Using Sequence Analysis to Explore the Role of Motivational Talk in Consultation

Grace Giles

University of Nottingham

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Abstract

Within the literature, school-based consultation has been conceptualised as an adult behaviour change process (Noell & Gansle, 2014). This study examined the process of consultation through the lens of Motivational Interviewing (MI). To do this, an adapted form of the Motivational Interviewing Sequential Code for Observing Process Exchanges (MI-SCOPE; Martin et al., 2005) was used to code the interaction in consultation between educational psychologists (EPs) and teachers. In total, 1610 verbal utterances were parsed, coded, and analysed over the course of two consultations.

Frequency analyses revealed that different kinds of motivational talk occur in consultations, and EPs communicate during consultation in ways that are consistent with the principles of MI. A sequential analysis of the interaction that occurred during consultation showed that different kinds of EP talk during consultation evoke different kinds of teacher response in a predictable way. Findings were used to create a state transition map of the interaction in consultation. Transitions of interest in the consultation were then considered in relation to the consultative literature, and theoretical and empirical learnings from Motivational Interviewing, Self-Determination Theory, and Self-Efficacy.

The findings of this study may be used to optimise the consultative practice of EPs, and thus implications are potentially far-reaching, albeit tentative given the early stage of research in this area. The cross-pollination of ideas from MI to school-based consultation appears to be a worthy area of study for EPs which warrants further research to expand upon the findings presented here.

Keywords: *Consultation, Process, Motivational Interviewing, Educational Psychology, Teacher, Conceptual, Behaviour, Change, Sequence Analysis*

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1. Introduction

This thesis explores the role of the talk in consultation between educational psychologists and teachers. The interactions that occurred in consultation are examined through the lens of Motivational Interviewing (MI), a well-specified approach to change that is evidence-based and applicable to a range of situations (Miller & Rose, 2009). MI has accrued a number of meta-analytic reviews examining process models of change, and how they relate to outcomes (Magill et al., 2018). This perspective is argued to offer a novel way of understanding how the process of consultation may contribute to conceptual and behavioural changes in teachers. This is of interest, as by furthering our understanding of the different kinds of talk in consultation, and how they may elicit specific responses from consultees in a predictable way, we can begin to specify the optimum EP practices in consultation that are most likely to lead to positive outcomes. In the context of the evidence-based practice movement, this has implications for the effective adoption and implementation of interventions, and may contribute to how EPs promote positive change through their work for the benefit of children, teachers, schools, and the wider community.

1.1 Personal and Professional Interest

At the outset of doctoral training, we were introduced to ideas around interpersonal and group processes, and consultation in educational psychology practice. In seminars, we considered the notion of expertism and the merits of collaborative problem-solving. I reflected upon some of the consultations I had facilitated as an assistant educational psychologist. I would meet a teacher who was facing a dilemma and respond with my advice, drawn from the evidence-base, to remedy the situation. Frequently, I would return to the school only to find none of the advice had been implemented. I would attribute this lack of change to the teacher and walk away feeling ineffective. The stakes were not low, these

consultations often revolved around a child, change being the difference between them getting the right support or not.

The taught sessions on consultation as part of my training had placed interpersonal interaction centre stage. Up until that point, it had not occurred to me that the difficulties I had been met with getting teachers to implement interventions might be related to my interaction in consultation. I was keen to know what I might do to communicate effectively to bring about change, and to ensure that the consultations I participated in with teachers had a positive impact on children. This led to an interest in examining the consultation knowledge base. Given the key role of consultation to our work, it came as a surprise to find the shortage of literature on the topic, particularly in the UK.

Concurrently, I had been engaging with the literature on school-based MI as part of a separate assignment. Here, I fell upon a mine of rich knowledge exploring the process of MI as a model of change. This knowledge seemed especially promising when applied to school-based consultation to develop a better picture of the optimal features of consultation that bring about conceptual and behavioural changes in teachers. These ideas formed the starting point for this study.

This thesis begins with an introduction to consultation (Chapter 2), leading onto a systematic synthesis of the consultation literature (Chapter 3). Following on from this, the methodological approach and study procedure are presented (Chapter 4). This is followed by a presentation of the results, depicted in pie charts and a state transition map (Chapter 5). Chapter 6 encompasses the discussion, and theorising about the results from this study and learnings from models of adult behaviour change. Implications are drawn in light of limitations.

2. Consultation

In the United Kingdom, consultation represents a key model of delivering educational psychology services (Leadbetter, 2006). In a survey of educational psychology practice, consultation was identified as one of five core functions of educational psychologists (Scottish Executive, 2002). There are concerns that some educational psychology consultation practice in the UK is not based on a clear approach (Farouk, 1999). Despite the prevalence of school-based consultation, and consultation as a key model of service delivery, research evidence has consistently lagged behind practice (Erchul & Sheridan, 2008; Gresham & Kendell, 1987; Gutkin, 1993). Nolan and Moreland (2014) argue that it is vital for psychologists to consider the process of consultation in order to better understand how consultation works and how educational psychologists (EPs) can develop their consultative skills. At present, the available evidence (or lack thereof) risks EPs embracing vague approaches to consultation with limited understanding of process and outcomes (Miller & Frederickson, 2006). In an era of evidence-based practice, and EPs as scientist practitioners, a "consult and hope" approach is not enough (Erchul & Martens, 2010). If consultation is to continue being a core function of the everyday working practice of educational psychologists and their work with others, there is a professional obligation to be better informed (Leadbetter, 2006).

Consultation refers to an indirect model of service delivery that involves two or more persons working together to optimise functioning for a focus client (Caplan, 1970). Since the emergence of school-based consultation in the 1960s, varying models of consultation have developed, for example, behavioural (Bergan & Kratochwill, 1990), process/organisational (Schein, 1999), and mental health (Caplan, 1970). Recent variants of these three types include conjoint behavioural consultation, instructional consultation, and consultee-centered consultation (Erchul & Sheridan, 2014; Newman & Ingraham, 2017). These models range

from expert to egalitarian approaches, and differ from one another in their foci (e.g., academic, behavioural, or mental health), level of the intervention (e.g., universal, targeted, or individual), and communicative approach (Gutkin, 1999). Although variations of consultation have emerged in literature and practice, there is consensus in the literature that models share common features, such as serving the twin purposes of preventing and ameliorating client outcomes, and developing consultee competencies with a view to improving their ability to prevent and respond to similar problem situations in the future (Caplan, 1970; Meyers, 1973). There seems to be at least five stages common to all models of school-based consultation: relationship building, problem identification, problem analysis, intervention implementation, and program evaluation (Kratochwill, Elliott, & Rotto, 1995).

The premise of school-based consultation rests on the assumption of the 'Paradox of School Psychology' – that "to serve children effectively, […] psychologists must, first and foremost, concentrate their attention and professional expertise on adults" (Gutkin & Conoley, 1990, p. 212). Of particular interest, when considering consultation as an adult behaviour change process, is consultee-centred consultation (CCC). In the next section, this model of consultation will be explored in more depth.

2.1 Consultee-Centred Consultation

This type of consultation evolved from Caplan's model and has developed in distinct ways (Lambert, 2004). A CCC approach emphasises the importance of the relationship between the consultant and consultee. Within CCC, psychologists attend to interpersonal processes and aim to empower those with whom they work in order to promote positive, long-lasting change for adults and students in the school setting (Knotek & Sandoval, 2003). The goal of problem solving in CCC is to co-construct knowledge and conceptualise a problem in a new way. The professional relationship between consultant and consultee

becomes the vehicle for client change. In contrast to other models, CCC may be considered less prescriptive as it prioritises developing the knowledge, skill, confidence, and objectivity of the teacher (Caplan, 1970; Meyers, 1973) over direct prescriptions of interventions. During CCC, both consultant and consultee are working together to problem-solve and shift the conceptualisation of a problem along (Hylander, 2012; Sandoval, 2003). The relationship in CCC is egalitarian, with the consultant and consultee working side by side, rather than the consultant influencing the consultee by offering expert advice. Consultants offer content expertise drawn from their professional knowledge (e.g., knowledge of instructional and behavioural principles and evidence-based practices), and process expertise (e.g., relational/communication skills). Process expertise allows consultants to guide the consultation without imposing their own problem definition or solutions (Knotek & Sandoval, 2003; Newman, Ingraham, & Shriberg, 2014).

2.2 Consultation and Models of Adult Behaviour Change

As described by Truscott and colleagues (2012), "improving schools is predicated on finding ways to facilitate conceptual and behavioural changes in educators" (p. 64). A primary purpose of school-based consultation is to bring about change though the alteration of the beliefs, attitudes, or behaviours of consultees (Truscott, 2012). In turn, consultees intervene directly to implement interventions developed through consultation for a focus client or child. One of the proposed benefits of consultation is that it has a preventive focus, such that consultation can help to contribute to the development of teacher competencies and thereby prevent future problems from occurring (Gutkin & Curtis, 2009). However, the evidence base to support this assumption is limited, and the generalisation of strategies (e.g. teacher praise) following school-based consultation has not yet been demonstrated consistently (Coffee & Kratochwill, 2013; Riley-Tillman & Eckert, 2001). In this context, the

skills of the consultant are key to creating conditions that improve the likelihood that

consultees will adopt, implement and generalise interventions with integrity, and deliver on

the preventive aims of consultation (Sanetti & Kratochwill, 2005).

  If critical intervention components are not adopted or implemented with fidelity,

consultation may have minimal to no impact. Bergan and Kratochwill (1990) suggested that

school-based consultation can work as a process to promote consultee intervention integrity.

More contemporary studies exploring intervention integrity are beginning to consider

consultee behaviour change (Sanetti & Kratochwill, 2009). The implementation of school-

based interventions might be helpfully conceptualised as an adult behaviour change process

(Noell & Gansle, 2014), and school-based consultation could offer a critical approach to

support teacher behaviour change (Truscott et al., 2012). However, little attention has been

paid to the theoretical and empirical variables that might moderate or mediate school-based

consultation to bring about sustained changes in teacher behaviour (Noell & Gansle, 2014;

Truscott et al., 2012). There has been considerable theory development and research on

variables that influence adult behaviour change (e.g. Self-Determination Theory (SDT; (Ryan

& Deci, 2000), Self-Efficacy (SE; Bandura, 1977), Motivational Interviewing (MI; Miller &

Rollnick, 2012) outside of the field of educational psychology. This knowledge might act as a

springboard through which to explore school-based consultation and teacher behaviour

change. The primary purpose of the next section is to illustrate key theories of motivation and

behaviour change and draw parallels between these theories and how they may help to inform

our understanding of what may be happening in consultation.

2.3 SDT and School-Based Consultation

  SDT (Ryan & Deci, 2000) offers a theoretical framework that may assist our

understanding of how change occurs in consultation. SDT suggests that people have three

fundamental needs: competence, relatedness, and autonomy. Each of these needs will be

considered in turn below.

2.3.1 Competence

Competence refers to the basic need to feel a sense of mastery: people need to feel

able to function successfully within important life contexts. Competence is reduced, however,

where challenges are perceived to be too difficult, negative feedback is pervasive, or feelings

of mastery and effectiveness are diminished by interpersonal factors such as criticism and

social comparisons (Ryan & Deci, 2000). The emphasis on competence to foster optimal

functioning is consistent with school-based consultation processes that promote a social

context that supports the development of competency, knowledge and confidence alongside

opportunities to make informed choices and to be autonomous (Truscott, et al., 2012).

2.3.2 Autonomy

Autonomy refers to the need for an individual to regulate their own experiences and

actions (Ryan & Deci, 2000). Central to autonomy, an individual's behaviours should be

congruent with their authentic interests and values. From a SDT perspective, creating

opportunities to make informed choices increases intrinsic motivation. The promotion of

consultee autonomy through careful questioning is consistent with many consultative

approaches as a way to overcome consultee resistance (Caplan, 1970; Rosenfield, 1987).

SDT acknowledges that people have the intrinsic need to be autonomous, and that

creating opportunities for people to make informed choices increases intrinsic motivation

(Ryan & Deci, 2000). Similarly, the non-hierarchical relationships between school-based

consultants and consultees aim to reduce the positioning of consultants as experts, but

highlight consultee knowledge and competence, and promote consultee choice whenever possible, thereby enhancing consultee intrinsic motivation, consonant with SDT.

2.3.4 Relatedness

Relatedness concerns a person feeling a sense of belonging and connectedness to others (Ryan & Deci, 2000). In the context of consultation, relatedness appears to be a helpful concept. For example, relationships in consultation may contribute to consultee relatedness and belonging, such that they feel significant among others.

Bringing about sustained change in the direction of more optimal functioning poses unique challenges for consultants. SDT is focused on how motivational processes can be sustained over time, and how the satisfaction of basic psychological needs can support wellness. Truscott et al., (2012) posit that school-based consultation can be delivered in such a way that it provides opportunities for people to meet these needs (competence, relatedness, and autonomy) and thereby positively influence the intrinsic motivation, commitment, and behaviour of the consultee (Ryan & Deci, 2000). SDT offers unique criteria for evaluating the processes by which consultants attempt to bring about change. School-based consultation can provide opportunities for consultees to meet the three fundamental needs of autonomy, competence, and relatedness, and thereby positively influence intrinsic motivation, commitment, and self-regulation of behaviour (Ryan & Deci, 2000; Seligman & Csikszentmihalyi, 2000).

