but the mother still does not have any support, and they live all together and the child does not have a good environment at home. That means his mother cannot do any intervention method at home. Although she is very diligent and concerned, she does not have the support to do some special activities as she is discouraged and criticized. This really affects my actions and motivation, so this completely changes the way that I approach the case. So, this, of course, leads me to change the intervention method that I pursue, and try to as much as possible during the therapy, instead of putting pressure on the mother…I try to teach her activities that are like games… (P5, Follow-up Interview)

When I asked in what way this situation affects her actions, she stated that:

> I know some specific therapy methods from workshops which cannot be applied without integrating parents and arranging a suitable home environment; so, this means if parents do not want to continue to do activities at home, I cannot use these methods with them. This negatively affects my motivation as I know that this child's progress will take lots of time. To use time more efficiently, I am trying to apply an intensive intervention programme here, in my office, so I try to use the time as productively as possible… but to be honest this leaves little room for me to be flexible and follow what children want to do… (P5, Follow-up Interview)

The above statements indicated that P5 feels under pressure about the child's progress, as the child has no opportunity to repeat her actions at home. This forces P5 to administer a different intervention method which is intense and less flexible. P5 believes that the most important thing is to increase the awareness of parents and others who surround the child:

> When parents are open to learning about how they can help their child, this makes my job easier, as they repeat the same activities at home …After I started working as a language therapist, I realised that parents are the most important factor that affects my therapies. I was not aware of this during my university education… Because no matter how good you are as a therapist and no matter how effective the intervention methods you know, if parents do not collaborate, you have no choice but adjust yourself accordingly and try to find a solution… (P5, Follow-up Interview)

Similar to P5, P12 also underlined another challenging side of the job. He stated that there are some children who have certain behavioural problems that they need to deal with first; however, sometimes it is difficult to convince parents that their child has such issues:

> Unfortunately, some children who have language disorder also show some behavioural problems. This makes our job so difficult. Instead of only focusing on their language improvement, I also try to overcome their other issues. Moreover, most of the time, we have children who have DLD, but what you see is that they first need some behavioural support before initiating intervention methods. This just discourages you, as parents sometimes don't want to accept this. So, what we do is to educate the parents first; so, this completely changes the nature of our therapy… So, you look at parents and make a decision about how the therapy will be. Sometimes five minutes is enough to make a general judgement about parents, then you know what to do. If they are educated and aware of many things, you directly initiate intervention methods and train parents. Otherwise, lots of challenges await you… (P12, Interview)

As can be seen from P12's statements, he observes parents first and judges their personality and their suitability for therapies. He uses his own instincts about parents' character; he then makes a decision about how to involve or not involve parents in the therapy. P12 also drew a different picture about being an SLT, as he seemed to be more exhausted from the challenges of the nature of the job. He also pointed out that some parents might also become a barrier to initiate an intervention method. He said:

> By the way, sometimes parents do not seem to be ready for therapies, as they do not accept that their child has an issue. You must convince them first; if you can't, then you have to choose a different intervention method because most of them include parents as well. So, it is an exhausting job. Sometimes I feel so exhausted because we try to make all the work in the sessions rather than spreading it to children's daily life. If parents were well aware of language issues and what it means, I believe my therapies would have been more productive (P12, Interview)

As P12 expressed, families' attitudes were found to be an important factor for the therapists in choosing a certain intervention method. P12 pointed out that most of the intervention methods include parents in the process. The participant therapists emphasized the importance of the families' motivation and level of education. It should be noted that by education, they mean the level of awareness of the parents when it comes to their child's needs. They do not mean that parents should be educated about language issues. This is more about the level of understanding and openness of parents.

Taking everything into consideration, the participant SLTs claimed that if caregivers or parents of children who have DLD are open to learning and willing to help their child, the SLTs support families with a variety of the

different methods that they know. If parents are not motivated or do not have an appropriate environment at home to repeat activities, then SLTs spend more time to train parents, trying to increase their awareness in the first place, which may take a long time in some cases. It was seen that the therapists first come to a decision about parents, and this generally stems from their own observation and beliefs. The therapists' judgement of parents seemed to be vital, as they design therapies accordingly.

6.2 The Changing Role of Parents in Therapy Sessions

> "… parental involvement is a crucial factor for an intervention method to be successful" (P10, Interview)

It was gathered from the data that all language therapists expressed the importance of parents and their willingness in helping their child when conducting an intervention method. However, observation data indicated that the way parents` involvement in the session had some differences; while some of the children received therapy one-to-one with the SLT, some others were taken to the session with one of their parents. Furthermore, whilst some of those parents' involvement in the therapy was in an active way, others only attended to observe the session (taking a passive role). Additionally, in some cases, there was no parents' involvement into the therapy; SLTs' either informed parents through the internet, or they invited parents into the room at the end of the session to explain what they did and what parents should do at home. Table10 summarises the role of the parents:

Table 10: SLTs' decision about parents' role in the sessions

THE NATURE OF THE SESSION	PARENTS' INVOLVEMENT
• The SLTs administered pre-planned activities • Parents can help and join in with the activities in the session at any time • Parents are supported to continue the techniques which they taught by SLTs • Parents provide information about their child to SLTs (such as likes/dislikes) in order to help to devise an intervention plan	PARENTS AS ACTIVE
• Only the SLTs administered and planned the therapy • Parents are observers • Consulting parents after the session and encouraging them to continue the techniques which they observed in the session	PARENTS AS PASSIVE
• Only the SLTs run and decide the intervention • Meeting with parents at the end of the session	THERAPIST-DIRECTED
• SLTs run therapies • Parents are learners	ONLINE CONSULTATION AND INFORMATION

As can be understood from the Table10, the SLTs' involved parents into the session in different ways. Although they all stated that the attendance of parents is important for the progress of all children with DLD, they have different approaches towards parents' involvement. In the next sections, I will present the details of these differences, and how these have an impact on their decisions and actions.

6.2.1 Parents as Active into the Intervention

> I personally prefer to work as a team with parents in my therapies. The latest research suggests that parents can be their child's therapist if they are well trained. So, I am not giving them here only an observer role: I want to teach them how to interact with their child, how to do oral-motor exercises, how to

> read a book, how to talk with them. I am not only encouraging parents to be part of each session here but also I discuss how their home-programming is going. There are some parents who are exhausted and do not want to do any activity at home, but I feel like it is my responsibility to train and make them active (P6, Follow-up Interview)

The extract above indicated that P6 encourages parents to be a part of the sessions. She based this on the latest research when explaining her reasoning in including parents into her sessions. She also stated, in our in-depth interview, that:

> Parents are together with their kids 24/7, but I only interact with them for 45 minutes each week; so, they should know what to do and use this knowledge within their daily life. To do this, it is necessary to include them in the therapy. You do not have to read academic articles or know some theories to prove this, but when you look at previous and current research, it is always said that parents are vital for children with language problem… (P6, Interview)

P6 prefers to involve parents into therapy in an active way. Her decision is based on the latest researches and learning from practical daily life. In addition to this, observation data provided another reason for this therapist, in terms of involving parents into the therapy. P6 was using the presence of parents to encourage the child to join the activities (see section 4.1.2). It was seen that P6 used parents in an active way to encourage child to produce correct [sound]s in different tones. *"Sometimes children get shy or do not want to imitate me; but when I include parents, they want to attend the activity by themselves"* (P6, Follow-up Interview). When P6 was asked whether having parents in the therapy as active members affected her intervention method choice, she said;

> P6: Well…As these children have DLD, you need somebody with whom these children are comfortable, and with whom I can communicate. In this way, children watch and learn how two people communicate. This is quite helpful for basic communication skills, as you saw like voicing animals, asking basic questions and so on. Well, one may think that children are always exposed to these kinds of things, but unfortunately, this is not the case. We take these basic communications for granted, but in many homes, children are only exposed to TV, so it is a one-way interaction. As I know that television is a must-have thing in Turkish families, I try to expose children to such two-way communications. In this way, parents become aware of what I am trying to do, and they repeat such things at home with a member of family… Now imagine what happens if no parents are involved in the session. First, they will not know what we are doing, and second, I will not have someone [with whom] I can practice some basic communications.
>
> I have not even mentioned the fact that children feel more relaxed with their parents …So although this is the right thing to do scientifically, this is also the right thing to do socially… I mean we are social creatures, and you feel that this way is better for children and parents… your experiences also confirm this… (P6, Follow-up Interview)

As can be understood from the data, P6 prefers to actively involve the parents into the interventions for three different reasons: Firstly, training, educating parents into the session is essential because they need to practice before doing at home. Secondly, she shapes the intervention methods on the basis that she would be able to practice basic communication skills in front of children. Thirdly, the therapist uses the presence of the parents as active members to help children feel relaxed and to participate in the activities. P6 also underlined an important aspect of her profession: she acknowledged the scientific and social aspects of the therapies and seemed to blend them when she explained the reasons behind her decision to involve parents. P5 is another therapist who actively involved the parents of children for similar reasons. Some notes from her session are as follows:

> The therapist seemed to encourage the mother to be in the session. There was a matching board on the table. The child did not seem to be enthusiastic in playing with it. Then the therapist asked the mother to do the activity together. After the mother did it, she said, "Now it's my turn" and she put in another part of the matching board, then the child wanted to do the other part... Then the SLT just observed the mother and child's playing together. She did not get involved in their play for a while; she only gave some suggestions to the mother about her communication style with the child... The therapist offered the child two options to play with, she asked the child to what she wanted to play with (blowing bubbles or cotton) and the child chose to play with bubbles. Then the SLT said, "Mom is blowing bubbles" and she gave the bubble materials to the mother. When the mother and the child were playing with it, the therapist was providing some suggestions to the mother about how to communicate with her child**…** (P5, Observation Notes)

It was observed that P5 included parents in the session as active members. In the follow-up interview, she emphasized the importance of parents and training them about their child's needs. She stated that if parents do not practice in the session about how they need to communicate with their children, it could take lots of time to overcome the difficulties of children. Furthermore, this situation seemed to directly affect her motivation and practices. In another session, it was observed that P5 tried to meet and explain the needs of the child to the father and grandparents before starting her therapies. This shows that instead of starting her therapies as a direct intervention method first, she prefers to increase parents' awareness about the needs of the child and train parents to provide continuous practices for the child at home:

> Parents who are following my suggestions: who are happy to play, talk, read some books, interact with their child during the day… instead of leaving the child to play by himself/herself without interacting with anyone and watching television for a long time, can see the progress of their child (P5, Follow-up Interview)

P5 was also asked about what she thinks about the impact of parents' active involvement on her intervention method decisions:

> I believe that the nature of our job requires us not only to engage with children but more importantly observe and engage with the interactions between children and parents. At the end of the day, it is the parents who make the difference, we just need to guide them and scaffold the necessary intervention decisions in accordance with their personal lives. So, if there are no biological deficits, we need to focus on parent-child interactions as a whole rather than focusing on children or parents alone. I generally do not accept children whose parents are not interested or do not have time to be active in therapies. I do not think it would be productive to see a child once a week and make a difference. I guess the attitudes of parents are one of the fundamentals factors that affect my therapy decisions, as you first asked…This should be the norm I think. All my education, the seminars and workshops I attended and sources on the internet say the same thing: that parents are so important. When you dive into the intervention session, you already see this yourself… (P5, Follow-up interview)

Vignette data that was gathered from P16 also underlined the importance of parents. P16's responses to vignettes showed that including parents in her therapy as an active way is crucial to have progress. She also suggested using the Hanen program as an intervention decision for vignette scenarios, which can be considered a family training programme:

> …watching too much television and lack of interaction between child and mother might have caused the DLD. So that I would administer the Hanen parental programme, and I would include the mother into my own sessions to train her about how to communicate with her child in a quality and effective way. Then the mother can continue these activities at home. This is one of the cases that the carer of the child must be present in the therapy… (P16, Vignette 1)

> As the grandmother takes care of this child, I would involve her in my sessions to show her how to interact with the child during his daily life. Then I would watch her interactions with the child when she plays with him. I would also start the Hanen

> programme to train the grandmother and modify the home environment (P16, Vignette 2)

P16's abstracts demonstrated that she suggested using the Hanen programme and parental training for two different vignettes. She seemed to focus on carers and carer-child interaction rather than the children. In addition to vignettes, audio diary records that were received from P16 also demonstrated that she involved parents in her sessions as an active way:

> This session was my first session with X. I tried to administer the language scale test with the help of his mother. X's mother will be attending in all the therapies, so we will probably do most of the things together… (P16, Audio Diary)

> I suggested and explained to the mother how to enrich their home environment. I also invited the sister of this child last week who is 8 years old. I showed her what I am doing here, and explained to her how to play with her brother at home. This was very useful as the child produced four to five new words within two weeks. She was more effective, and I did a better collaboration with his sister than the mother (P16, Audio Diary)

> …First, we showed the parts of the body with his mother in front of a mirror; then he joined us and started to show his body parts himself (P16, Audio Diary)

These data extracts show that P16 believes that people who are around children play an important role in terms of encouraging those children during therapy, providing an enriched environment, and repeating the administered activities at home. The data that was gathered through various methods revealed that P16's decisions about a certain intervention method were significantly affected and formed by people who interact with children in their daily life. P16 seemed to seek opportunities to involve as many family members as possible in her therapy, and she makes necessary intervention method arrangements. After she explained that she invited one of the children's sisters, she was asked in a

telephone conversation why she did this, and whether she does this regularly or this was a special case. She responded:

> As I also mentioned in the interview, my therapy is quite dynamic, so I could change intervention methods during the therapy if I need to. For me, family members are so important, so in that case and other ones, I often try to learn children's daily life. When I find out that they have siblings or a close relative in their daily life, then I try to involve them as well. It is not always possible, but in most of the cases, I managed to do that. For instance, in the case that I involved the sister, I needed to change the materials to encourage the sister to join us (I found a couple of girly toys and so on, and tried to find ways to teach the sister how she can play more effectively). As they are both children, I needed to make it simple, which was difficult, but we got a good outcome. So, when we look at before and after the sister's involvement, yes, the nature of therapy changed… Believe me, without the presence of a family member, the therapy sessions become a challenge… There are also some [parents] who are not motivated like I dragged them here. When you see this, you just focus on what you can do alone… This really frustrates me…
>
> Me: Why do you insist on involving a family member?
>
> P16: You see the benefits yourself. Of course, it is always recommended to involve parents, but at the university, we just read such things and turn the page—but when you practice your profession, things become clearer. So, I can say that it is both my experience and the training I received... When you see that the two most important things—I mean what you practice and what you know—say the same thing, you cannot avoid it… (P16, Informal Interview)

The informal telephone conversation that I had with P16 after receiving the audio-recordings showed that P16's firm decision to involve parents stems from both her past experiences and theoretical knowledge—but parents' motivation is also crucial. The vignette data from P1 also showed that he gives priority to parents:

> I would definitely do my therapy together with the parents. I have seen that there is a big difference in the child's improvement if parents are active. The first thing to do is to

> make parents ready to apply intervention methods with their kids at home. This could take a couple of weeks in some cases… In the first 20 minutes, I would ask parents to record the activities that I do, and then I would involve them in the therapy to practice their observations. And during the last 15 minutes, I would explain to the parents what I did with the child, for what reason, how the activity supported his development and so on. Then, I would suggest the family watch the video that they had recorded and repeat those activities at home again (P1, Vignettes)

Interview data that was generated through our conversation with P1 also underlined the importance of parents in his therapy decisions:

> Parents should be active in all my therapies. If I do an hour therapy here and if his/her parents do not do anything to support my therapy during the whole week, that means my therapy will not work, so I must find a different solution.
>
> Before that, my first principle is changing parents' attitudes, getting support from teachers, sisters, nannies whoever surround and interact with the child. How many hours do the parents play with their child? Do they read stories? Unless you… change their daily routine, your intervention method will not work. The most important thing is to raise their awareness of how they should behave.
>
> Objects are everywhere so they can use everything. If you put the family inside… the therapy and they have the motivation to repeat these activities, then children can progress easily. If a child does not have a family member to join in my sessions, this changes everything, so parents' absence not a simple thing. You need to figure out various intervention methods to close this gap, but it is quite difficult…
>
> As we were talking about what affects my decisions, I can say that parents are one of the most important factors, as their attitude, motivation, readiness, absence changes everything… (P1, Interview)

Active participation of parents or other family members is found to be an important factor in making intervention decisions. The presence of family members in therapy sessions seemed to facilitate the participant SLTs

therapies, and provide a chance to interact and give necessary instructions. As the participants expressed, family members' involvement in language therapy sessions has a significant impact on the nature and the process of intervention methods.

There were also cases when parents' involvement was reported to have had a counter-productive effect. Unlike the other participant SLTs, P3 mentioned a negative side of involving parents into the whole session:

> I used to involve one of the parents in my sessions, but not anymore. The reasons are many, but one of the most important reasons is that after I do therapy with children who have DLD with their parents, parents tend to underestimate what we are doing here… I did only one or two sessions with at least 15 different children [before] now. The reason is that when parents could watch and participate in all my sessions, they generally say that they can do these things at home and it was not necessary for their children to attend therapy. This attitude led me to change my mind about involving parents in most of the cases… (P3, Follow-up Interview)

Although P3 mentioned a different aspect of involving parents in therapies, it was seen that family members' involvement changes the participant SLTs' decision-making process about intervention methods and the nature of their therapies.

All in all, the data demonstrated that if parents can be involved in therapies, and their home environment is suitable to continue intervention methods, then the SLTs tend to choose any kind of family integrated therapy method. The attitudes and awareness of family members, therefore, are found to be a prominent finding that influences the Turkish SLTs decision-making process.

6.2.2 Parents as Passive into the Intervention: Limitation of Time and Distraction

> We have a restricted time in here. If I let parents be in the therapy, it would take lots of time. Parents have the opportunity to watch all sessions. Then they can do the same practices at home**…** When I let parents be in the session, they start chatting with me. …it is a strange situation, as I do not understand why parents want me to focus on them rather than their kids. It is not possible for me to focus on both. If they talk with me, it is very hard for me to keep the child engaged and interactive… This is generally the situation they encountered in the past, but when I see parents who are reasonable, of course I rather encourage them to get involved in the therapy… (P8, Follow-up Interview)

As can be understood from the above statements, P8 claimed that involving parents into the session distracts his attention. Furthermore, the time pressure leads him not to involve parents in his sessions. He also signalled that his past practices and experiences led him to take such an approach. Referring to past practices was common among the therapists when it came to parents—thus, it could be said that the therapists' negative or positive experiences have an important impact on every case.