2.4 Self-Efficacy (SE)

"Motivation, etymologically, concerns what moves people to action" (Ryan & Deci, 2000, p. 13). From a SE perspective, motivation relates to a person's efficacy expectations and is seen as a central mechanism to all motivated behaviours (Bandura, 1996). When

applied to teachers, SE relates to the beliefs a teacher holds about their competency to perform actions that can positively influence student outcomes (Higgins & Gulliford, 2014; Zee and Koomen, 2016). This appears relevant to consultation, as in the literature, teachers with high SE rated consultation as being more effective and acceptable than teachers low in self-efficacy (DeForest & Hughes, 1992). In addition to this, studies examining the relationship between teacher SE and intervention adoption document higher rates of adoption by teachers with higher SE than by teachers with lower SE (Rimm-Kaufman & Sawyer, 2004). This is relevant as there is a large body of research that demonstrates the association between teacher perceptions of SE and improved practice (Ashton & Webb, 1986: Flink, Boggiano, & Barrett, 1990; Pelletier, Seguin-Levesque, & Legault, 2002). Thus, supporting consultee intentions to implement a strategy, and consequently their SE, may contribute to intervention implementation (Sanetti, Kratochwill, & Long, 2013), or at the very least, enhanced intention to implement intervention (Higgins & Gulliford 2012; Turner & Gulliford 2020). Therefore, SE appears to be a relevant concept to consider when looking at consultation. It may be that consultation can serve to enhance teacher self-efficacy, and thus potentially influence intervention implementation and outcomes.

2.5 Motivational Interviewing (MI)

MI is a "collaborative, goal-oriented style of communication with particular attention to the language of change. It is designed to strengthen personal motivation for, and commitment to, a specific goal by eliciting and exploring a person's own reasons for change within an atmosphere of acceptance and compassion" (Miller & Rollnick, 2012, p. 29). Since its first description in the literature (Miller, 1983), MI has accrued an extensive evidence-base in the areas of addiction, substance misuse, and health-related problems, and is widely used in clinical practice with adults (Lundahl et al., 2010).

In MI, both spirit and process are hypothesised to be important mechanisms of the intervention. The process and procedures of MI have been well-defined for both relational and technical components (Hardcastle, Fortier, Blake, & Hagger, 2016). The relational or "spirit" component (see Figure 2) is underpinned by Rogerian skills and the person-centered approach. The spirit of MI emerges at the intersection of four fundamental aspects: acceptance, partnership (egalitarian collaboration), compassion and evocation:
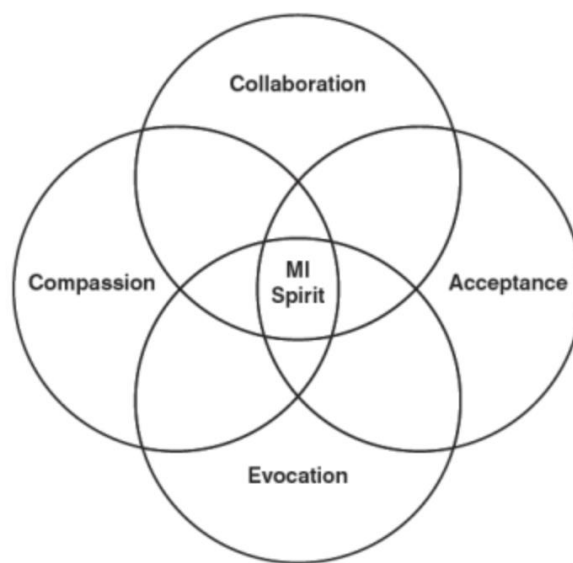
Figure 1. The Spirit of MI

The technical component of MI focuses on features of client language and what is termed 'change talk' (language in favour of change). Specifically, change talk is thought to be a good predictor of positive outcome, particularly when it occurs in the context of an empathic conversation. Whereas language in favour of keeping things as they are ('sustain or counter-change talk') is thought to lead to clients talking themselves out of change (Miller & Rollnick, 2004). Further to the underlying spirit of MI, Arkowitz, Miller and Rollnick (2015) posit that MI encompasses four key processes: engaging, focusing, evoking, and planning.

Figure 2. The Processes of MI

Studies that explore the effectiveness of MI focus on specific behaviours that are consistent with both the technical and relational components. The literature suggests that MI consistent behaviours such as emphasising autonomy, collaboration, and reflecting change talk, increase the likelihood of change talk (and decrease the likelihood of sustain talk). This in turn predicts subsequent change (Miller & Moyers, 2015). Additionally, MI skills predict the frequency of change talk in sessions, whereas behaviours that are inconsistent with MI such as confrontational approaches, advice giving without permission, and low empathy, in turn predict sustain talk (Borsari et al., 2015; Gaume et al., 2010; Magill et al., 2016). This is significant as the relationship between client language and outcomes in MI is a positive one, indicating that clients who offer more change talk than sustain talk during MI are more likely to have improved outcomes, whereas, conversely a higher proportion of sustain talk may contribute to a poorer outcome (Gaume, Bertholet, Faouzi, Gmel, & Daeppen, 2013).

2.5.1 Motivational Interviewing and School-Based Consultation

Frey et al., (2013) outline the promise of applying MI principles to school-based consultations with a view to enhancing intervention implementation. There are a small number of projects using MI principles in schools to address challenges of motivation. For example, The Family Check-Up (Dishion et al., 2008), the Classroom CheckUp (Reinke et al., 2011), and Tertiary First Steps to Success (Frey, Walker, et al., 2015). Early studies using

MI principles to support prevention and intervention in schools are associated with positive outcomes as measured by reductions in problem behaviour, and improved academic engagement (Frey, Walker, et al., 2015).

Adopting theoretical (e.g. SDT) and empirical (SE, MI) perspectives may be helpful to explore processes that might elucidate what is happening in consultation, and how this relates to outcome. Consequently, researchers might helpfully examine the extent to which consultation impacts on perceptions of support for autonomy, competence, and relatedness (Ryan & Deci, 2000), or explore the extent to which the spirit and principles of MI relate to teacher behaviour change.

2.6 Critical Examination of Consultation

To understand how consultation processes can be optimised, an understanding of its outcomes, and how they have been measured, are by implication necessary. The school consultation literature has accrued several major reviews and meta-analyses that have focused on outcomes (Gresham and Kendell, 1987; Reddy, Barboza-Whitehead, Files, and Rubel, 2000; West and Idol, 1987). However, there are several issues when attempting to evaluate consultation research (Kratochwill & Stoiber, 2000). Although reviews and meta-analyses have generally found school-based consultation to be effective for transporting interventions (Medway & Updyke, 1985; Sheridan, Welch, & Orme, 1996), conclusions about the effects of consultation cannot be easily separated from the interventions contained within the consultation itself, thus it is difficult to establish whether it is consultation or the intervention that has resulted in a positive outcome.

Further, the methodological rigour of some research included in reviews has been critiqued (Gresham & Kendell, 1987; Kratochwill & Stoiber, 2002). Consequently, there has been a move towards improving the quality of empirical evidence in the area of school-based

consultation. This is evident in an emerging body of randomised controlled trials (RCTs) (;
Fonagy et al., 2009; Ruble, Darymple, & McGrew, 2010; Sheridan, Bovaird, Glover,
Garbacz, Witte, and Kwon, 2012; Schulte, Osborne, & McKinney, 1990). Outcomes are
promising and broadly suggest that individuals assigned to consultation groups (versus
control) achieve more positive outcomes.

However, it is important to note that experimental methods such as RCTs might lend
themselves to evaluating prescriptive methods of consultation (e.g. behavioural consultation)
in contrast to nonprescriptive models such as CCC which may be more difficult to study.
Behavioural consultation models are often highly structured/scripted and emphasise
quantifiable client behaviour change, whereas CCC places importance on the consultation
relationship as a vehicle for change (Newman & Rosenfield, 2018). These different
perspectives might limit the generalisability of findings from studies of consultants working
from different consultation models. A key consideration here is the kind of change
researchers may want to explore. For example, if the expected outcome of consultee-centered
consultation is the conceptual change of the consultee, and consequently, an expected change
in the interaction between the consultee and the client, this is what needs to be examined. The
kind of question asked determines the suitability of the methodology, and so, different
research problems require different research methods (Guba & Lincoln, 1994).

2.7 Relational Communication and Language in School-Based Consultation

Despite the importance of relational communication for effective consultation
(Lambert, 2004), there have been relatively few investigations in this area. Studies addressing
the processes of successful consultation (Gutkin & Curtis, 2009; Nolan & Moreland, 2014),
have identified the relationship between consultant and consultee as an important component
of consultation (Erchul & Raven, 1997). Additionally, the quality of consultant-consultee

relationships is predictive of intervention implementation and client outcomes (Gutkin & Curtis, 2009; Erchul & Raven, 1997). Gutkin and Conoley (1990) identify interpersonal skills and the "collaborative relationship" as essential components of effective consultation (p. 211).

Sheridan et al. (2012), examined parent-teacher relationships as a mediator of conjoint-behavioural consultation outcomes within the context of an RCT using multi-level path analyses. Findings indicated that improvements in teachers' perceptions of parent-teacher relationships acted as a mediator of consultation effectiveness as measured by outcome (improvements in children's social skills). Newman, McKenney, Silva, Clare, Salmon and Jackson (2017) conducted a qualitative meta-synthesis integrating data from 38 studies on CCC, examining relational processes of consultation. The authors identified the importance of active consultee participation in consultation, particularly consultees having a voice in the process, and viewing consultation as a form of social-emotional support. Several studies within the synthesis suggested that consultant relational skills are supported through process-focused training. However, the authors conclude that the synthesis raises a number of questions. There is therefore a continuing need for future research to further our understanding of interpersonal and relational processes in consultation (Newman et al., 2012).

Evidently, the quality of the relationship between consultant and consultee is important to successful consultation. Rosenfield et al., (2014) stress the critical role of consultant–consultee communication in establishing collaborative relationships and engaging in effective consultation. "At its most basic level, consultation is an interpersonal exchange. As such, the success of the consultant is going to hinge largely on his or her communication and relationship skills" (Gutkin & Curtis, 1982, p. 822). If, at its simplest, consultation is an interpersonal exchange between a consultant and a consultee (Bergan & Tombari, 1975), it

follows that in order to specify how to conduct consultation effectively, it is necessary to describe the interactions which occur during the consultation process (Bergan & Tombari, 1975).   For example, using Bergan and Tombari's (1975) Consultation Analysis Record (CAR), researchers found that consultants asked more questions than consultees (Gutkin, 1996) but did less of the talking (Benes, Gutkin, & Kramer, 1991). This pattern of interaction in consultation has been found to be associated with more positive consultation outcomes. These early studies of consultation communication indicated that clear, specific, and strategic messages are more likely to be successful for meeting the objectives of consultation, and established that consultant utterances can influence which problems are identified for problem solving, and therefore overall consultation outcomes (Erchul et al., 2018).

Published research on relational communication in school-based consultation has demonstrated that interpersonal interaction makes a meaningful difference to collaborative problem solving (Erchul, Grissom, Getty, & Bennett, 2014). The use of language to facilitate change through consultation is an important skill (Rosenfield, 2013). When teachers do not adopt or implement interventions following consultation, this is often attributed to a problem of teacher resistance, rather than the skill of the consultant in building relationships and communicating effectively. For instance, Benn, Jones, and Rosenfield (2008) found quantitative and qualitative differences between the verbal interactions of novice and competent consultants, with competent consultants using more clarifying questions and higher quality verbalisations (more collaborative, and accurate in describing problem solving stages).

Emerging research suggests a lack of rigorous exploration about how the relationship in consultation between consultant and consultee may facilitate change (Nolan & Moreland, 2014). Nolan and Moreland (2014) used discourse analytic methods to look at the process of consultation in the UK. Their study draws attention to the process of consultation as a social

event constructed through language, involving consultants (EPs) using a range of discursive strategies to promote collaboration, joint problem solving and learning.

The study of verbal interaction in consultation is an important endeavour as these processes may mediate outcomes and are something that the consultant has the power to change (Erchul, Grissom, Getty, & Bennett, 2014). Further studies are needed which can begin to explore the relationship between consultant verbal interactions, consultee verbal responses, and link these to specific outcomes. Conducting such research on consultative processes presents methodological challenges as relational processes occur across all models of consultation, yet they are not always well-defined (Henning-Stout, 1993). Additionally, quantitative methodologies used to study consultation may not be well suited to studying processes (Hylander, 2003; Knotek & Hylander, 2014). Further to this, some school-based consultation reviews and meta-analyses (Sheridan, Welch, & Orme, 1996) exclude process-oriented research from the sample of studies for analysis. Thus, it is argued that consultation as depicted in the empirical review literature is not necessarily a true reflection of authentic school-based consultation as practiced (Henning-Stout, 1994).

Overall, the state of the literature suggests that there is a need for more ecologically valid research to develop an understanding of how consultation works. This is particularly true for applied educational psychology practice in the United Kingdom, as there is a shortage of literature on this topic. Qualitative and mixed methods designs may be best suited to studying the richness and complexity of interpersonal processes in consultation. Rosenfield (1991) suggested that consultation practice, rather than scientific experiments should be the primary source of research questions. The systematic review that follows attempts to address these points, aiming to explore what qualitative research can identify as likely successful interactional processes; and what the contemporary quantitative research can tell us about key influences in school-based consultation and its outcomes.

3. Systematic Literature Review

A variety of evaluation methods and perspectives may be required if we want to understand, explain, and develop successful consultation approaches that can guide practice and advance the art of consultation. The systematic synthesis of research is a core feature of the evidence-based practice movement (Kratochwill, 2007). The purpose of this review was to integrate and apply the best available evidence on consultation. In order to address the questions for this review, empirical papers combining quantitative and more flexible qualitative methods are included, leading to two distinct review sections.

3.1 Review Question

Whilst the focus of this study is upon interactional processes, ecological conditions and settings of consultation may influence outcomes. As such, contextual factors that may influence these processes have therefore also been considered, leading to the scope of the review question, as follows: "What ingredients in school-based consultation optimise teacher behaviour change?"

3.2 Systematic Review Procedure

This systematic review adopted a results-based convergent synthesis design (Noyes et al., 2019). This involved analysing qualitative and quantitative data individually. Findings from both reviews were tabulated and a synthesis produced. These syntheses were then put together to produce an over-arching summary. It is important to note that the literature was searched in terms of research outcomes, but not systematically assessed in terms of quality using a weight of evidence framework.

The researcher completed structured searches across a range of electronic databases (PsycINFO, SCOPUS, ERIC). Key word searches included: consultation, consultant,

consultee, teacher, school. Searches were limited to peer-reviewed studies between 2013 and 2020 to provide an overview of contemporary studies. In addition to initial systematic searches, additional search strategies including reference chaining and a hand search of journals related to educational psychology and/or consultation (including Educational Psychology in Practice, Journal of Consulting and Clinical Psychology; Journal of Educational and Psychological Consultation). Results from database ($n = 150$) and soft searches ($n = 36$) were combined and duplicates were removed. Studies were screened at abstract level and appraised for eligibility against inclusion criteria (see Table 1 below).

Table 1. Inclusion and Exclusion Criteria for Literature Review

Feature	Inclusion	Exclusion
Model of Consultation	Must include a school-based consultation between a consultant and consultee(s) Individual or group	Studies that do not include school-based consultations Behavioural/ conjoint-behavioural consultations
Date	2013 – 2020	Prior to 2013
Language of publication	English or translated copy available	No translated copy available
Participants	Must include teacher as consultee May include parents (e.g. joint consultations)	Consultation is not with a teacher
Setting	Naturalistic/real-world school-based consultations	Not computer-based or simulated training scenarios, not videoconferences

Table 1. Details of inclusion and exclusion criteria for studies.

Once the initial sample of studies was identified, 43 papers were screened at full-text and identified for two separate reviews of quantitative and qualitative studies. In total, 9 qualitative papers and 9 quantitative papers were included in the final review. The following section will present the findings from the synthesis of qualitative and quantitative studies.

Figure. 3 Flow Diagram (PRISMA, 2009)

Identification	Records identified through database searching (n = 150) Additional records identified through other sources (n = 36)

Records after duplicates removed
(n = 116)

Screening	Records screened (n = 116) → Records excluded (n = 73)

Eligibility	Full-text articles assessed for eligibility (n = 43) → Full-text articles excluded, (n = 26)

Studies included in qualitative synthesis
(n = 9)

Included	Studies included in quantitative synthesis (n = 9)

3.3 Data extraction

Table 2, data-extraction, identifies characteristics of each qualitative study including methodology, consultation model, sample, credibility, results/themes, and transferability. This involved extracting the titles of the categories and sub-categories used in the paper itself and a summary of the relevant material.

3.4 Table 2. Qualitative Data Extraction Table

Author(s) and year	Location	Method	Consultation Model (s)	Sample	Credibility	Results/Themes	Transferability
1. Massé, Couture, Levesque et al. 2013	Canada	Semi-structured interviews	Behavioural and mental health consultation models	Teachers ($n = 42$), head teachers ($n = 8$), school consultants - resource teacher, a psychologist or a psycho-educator ($n = 11$)	Consensus coding	• General appreciation • Meeting utility – understanding of problems, reflective practice, feedbacks and exchanges of views, strategies, effective support • Outcomes – proactive and positive interventions, attitudes, relationships, self-confidence, collaboration	
2. Nolan & Moreland 2014	UK	Discourse Analysis	Joint problem-solving process	Consultants - Educational Psychologists ($n = 5$), Consultees teachers ($n = 7$) and parents ($n = 4$)		• EP directed collaboration • Demonstrating empathy and deep listening • Questioning, wondering and challenging • Focusing and refocusing • Summarising and reformulating, pulling threads together • Suggesting and explaining • Restating/revising outcomes and offering follow up	Consequences for the area of social life in which it emerges, and possibly for other diverse areas Explicit description of the process of consultation
3. Thornberg, 2014	Sweden	Interviews, focus groups, and grounded theory	Joint problem-solving consultation model	4 members of the resource team 7 school leaders (e.g. principals) across 5 schools	Followed established guidelines for qualitative interviews, focus groups,	• Professional collision – inclusion versus exclusion, strict versus sensitive discipline, differences in problem explanations • Professional ethnocentricity • Insufficient tacit knowledge of school culture	To the extent that the situation is like another in terms of fit, relevance, and workability

					grounded theory methods	• Lack of integration between resource team and school personnel • Change resistance in the school culture • A grounded theory of change resistance in the context of school consultation – professional assumptions, professional main concerns, professional ethnocentricity, lack of integration, organisational barriers, change resistance in the school culture	
				Teachers, parents, and students, which resulted in 8 teachers, 4 students (15–16 years old, in eighth and ninth grades), and 7 parents (4 fathers and 3 mothers)	Member checking		
4. Capella, Jackson, Kim et al., 2016	US	Mixed methods, focus groups and semi-structured interviews	'BRIDGE' consultation and coaching intervention	12 mental health professionals – consultants - roles in the school included counsellor, social worker, and psychologist. Consultees - 36 teachers		• Dosage of intervention, specific content – e.g. evidence-based strategies, personal and professional support, self-reflection • School organisation – support from school e.g. time for consultation, number of programs, lack of support for teachers, whole-school buy in, peer professional support • Classroom Micro-context – whole classroom composition and organisational structure, student-teacher relationship	Not generalisable beyond this set of teachers and schools, or this teacher consultation and coaching model

						Implementer Characteristics and Relationships – consultants' competence and experience,	
5. Castro-Villarreal & Rodriguez, 2017	US	Mixed methods, qualitative and single-case methodologies - grounded theory approach	Consultee-Centered Consultation	Teacher consultees - 8, graduate student consultants	Triangulation	• Themes: Teachers' Preference for a Collaborative and Cooperative Approach • Teachers' Descriptions and Understanding of CCC: Unfamiliar yet Receptive • Teachers' Perception of School Culture on CCC and Student Behaviour: Culture Matters • Teachers' Perception of Successful Problem Resolution: a Solution-Focused Preference • Teachers' Mistrust of the Consultant and Process • Teachers' Recommendations for Future Work in their School: Viewing School Consultants as Direct Service Providers • Teachers' Perceptions of Effectiveness and Overall Satisfaction with CCC	
6. Newman, Hazel, Barrett et al. 2017	US	Survey, open-ended survey questions		262 Early Career School Psychologists (ESCP)	Constant comparative method Triangulation of data	• ECSPs perceptions of influences on ability to achieve change through consultation • Time and other resources • Administrative support • "Resistant" consultees • "Relationships" • Age, experience and psychologist variables	Consideration of transferability of results for ESCPs – description of participants provided

						• Earned credibility	
7. von Ahlefeld Nisser, 2017	Sweden	Qualitative methods, such as recordings and field notes from consultation Informal, open-ended and interview	Collaborative meta-consultations	12 special educational professionals (consultants)		• Basic conditions – time has to be allocated, the importance of consultants • Knowing how, knowing why: strategies and approaches – bridging the gap, openness about procedures, daring not to know, daring to be truthful, reciprocity in learning	
8. O'Farrell & Kinsella, 2018	Ireland	Case study, semi-structured interviews	Casework consultation	3 x Teacher, Parents and Educational Psychologists (EPs)	Transparent coding	• Support – implications for children and parents, implications for the teacher, implications for the psychologist • Understanding • Valuing consultation	Limited – small sample size
9. Sundqvist, 2019	Finland	Interpretative hermeneutical approach, content analysis of reflection journals	Preschool educators, basic education teachers attending a post-graduate special education course	8 preschool educators and 9 teachers enrolled in a postgraduate course in special education	Member checking Researcher reflexivity	• Creating frames and clarity • Applying reflective listening – • Offering keys and lifelines • Supporting change • The use of problem-solving skills – lessons learned • The use of communication skills • The complexity of the consulting role • Implications for consultation training	Consultations sessions not completely authentic Rich description of the research helps transferability

In order to aid the synthesis of the qualitative literature, subthemes in each study were identified, leading to identification of cross-study themes. Themes extracted are discussed further, below.

3.5 Table 3. Themes and Subthemes in the Qualitative Literature

Theme	Subtheme (studies where prominent)
1. Collaboration, relationships and resistance	<u>Collaboration</u> • Collaboration with consultants (Nolan & Moreland 2014; Castro-Villarreal & Rodriguez, 2017) • Collaboration with parents/families (Nolan & Moreland, 2014; Castro-Villarreal & Rodriguez, 2017; O'Farrell & Kinsella, 2018) • Daring not to know (von Ahlefeld Nisser, 2017) • Expert 'role' (O'Farrell & Kinsella, 2018; Sundqvist, 2019) • Fear of being directive (Sundqvist, 2019) • Relationships (Massé, Couture, Levesque et al. 2013; Capella, Jackson, Kim et al. 2016; Castro-Villarreal & Rodriguez, 2017; Newman, Hazel, Barrett et al., 2017; O'Farrell & Kinsella, 2018) <u>Relationships</u> • They emphasised that it is "… important that there is a consultant who can pull different strings to help the conversation move forward, because otherwise it would be easy to get stuck on the tips level" (von Ahlefeld Nisser, 2017) • Consultation training (Newman, Hazel, Barrett et al., 2017) • Suggesting and explaining (Nolan & Moreland, 2014) • Skills and strategies – questioning – open – versus inadequate questioning – closed questions, expert pressure, role ambivalence • Consultants use of language, being regarded as a competent person (von Ahlefeld Nisser, 2017) • Applying reflective listening (Sundqvist, 2019) – genuine interest and affirmation – authentic curiosity paraphrasing versus skill uncertainty hurrying, own agenda, silence, tempo • Questioning – skills and strategy flexibility – reflective questions, open suggestions • Inadequate questioning closed-ended questions

Theme	Subtheme (studies where prominent)
	Resistance • Professional collision, professional ethnocentricity, change resistance in the school culture (Thornberg, 2014) • "Earned credibility" – I look so young and other ECSP variables (Newman, Hazel, Barrett et al., 2017) • Consultant's knowledge versus classroom experience: "I have the impression that she's read the stuff and knows a lot of the stuff but she hasn't really been in the classroom" (Capella, Jackson, Kim et al. 2016) • "Resistant" consultees (Newman, Hazel, Barrett et al., 2017) • Teachers' mistrust of the consultation and process – consultation versus individual assessment (Castro-Villarreal & Rodriguez, 2017) • Consultants as direct service providers (Newman, Hazel, Barrett et al., 2017) • However, all psychologists stated that there can be resistance from schools "It is still a battle selling it (consultation) to its full potential" (O'Farrell & Kinsella, 2018) • Interventions and Implementation – supporting changes, actions/goals – check possibility, join the implementation – weak intervention acceptability, too demanding intervention, lack of consultee motivation (Sundqvist, 2019)
2. Consultee Learning	• Understanding, reflective practice, feedbacks and exchanges of views (Massé, Couture, Levesque et al., 2013; Capella, Jackson, Kim et al., 2016; von Ahlefeld Nisser, 2017) • Peer support - reciprocity in learning from and with each other (von Ahlefeld Nisser, 2017) • Strategies and approaches (Massé, Couture, Levesque et al., 2013; Capella, Jackson, Kim et al., 2016; von Ahlefeld Nisser, 2017) • Personal, professional support – peer learning (Capella, Jackson, Kim et al., 2016) • Acquisition of knowledge and understanding, conceptual changes in thinking (Massé, Couture, Levesque et al. 2013; Nolan & Moreland 2014)
3. The Structure and Stages of Consultation	• Structure, problem-solving stages (Sundqvist, 2019; Newman, Hazel, Barrett et al., 2017) • Teacher understanding of consultation process and receptivity (Castro-Villarreal & Rodriguez, 2017; von Ahlefeld Nisser, 2017; O'Farrell & Kinsella, 2018) • Social dynamics and positioning (Nolan & Moreland, 2014) • Openness about procedures (von Ahlefeld Nisser, 2017) • Creating frames and clarity – structuring the process – stage thinking, sampling information and clarifying concern, conclusion and clarifying - weak prep and guidance, lack of prop, avoid controlling flow (Sundqvist, 2019) • Teacher's mistrust of the consultation and process – consultation versus individual assessment (Castro-Villarreal & Rodriguez, 2017; Newman, Hazel, Barrett et al., 2017; O'Farrell & Kinsella, 2018)

Theme	Subtheme (studies where prominent)
	• Consultants as direct service providers (Newman, Hazel, Barrett et al., 2017) • Making the case for consultative ways of working in schools: "It is still a battle selling it (consultation) to its full potential" (O'Farrell & Kinsella, 2018)
4. Organisational Factors	• Lack of time (Capella, Jackson, Kim et al., 2016; Newman, Hazel, Barrett et al., 2017; von Ahlefeld Nisser, 2017) • Scheduling of consultations (Capella, Jackson, Kim et al., 2016) • Dosage (Capella, Jackson, Kim et al., 2016) • Administrative support (Newman, Hazel, Barrett et al. 2017; Castro-Villarreal & Rodriguez, 2017; O'Farrell & Kinsella, 2018) • The role of leaders in schools and how this can influence the efficacy of consultation – the role of teacher autonomy and seeing teachers as active collaborators in consultation (O'Farrell & Kinsella, 2018) • School-wide culture to support intervention implementation (Capella, Jackson, Kim et al., 2016)

3.6 Participants

Participants across the 9 studies in the qualitative sample included 333 consultants made up of school/educational psychologists, school psychology graduate students and other professionals/specialist teachers (e.g., counsellors, social workers, special educational professionals). Studies that described consultees included 104 teachers, 14 parents, 15 headteachers/administrators.