The data from observation supported this. It was seen that during the P8's session that the father of the child did not get involved actively in the therapy. P8 administered non-speech oral-motor exercises during the therapy, and the father of the child only observed what SLT did during the whole session. At the following interview, the therapist preferred not to involve parents in the session, as it disturbed his sessions. However, he was happy to involve parents in his sessions as an observer:

> Whenever I try to be positive about involving parents, I always have difficulties…I know parents are crucial, but when it comes to practice, this becomes a challenge…it is not easy to explain to parents about what they should do at home; if we just give them some suggestions without showing any practices, they cannot really know what to do at home, which materials to choose at home, so I let them watch me and if possible, I want them to do some of the activities at home. So sometimes I try to apply methods that would be easy for parents to understand and do the same activity at home. (P8, Follow-up Interview)

P8 involved the father of the child in his session in order to teach him what to do at home as an observer. When P8 was asked whether his choice about involving parents as passive members in the sessions has any effect on the intervention methods that he applies, he responded:

> Yes, definitely—but I cannot say systematically. What I mean is, I do not aim to observe parents and try to make therapy decisions, but you get the chance to know them and observe them. Even if I want them to be passive, they one way or another show their attitude. I mean: Some are so disciplined, you can see they cannot help themselves but intervene, or some of them are so motivated, you can see that they take notes and try to understand, or some of them are so careless, so they just look at their phone screen. So, this leads you to make some evaluations and these evaluations are generally revealed to be true. For instance, the parent who keeps looking at his phone is so busy with work and neglects his child at home or the parent who takes notes about the activities signals that I can cooperate with him and make him more active …So these kinds of observations help me to form what kind of intervention programmes to choose in the long term… (P8, Follow-up Interview)

The above excerpt reveals an important factor in parents' role in therapies. P8 and some of the other SLTs (to be considered next) expressed that in some occasions they make deductions from the attitudes of the parents in the session. In this way, they seemed to have the first-hand experience about the personality of the parents. This procedure was observed in P9's session: During the therapy, the parents were sitting in one of the corners of the therapy

room without being involved in the session actively. Some of my notes from the session included:

> When the therapist and the child were looking at the furniture pictures on the computer, the child lost his interest and wanted to stand up. The mother of the child told the child to sit down, but the language therapist warned her not to say anything to him during the session (P9, Observation Notes)

In the following interview, when I asked him why he did not allow the mother to talk during the session, he stated that:

> I am happy to see parents in my sessions to teach them what they can do at home, but if I let parents interfere, it extremely distracts me and the child. I have seen that some parents tell their child 'well done, well done' or give them high five or a kiss after every correct expression that a child can do. They may think that they reinforce their kids, or make feel them successful in this way, but this disrupts the therapy. It makes children more hyperactive. Or sometimes, some of them try to discipline their child in the session. As you saw, when the child stood up, his mother meddled, but I had to tell her not to interrupt. I prefer to talk with them at the end of my sessions and do not want any interruption unless it is important (P9, Follow-up Interview)

When P9 was asked whether he thinks that such situations affect his therapy decisions, he stated that:

> Actually, it affects them in a negative way. Imagine what happens if I let the parents be active in my sessions? What I really want is to let them be active, but most of the time, they interfere and make the sessions counter-productive. I guess this will soon lead me not to involve most of the parents into my sessions, even as passive observers. If they want, they could watch us through the camera. Of course, there are some parents whose presence makes a positive contribution. So, I guess the important thing is to do what is practical (P9, Follow-up Interview)

P9 and P8's practices and statements well illustrate the therapists' overall opinion, which is to prefer to involve parents in therapies, but some experience challenges to that, due to time restrictions and parents' distractive behaviours. Both of the SLTs involved parents in their sessions to increase the parents' awareness of their child's needs, and to show them what kind of activities they can do at home. They both want to increase parents' practical abilities and behaviours. To do this, they allow parents to observe their session in a passive way. Nevertheless, P9 believes the benefits of including the parents in the session as he emphasized that:

> No matter what, I have never applied a therapy that has not included parents of the child—I am trying to change [the] parents' attitude toward their child and our profession. My basic principal is increasing awareness of parents, teachers, siblings and every single person who surrounds the child. In this way, my aim is to provide environmental enrichment… It is not always easy to take a theory and make it happen in practice, but we at least try… (P9, Follow-up Interview)

As stated, P8 and P9 take parents into the session to let them learn the nature of the intervention methods, and also to observe the parents. In this way, P9 believes that they will learn how to behave and what to do at home without disturbing his session.

It was seen in the collected data that this section has mainly emerged through simulated recall data. Data showed that sometimes participants prefer not to give parents an active role in the session, as they do not feel comfortable or they think that parents may disturb their session. On the other hand, it was observed that parents were actively involved in the therapy in some cases. In

the next section, how and why the SLTs decided to actively involve parents in their session will be presented.

6.2.3 Therapist Directed

> … This disturbs my sessions. Because most of the children with DLD are at early ages, their parents easily distract their children's attention. Rather than concentrating on the session, children may look over at the parent for approval to do some activity or s/he may want to go to their mom's lap or asking for food etc... So that I personally prefer to invite parents at the end of therapy sessions to talk about what we did and what they should do during the upcoming week (P3, Audio Diary)

There were occasions that SLTs who expressed that the presence of parents had negatively affected their therapy sessions and they had to change the way they arrange the intervention methods. As the participants reported, although they were aware of the benefits of having parents in the therapies and involving them within intervention methods, the negative sides of having parents outweighed the benefits and they preferred to speak with parents at the end of the session.

P3, for instance, based her decision not to involve parents in her therapies based on her past experiences. She had involved parents in her sessions in the past, but her therapy session had been interrupted significantly. It can be understood from the above quote that she experienced that children were affected by their parents' presence. She stated that children suffer from lack of concentration so that she does not prefer to include parents in the session.

Instead, she invited them into the class at the end of the session to give them recommendations:

> At the end of the session, the parents of the child were invited to the therapy room and they were informed what did s/he did during the therapy and the therapist suggested to them to repeat this practice at home. She also gave them some suggestions. She said most of the parents understood her and agreed so they accepted watching the session via camera (P3, Observation Notes)

I asked her what was the difference between having parents and not having them when considering her practices, and she responded:

> The difference was that on some occasions, children seemed to focus easily. As I try to be as warm as possible and let them relax, they seemed to get better along with me when their parents are not present. It seems that this creates as a sense of bond between me and children. When you have that trust, they enjoy playing with you and they do whatever you tell them to do. For instance, one of the children was rejecting oral motor exercises and running away to his mother so I could not do any oral motor exercises. But when we were left alone, after playing with him a bit, he let me do those oral-motor activities… and so when I have such closeness, I started to make the intervention methods a bit more intense and change the nature of the therapy, as previously parents were also involved…
>
> Of course, there were few cases in which the children wanted their parents with them, in such cases I tried to make the process as smooth as possible, like letting parents stay for a while or leaving the door open so children can see their parents (P3, Follow-up Interview)

As P3 underlined, being alone, administering one-to-one intervention with some children in therapy had a positive effect in terms of children being more focused and calm.

Similarly, in P2's session, there was not a parent in the room. After the session ended, both the mother and father of the child came in, and P2 explained what

she did during the therapy, and for what reasons. She underlined the importance of child-centred interactive play to the parents. She explained the importance of following the child's interests in a pre-arranged, structured environment. The parents seemed to be happy about the recommendations, and they stated that their child had learnt some new words recently. At the end of the session, she gave some words for the parents to work on with the same method at home. She told the parents that;

> Here, we have to arrange our therapy room before your child comes in and we have to offer a semi-structured environment for your child. But you can talk with your child about everything; there is no limit to talking in a natural environment. Try to support your child in his daily routine (P2, Observation Notes)

When I asked P2 why she does not involve parents in the session, she said:

> Some kids are more attentive without parents. When the mother of the child left the therapy room, the child started to be more productive and followed my instructions. Regarding all my previous experiences, I can say that some children are not behaving well, I mean they are not listening, or they hide behind their mothers during the therapy. This slows down their progress, distracts their attention. However, when parents disappear gradually from the room, kids are completely fine and even better, more focused on their play (P2, Follow-up Interview)

The data that was collected from P2 and P3 showed that they do not prefer to involve parents in their session as this seemed to negatively affect the progress of the child and the nature of the therapy. Some other participants also stated, for the same reason, that sometimes they do not involve parents into the session:

> Normally I include the caregiver of the child in my session; but sometimes you have to ignore what is ideal in theory and practice what is ideal at that moment… so at the end, I was right as we did very well in the session… (P4, Audio Diary)

> Mother distracted the attention of the child today. I guess I am gradually going to exclude the mom from my sessions. We talked before that parents are quite important for me, but sometimes you have to change your road to reach somewhere even if it is not recommended. I am the one to make decisions here, because I am the one who is in the room with that [particular] mother and child… (P1, Audio Diary)

The above quotes exemplified how some parents or caregivers distract and affect the SLTs' decisions. P4's and P1's statements reflect a significant point that was also seen in the previous two chapters' findings. Statements such as *"ignore the ideal in theory and practice what is ideal at that moment"* (P4) and *"changing your road even if it is not recommended* (by theory) … *I am the one in the room*" (P1) indicate that although the therapists were aware of what research evidence suggests, their decisions do not always conform to research evidence. Their experiences and beliefs about what is more practical and beneficial at the specific moment seemed to dominate their intervention decision.

Another reason for not involving parents in the sessions is that sometimes the SLTs do not feel comfortable when parents are in the session:

> …in some cases, I do not feel comfortable when parents observe what I am doing in the session. So, sometimes I ask parents to wait outside. You have to work in this environment to understand how difficult it is to work with parents sometimes… (P13, Interview)

> I do not always prefer to involve parents in my sessions as an observer if they constantly make a comment about what I am doing, or try to teach their kids how to respond or behave during the session. Unfortunately, this happens a lot and you have to sacrifice (P10, Audio Diary)

As can be understood from the above statements, the participants are flexible about ‘parents’ involvement’ during the sessions regarding the productivity, children’s concentration and parents’ impact. It is important to note that ‘parents as passive’ or ‘therapist directed interventions’ does not mean that parents will not be a part of the intervention process. In observation and from audio diaries it can be seen that participants talk with parents about the session and suggest how to continue the intervention process at home after the sessions have ended.

The data also indicated that some parents were not able to come to the therapy to talk about the details of the session with the SLTs. This led the therapist to use technology. I will present why the participant SLTs decided to contact parents via digital tools and whether this has any impact on their therapy arrangements.

6.2.4 Online Consultation and Information

> If I do not have the opportunity to see parents face-to-face, I feel that I need to find a way to check and be sure about whether they continue doing the practices at home. To do this, I use WhatsApp. I send them photos and videos about my actions each week and they also need to send me some videos and photos about what they do at home. This is what I want from parents, of course, if they are motivated and willing to do that. In this way, they have no choice… even if they do not want to do the activities that I suggested them, as they must send me a video; so they repeat my actions and recommendations when recording these videos (laughs)… Actually, I get more details than I expect, as I get the opportunity see their home

> environment and how parents interact with children at home. Sometimes I hear the TV in the background or I see parents' capabilities or the way that they play with their child and so on. This helps me to make up my mind about what to do next… (P15, Follow-up Interview)

P15 reported that she uses WhatsApp, an instant messaging tool, to communicate with parents and gave an example. One of the children comes to the therapy alone on a school bus every week, so the therapist cannot conduct a face-to-face meeting with the parents. To talk about the child's progress and needs, P15 used WhatsApp to contact the mother of the child. She stated that she sometimes took a photo of the child, sometimes took some short videos of the child, and sent these to parents to inform them about the content of the session and what they should do at home. Additionally, she wanted the parents to send videos and photos of what they do at home. In this way, she uses technology as an opportunity to keep in touch with parents. When she was asked in what way she thinks using technology affects her practices, she stated:

> When you receive photos and videos that show the daily life of children, you can make a good interpretation about how parents interact with children, you can see that they have TV, tablets, PC all over their home. You see children ask for the tablet all the time. You see that parents use complicated sentences with their children or you see that there are other relatives who children want to play with more. I can give more examples, what I mean is when you have such data, you could change your intervention methods, therapy environment or the recommendations that you give the parents. It is so valuable I think (P15, Follow-up Interview)

P14 is another SLT who uses online tools for communicating with parents. She stated that after each session, she sends a detailed report to the mother of the child as an e-mail. She also stated that she provides some materials and a to-do-list for parents. However, she said she prefers to meet and discuss face-to-

face, after each session. Since some parents are so busy, the grandmother or alternate caregiver of the child brings and takes children from her without having any discussion about the session. When I asked how this situation affect her practices, she stated that;

> Most of the time, emails only are not enough for parents to administer therapy at home. So, they send me lots of emails back to ask details. This is time-consuming for me. It takes lots of time. After I send the necessary details, they tell me they are doing well at home, but I do not feel that the child made any progress at home. So, this makes me unhappy. So, I recently tried to use WhatsApp to be able to make this communication thing easier and practicable. I try to encourage parents to not only expect something from me, but I want them to feedback to me about what they do at home (P14, Interview)

P14 thinks that using WhatsApp might be less time-consuming and more practical than sending e-mails to parents. P7, who also use WhatsApp, stated that it is easy to check what parents do at home in this way:

> …it is so easy to communicate through WhatsApp; I can easily check whether they are doing things that I asked them to do via e-mail. Without me asking them, some parents send photos and videos that show what they do and how they do. They want my recommendations. So, it is a bit time consuming, but I get what I want, in this way I clarify what to do next, change my schedule, the nature of intervention method, materials I use and so on. For instance, one of the fathers was so motivated and did all the activities properly a couple of times. I would not know that if there was not this WhatsApp thing because I only know the mother. So, what I did was I skipped those activities that the father did and proceeded to the next level. I also used some materials that the father used as it was so obvious that the child was having fun. I also tried to find some activities for the father to do at home (P7, Audio Diary)

It was seen that online tools like WhatsApp enabled the therapist to have more information about the families' background. Although their use of technology stemmed from parents being unavailable, it seemed that parent's absence

opened up some other opportunities for these participants. Having an insight about children's home environment, the way that parents interact with children, knowing other people at home, activities parents perform or don't perform, and materials used at home seemed to affect and form the participant SLTs' intervention methods and therapy process.

6.3 Conclusion Remarks

This chapter introduced the final of three main themes. It was revealed that parents' attitudes, motivation, presence and awareness have a great deal of impact on Turkish SLTs therapy and intervention method choices. This indicates that unlike other health professionals, such as doctors or nurses, who only make decisions regarding the patients' situation, speech and language therapists seemed to be affected by a wide-range of social factors. As it was stated in the literature review, language is a tool that is bounded to our social environments and interactions that we build in this environment. Such facts seemed to force the SLTs to adjust their reasoning process, intentionally or unintentionally, in a positive or negative way, and form an intervention method for children with DLD.

It was seen that lack of parent willingness and a negative attitude lead the therapists to form more structured intervention methods which are basically administrated by the SLTs. Motivated parents, on the other hand, help therapists administer various intervention methods and encourage them to spend an extra effort to search for novel intervention methods.

Time pressure, parents' expectations and parents as a distraction factor also negatively affect the therapists to critically evaluate the cases and administer the `best practice`. In such cases, the SLTs seemed to improvise and base their decision on their previous practices and intuition. In this way, they reported that they make quick progress in a short period of time that satisfy parents, although they believe that such pressures discourage them to extensively evaluate the cases and administer more evidence-based practices where parents actively take part in the sessions.

It was also found that parents' involvement in the sessions showed differences from case to case. Although all of the participants in this study stated the importance of family involvement in the intervention process, it was gathered from observation and follow-up interview data that there were some cases in which parents only had an observer role in the session or the therapist had directed one-to-one intervention. This decision was primarily made by SLTs who are seen as experts by Turkish parents and they trusted SLTs' decisions. Even so, this does not mean that the parents were completely excluded from the therapy process; the SLTs' rather preferred to discuss and make suggestions to parents about what to do at home at the end of the sessions.

Prior to Discussion of Findings

In this thesis, three main themes were presented in chapters 4, 5 and 6. These themes were revealed as a result of conducting multiple data collection methods and performing a data-driven inductive thematic analysis approach. In chapter 4, it was seen that the therapists' decisions are affected by

formal/impersonal and informal/personal resources. The nature of the resources that the therapists use seemed to be drifting their intervention decisions. Particularly during the evaluation cases, there is an important interplay between the use of formal and informal resources.

In chapter 5, it was found that the therapists' decision to arrange the nature of therapy drifts between taking a child-centred approach or administrating therapist-based therapy. Due to factors such as time pressure, the therapists' past practices or fulfilling goals, the therapists seemed to drift towards applying a therapists-based therapy approach that shows contradictions to their theoretical knowledge that suggests administrating a child-centred approach.

In chapter 6, it was revealed that one of the most significant factors that affect both the nature of the therapy and intervention decisions is parents. The therapists were found to assign different roles to parents depending on their willingness and motivation. Although actively involving parents within the sessions and teaching intervention methods to them is desired by the therapist, there were occasions that the therapists' drifted from such an approach and administered more directive therapies. Such practices also indicated that theory is not always seen in practice and the therapists are found to be making decisions that are also based on their beliefs, past practices and informal observations.

Three main themes that this study presented indicate that the therapists do not have a certain way to evaluate and arrange the therapies, they rather have a

dynamic decision-making process that shifts within a trajectory where multiple modes of decision-making processes can be seen. Such decision-making process is not static, it is rather an interactive process where the therapists' instinct, beliefs, past practices, self-made assessment tests, informal observations, opinions about parent interplay with their theoretical knowledge, formal assessment tests, guidelines and protocols. It can be therefore said that these mentioned elements find a place within a trajectory that the therapists visit each of the element, when necessary.

A detailed revisit to the decision theories in the literature and considering the existence of such decision trajectory allowed discussing the SLTs' decision-making process with the help of Cognitive Continuum Theory (CCT) that is developed by Hammond (1964). The next chapter will, therefore, present the discussion as a case for applying cognitive continuum theory to SLTs' decision making features.

CHAPTER 7. A CASE FOR APPLYING COGNITIVE CONTINUUM THEORY TO SLT's DECISION MAKING FEATURES

Introduction

The findings of this study will be discussed in two layers: firstly, describing the decision-making process of SLTs through Cognitive continuum theory (CCT), secondly, the specific factors that influence the SLTs' decision-making process.

7.1 Positioning SLTs' Decision-Making Process within Cognitive Continuum Theory (CCT)

This study has taken an inductive qualitative research approach to be able to explore the complex decision-making process of SLTs. Various studies have been conducted in other health sectors, such as decision making in nursing (Jean, 2001; Raffik, Steve, & Don, 2005; Shaban, 2015b; Standing, 2008; Thompson & Dowding, 2002) or doctor's clinical reasoning processes, and theories and frameworks have been developed that maps out these professionals' decision-making processes (Hamm, 1988). Using such frameworks and theories for each phase of this research might not be feasible, as there are important distinctions in each profession, and this requires a research process that is free from well-structured frameworks as discussed in section 3.7, chapter 3. This research is therefore conducted in a data-driven manner where the data is the main source of exploring the decision-making

process of SLTs. The lack of decision-making studies in speech and language therapy also necessitated such an approach.