3.7 Qualitative Synthesis

Through the process of data extraction from the qualitative literature, the researcher identified a range of themes across qualitative studies. These themes were then organised into over-arching themes: *Collaboration, Relationships and Resistance*; *Consultee Learning; The Structure and Stages of Consultation*; *Organisational Factors*. In this section, the qualitative findings as they relate to each theme will be discussed.

3.7.1 Theme 1. Collaboration, Relationships and Resistance

The theme of collaboration was prominent across a range of studies in the review (Massé, Couture, Levesque et al., 2013; Nolan & Moreland, 2014; Capella, Jackson, Kim et al., 2016; Castro-Villarreal & Rodriguez, 2017; Newman, Hazel, Barrett et al., 2017; von Ahlefeld Nisser, 2017; O'Farrell & Kinsella, 2018; Sundqvist, 2019). Collaboration has been widely debated in the school consultation literature (Schulte & Osborne, 2003) and consensus among authors suggests that being collaborative does not mean that the consultant is passive in their approach; a consultant can be both collaborative and directive (Gutkin, 1999). Early Career School Psychologists (ECSPs) views suggest that collaboration is typical of their consultation practice, and that teacher consultees described valuing the collaborative

relationship. For consultees, working together with consultants to find solutions was viewed as empowering (Newman et al., 2014; Castro-Villarreal & Rodriguez, 2017).

O'Farrell and Kinsella's (2018) found the consultants see their relationship with parents and teachers as essential to successful consultation. The collaborative relationship between consultants and consultees appears to be an important mediator of change. In joint consultations, collaboration between parents and teachers appeared to allow consultees to explore multiple perspectives and to reframe a situation (Massé, Couture, Levesque et al., 2013). Nolan & Moreland (2014) indicate the way a student is presented in the language in consultation appears to change through the consultation process

Consultants used their interpersonal and relational skills during consultation. In Nolan and Moreland's (2014) study, consultants used the language of we/us, and avoided jargon. Consultants used language to demonstrate reflective listening by paraphrasing and reflecting what they had heard (Sundqvist, 2019). Consultants demonstrated warmth, genuineness and empathy in consultations (Nolan & Moreland, 2014; von Ahlefeld Nisser, 2017). A facilitating strategy in Sundqvist's (2019) study appeared to be the consultant's ability to use their relational and communication skills with flexibility, in contrast to consultants who demonstrated uncertainty in their use of these skills. This is illustrated in a qualitative extract from von Ahlefeld Nisser (2017): "…[it is] important that there is a consultant who can pull different strings to help the conversation move forward, because otherwise it would be easy to get stuck on the tips level."

Consultants discussed the balance between an expert and consultee-centred approach (von Ahlefeld Nisser, 2017). Consultants described adopting a non-expert role in the consultative process. Although at times offering advice or direction, they perceived their main role as *developing consultee capacity*. Nolan and Moreland (2014) found consulting psychologists used language to lessen their expert status: "maybe we could think about …" or

"I don't know but I'm wondering if …". This aligns with Knotek's (2003) examples of consultee-centered communication skills breaking down jargon.

In contrast to consultant views of their practice, teacher comments suggest that they may see the psychologist as the 'expert' in consultation who can advise or make suggestions: "with a trained psychologist, they can give a better insight into whether something I could do might be harmful or might be positive" (O'Farrell & Kinsella, 2018). Being collaborative in consultation does not mean that the consultant avoids discussion or challenge, rather, as framed by Erchul and Martens (2010), consultants can "act as content experts when necessary and not downplay their knowledge but, at the same time, attempt to understand and respect the consultees' unique strengths and weaknesses" (p. 26). Consultants in some studies, however, felt being perceived as an expert was detrimental to collaboration (O'Farrell & Kinsella, 2018; Sundqvist, 2019).

Consulting psychologist's views of consultee "resistance" appeared to impact their perceived ability to bring about change (Newman et al., 2017). One possible explanation for consultee resistance reflected in the data is that consultees did not value working with inexperienced consultants who might be seen lacking experience or expertise. One teacher spoke about their consultant being knowledgeable but queried their experience in the classroom: "I have the impression that she's read the stuff and knows a lot of the stuff but she hasn't really been in the classroom" (Capella, Jackson, Kim et al., 2016). In the studies that explore consultee's perceptions of consultants, those with more perceived competence or experience in the classroom, and those that were seen as having positive relationships with teachers, were seen as more effective (Castro-Villarreal & Rodriguez, 2017; Capella et al. 2016; Massé et al. 2013; Newman et al., 2017). Offering information is a communication skill that helps develop teacher competencies, however findings suggest that it might be detrimental for the consultant to offer too much information, too soon. It may be that

consultees are more willing to try new strategies or interventions when they feel valued. Teacher responses suggest the need for more time to build relationships to establish trust between consultants and consultees (Castro-Villarreal & Rodriguez, 2017).

3.7.2 Theme 2. Consultee Learning

The theme of *consultee learning* refers to findings across studies that identify consultation as a space for teachers to engage in reflective practice, feedback and exchange views, learn from and with each other, and identify relevant strategies or approaches (Massé et al. 2013; Capella, Jackson, Kim et al. 2016; von Ahlefeld Nisser, 2017). Consultees report that through consultation they gained new knowledge, which led to a shift in their understanding (Massé et al. 2013; Nolan & Moreland, 2014). On some occasions, this shift in understanding changed the way consultees made sense of a student behaviour. This is reflected in an extract from Masse's (2013) study: "I remember we must reconsider what we do, and ask questions, because often it is believed at first hand that this behaviour is just related to the student's lack of good will or uncaring attitude […], but there is always a reason behind the behaviour. […] It's worth looking into it."

In the context of group consultations, consultation appeared to offer an opportunity for peer support and professional learning. This is illustrated in an excerpt from a consultee who commented: "[Consultation] enabled me to question myself to tell myself 'well, that I would do differently" (Massé et al., 2013). Thus, consultation, and perhaps group consultation, appears to provide an opportunity for teachers to reflect upon their practice. This was a feature of consultation valued by teachers, school consultants and head teachers: "It really helped me realise what we do in class because we do not often fully seize what is actually going on. It's interesting to take time to stop to understand what we do" (Massé et al., 2013). Further to this, teacher views indicated that they valued exchanging views and

obtaining feedback on cases. This reportedly helped them consider why things may or may not be working, and as a result, to open up to new possibilities in terms of strategies and interventions.

3.7.3 Theme 3. The Structure and Stages of Consultation

This theme relates to the structure and stages of consultation. Sundqvist (2019) and Newman, Hazel, Barrett et al., (2017) found adherence to a problem-solving framework as helpful to the process of consultation. One consultant noted: "I was well prepared and conscious of the four-stage model we discussed […] without the stage thinking, the conversation would probably have ended in complete chaos without orientation. The awareness of the stages made the conversation more professional, more structured, and more progressive.") The findings of the review suggest that problem solving stages are important to successful consultation. When the consultant adheres to a coherent problem-solving process, more time is spent in problem identification, supporting consultees to voice their concerns more clearly. By contrast, consultations without clear structures may have aims that are unclear to consultees, provide interventions that are unfeasible or irrelevant to consultees, and lack accountability for outcomes (Sundqvist, 2019; Newman, Hazel, Barrett et al., 2017). It might be tempting for consultants to spring to offer advice and solutions before clearly understanding a problem. However, the process of spending time identifying the problem and collaborating during its analysis may contribute to intervention acceptability, fidelity, and sustainability.

Some consultants experienced difficulty structuring the process and stages of consultation by filtering information. For example, where consultees talked a great deal, and discussed numerous concerns, it was not always easy for consultants to control the flow of

information or guide the conversation. In some cases, in their attempts to be empathic, consultants let the consultees continue to talk at length (Sundqvist, 2019).

Consultants reflected on the use of taking notes to capture key ideas in the consultation. This reportedly helped the consultants to clarify key concerns and maintain focus during the consultation. On the other hand, some consultants reported that where they had insufficient time to prepare for the consultation, the sessions tended to lack direction (Sundqvist, 2019).

3.7.4 Theme 4. Organisational Factors

School-based consultation requires protected time, (Capella, Jackson, Kim et al. 2016; Newman, Hazel, Barrett et al., 2017; von Ahlefeld Nisser, 2017) initially to schedule the consultations, and for consultees to be released to participate. Within the consultation itself, time is needed, to optimise the potential for building collaborative relationships, to work through problem-solving stages and to prioritise consultee learning (Massé, Couture, Levesque, & Bégin, 2013).

A further organisational factor is the role of leaders in schools. Across studies, the importance of support from leaders to 'buy-in' to the process of consultation is evident (Newman, Hazel, Barrett et al., 2017): "If a principal isn't on-board, it is not going to filter down to the teachers. The principal needs to really see the teacher as active participant in the process and the teacher needs to see themselves as active collaborators in consultation" (O'Farrell & Kinsella, 2018). Consultees shed light on the importance of having leaders and school cultures that were receptive to school-based consultation and willing to support the implementation of interventions devised in consultation (Capella, Jackson, Kim et al., 2016).

Related to this, a further theme in the literature appears to be teacher's and leader's perceptions of consultative models of working versus traditional referral driven models

(Castro-Villarreal & Rodriguez, 2017). Psychologists discussed the challenge of 'selling' consultative ways of working in schools and described being met with resistance to this kind of work (O'Farrell & Kinsella, 2018). Teachers reported more familiarity with traditional referral-driven models of working, with consultants acting as direct service providers. This is evident in the following excerpt: "You need to spend more time testing these students then […] wasting time talking to me." These perceptions of school-based consultation might go some way to contributing toward resistance (Castro-Villarreal & Rodriguez, 2017; Newman, Hazel, Barrett et al., 2017; O'Farrell & Kinsella, 2018).

3.8 Quantitative Review

This next part of the literature review details the appraisal of quantitative papers. A data-extraction table (Table 4) was produced to assist in systematically identifying characteristics of each quantitative study including methodology, consultation model, sample, measures/analysis and findings. This is presented below.

3.9 Table 4. Quantitative Data Extraction Table

Author(s) and year	Location	Methodology	Consultation Model (s)	Sample	Measures/Analysis	Findings
10. Newman, Guiney, & Barrett, (2017)	US	Language Analysis	Instructional Consultation	Participants (n = 36) included 18 school psychology graduate consultants and 18 teacher consultees. Consultees sought consultative support for difficulties with a student or group of students in their classrooms	Linguistic Inquiry and Word Count (LIWC) software was applied to analyse consultation transcripts. LIWC categories examined use of past, present, and future tense verbs and positive and negative emotion words. Collaboration, Client Outcomes, and Consultee Outcomes were measured by a coding available data, including consultant reflective logs, case analysis papers and transcripts	• No significant differences in past or future verb tense use between consultants and consultees. • Present tense verb use within a dyad did not relate to positive outcomes – but significant correlation between consultees present tense verb use and outcome • Consultants past tense verb use negatively correlated with consultation relationship, future tense verb use for both consultants and consultees– potentially indicative of problem saturation/rumination • Consultants significantly more likely to use positive emotion words than were consultees • Consultants' and consultees' positive emotion word use were significantly correlated • Positive emotion word use by consultees was significantly correlated with consultee outcomes No differences in negative emotion word use were observed
11. Holdaway & Owens, (2015)	US	Using a within-subjects design	Consultation with key opinion leaders Consultation with observation and performance feedback	Participants included 157 teachers working in schools with an estimated 2,750 students	The Instructional and Behaviour Management Approaches Survey The Ohio State Teacher Efficacy Scale The Maslach Burnout Inventory – Educators Survey (MBI-ES; Maslach & Jackson, 1986)	• Teacher perceptions of their likelihood of adopting a behavioural intervention significantly improved if intervention training and support included consultation with key opinion leaders, consultation with performance feedback, or consultation with motivational interviewing compared with professional development as usual

			Consultation with Motivational Interviewing		The Intervention Support Questionnaire (ISQ)	
12. Wu Phuong, Shanahan, Rosenfield, Gravois, Koehler, Kaiser, Berger, Vaganek, Gottfredson & Nelson (2013)	US	A multilevel randomised control model	Instructional Consultation (IC)	1,440 educators (including teachers, administrators, school psychologists, health providers, social works, counsellors and others who met had taught at least 1 student during that academic year) 22,543 students in participating schools	The Level of Implementation Scale–Revised (LOI; Fudell, 1992; Gravois, Fudell, & Rosenfield, 1998) used to appraised the quality of consultation Case records A TSR questionnaire measured instructional practices, collaboration, teacher efficacy and job satisfaction Teacher Efficacy and Job Satisfaction scales were obtained from prior studies (Bryk & Schneider, 2002; Tschannen-Moran & Hoy, 2001).	• IC had significant effect on teacher efficacy and collaboration compared to randomly assigned control schools • Significant effect on teacher efficacy at two years and three years of implementation • Significant effect on teacher collaboration at the third year of implementation • Effect of the intervention greater for teachers in schools with IC and exposed to the intervention for longer period • Effects across other teacher outcomes were not statistically significant • IC intervention had a positive effect on efficacy of general education teachers, but not statistically significantly for efficacy of non-general education teachers • IC intervention had a significant and positive effect on the collaboration of non-general education teachers but did not significantly affect the collaboration scores of general education teachers
13. Newman, Guiney, & Barrett. (2015)	US	Language Analysis	Instructional Consultation (IC)	Participants included 18 Consultants in Training (CITs), and 18 teacher consultees	Consultant and consultee pronoun usage in transcripts was measured using Linguistic Inquiry and Word Count (LIWC) software. Collaboration, Client Outcomes, and Consultee Outcomes were measured by a coding available	• Consultees averaged more spoken words than consultants • Consultants perception of collaboration and measures of client and consultee outcomes were significantly correlated • Client outcomes correlated with number of sessions and consultee outcomes

| | | | | Consultees included 17 elementary-level (K-5) teachers and one 8th grade teacher. | data, including consultant reflective logs, case analysis papers and transcripts