A data-driven approach, however, does not mean that findings cannot be interpreted through theories. An important element of the inductive approach is to explore whether the findings of a study confirms or contradicts theories in a certain area. In this research, the findings will be interpreted through a decision theory that is called cognitive continuum theory as it well resonates with the findings of this research. Whilst through the end of the analysis of the data, I have made a detailed review of the decision theories in the literature to see whether the findings have parallels to any well-established theory. CCT, as outlined in chapter 2 section 2.3, is one of the theories that has been developed to understand humans' decision-making processes. As I stated earlier, how people make decisions has been explored by a variety of disciplines. It was seen that some of them were explained through CCT. CCT was originally developed in psychology and has been adapted in other disciplines such as nursing, management and medicine (Fawcett, 1993). It has also been used in studies in the areas of economics, education, the health sector (Parker-Tomlin, Boschen, Morrissey, & Glendon, 2017) and management (Dhami & Thomson, 2012).

The finding of this research reveals that CCT can be used to describe SLTs' decision-making process. While CCT explains the decision-making process of the participant SLTs, it still requires alterations to make it more relevant to

speech and language disciplines. These slight alterations will be discussed later in this section.

It has been reported in Chapters 4, 5 and 6 that there are various factors that influence the SLTs' decision-making process. These factors are both external and internal in nature. Internal factors mean that the therapists have their own beliefs and intuitive reasoning that is found to be separate from specific cases. Such internal factors stem from the SLTs' past practices that mainly occur as tacit knowledge. As reported by the participants, a certain intervention decision is made because "it worked before" (P3), it seems "right" (P3, P4, P5), "feel" (P4, P6, P8) or "think" (P3, P5, P6, P7) that a method will be useful for a child. Such expressions indicate that the SLTs have tacit knowledge that they cannot scientifically explain why the decisions based on their intuitive reasoning is good for a specific case. They rather justify their decisions through their past practices, where they reflect their past practices with their informal evaluations and reach a decision.

The SLTs were also found to be relying on their intuition and past practices due to time pressure, fulfilling goals and meet parents' expectations. These factors also lead their reasoning process to drift to the intuition pole. The therapists were also found to be considering formal tests, guidelines, protocols, the latest developments, theories, attending seminars and workshops and questioning their practices. Such factors position the therapists' decision-making process within the scientific pole, where more dynamic, flexible and child-centred therapy sessions were observed. These findings, however, do not

indicate that such practices are good or bad. The important point is that if SLTs become aware of their reasoning process (for instance where their decisions are positioned in the cognitive continuum), they might be able to adjust their reasoning by, for instance, using more scientific methods, or they can make use of their past experiences where there is no available scientific evidence.

As mentioned previously, the decision-making process of SLTs is quite complex in nature, as the participant SLTs make use of various methods of reasoning that are illustrated within CCT. CCT therefore well represents the overall reasoning process of the SLTs. For instance, during the diagnosis process, most of the SLTs were found to be using formal assessments that are standardised and well documented in the literature. Although the participants expressed their unease about the validity of the tests, they made use of such tests. In addition, as it was revealed from the findings from the data, SLTs give importance to family history and individual child' needs. These findings show that a scientific process is seen, particularly during the diagnostic process. Evaluating a child's story, receiving feedback from other professionals, and the use of scientifically standardised tests position the SLTs' decision-making process towards the scientific pole. It cannot be claimed, however, that the judgment process is still completely free from the participants' intuition, when the participant SLTs evaluate families' attitudes, history and the children's needs.

Nursing is one of the disciplines in which CCT has been used extensively. CCT is not only used to explain the nurses' decisions but also led researchers

to adopt CCT within their specific discipline to improve decision-making processes. For instance, Standing (2008) altered CCT to form a cognitive continuum framework that includes nine steps, instead of six as Hamm (1988) illustrated (see Figure1). Standing (2008)'s CCT framework does not include any significant shift from the original CCT, as can be seen in Figure13.

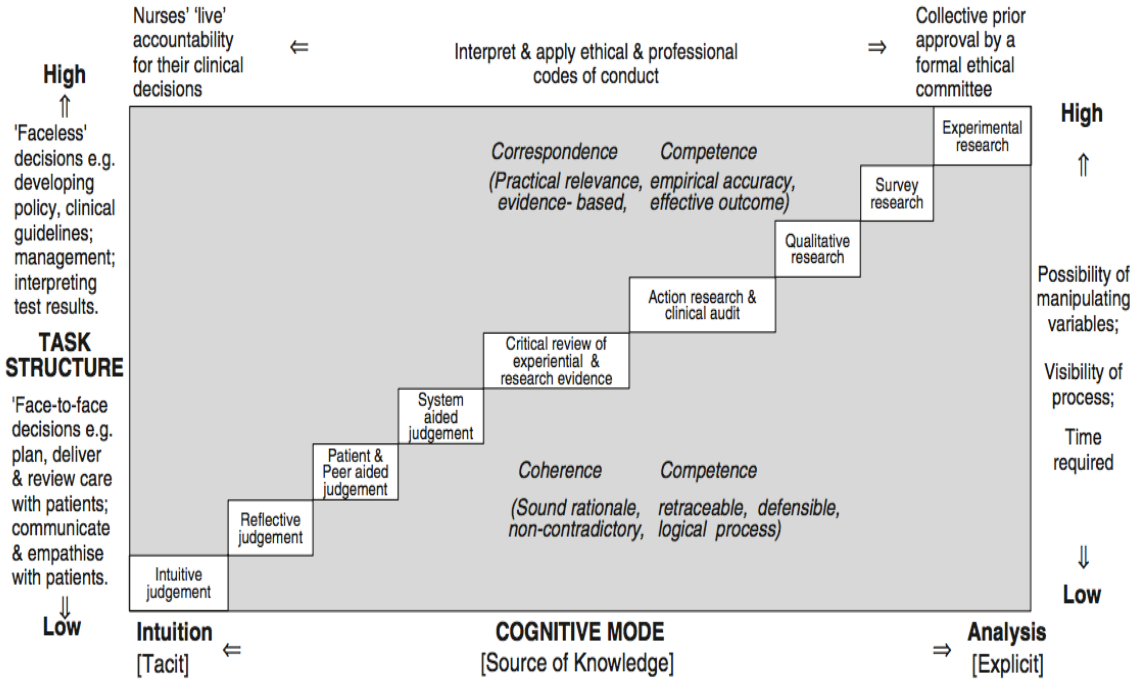


Figure 13: Standing (2008)'s adoption of CCT

Standing (2008) adds three more categories to the cognitive continuum framework that Hamm (1988)'s adopted CCT framework. These three steps are reflective judgement, action research, and qualitative research. Adding action research and qualitative research points to the importance of various research methods that influence the decision-making process of professionals. As these methods have gained more importance during the last decades, they are separately presented in the cognitive continuum chart. Reflective judgment, on

the other hand, underlines a significant step that is seen in professionals' decision-making processes. Professionals tend to mix their prior experiences when they evaluate novel cases. Schon (1987) stated that professionals' decisions include reflection-in-action when they evaluate a case and reflection-on-action while reviewing past experiences. Such an approach goes beyond what is called intuition and becomes an important step where a slightly more scientific analysis is seen. Reflective judgement, therefore, finds a place in the CCT that is reformed by Standing (2008).

The findings of this research can also be interpreted through this adapted version of CCT. Figure 14 illustrates the SLTs' decision-making process based on the findings of this study. The steps of the cognitive continuum framework were not numbered, such as step 1 is scientific, step 9 is intuition, to avoid presenting a structured decision process, where decision shifts from one to nine or vice versa, as it is a flexible and dynamic process where non-sequential leaps from one step to another might be seen.

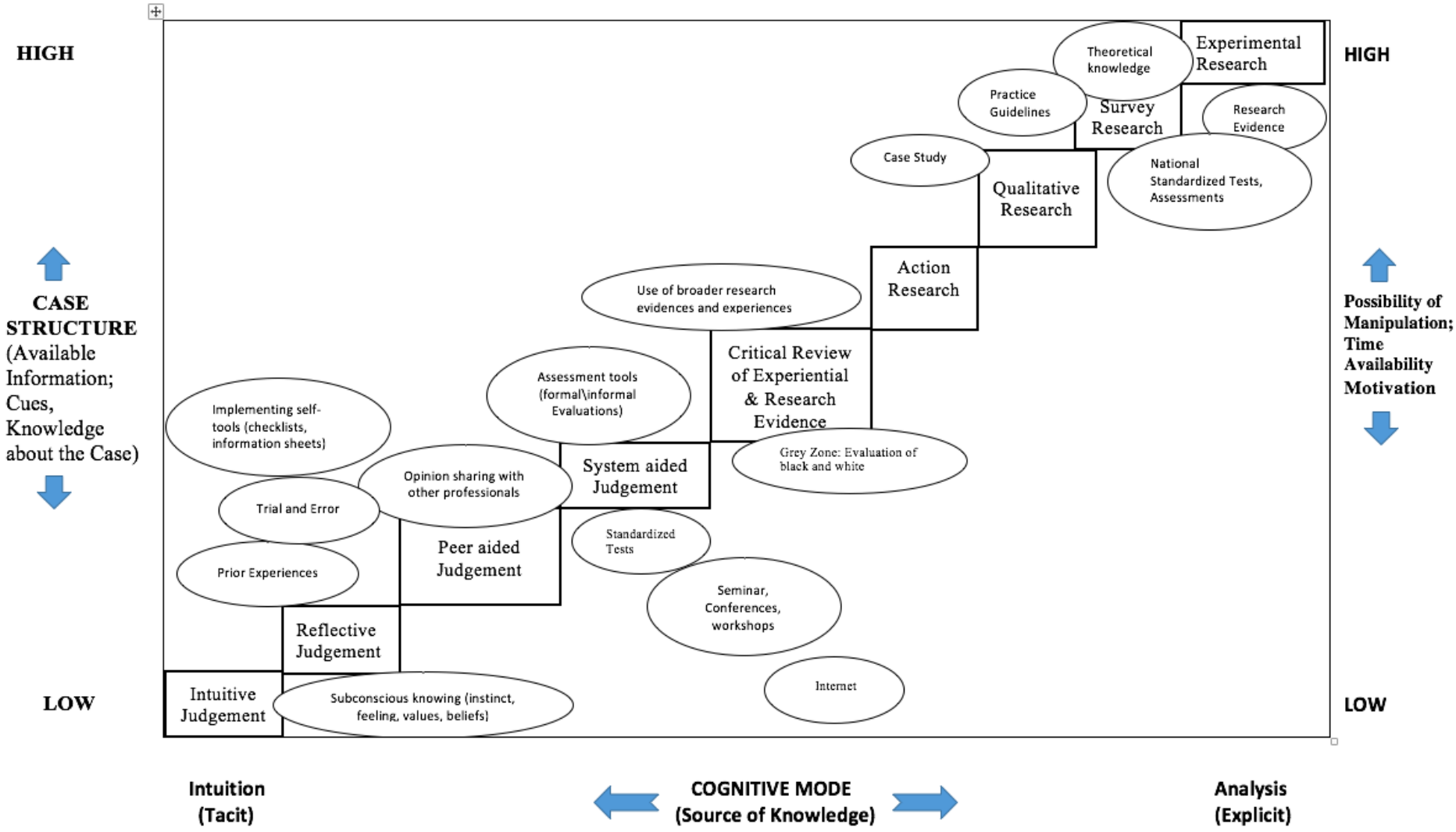


Figure 14: SLTs' decision process within CCT

On the left-hand side, there is the case structure which fundamentally determines how a professional's decision shifts through the cognitive continuum framework. For instance, lack of information about a child's language development background, family's socio-economic background, the environment in which the child is raised, or health issues that have cognitive and biological roots might lead the therapists to rely on their intuition and reflective practices that are partially supported by system-aided tools such as standardised tests and clinical guidelines. Although this study considers children with DLD, the cognitive continuum framework that is illustrated Figure14 might reflect generally how SLTs can or should approach a case. For instance, when therapists encounter a child who has DLD, they might be encouraged to apply a more scientific reasoning process where the therapist will be able to collect as much information as possible if s/he has enough time. These issues could include the possibility of hearing problems, cleft lip and palate, and other physical issues. To be able to eliminate such issues a more interdisciplinary approach, along with a critical review of the system-aided tools is required.

7.1.1 Intuitive Judgement in SLT

Intuitive judgment is positioned on the left bottom of the CCT. This could be explained as the 'gut-feeling' of the professionals. Such insights could be formed during a conversation with the parents or observing the child' behaviours. As DLD issues could be caused by various socio-economic factors, the first impression that therapists have about the family and the child might induce a hunch that might determine how the therapists will form an intervention decision.

In this study, this judgement process seemed to be triggered more when there are time pressure and lack of information about a case. While none of the Turkish SLTs was found to be making decisions solely on their intuition in this study, they continually visit this step before reaching a decision. Although various learning theories or theories which have been developed in other disciplines find their place in speech and language therapy, it is not evident that SLTs rely on such theoretical knowledge. In fact, there has been a considerable amount of research in the area of professionals' decision-making process reporting that it is highly unlikely that scientific knowledge is seen in practice (Lum, 2002). This is no different for speech and language discipline.

When professionals drift from scientific methods of making a clinical decision, it is likely that they rely on their intuition (Lum, 2002). There are instances that clinicians might find no option but their intuition to make an intervention decision (*ibid*). It is posited that this brings about dangers for practice, as after a while, practitioners might not recognize whether they are making a scientific intervention decision or using their intuition. Best et al. (1997) claim that the applied intervention method that is guided by intuition might be effective by chance, or patients would just find a particular method more useful. In such instances, patients or a certain practice are not reliable for future practices (Best, Howard, Bruce, & Gatehouse, 2003). It is stated that clinical decisions that are guided by intuition might be easily manipulated by the therapists. As such judgements might be highly subjective, it would be easy for the clinicians to seek certain evidence that supports their intervention decisions. Such decisions might not be explained scientifically, so they become private and die

with clinicians (Lum, 2002). Parallel to this, it is reported that "Indeed, many therapy students often remark that success in a clinic is more about quickly learning the pet techniques of the clinician than understanding why a particular technique is used with a patient" (Lum 2002, p. 229).

7.1.2 Reflective Judgement in SLT

It was revealed in this study that reflective judgment is one of the most heavily used decision-making processes by the therapists. It was stated that experience and knowledge of clinicians allowed them to create their own personal theories about a specific case (Custers, Boshuizen, & Schmidt, 1998; Garb, 2005) and such personal theories of clinicians influence their diagnosis and intervention decisions (Charlin, Boshuizen, Custers, & Feltovich, 2007).

The therapists in this study seemed to be continually reflecting on their prior experiences when they evaluated a new case. The nature of the speech and language therapy discipline has been laid out as a sophisticated area where SLTs face various cases that require them to form their role and decisions accordingly. One of the approaches that is seen to be beneficial in such a profession is reflective practice. Reflective practice means that professionals create theories about their practices (Lum, 2002). It requires professionals to use their theoretical knowledge along with their intuition in considering individual cases' needs. The reflective practice originates from the work of Donald Schon who was under the influence of the works of John Dewey (1933). Dewey (1933, p.9) explains reflection as "active, persistent, and careful consideration of any belief or supposed form of knowledge in light of

the grounds that support it and further conclusions to which it tends". Reflective practice, according to Schon (1996), requires professionals to make an active inquiry between their theoretical knowledge and certain cases that they face in their practice. Constantly questioning, examining and refining clinical practice through theoretical knowledge might provide better effective professional decisions on cases that have a sophisticated nature (Argyris & Schon, 1974; Schön, 1996).

It was seen in this study that the SLTs assess cases during the therapy and form intervention decisions accordingly. As helping an individual to improve his/her communication skills is a complex process, reflection-in-practice and reflection-on-practice seemed to be a must-have step for the speech and language discipline. It was reported that such a dynamic reflection also enabled some therapists to create their own tests, checklists and information sheets that they believe better evaluate Turkish children's language issues. They seemed to be able to free themselves from structured tests and intervention methods and form their own practices. As the therapists reported, language is a social phenomenon, and each language, culture and the context have its own uniqueness. Such a unique communication tool (language) that helps humans to make meaning requires dynamic reflection and adjustment.

However, although such claims are acknowledged in the literature and seemed to be a healthy approach, there are drawbacks of the intensive use of reflective judgement. For instance, it was found that the therapists were found to be adopting their practices even though they believed they should not. These

decisions were seen as not involving parents into the therapy; conducting a therapist-based approach instead of child-centred due to time limitation, parents' expectations, lack of motivation and fulfilling goals. The therapists could not clearly explain such decisions, they rather "feel" and had an "experience" that it would be much easier or productive.

Clinicians' belief systems about what causes a specific deficit are likely to be the main factor that influences their personal theories and therefore intervention decisions. The existence of such personal theories, that mainly stem from individual beliefs and past experiences, have been widely reported in the literature, and they are seen as a significant factor in influencing clinicians' decision-making processes. Such subjective intervention decisions seemed to be difficult to change and interrogate unless the therapists are aware of how their decision-making process truly works.

As it was reported in the findings, the interview results indicated that the therapists consider research evidence and theories when they make an intervention decision. Such a flawed perception (the perception that all their actions are based on science) seemed to prevent the therapists from questioning and criticising their intervention methods. This issue could be resolved if professionals were aware of their decision-making process. For instance, when therapists heavily rely on the intuitive pole of the cognitive continuum, they might be encouraged to take a more scientific approach in the cognitive continuum framework, such as interdisciplinary approach, system-aided judgement and critical review of scientific and practice-based evidence.

7.1.3 Peer-Aided Judgement

Peer-aided-aided judgement is an important step that could fundamentally influence professionals' intervention decisions. Diverse and complex factors that cause DLD necessitates SLTs to informally share opinions with other professionals about a specific case. However, this study showed that Turkish SLTs do not effectively use the peer-aided judgement mode. In a study conducted in the US, it was found that SLTs preferred to consult colleagues (Nail-Chiwetalu & Ratner, 2007), and interdisciplinary collaboration between teacher and child was found significant in a UK study (Hartas, 2004). This current study's findings have shown that this was not the case in Turkey. All of the participants in this study expressed their difficulty in collaborating with their colleagues. Opinion-sharing processes do not take place in a face-to-face environment discussing a specific case, especially in private clinics, where SLTs work alone in their clinic. These therapists rather refer the patients to hospitals to run some tests and they evaluate these tests separately. This is to ensure that children have no biological issues that would cause language issues.

It was also seen that SLTs' who are working with professionals from other disciplines in the same institution hold a face-to-face, separate discussion about a specific case. Such discussions were quite informal rather than formal. Collaborating with other professionals only seemed to affect the therapists' decisions about clarifying needs of the child. It seemed to have no further impact on the nature of their intervention.

7.1.4 System-Aided Judgement in SLT

In this study, system-aided judgement is the other most adopted decision-making process, along with reflective judgment, that the therapists perform. System-aided judgement occurs when professionals make use of standardised tests, clinical guidelines and other formal assessment tools. The therapists are found to be supporting their decisions by making use of such tools. However, such reasoning processes might lead the therapists to heavily focus on formal resources that have been developed on a broader level and have a more scientific nature. Relying on system-aided judgement processes seemed to leave little room for a flexible approach which considers social factors such as children's interests, their needs or family history. In such cases, one type of intervention method was observed to be administered regardless of children's interests, progress or families' expectations. This approach, therefore, was observed to turn the therapies into a strict professional-patient relationship where professionals apply the treatment and terminate the session.

However, as it was discussed previously, such clinical reasoning that only takes the formal procedures into the centre of the therapy might contradict with the nature of speech and language therapy. Beecham (2004) underlines that while evidence-based practices bring about significant contributions, there is the danger that such scientific reasoning that is adopted from other professions, such as doctors, might not be feasible for speech and language therapy.

Learning language is a social process, that helps individuals to make meaning through interacting with others. Helping an individual's DLD issue requires a

healthy and trusting relationship which therapists can build through using an approach that has a more social nature rather than scientific (Beecham, 2004). Although this study does not judge the quality of the therapists' reasoning process, it should be noted that such formally-constructed decision process where the therapists solely make use of formal tests, administer a therapist-based approach, ignore children's interests and parents' expectations are found to be alarming and requires careful questioning.

7.1.5 Critical Review of Experimental and Research Evidences in SLT

A critical review of experimental and research evidence is another step that has been renamed in Standing's (2008) adaptation of the cognitive continuum framework. This step coincides with quasi-rationality in Hammond's cognitive continuum modes. This step basically represents a grey zone where professionals make use of both their reflective practices, intuition and scientific evidence in a harmony. Not only is such a judgement process seen in harmony in this step, but professionals constantly question the validity of each decision in both a broader and case-specific manner. The participants are found to form their intervention decisions closer to this judgment process within the CCT when they consider various factors together, such as formal and informal resources, children' interests and the importance of parents in the therapy.

The therapists are found to be aware of the dynamic nature of speech and language discipline, which leads them to explore novel intervention methods, follow children's interests and shape the environment accordingly, understand parents' expectations and train them to help their children at home. The

therapists were found to be quite aware of the ongoing seminars, workshops and quality resources that are available on the internet. The SLTs, however, could not often use this judgement process due to time restrictions, parents' expectations and attitudes, the need to fulfil goals or the tendency to use accustomed practices. As was previously mentioned, this decision-making process is underlined to be the most desirable method that is expected to enhance the quality of therapy (Hammond, 2000; Standing, 2008), although this research did not focus on the outcomes of each decision process and cannot claim that one is better than another.

7.1.6 A Broder Scientific Judgement Process that Indirectly Affect SLTs' Practices

In this study, the first five decision-making steps, intuition, reflective judgement, system-aided judgment and critical review of experimental and research evidence represents the decision-making process that is more likely to be seen on an individual level. These steps reflect a more 'live' decision-making process that professionals might perform in their day-to-day practices. The participants of this study also were found to be performing a decision cycle within these five steps in a non-sequential manner. However, it should be noted that such individual decisions are fundamentally originated from a broader national and international level where scientific research plays a dominant role. Novel diagnosis and intervention methods, new insights into the origins of health issues are revealed from various scientific research. This step is illustrated as control-trial and scientific experiences in Hammonds' cognitive continuum chart. Standing (2008) distinguishes such scientific research from

one another, as they could reveal unique evidence. In Standing (2008)'s adaptation of CCT, these steps are named as action research, qualitative research, survey research and experimental research.

Each research approach that is used in the speech and language discipline could reveal unique aspects that have a significant influence on therapists' intervention decisions. This study revealed that such scientific research is well acknowledged by the Turkish SLTs, although this does not guarantee that scientific knowledge is seen in practice.

The therapists in this study expressed that they try to base their decisions on the knowledge that they received from their university education and research evidence. The scientific pole of the CCT seemed to have a central role in determining the standards and fundamental reasoning process of therapists at a wider level. This is especially true for the speech and language discipline because each country has its own language structure that may have major differences from another. This means that research evidence that is found to be useful in the English language could also be productive in the Turkish language. Even if such evidence might be found to be useful, there should be a process where intervention or diagnosis methods should be standardised for each language. To do this, a national level of various research should be performed which could include experimental, survey, qualitative and action research. For instance, the therapists reported that they make use of standardised tests such as TELD-3 (TEDIL for Turkish version) to make a decision, but they underlined their reservations on whether the test is good for

the Turkish language or whether the standardisation process of the test is properly done. Ultimately, some pioneers such as academics or private institutions in Turkey discover such tests or intervention methods and make great efforts to bring them to Turkey. They conduct nation-wide research to standardize the methods in Turkish language. Thus, such broader-level of judging process cannot be separated from the individuals' reasoning process.

7.1.7 How is the Data Related within CCT?

To be able to better reflect how the data fits within CCT, Table11 will further show the data that is related to CCT. Table11 shows the relationship between the data (participants' statements) and the modes of CCT. The left-hand column (P1 to P8) shows the eight participants and the top row shows the cognitive continuum modes. It was found that Turkish SLTs' decision-making processes were positioned between five modes: intuitive judgement, reflective judgement, interdisciplinary collaboration, system-aided judgement and quasi-rationality. In this current study, other modes were found to have no direct effect on SLTs' decisions. These modes can be called research-based practice modes (action research, qualitative research, survey research and experimental) which are defined in the literature as institutional level (Standing, 2010). For instance, standardized tests (referred to as system-aided judgement in CCT) are derived from survey research. Test tools which are developed through research help SLTs in practice. They use these tests to be 'confident' and to 'see the language level of the child' at a research-based level.

Only some of the most representative data that belong to eight participants will be illustrated in Table11:

Table 11: Relationship between the data and the modes of CCT

	How The Data Is Related within CCT?				
Participants	**Intuitive Judgement**	**Reflective Judgement**	**Peer Aided Judgement**	**System Aided Judgement**	**Quasi-rational**
P1	"Sometimes you cannot explain why the thing you do is necessary. You just know it. It doesn't have to be written in an academic article to be right…"	"Formal tests are not trustworthy so sometimes you need to rely on your experience…" "I also use the information sheets and checklists that I have created myself; not only standardized tests" "I would definitely do my therapy together with the parents. I have experienced that there is a big difference in a child's improvement if parents are active"	"…collaborating with other professions is crucial and that is what I try to do"	"I use some standardized tests to see the language level of the child"	"…instead of following a rule-based method, it is more about picking a little bit from one method and a little bit from another… Then, mix them all together" "I would work prompt techniques, PECS and other alternative communication techniques together with an oral motor technique which I have learnt … during university education"
P2	"…I feel this method was the main factor that helped children to improve their language"	"I was trying to keep children seated and was not allowing them to engage with other things. But this did not work so I change my practices until I find the right one…" "Regarding all my previous experiences, I can say that some children are hiding behind their mothers during the therapy. This slows down their progress, distracts their attention. However, when parents disappear gradually from the room, kids are completely fine and even better, more focused on their play."	"I discuss a child's issue with my friends from different professionals but only who are working in this institution"	"I use DIKTE and other language assessment tools together with my own observations"	"Every single theory can be used in a child" "Alone or mixing with other methods" "…various methods…" "our practice is dynamic, needs to be continually engaging"

	How The Data Is Related within CCT?				
Participants	**Intuitive Judgement**	**Reflective Judgement**	**Peer Aided Judgement**	**System Aided Judgement**	**Quasi-rational**
P3	"I do not think that theories can directly help our practices. Theory is good for having knowledge but not for practice. At the end, what to do is belongs to what we think is useful…" "I think the right therapy is this…"	"I try a method; if the outcome of the method is fruitful I keep on… If not, I am changing it" "It worked before and I think this child will also like this kind of therapy" "I observe and talk with the child and take my own notes during my first two sessions then design next therapies accordingly" "…I decided not to use this method again with parents who are not really motivated"	"I have opportunity here to ask any question other colleagues who are working here but that's it"	"I use Denver II and some other structured tests to have an idea about general development of the child"	-
P4	"I love my job and I love children. I love to help people; I would like to touch their life. When I see the happiness in their eyes, this affects my motivation very much. Good feedback [made me feel] that what I am doing is the right thing and I try to learn and develop more"	"I believe that informal evaluations are as important as formal tests, even can be more important" "…I created a scale myself to evaluate a child's language development by using my own reading from the latest publications" "I have created a checklist myself" "I design a therapy by observing the communication skills, necessities of the child in the first couple of sessions. "my previous experiences [make me feel] safe to go for the same activities, methods for another child"	"I have a friend who is my colleague. Sharing knowledge with him provides me [the opportunity] to see the things from different aspects"	"Formal tests give us important knowledge as these tests had been evaluated in terms of reliability and validity" "…these tests show us where is the child in terms of language development and where s/he should be normally" "They give me an idea about the child's development and needs" "a good reference"	"I use an eclectic approach. I use a mixture of all methods that I know. Decision happens the moment that I do the therapy" "there is no one unique technique or activity or method to help any language issues. Each case is special inside and needs greater, deeper examination to decide therapy"

	How The Data Is Related within CCT?				
Participants	**Intuitive Judgement**	**Reflective Judgement**	**Peer Aided Judgement**	**System Aided Judgement**	**Quasi-rational**
P5	"I think this is the right thing to do" "I think in the end it all depends on you as a therapist" "I mean if you love your job and children you probably make a better decision. You feel that this love gives better outcomes…"	"I do not always give importance to formal tests. I can understand the needs of the child after a couple of sessions based on my own experiences"	-	"Although I prefer my own checklist, this is a profession that you cannot always rely on your experience… quality assessment tests, well-known guidelines are quite helpful…"	"Sometimes I use only one or some steps of an intervention method and mix this with other methods… because sometimes one method is suitable for the child and other is recommended by academics… you seek a balance" "I would not blindly go for the same intervention method over and over again" "SLTs should not use hardly rule-based therapies" "We just need to guide them and scaffold the necessary intervention decisions in accordance with their personal lives…so the methods we use should be continually evaluated by looking at what theory and practice say"
P6	"Sometimes you meet parents and you just know if they can manage to continue intervention methods at home…" "I feel like it is up to me to make a final decision rather than looking at what theories or articles say about a case…"	"according to my previous experiences parents want to see what we are doing…"	-	"I learned these tools during my internship back in the university; I …" "…we should follow academic workshops, seminars and so on to learn new methods and tools… this helps a lot to makea better decision"	-

	How The Data Is Related within CCT?				
Participants	**Intuitive Judgement**	**Reflective Judgement**	**Peer Aided Judgement**	**System Aided Judgement**	**Quasi-rational**
P7	"I think this method work for most of the cases…"	"I generally prepare my materials and check lists as I have gained enough experience…" "I do not really rely on standardized tests as child might be sleepless or tired or not in good mood at that specific time. What I have learnt over the years is that a child can show better outcomes in an another day.	"I always ask our psychologist's opinion…" "the child's doctor told me that…"	"There are occasions that you have to follow a protocol or guideline to better decide what to do…"	"We create special therapies for each child. Of course, we have some children who have similar issues, but every single child has something very special, specific which cannot be seen by others… so you have to consider various factors and make a decision…"
P8	"I believe theories are not always helpful in practice…"	"What we evaluate is human and language. They are both social. You cannot measure these things. They are changeable. There are lots of things to observe. You should observe the family, their attitude, education or way of life. You need to have the experience to understand what kind of environment the child is raised in…" "You need to have a holistic approach then you can see what is wrong and right. That is how you make a decision" "I decide to administer such things based on my experiences and previous sessions" "…if the child is okay with it and s/he makes some progress then I stick to the method. This also gives me confidence for future practices if I face with similar things with different children… It makes me more confident for my next actions" "I tried this method on my previous children and it worked well" "…So, I decided to use this therapy based on my experiences and needs, sensibilities of the child"	"There are physiotherapists, special needs educators, child development specialists etc. You chat with these people and I think this feeds me a lot. The good thing is that these people are familiar with DLD so for instance our psychotherapists widen my knowledge about biological issues, another one gives interesting information about children with special needs so that when I share some of my cases with them they help me to see the parts that I did not see before. This helps a lot"	"…the workshops I think are the most beneficial ones because the creator of the workshops comes by different academics across the world, refine them and present to us. You learn new tests and tools to better evaluate a child's language issue…"	

Some of the most related expressions for related modes have been shown in the Table11. As explained earlier, intuitive judgement represents beliefs, ideas, and instincts. In this study it is found that SLTs gave importance to their own feelings, and, they felt that their own motivation and parents' motivation had a significant impact on their decisions. Reflective judgement mode comes from the SLTs' previous experiences and judgements. For instance, in this study, if an activity or certain method worked for children with DLD, SLTs seemed to stick with it, and use the same method for children who have similar issues.

Peer aided judgement shows participants who shared and benefitted from other professionals' expertise and knowledge. In this study, it was found that SLTs do not prefer to share their knowledge with their own colleagues, but they rather hold informal, one-to-one discussions with other professionals who work in the same institution rather than collaborating and discussing altogether.

The system aided judgement mode relates to using some tools and tests for decision making. Lastly, quasi-rational is the more scientific mode in SLTs' decision making, compared to previous modes. This step is about "mixing" "picking a little bit from one method and a little bit from another" and "using various methods".

To conclude this section, it can be said that this is the first known research that has interpreted SLTs' decision-making process through a decision theory. The aim was to map out what bases SLTs make their decisions on. To answer this,

a data-driven research approach is found to be helpful, to freely explore various decisions that are made by the therapists and the reasons behind them. While there are many decision theories in the literature, CCT is found to be a good match to explain the therapists' decision-making process. Speech and language is a complex discipline, where both pure scientific evidence and social factors play critical roles, so that the therapists' reasoning process shift through within these poles where there is a close interplay within each step that is described in the CCT. This section interpreted the findings of this research in a broader manner, where they were interpreted through theory. The next section will discuss the details of how the therapists' decision-making process is seen in practice and its implications for the nature of the therapy.

7.2 How are the Turkish SLTs' Decisions Reflected into Practice?

In this section, how the therapists' decision-making process is reflected in practice and its position within the CCT will be discussed.

7.2.1 Decisions During Evaluations: The Nature of Resources that Affect the SLTs' Decision-Making Process

As underlined previously, the participant SLTs were found to be drifting within the steps that are described by CCT. The first theme that was presented in Chapter 4 showed that the participants were found to be making their evaluation decisions that are based on the use of formal/impersonal or informal/personal resources. The use of such resources could mainly be

positioned within system-aided and reflective judgement steps of the CCT, as can be seen in Figure15:

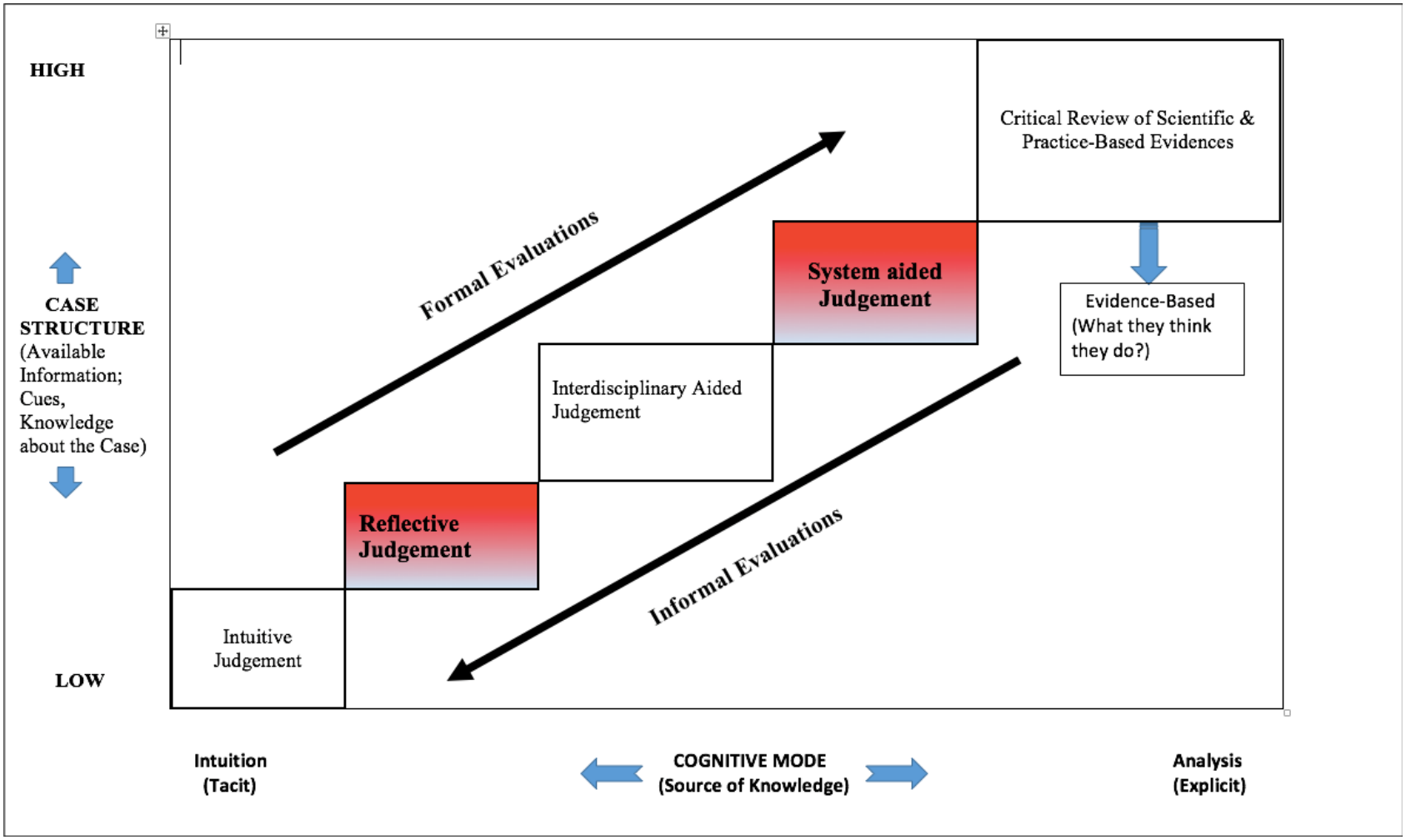


Figure 15: Graph shows how "Formal and informal evaluation" theme related to CCT

The graph in Figure 15 illustrates how the therapists' decision-making process shifts within the continuum regarding the resources that support their decisions. Two main steps, the system-aided judgment and reflective judgment, are fundamentally used to evaluate the cases before making an intervention decision. Such an evaluation process could be said to be the backbone of further therapy decisions. However, as was stated previously, what the therapists think they do and what they do show differs on some occasions. The interview data revealed that the therapists acknowledge various resources that should be seen in practice. Such statements indicate that the therapists' reasoning process takes place within the step of a critical review of tacit (intuitive judgement) and explicit (scientific reasoning) knowledge (Hammond, 1965).