Language style matching (LSM)

The number of sessions completed between consultee and CIT was measured at the end of the consultation relationship | • Consultee outcomes correlated with number of sessions
• CITs used we and "you" language more frequently than consultees
• Consultees used I, "he" or "she," and "they" more frequently than CITs - large effect sizes
• I, we, and they were significant correlates of collaboration
• Consultee I LIWC score negatively correlated with collaboration
• Consultee we LIWC score was significantly correlated with collaboration
• They was significantly, negatively correlated with collaboration
• Client outcome was influenced by they LIWC scores - the higher the they LIWC score, the lower the client outcome
• Higher we LIWC scores related to more positive consultee outcomes
• Higher they LIWC scores related to negative consultee outcomes
• Synchrony of we usage between consultees/consultants significantly correlated with client outcome and collaboration |
| 14. Owens, Coles, Evans, Himawan, Girio-Herrera, Holdaway & Schulte (2017) | US | Experimental Evaluation | Multi-Component Consultation | 58 teachers were from eight schools

Consultants (n= 7); referred to as facilitators) were | Teacher Knowledge of Behavioural Principles as Applied to Children 16-item multiple-choice measure

Teacher Knowledge of ADHD 24-item True/False/Don't Know measure | • Effect of consultation condition was not significant
• Teachers with lower baseline knowledge and intervention supportive beliefs demonstrated greater change in the multi-component condition
• Teachers with higher baseline (e.g. no barriers to implementation) benefited from both conditions - average effect size between the conditions of 0.06.
• Satisfaction ratings for teachers in the multi-component condition higher than that of teachers in |

			postdoctoral (n = 2), master's level (n = 2), or graduate students in a master's or doctoral program in psychology (n = 5). Focus student participants (n = 58)	Teacher Locus of Control 25-item measure Teacher Skills in Classroom Management Teacher Satisfaction with Consultation	the comparison condition – but not statistically significant
15. Owens, Schwartz, Erchul, Himawan, Evans, Coles, & Schulte (2017)	US	(Not specified)	365 elementary teachers (kindergarten – 5th grade)	Demographic questionnaire Modified IPI-Consultee/Teacher Version (Erchul et al. (2001) Teacher knowledge of Behavioural Principles – a 16-item multiple-choice measure to assess teacher knowledge of behavioural principles, based on the Behaviour Modification Test (Kratochwill, Elliott, & Busse, 1995) Mental Health Literacy Scale (O'Connor & Casey, 2015) Teacher Beliefs Inventory – an 11-item measure to assess teacher	• Internal reliability estimates for the subscales representing the soft power bases (> .80) • Teachers' 4 top-rated bases were *direct information, positive expert, positive referent, and legitimate dependence*. • Teachers' perceptions of influence in a past or hypothetical consultation relationship significantly related to perceptions of influence in a current relationship • Teachers with low baseline competencies in classroom management and who reported being influenced by soft bases showed greater growth in skills and changes in behaviour compared to teachers in need of classroom management consultation who reported not being influenced by soft bases

					beliefs about student behaviour, intervention to address behaviour difficulties, and consultation	
					Need for Cognition Scale (Petty, Cacioppo, and Kao, 1984) - assessed using four items from the Proactive Personality Scale developed by Bateman and Crant (1993)	
					Openness to Experience construct assessed using a four-item measure related to Big Five personality dimensions	
					Participants completed six items from the work-related stressors subscale of the Teacher Concerns Inventory (Fimian, 1988)	
16. Castro-Villarreal, F., & Rodriguez, B. J (2017)	US	Mixed Methods – AB Quasi-Single Case Experimental Design Results	Consultee-Centered Consultation	High school with an enrolment of 215 students ranging in age from 13 to 22 The school primarily served high-risk students	Measurement data were collected for on-task behaviour and work completion On-task behaviour was measured via observation and interval recording of a random student per lesson.	• Students showed increase in on-task behaviours. • On-task behaviours increased from 0% the last observation period of baseline to 88% after intervention implementation. • Visual analysis trend and level change showed improvement on on-task behaviour • Visual analysis trend and level change showed marked improvement in work completion

				Consultee Participants included 8 teachers	Inter-observer agreement data collected for 25% of the baseline and intervention phases.	
				4 Graduate Psychology Student Consultants	Work completion measured by review of work products collected at the end of each lesson, and daily monitoring of note-taking over a period of 2 weeks.	
17. Collier-Meek, Sanetti, Levin, Kratochwill & Boyle (2019)	US	Randomized individual single-case AB intervention designs	Problem-solving consultation – using five implementation supports (Implementation Planning, Role Play, Participant Modeling, Raising Awareness, Motivational Consulting)	14 teacher consultees from four elementary schools Consultants were 4 doctoral school psychology students	Teacher delivery of classroom management plans measured by 30-minute observations, 2–3 times per week during times reported to be challenging Classroom management plans rated for adherence Class behaviour measured by 15 min observations, 2–3 times per week during times reported by teacher to be challenging Teacher participants rated their perceptions of the classroom management plan, consultants, and implementation supports using: Usage Rating Profile-Intervention Revised (URP-IR; Chafouleas,	• Baseline to the first implementation support received resulted in a higher average adherence for all participants • 10 participants who received a second implementation support improved adherence further • Teacher quality of adherence did not improve over time, but remained consistent • 4 teachers implemented with adequate treatment fidelity after receiving one support, 6 teachers' treatment fidelity improved to above 80% after two implementation supports, and four teachers' treatment fidelity remained below 80% • Adherence and quality improvements persisted through one- and two-month follow-up assessments • Role Play and Participant Modelling were most favoured supports • Motivational Consulting was rated more positively than Raising Awareness. • Delivery of implementation supports associated with improvements in class outcomes

					Briesch, Neugebauer, & Riley-Tillman, 2011)	
					Consultant Evaluation Form (CEF; Erchul, 1987)	
					PRIME Rating Profile	
18. Wong, V., Ruble, L. A., McGrew, J. H., & Yu, Y. (2018)	US	Secondary analysis of two RCTs of COMPASS (Ruble et al., 2010, 2013)	Collaborative Model for Promoting Competence and Success (COMPASS) and the Multilevel, Multidimensional Fidelity Model	79 special education teachers and student with autism selected randomly from teacher caseload Forty-seven teacher and student dyads assigned to COMPASS experimental groups	25-item Consultant Consultation Adherence Form The eight-item Consultation Quality of Delivery Questionnaire The Social Interaction Rating Scale (SIRS; Ruble, McDuffie, King, & Lorenz, 2008; Ruble & McGrew, 2013) Autism Engagement Scale (AES; Ruble & McGrew, 2013). Intervention dosage via teacher reports of weekly frequency of teaching the targeted skills Psychometric Equivalence Tested Goal Attainment Scale (PET-GAS)	• Implementation-level fidelity components had indirect effects on student outcomes • 3 fidelity components correlated with outcomes: teacher coaching responsiveness at the implementation level, teacher quality of delivery and student responsiveness at the intervention level

3.10 Participants

Participants across the studies in the quantitative sample (where specified) included 33 consultants made up of graduate students, consultants in training, master's level clinicians and post-doctoral or doctoral students. Studies that described consultees included a total of 2139 consultees made up of teachers, special education teachers in settings ranging from nursery-aged children through to secondary age.

3.11 Quantitative Synthesis

Through the process of data extraction from the quantitative literature, the researcher identified a range of findings. In this section, findings have been organised under three topic headers, including: *Consultation: Intervention Adoption, Fidelity, and Outcomes*; *Teacher Responsiveness and Receptivity: The Role of Skills, Knowledge and Beliefs*; and *Language in Consultation: Emotion Words, Verb Tense and Pronouns*. In this next section, the quantitative findings as they relate to each topic will be discussed.

3.11.1 Consultation: Intervention Adoption, Fidelity and Outcomes

Castro-Villarreal and Rodriguez's (2017) case study results provide correlational evidence of the effectiveness of consultee-centered consultation and problem-solving on a teacher's ability to collaboratively develop and implement interventions that lead to meaningful outcomes for a student (e.g. increased on-task behaviour and academic engagement). However, teachers participating in school-based consultations can have difficulty delivering interventions with adequate fidelity (Collier-Meek et al., 2017; Noell et al., 2017; Sanetti et al., 2014, 2015,

2018). To support fidelity to interventions discussed in consultation, school-based consultants can deliver implementation supports.

In Collier-Meek et al's., (2019) study, five implementation supports were evaluated in a series of case studies. All implementation supports (Implementation Planning, Participant Modelling, Role Play, Raising Awareness, and Motivational Consulting) were associated with increases in teachers' adherence and quality to interventions, and improvements to behaviour. Further, for those who received a second implementation support, adherence improved above the initial increase for all but one participant. These improvements in adherence are important as most of the literature indicates decreases in teacher adherence following initial training (e.g., Noell et al., 2017; Sanetti et al., 2018). This is notable as implementation supports were provided alongside initial training, which is often insufficient as a standalone activity (Collier-Meek et al., 2017; Sanetti et al., 2014, 2015).

Holdaway and Owens' (2015) study examined the effects of four consultation conditions on teacher's self-reported likelihood of adoption of an intervention. The findings indicated that key opinion leaders (defined as respected, socially central figures in the school environment) are important to the growth of an intervention in a school environment. Almost 80% of teachers identified that the use of key opinion leaders to circulate interventions would be their first or second most likely condition to result in intervention adoption. Teacher perceptions of consultation with performance feedback indicated that they viewed this condition as most likely to result in adoption than procedures that have not been shown to result in behaviour change (Holdaway & Owens, 2015). Although consultation with MI was seen as less likely to result in adoption than key opinion leader or performance feedback conditions, interventions with a MI component may still hold promise, particularly as teacher reports suggest that consultation with

MI is perceived as significantly more likely to result in adoption when compared with professional development as usual conditions. For some teachers, consultation with motivational interviewing was their preferred choice of support (Holdaway & Owens, 2015). It is important to note that the data is based on self-report rather than actual intervention adoption. Thus, the results may overstate the actual number of teachers who would go on to adopt the intervention. Nonetheless, these perceptions may be an important indicator of teacher behaviour change, as evidence suggests teacher perceptions of interventions are associated with implementation (Baker et al., 2010).

At present, there is no clear framework for incorporating MI principles in school-based consultation, but authors have proposed potential adaptations (Frey et al., 2013; Reinke et al., 2011). Owens et al., (2017) evaluated the effects of multi-component consultation on effective teacher classroom management practices. The multi-component approach included techniques informed by MI to target consultee skills and beliefs. For example, consultants attempted to elicit change talk, listened for sustain talk, and attempted to incorporate their values into the problem-solving process. Teachers who demonstrated low general knowledge, skills and intervention-supportive beliefs showed more growth in response to the multi-component approach (Owens et al., 2017). This might suggest that the explicit use of MI techniques in consultation may be most effective with teachers whose knowledge, skills, and beliefs may otherwise impede intervention implementation.

3.11.2 Teacher Responsiveness and Receptivity: The Role of Skills, Knowledge and Beliefs

Vu et al., (2013) measured the impact of instructional consultation (IC) teams on teacher variables thought to relate to student achievement. IC is a model focused on providing academic and behavioural supports to students through consultative support for teacher consultees (Rosenfield, Gravois, & Silva, 2014). Findings indicated that the IC Teams intervention had a significant effect on teacher efficacy at two and three years of implementation (Vu et al., 2013). The intervention had some influence on teacher perceptions of their efficacy, which is an important finding given the relationship between teacher SE and student outcomes.

The implementation of the IC Teams intervention in a school may change teacher beliefs about how much they can do to influence learning. In addition to this, exposure to the IC Teams intervention altered teacher perceptions of collaboration in their setting (Vu et al., 2013). These effects were not only specific to consultees who participated directly, but the wider school team. This might suggest that ongoing consultative processes in school settings may play a role in shaping organisational culture.

Owens et al., (2018) examined the role of teacher factors such as teacher responsiveness to school-based consultation. Results demonstrated that teachers' intervention-supportive beliefs (e.g. the alignment between teachers' views and evidence-based practices) and need for cognition (e.g. a teacher's tendency toward intentional and effortful engagement with intellectually stimulating tasks), as well as the interaction between need for cognition and ratings of work-related stress, were significantly associated with receptivity to consultant expertise and relevant information provided by the consultant. This is encouraging as there is some evidence to

indicate that consultation that targets teacher beliefs is associated with improvements in implementation integrity of interventions, and student outcomes (Owens et al., 2017).