It is stated in the literature that specific guidelines have been created to improve therapy services for SLTs (ASHA, 2005; Gascoigne, 2006). These guidelines suggest using specific guidelines for SLTs to employ current research evidence in the literature. Such guidelines propose two main steps to make an intervention decision. The first step is conducting formal standardized tests and informal evaluations that allow SLTs to understand speech, language, communication and oral functions of the individual child (*ibid*). These formal resources are mainly described as system-aided judgement within Ham (1988)'s CCT. These are found to be the curriculum of their university education which has been created with the recent developments in speech and language therapy, the use of formal tests that have been formed in accordance with scientific research, seminars or conferences that are given by academics in

speech and language therapy training or clinical guidelines. As the SLTs reported, they make use of such formal resources, as they think that they are generally linked to theory and scientific evidence. As Topbas (2014) stated there area variety of tests developed in Turkey within the last years to assess Turkish children's language problem and many types of research have been conducted at DILKOM, Anadolu University.

Informal resources, on the other hand, constitute informal evaluations, using opinions of colleagues, trial and error method, focusing practice over theory. These resources are generally perceived to be more practical to apply in therapies. Such informal processes mainly include the therapists' opinions about a specific case. They seemed to compare previous cases and the present ones to support the diagnosis process. It was revealed that some therapists created their own informal tests based on their past experiences. Such informal reasoning processes that were seen during the evaluation of a case can be positioned within the reflective judgement step of CCT. It should be noted, however, that informal resources that affect the SLTs' decision-making process do not mean that these resources are not scientific, or they are wrong. For instance, an SLT could be influenced by their past practices which could well include the principals of action research, so that reflecting their own practices in a scientific manner would also increase the scientific nature of the judgement process. This research, therefore, does not judge the effectiveness or the authenticity of the intervention methods.

The therapists' opinions about what they think they do could be referred to as

evidence-based reasoning. Over the past two decades, it has been discussed that there is a dramatic increase in using scientific, evidence-based practice, as a guide to intervention decision-making processes among healthcare professionals, and understanding the importance of EBP (Zipoli & Kennedy, 2005). The concept of EBP contains three main factors which are: the combination of using best research evidence into the clinical practice, professionals' expertise, clients' preferences and values (Asha, 2005) and also using contextual evidence (Thompson & Dowding, 2002). The use of EBP allows increased objectivity, decreased variety in practices, and administering the best therapy by using well-reasoned decisions and reducing the gap between research and practice (Schlosser & Raghavendra, 2003). EBPs have an important place in SLT. The American Speech–Language–Hearing Association (ASHA) has therefore published an official document about principles of clinical decision-making for audiologists and speech and language pathologists to offer high-quality care (ASHA, 2005).

However, although the use of EBP has a significant value, some studies reported that research evidence does not have as much influence on SLTs' decision-making processes as expected (Brener, Vallino-Napoli, Reid, & Reilly, 2003; Zipoli & Kennedy, 2005). In this current research, it was also found that although the participants that were interviewed seemed to make their intervention decisions based on their theoretical knowledge and evidence-based practices, they seemed to not practice what they claim that they do. The participants' that I have observed decision-making processes tend to be heavily influenced by the practicability of the intervention method, rather than being

evidence-based or scientific. Waller and Turner (2016) also stated that although evidence-based tools and approaches are known as necessary for clinicians, they are found less effective in practice. The reasons are stated as to be "our personalities, knowledge, emotions, beliefs, behaviours and social milieus" (Waller & Turner, 2016, p.129). Waller and Turner (2016, p.130) call it a "therapist drift", in which they claim that even though therapists receive formal training, or they are under supervision, they tend to shift from evidence-based approaches to more practical ones.

It is clear from this study, Turkish SLTs gave more importance to practical experiences (see Section 4.2.3), their instinct (see Section 4.2.5), and their interpersonal factors (see Section 4.2.6) all of which had an impact on their therapy decisions. A recent study also concluded that:

> "…treatment decisions are primarily pragmatically influenced and rely heavily on craft knowledge or practice evidence…" (McCurtain and Clifford, 2015, p. 1185).

Therefore, recent studies have shown that SLTs' therapy decisions do not align with the principles of evidence-based decision making (McCurtin & Clifford, 2015; Kahmi, 1999; Waller & Turner, 2016). Decisions heavily come from SLTs' pragmatic stance, knowledge and practical experiences, which could be categorized as reflective judgement. It was reported that SLTs often make their decisions by not using any guidance or best research evidence (Law et al., 2003b); rather, they use "*only one example of science in practice"* (McCurtain and Carter, 2015, p.1143). As science is not described solely as knowledge, rather it is a way of thinking and evidence of conscious behaviour, scientific-

based practices have been used as evidence of this behaviour by professionals (*ibid*).

To conclude, the Turkish SLTs' decision-making process is initiated when they are first faced with a specific case. This process is the evaluation step where the therapists make use of various resources to come to a decision. These resources could be categorised as formal/impersonal and informal/personal. While informal judgement process represents a more intuitive process, where the therapists gradually make use of their assumptions and information from their past practices; formal resources include using standardised tests and clinical guidelines and information that comes from other scientific, formal documents. Decisions that are made within this evaluation process are found to be fundamentally based on reflective and system-aided judgement processes. However, the therapists are found to be aware of the importance of a more evidence-based practice which finds its place as quasi-rationality within the CCT.

7.2.2 Decisions on the Nature of the Therapy: Administering Child-Centred or Therapist-Based Intervention Approach

After evaluation process, the second decision step is to design the nature of the therapy. Two fundamental approaches were seen: administrating child-centred or therapist-based intervention methods. It was found that such decision shifts and the factors behind them reveal significant findings about the participant SLTs' decision-making process. The factors such as time pressure, parents' expectations, the necessity to fulfil goals or relying on past practices might lead the therapists to administer a more therapist dominant intervention method. However, when the therapists question their practices and consider research and practice-based evidences which suggest applying a child-centred approach and following children's interest, a more flexible intervention decision process is revealed where the participant therapists give room to children to reveal their interest.

Almost all the therapists were found to be constantly adapting the chosen intervention methods once children make progress or demonstrated needing a different activity. When the basis of such decision was questioned, these therapists referred to research and practice evidence based on seminars, workshops, academic articles. This indicates that when the therapists became more aware of such resources and made use of them, their reasoning process can be well positioned within the step of a critical review of research and practice-based evidence of the CCT. The Figure16 illustrates the therapists' decision drift between child-centred and therapist based approach within the cognitive continuum chart.

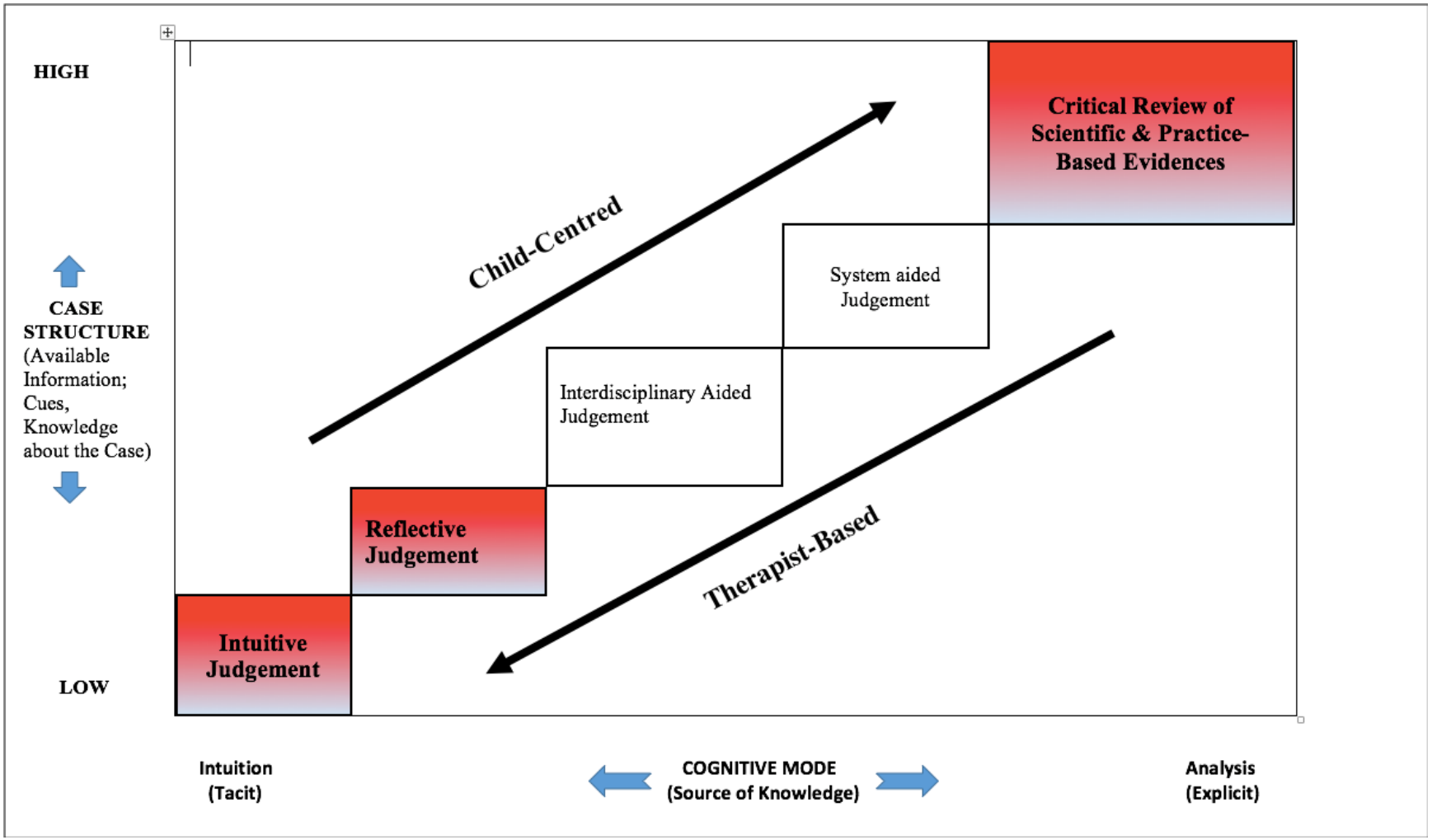


Figure 16: Graph shows how "Child Centred or Therapist-based" theme related to CCT

It was revealed from the data that the SLTs acknowledge the impact of the child-centred approach on their decision-making, which means that they guide children in a pre-structured environment that was prepared regarding the needs and interests of children; which reveals that they have a dynamic decision-making process. It can be said that such a dynamic decision-making process allows flexibility to continuously reshaping their intervention methods. Thus, the children's interest is found to be an important factor in the SLTs' reasoning to shift their intervention approach during the therapies.

When the SLTs followed a therapist-based approach, they controlled the flow of the activities. They generally administered the session sitting in a chair in a face-to-face position with the children. They all decided the sequence of the activities without giving options to the children. If the children were not interested in the material or activity, they continued the therapy without considering the interest of the children. This decision shift was found to be caused due to time pressure, parents' expectations, the need to complete tasks and the therapists' belief in the benefits of their past practices. While the SLTs in this research were aware of the scientific researches that underlined the importance of children's needs and interests, in some instances, they were not able to apply such thinking into practice.

There has been a considerable amount of research that stresses the importance of scientific research (the patient-centred approach in this case) into practice (Layard & Clark, 2014; Shafran et al., 2009). However, such evidence has

failed to be reflected in practice due to different factors such as beliefs, emotions or attitudes as I stated before. The reasoning behind taking a therapist-based decision-making process seemed to be caused by the effectiveness of such an approach.

Kamhi (2006) underlines the complex factors that lead clinicians to make certain treatment decisions. The author states that while research shows that one method is more efficient than others, this does not mean that such methods will find a place in practice. It was claimed that clinicians are aware of the limitation of scientific research and know that efficiency is not the first and the most important factor in their decision-making process. Kamhi (2006) illustrates this by comparing the child-directed and clinician-dominant approach. He accepts that child-directed approach might not be as effective as a clinician-dominant approach in the short term, however, clinicians could choose a child-directed approach as this could give more fundamental outcomes and create meaningful interactions (*ibid*). Fey and Johnson (1998) also stated that there is an important disconnection between studies and practices, as studies fail to address the needs of clinicians. It was claimed that clinicians are likely to follow their beliefs and past experiences and if they find a more practical and beneficial approach they tend to embrace such new practices, instead of following what scientific studies suggest (Kamhi, 1998). Such complex factors behind decision-making processes are also seen in this study. Regardless of what scientific research suggest, the SLTs dwell on their instincts and follow a certain trajectory in their therapies.

It should also be noted that relying on reflective judgement and past practices do not always create a structured and therapist-based approach. For instance, one of the therapists, P2, used to follow a more therapist-based approach; she then changed this approach and adopted a child-directed approach. She stated that;

> In my first year in this job, I was trying to keep children seated and was not allowing them to engage with other things. But this did not work… It is important to follow their interests and adjust the therapy rather than forcing them (P2, Follow-up Interview)

As can be seen, she reformed her intervention decision because of the previous one, as stated "*did not work".* The transition from a more rigid and structured approach to a flexible one that considers children's interest seemed to stem from a more practical consideration rather than a scientific one. However, this does also not mean that such a positive transition (from "I was trying to keep children seated and was not allowing them to engage with other things" to "It is important to follow their interests") occurred coincidently; rather it seemed to be formed because of formal training that was discussed in the previous session.

Such finding signals that when the SLTs face difficulties in their decision-making approach, they make use of various decision steps that are described in the CCT. Such a decision-making process is also called an eclectic approach in the literature. Marion (2003) stated that being eclectic gives the practitioner the flexibility to create their personal theory to follow in their practice. However, this does not mean that being eclectic is going with the flow or doing whatever works (Marion, 2003), it is rather merging personal beliefs, practices with

scientific theories and use this combination to make effective decisions. McDevitt and Ormrod (2004) claimed that the eclectic (quasi-rationality in CCT) approach is one of the most practical methods in child development, as there is no one theory or practice that covers all aspects of a child's development stage, especially for language problems. This requires practitioners to combine various factors before making an intervention decision.

To conclude, deciding on the nature of the therapy has a significant place in forming an intervention approach. Due to various factors that were mentioned, a tendency towards the intuition pole of the cognitive theory is observed. Reflective judgement dominates these therapists' reasoning processes, where they consider their previous troubles regarding time issues, failing to complete the task or satisfying parents' expectation. They also have confidence administrating a method that worked before and to which they are accustomed. Although the reflective judgement process is valuable when it is done properly, the findings of this study indicated that there are many drawbacks of using such an approach, as it might prevent the therapists questioning and reforming their practices. Administrating a dynamic child-centre approach, on the other hand, indicated the therapists performing a flexible reasoning process where they both consider and question their past practices along with research evidence. This confirmed that when a middle ground reasoning approach (quasi-rationality) is taken, more quality care could be seen, as Hammond (1980) suggests.

7.2.3 Parents Matter: The Role of Parents in SLTs' Intervention Decisions

It is the fact that parents play a significant role in every phase of their child's development (Topping et al., 2013). As children generally spend most of their time with their parents, their behaviours, education level or socio-economic level determines the state of the interaction with their children. When it comes to language development, it has been repeatedly reported in studies that quality and quantity of parent-child interaction has an important impact on child's language acquisition (Safwat & Sheikhany, 2014; Schoon et al., 2010; Topping et al., 2013).

It is also found that inconsistent parental behaviours and parenting problems could affect parent-child interaction and lead children to have language difficulties and developmental disorder (Susan, 1995). Another research indicated that parents play a significant role for children whose language development is slower than their peers; and they suggested that parental involvement and home activities are significant for effective intervention (Pappas, McLeod, McAllister, & McKinnon, 2008). These similar outcomes in the literature that were underlined over the years lead SLTs to involve parents in their language intervention strategies. In this way, parents may "carry over" the interventions at home and then "maintain" the support for their child's language development (Law & Camilleri, 2007, p.4).

As parents have a central role in their children's language development, it was seen in this study that the therapists' decision-making process is also influenced by parents. The previous sections discussed the factors in which the

therapists were the main actor who mainly gave direction to the therapy. As previously mentioned, the therapists are aware that language is a meaning-making process, so that ones' interactions with people around them is vital regarding language development. Therefore, parents play an important role in the therapist's decision to administer a certain intervention method. As the Turkish SLTs in this study reported, their theoretical knowledge seemed to encourage them to involve parents in the therapy. In addition, the SLTs are found to be more motivated when parents are eager to learn and pursue intervention methods at home. Such motivation induces a reasoning process where the therapists explore a wide-range of intervention methods that they believe to be more helpful for the individual child.

There have been some studies in the Turkish context which have also underlined the importance of parents in their children's language development. Topbas *et al*. (2003) stressed the importance of early communicative interactions between parent and child in order to improve children's language development. Diken and Diken (2008, p.110) stated that:

"it is currently a legal requirement of special education policies both in western countries (e.g., the US) and Turkey to engage parents of children with disabilities into the whole process of special education services starting from assessments and diagnosis to planning programs"

Although it has been suggested that parents' involvement in intervention is a legal requirement in Turkey, this study's findings show that parents who are

passive or distractive could discourage the SLTs and lead them to form particular intervention decisions to administer more therapist-directed intervention techniques. However, as was stated in Chapter 6, this did not mean that the SLTs completely excluded parents; instead, in some cases, the SLTs preferred to meet with parents after the session to discuss what had happened during the session and what they could further do at home.