3.11.3 Language in Consultation: Emotion Words, Verb Tense and Pronouns

As previously highlighted in Chapter 2, the role of language and relationships has been a core focus of consultation research. This area of study has accrued a range of evidence that identifies interpersonal interactions as one of the key ingredients that can influence consultation (Erchul et al., 2014). Contemporary studies that have examined consultant and consultee communication in consultation have looked at the role of emotion words, verb tense and pronouns using the LIWC (Newman, Guiney & Barrett, 2015; 2017). Findings suggest that consultants (in training) and consultees communicate in different ways during consultation sessions, and that these differences influence the process and outcomes of consultation.

Consultant use of positive emotion words (defined as affective language with a positive connotation), related to consultee use of positive emotion words, and consultee use of positive emotion words related to consultee outcomes such as improvements in skill and/or changes in their perceptions of clients (Newman, Guiney & Barrett, 2017). These findings suggest that the use of positive emotion words in consultation may be an important communication component that relates to teacher behaviour change. One possible explanation for this is that positive emotion words may be used by consultants as a way to reframe problems.

The use of verb tense also appears to be relevant in consultative interaction. For example, consultant use of past tense verbs had a significant negative correlation with collaborative relationship dynamics, and consultee use of present tense verbs correlated significantly with consultee outcomes. Consequently, it might be that too much past tense verb use in consultation

indicates rumination or a focus on a past problem-situation. Then again, too much future tense verb use may not adequately explore the problem at hand. When consultants use present tense language (e.g., "what is happening?"), consultees may be more likely to respond with their experience of problems in the here and now (Newman, Guiney & Barrett, 2017). It may be helpful for consultants to maintain an awareness of verb tense during consultation.

In addition to verb tense and emotion words, Newman and colleagues explored consultant use of 'we' language in school-based consultations. This is illustrated in an example from their study which stated: "So, we can prioritize here. We can work on math facts or her letter sounds, I was thinking. What do you think about that?" (Newman, Guiney, & Barrett, 2017, p. 58). Overall, we language was used less by the consultee than consultant during interactions, but consultee use of we language was significantly related to consultant perceptions of collaboration in the relationship. Thus, consultees use of we language might be an indication of a shared ownership of the consultation process, and thus, potentially an ingredient of effective collaboration. This is significant as the total we language used by both consultants and consultees together was positively correlated with consultee outcomes, including improved skills or positive changes in the teacher's perception of the client/student. It is acknowledged however, that we language in consultation may be more likely to be a kind of linguistic indicator of the relationship, rather than something that can be mechanically altered to influence outcomes alone.

3.12 Summary

This review set out to explore the ingredients of school-based consultation that optimise teacher behaviour change. The quantitative and qualitative components of the review offered an array of findings which can be complementary to one another. One of the over-arching findings from this literature review identifies how consultation may lead to changes in teacher attitudes and beliefs. This may be achieved by promoting teacher self-efficacy or explicitly targeting beliefs as barriers to intervention implementation (Vu et al., 2013; Owens et al., 2017).

Beyond these conceptual changes, consultation may also lead to changes in teacher behaviour as measured by the adoption and implementation of interventions. These changes are significant, as they are associated with a range of improved outcomes in terms of behaviour and academic engagement (Castro-Villarreal & Rodriguez, 2017). One ingredient in consultation that has been identified as supporting fidelity to interventions is the use of implementation supports (Collier-Meek et al., 2017; Sanetti et al., 2013).

Perhaps unsurprisingly, this review identified the collaborative relationship as a key ingredient in consultation, a theme that featured across a range of qualitative and quantitative studies (Massé, Couture, Levesque et al., 2013; Nolan & Moreland, 2014; Capella, Jackson, Kim et al., 2016; Castro-Villarreal & Rodriguez, 2017; Newman, Hazel, Barrett et al., 2017; von Ahlefeld Nisser, 2017; O'Farrell & Kinsella, 2018; Sundqvist, 2019). The collaborative relationship between consultants and consultees appears to be an important mediator of change in consultation (Newman et al., 2014; Castro-Villarreal & Rodriguez, 2017; O'Farrell & Kinsella, 2018).

Across quantitative and qualitative studies, the linguistic features of consultation were identified as relevant. This might involve the language of 'we' (Nolan & Moreland, 2014;

Newman, Guiney & Barrett, 2015), language to demonstrate reflective listening, (Sundqvist, 2019), or language to lessen the 'expert' status of the consultant (Nolan & Moreland, 2014). Further, there is an emerging body of research looking at the role of emotion words and verb tense in consultation (Newman, Guiney & Barrett, 2015; 2017). These linguistic features have been related to both the collaborative relationship and consultee outcomes.

It may be that the use of past, present, and future verb tenses in consultation relates to problem-solving stages in consultation. For example, too much future tense verb use may indicate premature problem-solving or on the other hand, too much past tense verb use may indicate problem-saturation or an incoherent approach (Newman, Guiney & Barrett, 2017). This highlights the importance of clearly conceptualised consultation frameworks to optimise consultation practice (Sundqvist, 2019; Newman, Hazel, Barrett et al., 2017). This is pertinent, as findings suggest that consultation without clear structures may lead to unfeasible intervention recommendations, which are then not implemented effectively (Sundqvist, 2019). This may contribute to teacher resistance as reported in the literature. For example, teacher views suggest that consultants can be seen as lacking sufficient classroom experience. However, this might be construed as a communication difficulty, rather than being an experience problem, per se. There is a risk, that when consultation is incoherent, the consultant might not fully understand the problem-situation, and thus offers inappropriate or unfeasible interventions, which then prompt resistance from the consultee. This aligns with findings that identify the need for sufficient time in consultation to build relationships and establish trust between consultant and consultee (Castro-Villarreal & Rodriguez, 2017). Where consultation is coherent and adheres to a staged model, consultees may be more invested in the interpretations and analysis of the problem, and as a result the interventions.

The context within which consultation is carried out appears to be an important ingredient that relates to teacher-behaviour change. It may be that consultation can influence organisational change in school, but the support of key people and leaders is required (Holdaway & Owens, 2015). For consultation to be most effective, leaders need to 'buy-in' to the process (Newman, Hazel, Barrett et al., 2017). This can impact the extent to which consultees feel supported to implement interventions that are discussed in consultation (Capella, Jackson, Kim et al., 2016). And so, the organisational context in which consultation is carried out is key. Promisingly findings from Vu et al. (2013) showed that IC Teams can alter the perception of collaboration in an organisation over time, even for those school members that do not engage directly with the consultation.

One of the takeaways from this review is that practitioners can be keen to communicate in ways that they may think are helpful and this can be well-intentioned, but it is possible that in their endeavours to be non-directive and empathic, consultations can lack structure and coherence. Like walking a tightrope, consulting appears to be a balancing act, on one hand consultants do not want to be positioned as experts or communicate in ways that may engender resistance in the consultee. On the other, they do not want to be so laissez fair that they are not fulfilling their professional role and offering challenge or sharing information when needed. It seems important for consultants to get a balance between listening to the consultee in consultation and expressing empathy, while staying true to their professional knowledge, competency, and expertise. However, at present, we do not know enough about how EPs do this effectively, and how this relates to outcomes.

As earlier discussed, the value of consultation rests in its potential to enhance outcomes for children and young people by working through adults to bring about change (Miller &

Frederickson, 2006). As Gutkin and Conoley (1990) state, to help children, educational

psychology consultants must learn how to influence adults. While there are many models of

consultation, there has been limited research conducted on the actual consultation practices of

EPs in the United Kingdom. It is argued that we do not know enough about consultation, how it

works, under what conditions, or the most important variables in predicting successful

consultation outcomes (Gresham & Kendell, 1987). Given that consultation is a key model of

service delivery and core feature of EP practice, there is a need to understand how best we can

specify what is happening in consultation and assimilate this knowledge to optimise practice and

improve outcomes. As earlier mentioned, consultation may be helpfully conceptualised as an

adult behaviour change process. This suggests that learnings drawn from MI, and theoretical

concepts such as SDT and SE may hold promise in furthering our understanding of what is

happening in consultation. This leads us onto the research questions in this study.

3.14 Research Questions

The research questions below are the starting point for this study. These questions are

guided by an interest in the interaction in consultation between educational psychologists and

teachers:

1. What kinds of motivational talk occur in consultation?

2. What is the relationship between EP talk and teacher response?

3. What are the effects of MI-consistent talk on teacher self-efficacy?

4. Methodology

This chapter will consider the philosophical paradigms within applied research and the ontological and epistemological positioning of this study. The chapter then introduces observational methods and sequence analysis, acknowledging the strengths and limitations of these methodologies. Following this, the rationale for using sequence analysis to examine interactions in consultation is presented. This leads onto an overview of research ethics, a description of the coding schedule, research design, and analytic procedure in the present study.

Research Paradigms

A research paradigm is a way of looking at the world. It is composed of certain philosophical assumptions that shape thinking and action (Mertens, 2005).

Table 5.

Ontology, Epistemology and Methodology – An Overview*

	Post-Positivism	Constructivism	Pragmatism
Ontology (nature of reality)	Critical realism; One reality; knowable within a specified level of probability	Multiple, socially constructed realities	Asserts that there is single reality and that all individuals have their own unique interpretation of reality
Epistemology (nature of knowledge; relation of knower and would-be known)	Objectivity is important; research can only claim to know the world imperfectly e.g. in terms of probabilities.	Interactive link between researcher and participants; values are made explicit; created findings	Relationships in research are determined by what the researcher deems as appropriate to that particular study
Methodology (approach to systematic inquiry)	Quantitative (primarily); interventionist; decontextualized	Qualitative (primarily); hermeneutical; dialectical; contextual factors are described	Match methods to specific questions and purposes of research; mixed methods can be used as researcher works back and forth between various approaches.

Note: *Adapted from Lincoln and Guba (1985); Mertens (2005)

The major paradigms are outlined in Table 5. Positivist researchers assert an objective knowledge knowable within a specified level of probability. Constructivists propose that knowledge is relative, and there are multiple, socially constructed realities (Lincoln & Guba, 1985). Pragmatists sit somewhere between the two, believing that the process of acquiring knowledge is a continuum rather than two opposing forces of objectivity and subjectivity

(Morgan, 2007). While post-positivism typically supports quantitative methodologies and deductive reasoning, constructivism favours qualitative approaches and inductive reasoning. Pragmatism spans the two polarities and offers a flexible and more reflexive approach to research design (Morgan, 2007).

4.1 The Philosophical Underpinnings of the Present Study

4.1.2 Ontology

The ontological question asks "what is the nature of reality?" This study takes a pragmatist ontological perspective. Pragmatists reject the use of philosophical concepts such as truth and reality, considering effectiveness as a more valuable criteria for judging research (Maxcy, 2003; Teddlie & Tashakkori, 2003). It is the pragmatist view that it is possible to assert both that there is a single "real world" and that all individuals have their own unique interpretations of that world (Mertens, 2005).

4.1.3 Epistemology

The epistemological question asks: "What is the nature of knowledge and the relationship between the knower and the would-be known?" The pragmatist epistemology stresses the importance of studying that which is of interest and value, through methods that are thought to be appropriate and purposeful (Maxcy, 2003; Tashakkori & Teddlie, 2003). For pragmatists, the focus is on "lines of action" that are seen to be most appropriate for studying the phenomenon at hand (Morgan, 2007, p. 67). As such, both qualitative and/or quantitative methods fit within the pragmatic paradigm. The use of mixed methods is seen as a practical solution that avoids the constraints of a single 'monolithic' method such as those in post-positivist paradigms (Maxcy,

2003). Simply, a pragmatist approach allows the researcher to choose the method (or combination of methods) that work best to study questions of interest.

4.2 Observational Methods in Research

This section is intended as an introduction to observational methods. Key topics covered include observation and the strengths and limitations of observational methods. This is followed by a brief introduction to the study of interactions, and the rationale for sequence analysis in the present study.

Observation involves looking, noticing, and recording events. Observation can be considered along different dimensions varying from unstructured to structured, responsive to pre-ordinate (Flick, 1998). Less structured approaches to observation offer the observer freedom in what to look at and how to record what is seen. Structured approaches, by definition, impose a large amount of structure on what is to be observed and how this should be recorded. The essential features of structured observation are the use of coding schedules by trained observers of demonstrated reliability (Bakeman & Gottman, 1997). High reliability and validity are easier to achieve with structured approaches, although at the expense of thick description. Structured observers tend to adopt a 'pure observer' position. For them, structured observation is a way of quantifying behaviour. This contrasts with participant observers, who tend to adopt more qualitative approaches (Robson, 2014).

4.2.1 Strengths of Observational Methods

As a methodology, observation is an approach that allows the researcher to gather 'live' data in situ (Bakeman & Gottman, 1997). While it is possible to observe in a laboratory setting,

direct observation in the field permits an authentic 'real world' approach. In addition, the findings of field studies can expose differences from findings derived in more artificial settings.

Traditionally, observation is non-interventionist in that the researcher does not seek to manipulate the situation or create "new provocations" (Adler & Adler, 1994, p. 378). Thus, a distinctive strength of the observational method is its strong face validity, allowing for rich contextual information and 'first-hand' data to be collected (Clark et al., 2009). A further strength of observation is its focus on overt behaviour that can be seen and recorded. This contrasts with questionnaires or interviews where the researcher might ask about participant perceptions, which can be susceptible to discrepancies between what people report, as opposed to what they actually do (Zeedyk & Kelly, 2003).

4.2.2 Limitations of Observational Methods

Observation requires the researcher to be sure that it is valid to infer that an outward behaviour indicates a particular intention or motivation. This focus on the observable can mean that complex concepts and constructs are oversimplified, and thus distorted by observational methods (Denscombe, 2014). Structured observation can also be criticized for not adequately capturing the dynamic nature of behaviour as it flows moment to moment (Bakeman & Gottman, 1997). In the context of this study, this is significant, as interactions in consultation are fluid and evolve over time. For these purposes, methods of structured observation would allow for a 'freezeframe' of behaviour in consultation, but it is difficult to make inferences about what is occurring in consultation from this alone (Robson, 2014).