Thus, although these therapists seemed to perform a quasi-rational reasoning process regarding whether to involve parents or not (in the most of the cases, they are favour of involving them), their past practices (reflective judgement and intuition) influence such thinking and changes the nature of the intervention method. Figure17 illustrates how such a transition occurs within the CCT:

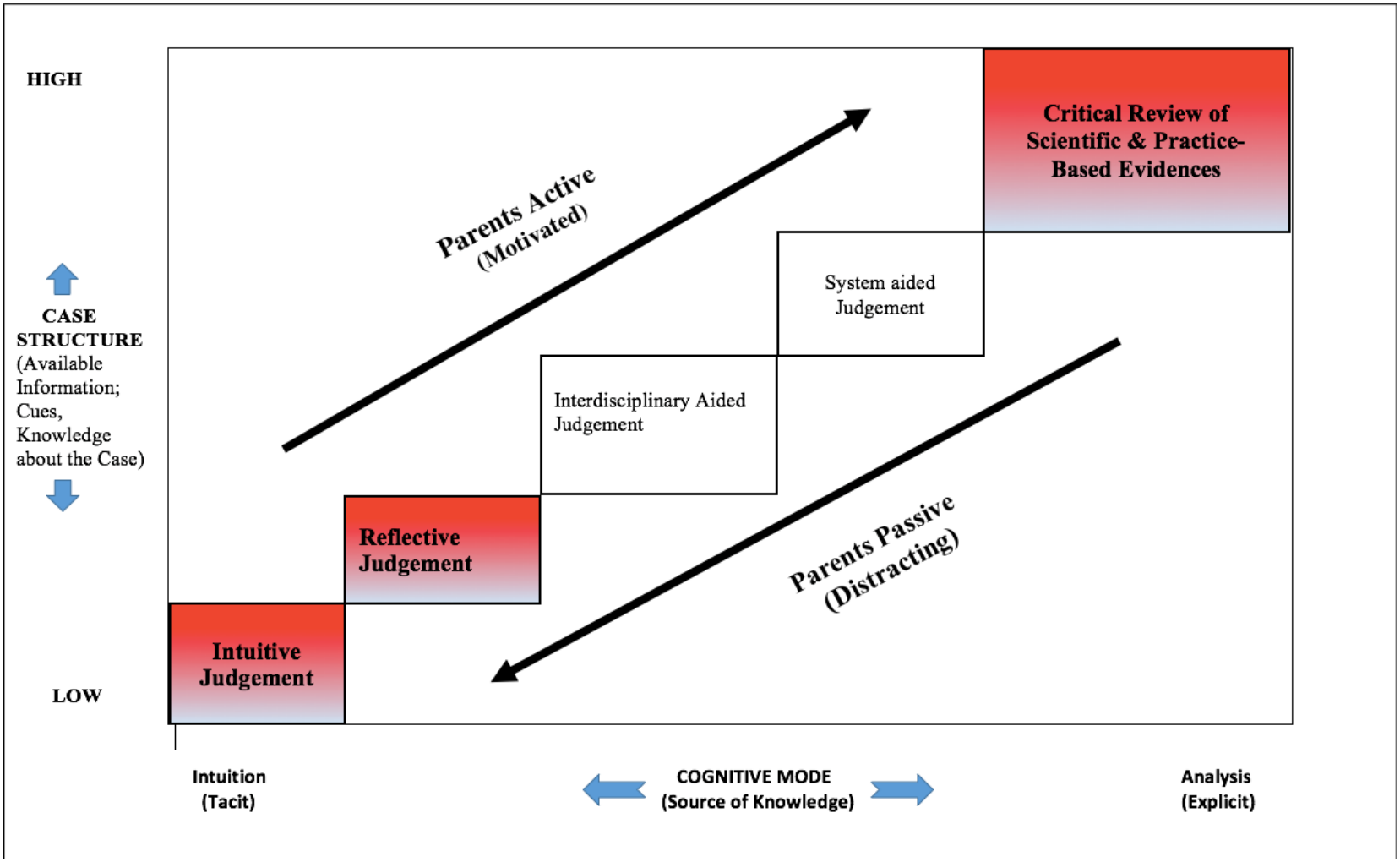


Figure 17: Figure show "Parents Matters" theme related to CCT

As the participants reported, the motivation of the parents directly influences their intervention decisions. The more motivated the parents are, the more complex and eclectic intervention methods are administered by the therapists. As the therapists ensured that parents continue to apply intervention methods at home, this brings extra motivation to the therapists and more effort is spent to find extra intervention methods. It was also reported in the literature that training parents and actively involving them into the practice increased parents' skills, helping them to better interact and communicate with their children (Roberts & Kaiser, 2011). Roberts and Kaiser (2011) found that there is a modest change in the participants' children language acquisition in relation to parents' increased intervention skills. Thus, this research also showed that SLTs seemed to be aware of the importance of parents and try to involve them in the process as much as possible.

However, such decisions do not always seem to stem from the therapists' engagement with scientific research, it sometimes seems to originate from their past experiences and values. A therapist with a negative experience with parents might well choose to exclude parents from the process. For instance, as P3 stated (section 6.2.2):

> … I did only one or two sessions with at least 15 different children until now. The reason is that when they (parents) have the opportunity to watch and participate in all my sessions, they generally say that they can do these things at home and it was not necessary for their children to attend therapy. They seem to expect some kind of medical intervention as if we are surgeons. This attitude led me to change my mind about involving parents in most of the cases… (P3, Audio Diary)

So that, although P3 used to involve parents in her sessions previously, she modified her actions as the parents seem to underestimate the intervention methods that P3 administrated. For this reason, P3 preferred to conduct direct therapy, one-to-one, with the child; and meet and discuss with parents after the sessions about what they had done during the session and what they can do at home. As also discussed in Chapter 2, the SLTs seem to have a conflict about how they can define their job description. Most of the therapists work in clinics, but they differ from other medical professionals in terms of the methods they use to help patients.

It was also discussed in Chapter 2 that patients and their families might want to expect similar medical experience as they have had in a hospital context (such as expecting a direct cure, medicine, scientific explanation of the problem, a surgical intervention); this seems to create a conflict and leads to the SLTs finding different intervention solutions, although they are not scientific, such that therapist-directed intervention is quite a traditional approach (Pappas and McLeod, 2008). When the participant therapists are faced with such parents who are not willing to be active, who do not have time to apply intervention methods at home, or who have different expectations, they feel under pressure. Such pressure leads them to make certain intervention decisions that are easy for parents to learn and apply at home. The therapists seemed to spend more time encouraging these parents. Roberts and Kaiser (2011) also confirm that the success of parents' involvement in therapies depends on parents' learning capacity and the frequency and accuracy of implementing intervention methods at home.

It should not be underestimated that patients and their families also have a set of beliefs and expectations from therapists. Such expectations and beliefs have been built by their prior experiences with the medical sector (Lum, 2002). When a person enters a hospital, they automatically want professionals to cure their illness and provide a clear explanation to them. While such explanations and finding a cure could be straightforward for most professionals in the medical sector, SLTs would not always have such direct solutions and scientific explanations, as discussed previously. This creates another dilemma for patients. Such expectations and beliefs might also influence SLTs' approach to their profession, and so their reasoning in making a certain intervention decision.

How is the 'parent effect' seen in the practice?

The data revealed that four different therapy sessions have been formed due to parents' willingness or unwillingness, their work-life balance, their motivation or attitudes. These effects are represented in Table9 (Section 6.2). Although all SLTs acknowledged the importance of involving parents into the intervention and wanted to train them, their style of involving parents into the therapies varied. Such variations revealed the changing nature of the decision-making process of the participants in relation to parents' roles. While on some occasions the SLTs preferred to involve parents into therapy as passive (section 6.2.1), there were times that they give an active role to parents in the sessions (section 6.2.2). Also, it was seen that therapists preferred to do therapy one-to-one, only with the child, and then they arranged an appointment to talk about the session with parents (section 6.2.3).

Parents' involvement in this study matches Pappas and McLeod's (2008) models for working with parents in the intervention. Pappas and McLeod (2008) stated that there were three family involvement models discussed in the literature, therapist-centred, parent-as-therapist aide and family-centred. They added a new model of practice for working with families in the intervention process which they named family-friendly (*see* Figure18).

Model	*Family Involvement in Intervention Provision*	*Family Involvement in Intervention Planning*	*Primary Decision-Maker*	*Primary Client*
Therapist-centered	No	No	Professional	Child
Parent-as-therapist aide	Yes	No	Professional	Child
Family-centered	Varies according to families' wishes	Varies according to families' wishes	Family	Usually the family (varies according to families' wishes)
Family-friendly	Families supported to be involved in the intervention	Varies according to families' wishes	Professional	Usually the child (varies according to families' wishes)

Figure 18: Family Involvement Model (Pappas and McLeod, 2008, p.2)

The therapist-centred model refers to a therapist controlling the entire process of intervention. In this model, the principal client is the child and parents have no involvement in intervention provision or planning and the therapist is the main decision-maker. This model matches cases in which Turkish SLTs led the intervention methods which were termed 'therapist-directed' in Chapter 6. Pappas and McLeod (2008) stated that although no advantages of this model have been discussed in the literature, there is a preference in practice for the therapist-centred model for two reasons.

First, it has been reported that parents want to have a professional to lead the intervention process (Davies *et al*., 2017; Carroll, 2010; Pappas *et al*., 2009b). Parents' perceptions of SLT therapy and their expectations from therapists

have been explored and it has been found that parents viewed their SLT as an expert; also that they were not sure about what their role is in the intervention process and considered the SLT as a 'fixer' (Carroll, 2010). A more recent study also showed that "parents often expect to be learners, even from the outset of involvement with the SLT" (Davies *et al*., 2017, p.182). Parents' perception of an SLT's role is that they act as assessor, intervener and planner and they expect SLTs to teach them how to overcome their child`s language issue (*ibid*.). In the same way, it was observed in this current study that parents tend to accept whatever SLTs recommend and expect to be taught by them.

The other reason why SLTs might deliver a more therapist-led therapy session is because they are found to be giving more importance to direct intervention methods (Pring *et al*., 2012; Watts Pappas *et al*., 2009a). Pring *et al*. (2012) stated that SLTs give more value in direct intervention than in indirect intervention methods because they deliver the intervention themselves rather than teaching and delivering the service through others. This might signal that in practice, SLTs' perception of parent-led interventions is that they are less valuable than when SLTs deliver it by themselves (*ibid*.). In this current study, it was also seen that there were occasions when the participating SLTs thought that it would be better not to involve the parents in the session; however, the difference is that they preferred to discuss the intervention and talk with the parents at the end of the sessions.

The parents-as-therapist aide model refers to when parents participate in the intervention process by administering activities at home. Under this model, SLTs train parents to be their child`s therapist at home to continue the

activities, but the parents are not involved in the decision-making or planning process for the intervention methods. This model matches the findings of the current study discussed under the 'parents as passive' heading in Chapter 6. It was also seen in this study that in some situations, parents attended the session as observers in order to learn how to continue the activities at home.

The family-friendly practice model which was introduced by Pappas and McLeod (2008) is also about family involvement in intervention planning and provision, but the primary decision-maker is the professional in order to ensure that the child is in an evidence-based, effective and safe intervention programme. The main client in this model is usually the child; putting parents in the centre of intervention as a client might be unnecessary and/or not the right thing to do for a family (Pappas *et al*., 2009b). In this current study, it was found that although it is not always the case, the SLTs were likely to involve parents in the decision-making process and this was termed 'parents as active'. The primary decision-maker was the SLT and the client was the child, but parents had an active role in the decision-making process and in provision. Togram and Mavis (2009), Turkish academics in the Department of Speech and Language Therapy at Anadolu University, stated that as the parents are the first people who can notice their child's language problem, it is important to work together with them. They are the ones who can transfer SLTs' clinical practices to the everyday life of their child. Togram and Mavis (2009) also stated that it is SLTs' responsibility to enhance parents' awareness of their child`s needs; parents can learn much from SLTs and they can also administer the same strategies once they know how. However, they also stated that parents have other important roles in their personal and their children's lives, and that

for this reason, their help regarding the intervention methods should not be exaggerated *(ibid.)*.

Finally, the family-centred model was developed to support the child's whole family and context. In this model, the family has the primary role in every phase of the intervention process; the family is the client and at the same time decision-maker and planner and is actively involved in the intervention sessions. Legislation on special education in many countries suggests involving parents in the intervention process; in the US (Kaiser *et al*., 2003), the UK (Davis & Meltzer, 2007; Roulstone 2012) and Turkey (Diken & Diken, 2008), it is recommended that parents should be involved "starting from assessment and diagnosis to planning programs" (Diken & Diken, 2008, p.110). In the literature, this is called family-centred intervention because the parents are involved in every phase of their child's intervention process; assessment, planning goals and intervention (Pappas & McLeod, 2008). The importance of using the family-centred approach in Turkey was emphasised by *Diken & Diken (2008, p.110):*

> It is currently believed that taking into account the child's socio-cultural context rather than focusing only on the child and his/her problem in early intervention programs is essential to get positive outcomes from the services provided to children with disabilities and their families.

In this current study, however, the family-centred model was not seen in any of the Turkish SLTs' decision-making processes; it was found that although the

SLTs were quite aware of and underlined the importance of parents in the interviews, it was observed and reported that there were cases in which the SLTs passively involved or did not involve the parents in the sessions. Even in the 'parents as active' theme, the parents were not fully involved in terms of the principles of the family-centred model. This means that there is a gap between the theoretical understanding and the practices of Turkish SLTs.

In this study, it was seen that when the Turkish SLTs actively involve parents, they seemed to be affected by the parents' motivation and they sometimes make this decision when they first met the parents as they *feel* it. Another reason for Turkish SLTs to involve parents into the sessions actively is that the idea that *"parents can be their child's therapist if they are well trained"* (P6, Follow-up Interview). It was found in the literature that there is no significant difference between trained parents and clinicians in terms of administering an intervention method (Law et al., 2003b). This thinking was seen in the SLTs' practices, as they mainly believe that there should be a continuum between the clinic and home, and parents play a significant role to maintain this continuum. It was observed that even if the participants' in this study did not involve parent into the sessions in some occasions (such as distraction), they met and discussed with parents at the end of the sessions.

A similar finding is reported in Pappas et al. (2008). The study has investigated the beliefs and practices of 227 SLTs regarding parents' involvement in therapies. They found that although SLTs specified that they believe in and use

parent-based practices and assign home activities, 40 per cent indicated that they were not happy with parents' involvement in the sessions. Their practices were found as therapist-led rather than family-centred. Pappas et al. (2008) pointed out that three factors prevented the SLTs involving parents. The first one was called service-based factors such as the institution may prevent the involvement of parents. Second, speech and language therapy restrictions such as time and experience of the therapist; the third one is parent-based factors such as availability of parents, capability and expectations of parents. The researchers found that there is a contradiction between what SLTs believe they do and what they do in the practice. Although participants in the study believe that parents should be the final decision makers for the goals of the therapy, SLTs followed a therapist-led approach *(ibid)*.

As previously stated, similar findings are reported in this study. Even though all participants acknowledged the importance of parents' presence in therapy, there were occasions that SLTs only gave parents observer role in the practice because parents tend to distract the session by chatting with therapists or distracting the child by trying to reinforce the therapy or trying to discipline them in the session. Such outcomes confirm the findings of this study: that past practices (such as parents' inappropriate behaviours) lead the SLTs to make certain decisions, such as not involving parents into the session, that outweigh what they believe is a right approach.

The observed parents also seemed to mostly expect the SLTs to be dominant and 'heal' their children. As the therapist is the professional one in the room,

they did not seem to be aware of their role in their children's language development. Although the focus of this study is not investigating parents' expectations from the SLTs, it was seen that this attitude of parents (the belief that the therapist 'knows better') discourages them to be active, which contradicts with the SLTs decision to actively involve parents in administrating intervention methods. This is also reported by other studies (Davies, Marshall, Brown, & Goldbart, 2016; Lyons, O'Malley, O'Connor, & Monaghan, 2010; Pappas et al., 2008; Watts Pappas, McLeod, McAllister, & Daniel, 2006). Pappas, McAllister, and McLeod (2015) found that parents' aim was to help their children access to professionals and use the SLTs' expertise. The parents in the study believed that they lacked the skills to help their children so that they expected the SLTs to 'fix' their children. Although the authors did not report how such attitudes influenced the SLTs' choice of forming the therapy sessions and choosing a certain intervention method, it was found in this study that the SLTs' are directly affected by the attitude of parents and form the intervention methods accordingly.

The category that was called 'therapist-directed' includes the SLTs who had some negative experiences with involving parents. If the therapists think that the parents become a distraction preventing children from focusing on the intervention method, then they preferred to meet the parents after the session and inform them about the therapy. For instance, As P2 stated, *"when parents disappear gradually from the room, kids are completely fine and even better, more focused on their play"* (P2, section 6.2.3); she felt she had more productive outcomes by excluding parents from the therapy sessions. These

SLTs' decisions can be understandable from the point of saving more time to give direct therapy, as Pring, Flood, Dodd, and Joffe (2012, p.696) also underlined. The authors reported that *"...a typical clinician spends less than one-quarter of their time giving direct therapy and more than one-quarter training parents and other professionals"*. Also, it was found that SLTs are not happy with this status, as they think they should use their time better as they have *"too little time for direct therapy"* (Pring et al., 2012, p.696).

Lastly, there were occasions where SLTs were found to give importance to involving parents in the session but failed to meet with parents due to the work-life balance. These therapists seemed to pursue their decision to involve parents and find digital solutions such as using WhatsApp to interact with parents. They were also willing to use digital technologies to follow the children's development and the state of parent-child interaction at home. This group of therapists seemed to create opportunities for involving parents, instead of accepting the fact that parents were busy or have lack of motivation.

In conclusion, the theme that is called parents matter revealed an important factor in the decision-making of the Turkish SLTs. The parent factor yields different outcomes for the SLTs. It was observed and expressed by the SLTs that parents could become a motivation source which leads the SLTs to fully administer what they think to be right. Parents' willingness and motivation affect the SLTs decision to explore and apply various intervention methods and provide a connection between home and clinic.

On the other hand, the SLTs with negative experiences with parents seemed to find new ways to exclude parents from the therapies and apply a more

therapist-driven approach. When only considering the statements of the participant SLTs in the interviews without observation data and follow-up interviews, one could say that the SLTs acknowledge the importance of the parents' involvement in intervention methods. It could be claimed that they make decisions about how they better involve parents into the therapies, and they seemed to base such decisions on their scientific knowledge. However, observation data and follow-up interviews revealed that such scientific knowledge seemed to be dominated by the therapists' past experiences and their belief about which sorts of intervention method is more practicable, beneficial and time-efficient. Such decisions are not in line with the critical review of evidence-based research and practice – the middle and the 'ideal' points of cognitive continuum theory – but are rather found to be more in line with the intuitive decision-making process, which, as I have discussed, could prevent Turkish therapists from questioning and criticising their practices.

7.3 The Implication of the CCT Model in Turkish Context

In this section, I shall discuss how CCT could be a framework for improving the understanding of the decision-making processes of Turkish SLTs. First, the implications of CCT as a learning tool in educational and practice settings will be considered, then how CCT might improve awareness of decision-making and quality of service will be explored. Finally, implications for parents will be discussed.

Considering the steps in CCT and the findings of this study, the SLTs' decision-making processes had a dynamic nature and might constantly change not only from case to case but even within a specific case. On some occasions, the Turkish SLTs were found to be making decisions in a quasi-rational way (middle ground) as depicted in CCT. The therapists were found to be constantly adjusting their reasoning in accordance with children's needs and interests, parents' motivation, scientific evidence which tests and colleagues provide, and learning new methods through ongoing training. The resources which they used for reference (formal assessments, formal training and theoretical knowledge, ongoing learning) led their reasoning to shift towards to the scientific pole, whereas the use of informal resources and their personal experiences led them to use a more intuitive cognitive reasoning.

> "In our country [Turkey], children with slower language development may not be diagnosed. This partly results from the lack of sufficient standardized assessment/evaluation tools, educational and therapeutic media and qualified speech/language therapists. Formal instruments are very rare.