4.3 Observing Interaction – Taking a Sequential View

The systematic study of communication has a long history in psychotherapy process research. This field of study was first pioneered by Carl Rogers with his innovative use of early recording technology to explore process and outcome during the 1940s and 50s (Elliott & Farber, 2010). Behaviour coding has also been applied to capture the sequential dependencies between behaviours, known as Sequence Analysis (SA). SA is an approach to collecting and analysing observational data in a way that preserves sequential information. There is a rich history of this kind of observation to collect data on 'real' behavioural sequences in psychology (Bales, 1951). SA can be performed to make use of - and illuminate – the dynamic nature of interactions (Bakeman & Gottman, 1997). A nonsequential analysis (e.g. structured observation) can produce informative frequency counts, but only a sequential analysis can shed light on interactions as they unfold in time (Bakeman & Quera, 2011). Typically, an observational study involves two steps. First, observers code behaviour for a session. Second, summary statistics are derived from the data. When behaviour is observed and coded continuously, sequential data is captured, and researchers can note occurrences and identify patterns in the data (Bakeman & Gottman, 1997). One example of this methodology in the field of MI, is a study of potential mechanisms of change in motivational interviewing (Laws et al., 2018).

Like in other observational approaches, the coding scheme and its development is crucial in SA. As part of this process, the researcher identifies behaviours that are theoretically meaningful, and records them using streams of representative codes (Martin & Bateson, 2007). If the behaviour patterns in a sequence are mutually exclusive (e.g. only one can occur at any one time), then recording the sequence involves noting down each occurrence. In reality, sequences of behaviour are variable and predictable to some extent. These sequences are known as

probabilistic sequences (Ivanouw, 2007). Sequential analyses may range in complexity from lag-sequential techniques to hidden Markov models (Ivanouw, 2007). Markov analysis is a method for distinguishing whether a sequence is random or contains some level of order. A first-order Markov process is one in which the likelihood of the next behaviour depends only on the behaviour immediately preceding it. This is known as a lag-one analysis. If the likelihood depends upon two preceding behaviours, then the process is described as second-order analysis (lag-two). The more complex the analyses, the more data they require to perform.

In SA, sequences are analysed by comparing the actual number of times each transition occurs with the number of such transitions that would be expected if the sequence were random. The conditional probability that one behaviour pattern follows another is referred to as a transition probability. To test whether a sequence is nonrandom, a transition matrix is constructed, showing the actual transition probabilities. The transition matrix can then be used to identify the possibility of predicting the next code from a preceding code by testing for 'regularities' in the matrix (Ivanouw, 2007). To do this, the researcher conducts tests for independence. A chi square-test can be used, but some authors have advocated for the use of, the g^2-test, based on likelihood ratio (Ivanouw, 2007). If there is some regularity in the transition table and so in the sequence of behaviours, the researcher can look for transitions that have significantly higher transition probabilities than expected. This may be done by calculating the residuals for each of the cells in transition frequency matrix. These show how much the individual cells differ from the independence assumption. Residuals can be calculated to calculate a type of standard scores, z-scores (Bakeman & Gottman, 1997). Individual cells with z-scores numerically greater than 1.96 are regarded as statistically significant at the 5% level. Transitions that meet this criterion indicate transitions of interest (Ivanouw, 2007).

4.3.1 Study Purpose and the Rationale for Sequence Analysis

The empirical literature on consultation has been criticised for not being an authentic reflection of consultation in applied practice (Henning-Stout, 1994). As a result, there has been a call for more "real world" research examining the processes of consultation in situ. As earlier discussed, observational measurement is often the method of choice when naturalistic behaviour is of interest and when processes are the focus (Bakeman & Gottman, 1997). It is argued that by preserving the temporal sequence of behaviours, SA permits the analysis of reciprocal interactions between consultant and consultee in school-based consultations, which can help to explore process, identify mechanisms of action, and potentially improve delivery and outcomes. In respect of the research questions in this study, SA was considered a useful approach as it permitted the exploration of the kinds of motivational talk that occurred in consultation through the behaviour coding process (Research Question 1). Secondly, SA allowed the researcher to capture consultation as a dynamic process, and explore how the talk in consultation functions as part of an ongoing interaction, particularly EP talk and teacher response (Research Question 2). Finally, motivational talk that occurred in the consultation could be examined to see how it associates with measures of teacher self-efficacy (Research Question 3).

4.4 Research Design

In this section, a description of the research design is provided, including sampling methods, gaining access, sample size, participant characteristics, data collection, and ethical considerations.

4.4.1 Sample

When selecting a sample of research participants, researchers need to consider: sampling methods, the representativeness of the sample, access to participants and sample size (Cohen, Manion & Morrison, 2009) Each factor is now considered in relation to sample in this study.

Sampling Method

In the present study, the researcher used purposive sampling. This involved identifying the settings, and individuals where (and for whom) consultations were most likely to occur (Denzin & Lincoln, 2000). However, it is important to note that while this approach to sampling is pragmatic, purposive sampling can limit the representativeness of the sample and as a result the generalisability of findings (Mertens, 2005; Robson, 2014).

Gaining Access

As a Trainee Educational Psychologist working within a local authority, the researcher was in a position to approach educational psychology colleagues regarding access to consultations occurring as part of routine practice. Initial invitation letters (see Appendices) were emailed to Principal Educational Psychologists across 3 local authorities in the East Midlands and North West of England.

Sample Size

Sample size is an important issue that must be addressed clearly. In applied practice, consultations are delivered by a range of educational psychologists. As a result, it was thought that heterogeneity of participants would be a strength of the study. The researcher hoped to have a sample that would be enough to observe variability and permit a meaningful analysis of their

contribution to outcomes, but small enough to allow for a detailed analysis (Schensul & LeCompte, 1999). In addition to this, the researcher was acutely aware of the demands of parsing, transcription, and coding in SA, thus, the decision to use a small sample was largely pragmatic. The researcher initially intended to observe and record 3 consultations. However, due to limited uptake, the current study features data derived from two consultations in total. Despite the small sample size, a sufficient number of utterances (n = 1610) were observed across the interactions to perform the sequential analyses. Naturally, the sample size has implications for the generalisability of the findings. However, this study was a preliminary, exploratory study, the main purpose of which was to find out what is happening in the talk in consultation, as a potential precursor to subsequent further study of the insights obtained. Furthermore, SA draws upon the number of state transitions, rather than upon the sample number per se, making the data here of a robust sample size.

Participant characteristics

The total participant sample (n = 4) included two primary school teachers, and two educational psychologists from local authorities in the North West of England, and the East Midlands. Table 6 below details EP demographic information, including: EPS model of service delivery, role, years in role, consultation training/experience, psychological theory/approach to consultation, and how often (%) they used consultation in their work).

Table 6.

Demographic Information of Educational Psychologist Participants

	Consultant 1	Consultant 2
Model of Service Delivery	Local Authority non-traded EPS in the North West of England	Fully-traded Local Authority EPS in a city with high levels of deprivation in the East Midlands
Role within EPS	Educational Psychologist (previously with specialism in behaviour)	Full-time main grade EP
Years in Role	18 years	2 years post-qualification from the doctoral training course
Consultation Experience/Training to date	Training during masters/research Previous experience supporting the development of group consultation process in Local Authority	Developed skills through modules on doctoral training Experience using consultation with school staff, parents and a range of other professionals to collaboratively develop feasible intervention plans and facilitate problem-solving
Experience/Training in MI	No formal training in MI	Taught input on MI as part of doctoral training
Psychological theories/frameworks informing consultation practice	Attuned Interaction approaches (e.g. VIG) Vygotsky Rogerian ideas around empathy, compassion and unconditional positive regard Strengths-based approaches	Wagner's model of consultation Interactionist and eco-systemic frameworks Solution-focused Approaches
Self-reported time spent using consultation in role (%)	10%	80%

4.4.2 Data Collection

Identified consultations between educational psychologists and teachers were observed and audio-recorded by the researcher. Consultation 1 was delivered face-to-face, and Consultation 2 was delivered by videoconferencing software, Microsoft Teams. As naturalistic studies, duration of the consultations varied between 60 – 90 minutes. Audio-recordings were transcribed by the researcher. Pre- and post- scaling measures of teacher self-efficacy were completed, and teachers responded to a brief questionnaire about what they found helpful in the consultation.

4.4.3 Ethics

From the outset of this study, considered thought was given to the ethical aspects of the research. Prior to the research taking place, the researcher received ethical approval from the University of Nottingham Ethics Committee. The Ethical Risks Checklist was completed, and the study was conducted in accordance with the ethical guidelines outlined within the British Psychological Society Code of Human Research Ethics (2014). Ethical considerations are detailed throughout the next section, including informed consent, right to withdraw, non-maleficence, and anonymity.

Informed Consent

Informed consent concerns a participant's autonomy, right to freedom and self-determination (Cohen, Manion & Morrison, 2018). Self-determination requires that all participants have the right to weigh up the risks and benefits of taking part in a study and decide for themselves whether they would like to participate. Following from this, a person has the right

to refuse to take part, or to withdraw once the research has begun. (Cohen, Manion & Morrison, 2018). In the present study, observation and audio-recordings were only recorded and transcribed for those participants who had given fully informed written consent to take part in the research. Although there was no direct involvement of a child in this study, since they were to be the subject of the consultation, parental consent was essential. Consent forms are presented in Appendices. All participants were given the option to stop the recording of the consultation without giving explanation as to why. Participants were informed that they have the right to withdraw consent within the consent forms. All participants were offered a debrief and the researcher's contact details.

Non-maleficence

'First of all, do no harm' is a guiding principle in research. Research should not harm participants physically, psychologically, or emotionally in any way. Non-maleficence requires the researcher to consider the potential consequences of participation in a study. Hammersley and Traianou (2012) suggest that all research involves some risk of harm, just as in everyday life, but the task of the researcher is to minimize this risk. In the present study, the child at the focus of the consultation might have been considered to be vulnerable, however, this was not arising as a result of research, and the consultation was naturally occurring within the routine work of an EP. Typical protocols and procedures were be followed in line with the Local Authority Educational Psychology Service guidance, the British Psychological Society's Code of Ethics and Conduct (BPS, 2018), and the Health and Care Professions Council Standards of Proficiency for Practitioner Psychologists (HCPC, 2015). The act of being recorded and observed during consultation may have potentially contributed to a sense of embarrassment, or failure. All

consultations were therefore held in a confidential space, and all participants were informed that they had the right to withdraw from the study.

At the outset, all participants were informed that this study would be exploring the role of the interaction between EPs and teachers in consultation. Following analysis, participants were offered a thorough debrief which demonstrated how their data had been analysed through the lens of Motivational Interviewing using the adapted version of the MI-SCOPE (see below).

Anonymity

The essence of anonymity is that information provided by participants should in no way reveal their identity (Cohen, Manion & Morrison, 2018). A participant is considered anonymous when the researcher or another person cannot identify the participant from the information provided. One way to ensure anonymity is to remove any means of identification. In this study, the researcher anonymised data at the point of transcription. Additionally, all data was kept confidentially, stored in line with GDPR regulations, and used solely for research purposes. A copy of the GDPR participant privacy notice can be found in the appendices.

4.5 Analysis Procedure

In this section, a description of the analysis procedure is detailed, including: coding schedules, parsing, coding adaptations, and the coding of the data in the present study. This is followed by an outline of the SA process and statistical analyses. Each of these will be discussed, in turn, below.

4.5.1 Coding Schemes

Coding schemes in observational research are analogous to the lens in microscopes, in that they both limit and focus what the observer sees (Bakeman & Gottman, 1997). The importance of coding schemes when observing interactions cannot be understated. Researchers should continually ask themselves, exactly what questions they want to answer, and how their method of coding helps to answer those questions (Bakeman & Gottman, 1997). Coding schemes consist of categories that observers assign to the observed behaviour. Coding schemes can be adapted from others with similar theoretical concerns and assumptions or developed from scratch (Keatley, 2018). Codes are organized into mutually exclusive and exhaustive categories - this means that behaviour codes cannot occur at the same time, and that all behaviours are assigned a code. Like a photograph, coding schemes vary in their resolution, from finer-grained to coarser-grained (Bakeman & Gottman, 1997). A highly specified coding schedule can produce a detailed 'snapshot'. These highly specified codes can then be merged to form collapsed categories for the sequential analysis stage with relative ease. However, it is more difficult to attempt to expand upon a vague coding scheme if this was used at the outset (Keatley, 2018).

4.5.2 The Motivational Interviewing Sequential Code for Observing Process Exchanges (MI-SCOPE; Martin et al., 2005)

The Motivational Interviewing Sequential Code for Observing Process Exchanges (MI-SCOPE; Martin et al., 2005) is a sequential coding scheme that was developed to measure transition probabilities between therapist and client behaviour during MI sessions. Elements of the MI-SCOPE were derived from the Motivational Interviewing Skills Code (MISCv. 2.0; Miller, Moyers, Ernst, & Amrhein, 2003). In total the MI-SCOPE includes forty-six mutually exclusive

and exhaustive behaviours: 30 for the therapist and 16 for the client. Elements specific to MI (e.g., emphasis on client control and motivational statements from clients), as well as those common to most therapies (e.g., questions, reflections, giving information, and client questions), are represented in the MI-SCOPE. For the present study, the MI-SCOPE was seen as a useful observational schedule, as it offered a rich coding framework that could be used to explore consultations through the lens of MI.