> Evaluations are mostly based on parental interviews and only detect general developmental delays. As a first step in devising appropriate evaluation instruments, it is necessary to examine cross-linguistic variation in early language acquisition" (Topbas et al., 2003, p.347)

Although SLT is a new and developing area in Turkey, many assessment tools have been developed over the last few years. Topbas (2014) stated that research into assessment and evaluation procedures are routinely conducted in DILKOM at Anadolu University in Turkey. In this current study, it was found that SLTs used both formal and informal resources which changed from case to case and from one professional to another. These findings bear significant implications for SLTs. The CCT framework can be a reference point which can help to make the decision-making process more transparent. Thus, CCT can be used as a learning tool and a practice guide for SLTs to integrate a broad range of evidence-based and reflective practices. It can enhance the understanding of the theory and practice of clinical judgement and decision-making in both educational and clinical settings. Hamm (1988) suggested that the choice of practice could be linked to reflective judgement or evidence-based decision-making; the important thing is that we need to be aware of how we make decisions and keep a critical eye on our decisions.

For example, using intuition and/or reflective judgement might be useful because SLTs' experience and past practices are valuable; however, over-generalizing a case to other cases might be dangerous. This is called in the literature the "cognitive illusion" (Kahneman *et al*., 1982). When a method works, we tend to stick with it. Our minds become resistant to change with the result that intuitive, reflective judgement can cause highly structured and rigid

practices, which could be prevented if professionals can be more aware of the sources of their decisions which are reflected in their practice.

The inclusion of the CCT framework in Turkish SLTs' training as a module in the curriculum could foster such an awareness. Student therapists could study such reasoning processes in order to become aware of the pitfalls and the advantages of making a judgement which is addressed within the CCT.

For instance, in this current study, it was found that the SLTs were using the reflective judgement step to make an intervention decision, meaning that they used past and current experience and reflected these in new cases. Although this method of judgement is beneficial, it was seen that it could become difficult for the therapists to effectively question their practices and rely on their intuition, which could result in designing more therapist-based activities. Similarly, it was found that the system-aided judgement step was also frequently used by the participants as they made use of formal tests to evaluate children's language development. However, relying on these tests could have some risks, as most of them were originally developed for other languages. This could cause flawed evaluations of children who speak Turkish, as the respondents reported. What is required is that therapists should be aware of the pitfalls and consider making a critical review of experiential and research evidence (quasi-rationality). They could also benefit from their past practices and take a child-centred approach rather than making a decision based on scientific tests or guidelines. As can be seen, if student SLTs become aware of

the sources of their decisions, they could balance their thinking and practices and could offer a higher-quality service.

Another implication of CCT is to encourage awareness of the effectiveness of the collaborative approach. The importance of inter-disciplinary collaboration has been emphasized in the literature so it is significant for SLTs to collaborate with other professionals over issues from the identification of the causes of language delay to the choice of intervention methods. In this current study, the findings showed that in both private and state special education schools, the SLTs failed to collaborate with their peers and with other professionals over intervention processes. The mode of 'peer-aided/interdisciplinary judgement' within the CCT framework underlines the importance of such collaborative processes.

There are also implications for parents. Increasing the awareness of the speech and language therapy profession in Turkey would decrease misunderstandings and increase the public's understanding of the process of intervention. As language is a complex phenomenon, administering an intervention to improve it is also a complex process and requires a considerable investment of time. It should also be made explicit that SLTs are not doctors or nurses, who often make visible and quick interventions by using medicines or surgery. Duru *et al*. (2018) explored the awareness of the SLT profession in Turkey and found that it was not high; awareness was found to change based on the age, gender and educational level of participants. Increasing such awareness in the community

could facilitate the SLTs' profession and offer them a better environment in which to work.

Another important implication is for the parent-centred approach. Although new legislation in western countries and also in Turkey suggests using the family-centred approach, none of the participants in this current study fully used this approach. They were using the family-friendly approach in which parents are involved in intervention planning and provision, but the SLTs are the primary decision-makers. Under the family-centred approach, parents are involved in the intervention process from beginning to end and are the primary decision-makers (Pappas & McLeod, 2008, p.2).

CHAPTER 8 A BRIEF SUMMARY AND CONCLUSION

8.1 Introduction

The purpose of this research was to explore the nature of the decision-making process of SLTs. The concept of decision making has been an important area of research in academic work. From economics to education, from engineering to business, researchers have been exploring how human beings make decisions before they act. For instance, how people make investment decisions has been an important topic in economics (Paul, 1972); it is important to know how policymakers in educational institutions decide to apply a curriculum for a certain department (Doll, 1992). Another example might be to explore the decision-making processes of people before they vote for certain political parties (Sunshine & Simon, 2003).

One of another vitally important area that researchers need to explore is how professionals make decisions in the health sector. It cannot be denied that professionals from the health sector—doctors, nurses, midwives, psychiatrists or SLTs—have a crucial role in people's lives with decisions they make for a certain intervention. While there have been many studies that focus on nurses or doctors' decision-making process in the literature, recent research has underlined that there has been little research about SLTs' decision-making process (Arlene & Bernie, 2015; McCurtin & Clifford, 2015; Zipoli & Kennedy, 2005). Moreover, no research has explored SLTs' decision-making process in the relation to decision-making theories. Therefore, this study was

the first known research that describes how SLTs make decisions through decision theories in the literature.

To understand the SLTs' decision-making process in depth, it is necessary to focus on one specific issue. As argued in Chapter 2, children with DLD may have various difficulties in their present and future life, in academic, social and emotional aspects. Such difficulties could have major impacts on children's lives. Moreover, parents of these children could also be negatively affected, due to their children's language issue. As also underlined before, parents tend to think that their children who have a DLD might be perceived by others as disabled if they send their child to a special needs institution. Zengin-Akkus et al. (2018, p.171) also highlighted the same issue:

> In Turkey, the regulations to receive special education often create anxiety for the parents due to the fact that children with special needs must to be reported according to ICD codes, which can lead to the labelling of the child.

Such thinking prevents them from consulting professional help, as having help would highlight the child's issues and make it more distinctive in public. Although such thinking is flawed in many aspects, the DLD affects these families in various ways. Considering such factors, SLTs have an important role in resolving such issues, by helping families and children with appropriate intervention methods.

The difficulties that children with DLD face in their present and future life has been recognized by parents, teachers, academics, and policymakers. There has therefore been an increasing demand for SLTs in Turkey. New departments in Turkish universities have been founded. During the last decade, masters and

Ph.D. degree courses have been initiated to address such language issues in Turkey. However, there is an important gap in the overall literature about how SLTs come to decisions to administer an intervention method for children with DLD. This research, therefore, focuses on speech and language therapists' decision-making process by asking the question:

How do Turkish SLTs make intervention decisions for children who have developmental language disorder*?*

To explore this research question, a qualitative research approach was taken, as explained in Chapter 3. Four different data generation methods were used to increase the reliability and validity of the research. These methods were interviews, stimulated recall (observation and follow-up interviews), audio diaries, and vignettes. An inductive thematic analysis method was used to analyse raw data, with reliability-checking by an additional researcher who was another Ph.D. student from the School of Education and experienced in qualitative analysis methods.

8.2 Concluding Remarks

The findings that have been presented in this research are not intended to be definitive explanations of how Turkish SLTs make decisions in their day-to-day practices. However, the research has significant outcomes for both the individual and institutional level.

Although a summary of my analysis suggests that SLT's decision-making process is quite complex, it does not mean that it is not understandable. This study showed that there is no one recipe that the therapists follow, even though the ingredients are the same. They have a dynamic decision-making process that is affected by quite different factors such as intuition or science, which can coexist together. This study outlined three main steps that the therapists mainly use to make important decisions about the flow of the therapy. First is the nature of the resources they use to evaluate a case. Second is the nature of the therapy that they design, and the third one is determining the role of parents in their therapies.

An important contribution of this study is that SLTs' decision-making process is mapped out within a decision theory for the first time in the literature. CCT that Hammond (1964) created and Standing (2008) adapted resonates with this study's findings. According to CCT, professionals' reasoning process shifts within a continuum, as was shown in the CCT chart (Standing, 2008).
One pole of this continuum represents intuition and the other pole is science. Within this continuum, it is seen that the therapists' decisions drift within the steps of intuition judgement, reflective judgement, patient & peer-aided judgement, system-aided judgement and critical review of experiential & research evidence. The dominant judgement steps that the therapists adopt are found to be intuition, reflective judgement, system-aided judgement and critical review of experiential & research evidence (quasi-rational). There are various factors that shifts the therapists' reasoning process within the continuum, such as making use of formal or informal resources, engagement

with latest developments through the internet, seminars or workshops, reading academic articles, being aware of theories, time pressure, parents' expectations and motivations, the need to complete the goals and so on.

8.3 Limitations

Some limitations that affected the research process is outlined below:

Data Collection Process:

I encountered two important barriers throughout the data collection process which were time and travel issues. The cities that I recruited the participants were far away from one another, so I had to travel almost 3000 miles to complete the data collection process. The method of observation also took a considerable amount of time to complete, which made it difficult to observe more sessions of the therapists. Observing more sessions would have enriched the data and made the research more robust.

Reliability:

Reliability checking has been difficult and challenging. A Turkish PhD student, who was experienced in qualitative studies and inductive thematic analysis, was employed for the translation and data analysis process. While this has brought many advantages such as checking the translations and understanding unique nuances in Turkish language, it was the fact that as we are both Turkish and raised in the same culture, we might be biased towards Turkish people. We might have taken some aspects for granted regarding, for instance, the working conditions of Turkish SLTs or family's and children's

attitude. A researcher who has no knowledge of Turkish culture, may have revealed different aspects from the data regarding Turkish SLTs' reasoning process.

Another limitation or can be called difference is that calculating inter-rater reliability is not recommended in inductive thematic analysis approach. Finding a method to calculate and show similarities and differences in percentages between two researchers' analysis would have contributed to the reliability process.

Lastly, to enrich the data, parents would have been interviewed about what they think about intervention methods and their role in the therapies. This could have revealed different aspects of how the therapists design the intervention methods. They might have commented on their presence in the therapies and the behind reasons of their expectations and actions within the therapies.

8.4 Future Directions

For similar future studies, it might be recommended that more longitudinal qualitative case studies be conducted to better understand the dynamic of SLTs' decision-making process when they make an intervention decision. A smaller number of participants in a longitudinal observation study could be employed and a longitudinal study can be made about whether their reasoning processes alter over a long period of time.

This study could also be replicated in another country to understand whether the reasoning processes of SLTs show similarities and can be positioned within CCT, as this study suggested. It would be also possible to make significant changes to CCT and adapt it to the multi-cultural SLT discipline.

This study only focused on children with DLD, so future studies could expand this and cover other cases such as speech disorders, tongue tie, cleft lip and palate, to see how SLTs' reasoning process work in such cases. As there are also biological and cognitive issues in such cases, it would be interesting to see whether therapists' reasoning process is positioned within the scientific pole of the CCT.

This study did not aim at exploring how a particular decision-making process could affect a child's language improvement. Thus, it can be recommended to conduct a study that seek to find out whether the way in which a decision is made has an impact on the outcome for the child.

This study indicated the usefulness of an inductive thematic-data-driven approach, but it might also be recommended to take a deductive approach, unlike this study, and analyse therapists' reasoning process by taking the CCT into the centre of the study. Raw data could be analysed by considering CCT and similarities and differences could be discussed.

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APPENDICES

Appendix 1: Glossary of Terms

SLT: Speech Language Therapist

DLD: Developmental Language Disorder

EBP: Evidence-based Practice

CCT: Cognitive Continuum Theory

CDM: Classical Decision Making

ASHA: American Speech-Language-Hearing Association

Intervention: "Any type of intervention designed to improve an area of speech or language functioning concerning either expressive or receptive phonology, expressive or receptive vocabulary, expressive or receptive syntax" (Law et al., 2010, p.3)

Technique: The strategy of administering therapy or method

Therapy: A type of intervention method such as play therapy

Assessment: "Assessment is a process of collecting reliable and valid information and integrating and interpreting it to form a sound basis for all clinical judgements and decision-making" (Roulstone et al., 2015, p.173: Shipley and McAfee, 2008)

Professional: Relating to or belonging to a profession

Follow-up Interview: Directing questions about the participants' actions directly after the observation

Appendix 2: Information Sheet for Institution

I am a postgraduate student from the School of Education at the University of Nottingham in the UK and I would like to include your language therapist in a research project on exploring language therapists' intervention decision making process for children with DLD. I hope that my research will help to learn about how professionals decide to use particular intervention methods with children with DLD to bring some advantages for children's future intervention strategies.

It is undeniable that professionals' who work in the health sector have an important role in the lives of people who are in need of them so that their experiences become valuable. This research will benefit from their experiences in the field of language therapy.

In this study, there are four phases that you will be invited to be involved in. First, a therapist's one of session with a child with DLD will be observed or video-recorded (subject to permission from you, therapist and the child's parents). Second, an interview will be held in relation to specific actions s/he took in the observed session. These two phases will be completed within the same day and it is expected that this will take nearly 2 to 3 hours. After we complete the interview, I will give the therapist some imaginary short scenarios about children who have DLD. S/he will be asked how you would approach these children and how you would decide which intervention method to administer. If s/he are not able to complete this task on the interview day s/he

can send this through e-mail. Also, s/he will be asked to keep audio or written diary for one month about on what basis s/he make decisions when s/he are about to choose an intervention method for a child with DLD. There is no requirement about the time spent on the diaries, so each audio diary could last seconds, minutes or hours.

I will use stimulated recall data collection method as it can yield knowledge about specific practices of therapists. After I record language therapists' actions in the session, we will watch the video together with them and then we will talk about why they decided to administer a specific intervention method, why they changed your actions, why they decided to act in a specific way etc. Audiotapes, videos, answers to vignettes and interview transcripts will be stored on the researcher's computer until research is completed and no-one other than supervisors or examiners will have access to any of the data collected. The collected data will be removed after 5 years of the completion of the thesis. All data will only be used for PhD research.

Appendix 3: Institution Permission Letter

- With your agreement, I would like to record with a camera one session of the therapist when s/he administers an intervention. Data will be sought from therapists' actions. However, if you have reservations about me filming the session, I will only observe the session and take some notes about the actions of therapist.
- Videos or written notes about the intervention will be stored on the researcher's computer until the research is completed and kept safely for 5 years and no-one other than researcher and her supervisors/examiners will have access to any of the data collected.
- Only those children who have parental permission and who want to participate will do so.
- Any information about the institution will not be identified.
- You are free to withdraw your permission at any time and for any reason.

If you have any questions about this project, please contact myself or my supervisors using the information below.

Sincerely,

(Signature)

Appendix 4: Information Sheet for SLTs

PROJECT TITLE

Speech and Language Therapist's Decision-Making Process: Exploring Factors Behind Intervention Decisions for Children with DLD in Turkey

INVITATION

My name is Fatma Canan. I am studying for a PhD in the school of education at the University of Nottingham. The purpose of my research is to understand professionals' decision-making process regarding intervention methods for children who have DLD.

You are being asked to take part in a research study on exploring language therapists' decision-making process. I will describe the study and go through the information sheet, which we will give to you. I will then ask you to sign a consent form to show you agreed to take part. You are free to withdraw at any time, without giving a reason.

AIM OF THE RESEARCH

The purpose of this research is to understand professionals' decision-making process regarding intervention methods for children who have DLD. It is undeniable that professionals' who work in the health sector have an important role in the lives of people who are in need of them. Also, understanding language therapists' decision-making process will make an important contribution to the academic literature in this area. A framework might be developed to see what factors influence this decision-making process so it is

hoped that more effective assistance could be given to new language therapists. Therefore, your participation in this study will be beneficial in terms of understanding language therapists' decision-making process.

WHAT WILL HAPPEN

In this study, there are four phases that you will be invited to be involved in. First, one of your sessions with a child with DLD will be observed or video-recorded (subject to permission from you and the child's parents). Second, an interview will be held in relation to specific actions you took in the observed session. These two phases will be completed within the same day and it is expected that this will take nearly 2 to 3 hours. After we complete the interview, I will give you some imaginary short scenarios about children who have DLD. You will be asked how you would approach these children and how you would decide which intervention method to administer. If you are not able to complete this task on the interview day you can send this through e-mail. Also, you will be asked to keep audio or written diary for one month about on what basis you make decisions when you are about to choose an intervention method for a child with DLD. There is no requirement about the time spent on the diaries so each audio diary could last seconds, minutes or hours.

WHY VIDEO RECORDING?

I will use stimulated recall data collection method as it can yield knowledge about specific practices of therapists.

After I record your actions in the session, we will watch the video together with you I recorded and then we will talk about why you decided to administer a specific intervention method, why you changed your actions, why you decided to act in a specific way etc.

STORAGE OF DATA

Audiotapes, videos, answers of vignettes and interview transcripts will be stored on the researcher's computer until research is completed and no-one other than supervisors or examiners will have access to any of the data collected. The collected data will be removed after 5 years of the completion of the thesis. All data will only be used for PhD research.

YOUR RIGHTS

You may decide to stop being a part of the research study at any time without explanation.

You have the right to ask that any data you have supplied to that point be withdrawn/destroyed. You have the right to omit or refuse to answer or respond to any question that is asked of you.

You have the right to not be involved all the four phases (interview, observation, diary, vignettes). You have the right to choose in which phases you want to take part.

BENEFITS AND RISKS

It is hoped that you will gain benefits within this study as you will be able to have a chance to make a robust evaluation of your intervention decisions. More importantly, if you want, the results of this study will be shared with you so that you will be able to compare your intervention choices with other language therapists, which is hoped to make a positive contribution to you as a practitioner. On the other hand, there are no expected risks in this study.

CONFIDENTIALITY/ANONYMITY

The data we collect will not contain any personal information about you. All information about your identity which is collected during the course of the research will be kept strictly confidential, and any information about you which leaves the hospital/clinic/university will have your name and address removed so that you cannot be recognised. If you withdraw from the study all the information and data collected from you, to date, will be destroyed and you name removed from all the study files.

Appendix 5: Participant Consent Form for SLTs

Project title: Speech and Language Therapist's Decision-Making Process: Exploring Factors Behind Intervention Decisions for Children with DLD in Turkey

Researcher's name: Fatma Canan Durgungoz

Supervisors' name: Dr Edward Sellman, Dr Anne Emerson

I have read the Participant Information Sheet and the nature and purpose of the research project has been explained to me. I understand:

- The purpose of the research project and my involvement in it
- Participation in the research is voluntary
- I may withdraw from the research project at any stage and that this will not affect my status. While information gained during the study may be published, I will not be identified and my personal results will remain confidential
- I will be recorded during one of my sessions with children with DLD or the researcher can observe my one of session with a child with DLD
- I will be *audiotaped* during the interview
- Audiotapes, videos, answers of vignettes and interview transcripts will be stored on the researcher's computer until research is completed and no-one other than supervisors or examiners will have access to any of the data collected. The collected data will be removed after 5 years of the completion of the thesis. All data will only be used for PhD research.
- I will see the interview transcript so I know that I will have a chance to add or remove some parts if I want
- Only children and their parents whose consents were received will be recorded or observed. (This depends on their permission. If they will not allow me to record their child's session, I will just observe it and take

detailed notes. If they would like to see these notes, I will share these notes with them)

- All information obtained will be treated in strictest confidence
- The participants' names will not be used and they will not be identifiable in any written reports about the study
- A report of the findings will be made available to participants
- I may contact the researcher or her supervisors if I require further information about the research, and I may contact the Research Ethics Coordinator of the School of Education, University of Nottingham, if I wish to make a complaint relating to my involvement in the research

Signed .....

(participant)

Appendix 6: Parent Permission Letter

Dear Parent,

- With your agreement, I would like to record with a camera one session of the therapist when s/he administers an intervention with your child. Data will be sought from therapists' actions. However, if you have reservations about me filming the session, I will only observe the session and take some notes about the actions of therapist. If you would like to see these notes, I can share them with you at the end of the sessions. But, I should note that filming the session will be more beneficial for my research as I will be able to watch back the sessions with the therapist to talk about their actions.
- Videos or written notes about the intervention will be stored on the researcher's computer until the research is completed and kept safely for 5 years and no-one other than researcher and her supervisors/examiners will have access to any of the data collected.
- Only those children who have parental permission and who want to participate will do so.
- You are free to withdraw your permission for your child's participation at any time and for any reason. These decisions will have no effect on your future relationship with the language therapist or your child's status.

Appendix 7: Information Sheet for Parents

Dear Parent,

I am a postgraduate student from the School of Education at the University of Nottingham in the UK and I would like to include your language therapist in a research project on exploring language therapists' intervention decision making process for children with DLD. I hope that my research will help to learn about how professionals' decide to use particular intervention methods with children with DLD to bring some advantages for children's future intervention strategies.

The purpose of this research is to understand professionals' decision-making process regarding intervention methods for children who have DLD. It is undeniable that professionals' who work in the health sector have an important role in the lives of people who are in need of them so that their experiences become valuable. This research will benefit from their experiences in the field of language therapy. Therefore, your participation in this study will also be beneficial in terms of understanding language therapists' decision-making process.

In this study, there are four phases that you will be invited to be involved in. First, your therapist's one of session with your child will be observed or video-recorded (subject to permission from you, therapist and institution). Second, an interview will be held in relation to specific actions s/he took in the observed session. These two phases will be completed within the same day and it is

expected that this will take nearly 2 to 3 hours. After we complete the interview, I will give the therapist some imaginary short scenarios about children who have DLD. S/he will be asked how you would approach these children and how you would decide which intervention method to administer. If s/he are not able to complete this task on the interview day s/he can send this through e-mail. Also, s/he will be asked to keep audio or written diary for one month about on what basis s/he make decisions when s/he are about to choose an intervention method for a child with DLD. There is no requirement about the time spent on the diaries so each audio diary could last seconds, minutes or hours.

I will use stimulated recall data collection method as it can yield knowledge about specific practices of therapists. After I record language therapists' actions in the session, I will watch the video back with language therapist and then we will talk about why they decided to administer a specific intervention method, why they changed your actions, why they decided to act in a specific way etc.

Audiotapes, videos, answers of vignettes and interview transcripts will be stored on the researcher's computer until research is completed and no-one other than supervisors or examiners will have access to any of the data collected. The collected data will be removed after 5 years of the completion of the thesis. All data will only be used for PhD research.

Appendix 8: Interview Questions

Topic 1: Background

The first part of the interview aims to obtain information about the background of the therapists. As experiences and background of professionals have an important impact on their decision making process (Bennett et al., 2003), I believe that the more I have information about their professional life, the more reliable interpretations can be made about their decision making process.

Lead-Off Question: Can you tell me about your experiences as a therapist in general?

Follow-Up Questions:

1. How old are you?
2. How long have you been a therapist?
3. What do you think about your university education in terms of making you a good therapist? (Was it so theory-based? Lack of experience, facilities etc.)
4. Have you worked in different hospitals/clinics with different children who have various disabilities? What do you think about the experiences you gained in these places?
5. How do you like your job?

The second part will serve as a guidance to understand the experiences and knowledge of the therapists about children who have DLD. The tests or methods of diagnostic materials may affect professionals' intervention decision process since they may arrange their intervention process according to results of diagnostic materials. It is therefore important to understand the procedure the therapists follow in the process of identifying DLD.

Lead-Off Question: Can we talk about your experiences with children who have DLD?

Follow-Up Questions:

1. How experienced are you with children who have DLD?
2. How do you diagnose children who have DLD?
3. How confident you are when using the methods/tests/measurements that you use to diagnose children with DLD?
4. Can you give examples of how you have been dealing with DLD issues? Let's talk about both success stories as well as frustrations here…

Topic 3: Intervention Methods

The third part will provide information about the types, effectiveness of intervention methods administered by professionals. Roulstone (2001) stated that although therapists may agree about the nature of the child's issue, they could conduct different sorts of assessments so that they administer different intervention methods. This variability brings difficulties in deciding which intervention methods to administer. Hence, this part will help the researcher to understand the approach of the therapists to the types of intervention methods.

Lead-Off Question: So, let's talk about intervention methods here...

Follow-Up Questions:

1. Could you tell me about intervention methods that you have administered so far and the ones you know but have not chosen to use? (group-individual, direct-indirect, directive-interactive etc.)
2. From where/who (university, internet, papers, colleagues, seminars etc.) did you learn these intervention methods?
3. Can you give examples of what specific advantages or disadvantages you find noteworthy or significant in administrating these intervention methods?

Topic 4: Decision Making Process

The fourth part aims to reveal how professionals decide which intervention methods to administer. Decision making process may grouped under four main categories which are contextual (Miles, 2007), practice-based (Law et al., 2003b), theory-in-practice (Higgs et al., 2001) and professionals' belief (Wolff, 1989) factors. The question in this section are therefore prepared in accordance with these categories but as this is a semi-structured interview, the researcher will allow the participants to share their unique practices, if they have.

Lead-Off Question: Can we talk about how you came up with an intervention method to administer?

Follow-Up Questions:

1. Can you explain how you decide which intervention methods to administer?

2. Do you think that you have a favourite intervention method that you believe is beneficial for children who have DLD? If yes, why do you think so?
3. Can you give examples of which materials you use in the intervention process?
4. Do you know any theories about language acquisition? If yes, how helpful are they in practice?
5. Do/did you have any colleagues who you collaborated and share experiences with? If yes, how do you think s/he affected your therapy decisions?

Appendix 9: Vignettes

Vignette 1

X is 3 years old and currently only says about 20 single words. He uses these words without constructing any sentences but he is able to understand and can follow simple instructions. For example, when his mother says him a vocabulary and put in front of him some visual cards, he is able to choose and show relevant card.

His background records do not show any health or developmental issues. He born with normal kilos and good health. Development tests shows that his other developmental areas such as motor skills, cognitive development etc. is in expected development stage from his age. His parents are both working from 9 am to 5 pm and his grandmother taking care of him during the weeks for 2 years. His grandparent stated that he loves watching cartoons, animations and he spends at least 3 hours a day in front of a television.

Vignette 2

Y is 4 years old and has severe delays with expressive language. Her understanding is good but he language difficulty impacts negatively her learning and social skills. She has very unclear speech and will not initiate conversations, but she shows the things when she wants something. She struggles with concentration, social skills and communication when together with other peers. She is happy with them but plays alongside them rather than with them.

together during the day, but her mother stated that she has many house works to do and must take care her baby so that Y has a 1 years old brother and she jealous him. Her mother does not spare some time to play a game with her daughter and Y has not enough stimulation to develop her skills in home environment.

Vignette 3

Z is 3 years old and he is seeming as not to listen when somebody is spoken with him. He has inability to follow instructions especially in complicated sentences. His inability to understand and follow instruction is affected his expressive language development, as well.

Hearing tests applied by an audiologist and result shows that language problem is not caused by hearing loss. Similarly, a neuropsychologist conducted an assessment to identify whether the language issue associated with any cognitive problems and results indicates that this child has no problem in terms of cognitive development. He shows expected skill level for the child's age. Additionally, other tests indicate that his issue is not stemming from any other conditions such as Autism, brain injury or etc. Information about the child which is obtained from his/her parents indicated that s/he has arranged and good environment to develop language skills. Also, his/her parents are spending enough time each day with their baby. The cause of the disorder is unknown.

Appendix 10: Sample of Initial Coding

Below table shows which main theme came from which initial themes by which data set. The themes basically created by interview data and stimulated recall data (observation and following interview); nevertheless, other data sets (vignettes and audio diaries) also supported the themes. There are main themes were sought from the data analysis, all of which represents how SLTs decide their therapy interventions with children with DLD. With the aid of analysed interpretive analysis data, it is possible to understand the factors that affected SLTs therapy decisions, their knowledges, experiences and also practical skills. In the discussion chapter, how the data sought and created "SLTs' decision shifts between child-centred, therapist driven approaches" presented. Other two main themes will be exemplified with some distinct data.

Table shows the initial themes that were revealed from different types of data. These initial themes lead the creation of "Formal/Impersonal and Informal/Personal Resources" theme

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Interview	P9: "I learnt most of my practices from the university, of course…" P6: "I did my internship which was a part of my formal education with a very helpful language therapist who taught me every single thing that I am using on my practices now"	Therapies comes from University Education	Formal Training
	P6: "we should follow the latest intervention methods, we should learn what others are doing in their therapy, we should follow workshops, seminars and so on…" P2: "I am trying to learn more methods as much as I [can] and I attend to educational programs, seminars and workshops…"	Participants continue to learn the methods from Seminars, Workshops	Ongoing Learning

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Interview	P11: "it is very important to learn whether child has any physiologic issues such as mouth palate, hearing issues or any psychological issues. To learn this, it is necessary to direct child to related professionals and get information from other colleagues. However, my colleagues, SLTs, do not want to share anything, unfortunately"	SLTs prefers to collaborate with other health professionals; but not with their colleagues	Collaboration with other Professionals rather than Colleagues
	P4: "Assessment is a kind of precondition for choosing an intervention method. It is the crucial step that affect the whole therapy" P12: "I think without these tests; I would not be sure about how I should choose an intervention method. As I said, it is about confidence"	Outcomes of Standardized Tests help SLTs' therapy decisions	Formal Evaluation

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Interview	P12: "…We try something and if it does not work I try another" P8: "…So if it the child is OK with it and s\he makes some progress then I stick to the method….It makes me more confident for my next actions"	If it works, SLTs stick it and use it if they face with similar cases	Trial and Error
	P5: "…I mean if you love your job and children, you probably make better decisions" P11: "…their happiness makes you to research, learn and find out the best intervention method" P9: "When you help them to overcome these problems, there are not only visible language improvements on their life but also their mood, their perspective about life change. This forces you to do your best"	Job satisfaction and motivation affect the nature of therapy	Interpersonal Factors

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Interview	P12: "We learnt the theories, but I can ensure you that almost all theories are too abstract for practice" P11: "Leaning theories is so important for practice, but I am not sure how I use them on my therapies" P1: "Theories are not really useful in practice but…"	Participants could not explain how they benefit from theories. They based on their previous experiences rather than theories	Practicality, rather than Theory
	P12: "Informal evaluations are very important to know a child" P16: "…So I can say that my observations, parents' opinions and videos are more important to make a decision" P8: "…what you measure is human and he is not measurable that is why you cannot trust tests"	SLTs based on their own observation, gathering knowledge from parents and information about child's environment to decide therapy.	Informal Evaluations

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Stimulated Recall (Following Interview based on Observation Notes)	P6: "…I learned this during my internship back in the university…"	University education	Formal Training
	P6: "I also read some articles that…"	Some participants following the latest researches, articles	Ongoing learning
	P5 "…what I did was called expansion in the literature" P2 "…This calls as focused stimulation; means that exposing the child to a stimulant multiple times in a conversation to facilitate language production…"	Some participants used theoretical terms to explain their reasoning after the session that I observed	Theoretical Knowledge
	P3 "… if the outcome of the method is fruitful I keep on. If not, I am changing it."	Some participants try a method, if the child progress with the method, they keep doing it.	Trial and Error

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Stimulated Recall (Following Interview based on Observation Notes)	P14: "We should know the theories. I cannot name the theories now. Actually…, we should learn, digest all theoretical knowledge and then fix them into our actions in a way" P3: "I do not think that theories can directly help our practices. Theory is good for having knowledge but not for practice"	Some SLTs stated that theories are not directly help their actions	Practicality rather than Theory
	P1: "The data we get from formal tests are not trustworthy…"	He thinks that as the tests copied from English spoken countries, they are not well standardized for Turkish language. So, he believes informal evaluations so important. Some more participants think the same	Informal Tests, Evaluations

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Vignettes	P9: "According to my experiences from the university education and the practice unit named 'DILKOM', I would start my therapy by practices of structuring language"	Knowledge from university education shapes therapy decision	Formal Training
	P10 "… needed so that indirect approach will be beneficial…. But at the same time, … direct intervention method will be helpful as well which is I take the child the therapies regularly" P1 "I can use classical behavioural model and imitation focused therapies" P16: 'So that Hanen program and child-centred programmes which I learnt from workshops can be used here"	When participants decided how to decide different scenarios, they based on theoretical knowledge.	Theoretical Knowledge

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Vignettes	P6: "Actually, I found this therapy schedule effective as I tried before and helped some children to overcome their language difficulties. This is what I do, I start with this way with all children, if it does not work then I look for other things"	If an activity, method or action worked previously, some participants stick on it.	Trial and Error
	P9: "I would directly conduct this child the TEDIL language scale test which is developed by Anadolu University to see the child's language development level. Then, I can prepare a therapy program according to the outcomes"	Formal tests help SLTs to decide what to do their therapies	Formal Evaluation

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Vignettes	P16 "…The nature of interaction between child and parents is very important to me and I cannot see this by trusting formal tests" P7 "…. it is very important to observe the child's and parents' behaviours and have some information about their natural environment" P9: "I think, gathering detailed knowledge about the child from parents is as important as conducting standardized tests"	Some participants believe that humans cannot be measured with standardized test. Moreover, sometimes children do not want to do tests. So, they think collecting information from parents, teachers, observing the child in his natural environment help SLTs to capture child's needs	Informal Evaluation

Table shows the initial themes that sought from different types of data. These initial themes lead the creation of "Parents Matters" theme

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Interview	P2: "without parents, you can't do much. If parents start doing our suggestions at home, we see that children progress quickly…" P3: "…I decided not to use this method again with parents who are not really motivated" P4: "…So working with an enthusiastic family increases my motivation and forces me to find new methods so I can teach these methods to them" P9: "…if I do all the things and parents are still not willing to do anything then I have to do it myself in the therapy. I have to find a different approach or different intervention method that parents would find it easier to apply… This is not always easy. It is so discouraging…"	Parents play an important role in therapy decision and therapist's motivation	Parents' Willingness impact on SLTs Decisions

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Interview	P8: "We have restricted time in here. If I involve parents in the therapy, it would take lots of time. Parents has opportunity to watch all sessions. Then, they can do same practices at home"	Some SLTs let parents to observe their session; but they do not allow parents to be in the therapy	Involving Parents into the Session as Passive
	P1: "Parents should be active in all my therapies"	Some SLTs prefer parents to be in the therapy as an active	Involving Parents into the Session as Active

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Stimulated Recall (Based on Observation Notes)	P5: "I know some specific therapy methods which cannot be applied without integrating parents and arranging home environment; so this means if parents do not want to take their child into therapy, I cannot work these methods with them"	Some methods cannot be administered without cooperating with parents	Parental Willingness
	P9: "I am happy to see parents in my sessions to teach them what they can do at home but if I let parents interfere, it extremely distracts me and the child. I prefer to talk with them at the end of my sessions and do not want any interruption unless it is important"	Some SLTs prefers to involve parents into the therapy as a passive observer. Including parents into therapy sessions distracts SLTs and the child	Involving Parents as Passive in the Therapy

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Stimulated Recall (Based on Observation Notes)	P6: "...parents can be their child's therapist if they are well trained. So, I am not giving them here only observer role, I want to teach them how to interact with their child, how to do oral-motor exercises, how to read a book, how to talk with them" "When the child could not do it or do not want to do it, the therapist asked the mother of the child "How does a snake sound?" After mother did the [sound], she asked the mother again "How does a bigger snake sound?" "How is it like a baby snake's [sound]?" In this way, the therapist seemed to try to encourage the child to make the same [sound] with different tones" (P6, Observation Notes) P5: "I generally do not accept children whose parents are not interested or do not have time to be active in therapies."	It is observed that some SLTs involved the parents into their activities	Involving Parents as Active into the Therapy

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Stimulated Recall (Based on Observation Notes)	P3: "… This disturbs my sessions. Because most of the children with language delay are at early ages, their parents easily distract their children attention. Rather than concentrating on the session, children may look over at the parent for approval to do some activity or s\he may want to go their mom's lap or asking for food etc. ..." P2: "Some kids are more attentive without parents. When the mother of the child left the therapy room, the child started to be more productive and follows my instructions"	It was observed that, in some therapies, SLTs did not include the parents in the therapy neither active or passive. They believe this disturb their session in many ways. So, they met and talk about the session after the therapy finished	No Parents—No Mess
	P15: "If I do not have opportunity to see parents face to face, I feel that I need to find a way to check and be sure about whether they continue doing the practices at home. To do this, I use WhatsApp. I send them photos and videos about my actions each week and they also need to send me some videos and photos about what they do at home"	It was observed that some SLTs did not met with parents even at the end. They contacted with parents via WhatsApp, email.	Using Internet Resources

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Vignettes	P9: "I would guide parents to do activities at home, spending quality time with the child and I would provide parental counselling to modify their attitudes" P6: "I feel like it is my responsibility to train them and make them active" P5:" Parents might be hopeless, unmotivated but it is our job to convince them about their child can progress, we should not give up applying an intense and beneficial method just because parents are not motivated"	Supporting and Counselling Parents make SLTs job easier	Supporting Parents to Increase Motivation
	P16: "As grandmother takes care of this child, I would involve her into my sessions to show her how to interact with child during his daily life. Then, I would watch her interactions with the child when playing with him. I would also start Hanen program to train the grandmother and modify the home environment"	Some SLTs involve caregiver into their session as an active way to train them	Involving Parents as Active into the Therapy

TYPE OF DATA	Data Extract	What was happening in the data?	Initial Theme
Audio Diary	P16: "This session was my first session with X. I try to administer the language scale test with the help of his mother. P16: "…first, we showed the parts of the body with his mother in front of a mirror; then he joined us and started to show his body parts himself"	I order to encourage the child to be active in the session, some SLTs take the advantage of involving parents in to the session	Involving Parents as Active into the Therapy