4.5.3 Parsing, coding, and analysis

The process of analysing in sequence analysis involves three key steps: parsing the episode into utterances, coding the data/collapsing codes, and performing the sequential analyses (Keatley, 2018). This next section will outline each of these stages as they were carried out in this study.

Parsing

This stage involved creating the 'units' of behaviours and events in preparation for the sequence analysis (Keatley, 2018). In linguistic SA, the basic unit of coding is the utterance. An utterance is a complete thought, or a thought unit. The parsing of transcripts included slowly reading/ and making decisions as to where to draw a line on the transcript. The first step in the analysis of the consultation data involved parsing the entire transcript into individual utterances. According to the guidelines, the MI-SCOPE is a two-pass coding scheme, with one pass for parsing the transcript into utterances and a subsequent pass for coding the utterances (Martin et al., 2005).

Coding

After the parsing pass was complete, the coding was done in a separate pass through the audio-recording. Coding in the present study was carried out by the researcher, supported by research supervision, and a fellow doctoral student at the University of Nottingham. Both coders were familiar with MI and consultation in educational psychology and had previously participated doctoral training sessions and tasks. Both coders carried out coding exercises on a series of sample extracts from transcripts prior to the final coding pass. As part of this, coders undertook regular discussions to tease out any problematic codes. As a result of these discussions, it became apparent that there was a need to account for the differences between MI sessions and school-based consultations, and some adaptations to the MI-SCOPE coding scheme were necessary to ensure fitness for purpose.

Typically, the MI-SCOPE emphasises identifying an explicit target behaviour (e.g. smoking cessation) and change talk is monitored against this target throughout the observed session. In the context of school-based consultation, it was necessary to expand the category of change talk to capture change in its broadest sense. Teacher (consultee) statements with an inclination toward or away from enacting change were coded as change or counter-change talk (e.g. DARN, TS, C, CCT +/-; see Table 7 below). A further change talk category was included – Child Change Talk (CCT+/-) – to account for utterances that focused upon changes noticed in the behaviour of a focus child. In addition to this, an additional category was included to account for talk that was judged to be neither toward or away from change, but reflected what might be considered general 'problem description (PD)', a core feature of consultation. During the coding process, and in discussion with the second coder, it was apparent that there was distinct overlap between the codes Emphasise Control and Permission Seeking, and Affirmation and Support as

they occurred in the data. Thus, for simplicity, these categories were merged to form one code that encompassed both sets of events. These codes were seen as MI-consistent within the empirical MI literature, and thus, this was considered to be a feasible change.

The researcher opted to retain as much specificity in the coding categories as possible, as this detail may be informative in understanding what is happening in the back and forth talk between teachers and EPs in consultation. Simpson and Tuson (1995) suggest that researchers should ensure that coding categories include a range of behaviours of interest for observation, and that the descriptors adequately describe the 'range of possibilities '(p. 43) in the item for observation. In addition to this, sufficient specification of what and how to observe is given to researchers for completing the observational schedule, such that two observers complete the schedule of the same behaviour in the same way.

When coding, utterances were only ever assigned one code. In some instances, two events in succession merited the same code (e.g. an affirmation followed by an affirmation). As such, there are some instances of repeating codes in the data. These codes were only coded as separate events when the successive code contained a different idea from the code preceding it. This meant that, if two utterances were essentially the same idea this was coded only once. If two utterances merited the same code, but contained distinctly different ideas, these were coded in succession.

The final coding schedule as used in this study is presented in the tables below. The tables detail consultant (Table 7) and consultee (Table 8) codes, coding abbreviations, and a description of categories with examples.

Table 7.

Consultant Behaviour Coding Schedule

Consultant Code	Abr.	Description
Advise	*Adv*	Gives advice, makes a suggestion, or offers a solution or possible action. These will usually contain language that indicates that advice is being given: Should, Why don't you, Consider, Try, Suggest, Advise, You could, etc.
Affirm	*Aff*	The consultant says something positive or complimentary to the consultee e.g. comments favourably on a trait, attribute, or strength of the consultee, encouraging or "applause" statements. Includes praise and supportive statements
Direct	*Dir*	Gives an order, command, direction. The language is imperative e.g. "You need to..." "I want you to …" "You have to..." "You must...."
Emphasise Control	*Econ*	Directly acknowledges or emphasizes the consultee's freedom of choice, autonomy, ability to decide, personal responsibility, etc. Example include: e.g. "What do you think?" "Have I got that right?" In the present study, statements that request permission from the consultee to speak were also coded as Econ. This may be direct or indirect. For example: "Could I suggest something here?", "I'm wondering…", "This may or may not apply to you…"
Filler	*Fill*	Filler (Fill). This is a code for the few responses not codeable elsewhere.
Facilitate	*FA*	These are simple utterances that function as keep going acknowledgments. "Mm" "Right" "Tell me more" "I see"
Give Information	*GI*	Straightforward information without added opinion or attempt to persuade the client to a particular point of view. Coders should not try to assess the truth value of the information.
Closed Question	*CQ*	The question implies a short answer: Yes or no, a specific fact, a number, etc.
Open Question	*OQ*	Questions that are not closed questions, which leave latitude for response.
Opinion	*Op*	Provides information in a subjective fashion, often with the goal of supporting an argument being made or persuading to a point of view.
Simple Reflection	*SR*	These reflections add little meaning or emphasis to what the consultee is saying. They do not change substantially the consultee's intended meaning

Consultant Code	Abr.	Description
Complex Reflection	*CR*	These reflections add significant meaning to what the consultee has said. This may be accomplished in a variety of ways, but the essential feature of a complex reflection is the injection of emphasis or content to make the statement more than it was
Structure	*Str*	These are comments that are used to structure the consultation process and explain what is going to happen e.g. "we're here to talk about…"
Confront	*Con*	Directly disagrees, argues, corrects, shames, blames, seeks to persuade, criticizes, judges, labels, moralizes, ridicules, or questions the consultee's honesty.
Feedback	*FB*	Presents information that is personal to the client, in an objective and unbiased fashion. The information is presented without apparent attempt to persuade and the client is invited to draw his or her own conclusions from the data.
Self-Disclosure	*Sdis*	This is information given to the client about the consultant. It includes disclosure of past events and experiences, as well as expression of the consulant's present feelings or personal reaction to the consultee.
Raise Concern	*RC*	Points out a possible problem with the consultee's goal, plan, or intention.
Warn	*Warn*	Provides a warning or threat, implying negative consequences that will follow unless the consultee takes certain action.

Note: Adapted from the MI-SCOPE (Martin et al., 2005)

Table 8.

Consultee Behaviour Coding Schedule

Consultee Code	Abr.	Description
Ask	*Ask*	The consultee requests information, asks a question, seeks the consultant's advice or opinion.
Follow/Neutral	*FN*	The consultee's response follows along with the consultant, but does not deal with changing the target behaviour. The statement is neither toward nor away from the direction of changing the target behaviour.
Desire	*D* *+, -*	A statement that expresses a desire to make a change. For example: "We're keen to put support in place" = D+
Ability	*A* *+, -*	A statement that assesses the consultant's ability or capacity to alter the behaviour. "Ability" here refers to capability, not to choice. Ability includes statements about the feasibility of actions e.g. "That's doable" (A+), "I can do that" (A+), "That won't work in our setting" (A-). This

Consultee Code	Abr.	Description
		also refers to the consultee's knowledge/skills of intervention. Where a teacher is sharing ideas for intervention – this is coded as A+
Reason/Need	*RN* *+, -*	This is a form of commitment language. Statements made by the consultees that voice the reasons/needs for making or sustaining a change
		This might include descriptions of the problem-situation. Some judgement is required on the coder's behalf as to whether the talk is making the case toward or away from change. If the talk is predominantly descriptive, this is coded as Problem Description (PD)
Taking Steps	*TS* *+, -*	A statement that refers to a recent or previous change made by the consultee
		We tried Precision Teaching… (TS+)
		Steps taken e.g. statement referring to interventions/strategies tried in the past. Future actions e.g. "I'm going to…" would be coded as Commitment (C+)
Commitment	*C* *+, -*	A statement that explicitly states or implies that the consultee is making a commitment to change or maintain the behaviour. "I'm going to do that" (C+), "I'm not going to do that" (C-)
		Statements that indicate "I can" might be best coded as Ability. Some judgement needed on behalf of coder to judge spirit of statement in context of preceding utterances/flow of interaction
Child Change Talk	*CCT* *+, -*	A statement that refers to a change in the behaviour of a focus child or young person. These are changes noticed in response to steps taken. "We've done Precision Teaching" (TS+) and "[Young person's] retention has improved" (CCT+), "it didn't work, [child] didn't make any progress" (CCT-). Note the valence of the commitment (positive/ toward change or negative/away from change) with a + or – sign next to the letter.
Problem Description	*PD*	This included statements of problem-description. These statements are neither towards nor away from change – but more informative 'painting a picture'

Note: Adapted from the MI-SCOPE (Martin et al., 2005)

As observers coded, decisions were marked on the transcript with pencil, and were later

transferred to an electronic data file in Microsoft Word. In this study, untimed-event recording

was used. This involved detecting events as they occurred in the stream of the consultation, but

not recording the duration or timings (Bakeman & Gottman, 1997). Listening to the audio-

recordings while parsing and coding was important to ensure that a sense of the interaction in the

consultation was fully captured, as this may not have been adequately reflected in the transcripts

alone (Martin, Moyers, Houck, Paulette, & Miller, 2005). An example of a parsed and coded

extract from the transcript is presented in Table 9 below:

Table 9.

Coded Transcript Extract from Consultation 1

Utterance #	Teacher / EP	Content of Utterance	Code Abbreviation
1	EP	Okay so we're here today to talk about a problem –	Str
2	EP	and I obviously don't know anything about the problem you know an awful lot about the problem	Econ
3	EP	because you're dealing with it I think think every day and so you obviously are a bit of an expert in this	Aff
4	EP	and I might know a bit about psychology and education	GI
5	EP	so we're gonna work together on this if that is okay?	Econ
6	EP	Okay, so if I make suggestions or say things or misunderstand, [teacher name] take it that I just don't know, is that all right?	Econ
7	T	[laughing] Yeah, yeah, yeah, that's fine	FN
8	EP	Okay, all right	FA
9	EP	Do you want to just first of all just tell me a little bit about what you've come to see me about today?	OQ

Table 9. This table presents an extract from a coded transcript

Sequence Analysis

Once recorded, parsed and coded, the data was converted into the Sequential Data Interchange Standard (SDIS) format to represent observational data. The SDIS formatted data enabled analysis by the Generalized Sequential Querier, software (GSEQ; Bakeman & Quera, 2011), designed specifically for the analysis of sequential observational data.

One of the aims of this study was to examine the relationship between EP talk and teacher response in consultation. To address this, the researcher examined associations between utterances at the sequential level. Specifically, the associations explored were transitions between two adjacent utterances. The researcher used the GSEQ to produce a transition frequency matrix. Further statistical analyses were performed based on observed versus expected cell frequencies to produce transition probabilities. The G-squared (g^2; likelihood-ratio chi-square) is a standard goodness-of-fit test for two-dimensional tables (Bakeman & Quera, 2011). As earlier noted, transition probabilities permit direct interpretation of the overall likelihood of a behaviour once another has occurred (Moyers & Martin, 2006). Thus, transition values can be read directly as the likelihood of a sequitur behaviour (e.g. Problem Description) following an antecedent behaviour (e.g. Open Question). For the data set used in this study, transition probabilities allowed the evaluation of the relationship between consultant and consultee behaviors (lag-one) within a consultation. This data set generated 1610 transitions in total. There transitions were unevenly distributed among the categories of the MI-SCOPE. To obtain reliable estimates of transition probabilities, the expected frequency of any transition should be at least 3. To ensure the minimum expected frequency occurrences for most cells in the transition matrix, the

researcher collapsed codes across categories that were theoretically meaningful and fit for

purpose in terms of exploring the research questions (Moyers, Miller, & Hendrickson, 2005).

The formation of these collapsed categories is presented in more detail in Table 15.

4.6 Evaluating Quality

There is a need to be cautious about any causal inferences from an observational study.

However, sequence analysis as a methodology has a number of advantages when used to

examine consultation. Moyers et al., (2009) identified the transition probabilities produced

through sequence analysis as offering stronger support than that of a correlational design.

However, there are also some challenges with SA. Sequential analyses typically examine the

transition between one utterance and the one immediately following (lag-one). As such, first-

order analyses may be limited in capturing the relationship between utterances beyond the one

immediately following the first utterance (e.g. A → B, but not A → B → C), as a result some

transitions of interest may not be captured fully in a lag-one SA, and thus, any findings will need

to acknowledge this.

During the behaviour coding process, the researcher moves from low inference, to a

higher degree of inference (making judgements about events observed). This might introduce a

degree of unreliability into the observation through the halo effect or recency effects.

Hartmann and Wood (1982) refer to observer accuracy as the 'sine qua non' of

observational research, highlighting the importance of accurate coding to support reliability and

replicability. To assess observer accuracy, point-by-point agreement may be helpful. The statistic

most commonly used for point-by-point agreement is Cohen's kappa (Cohen, 1960). Cohen's

kappa is a summary statistic that assesses how well two observers agree when asked to

independently assign codes. Cohen's kappa corrects for agreement due to chance which makes it preferable to percentage agreement, which does not. Factors that affect values of kappa include observer accuracy and the number of codes, as well as codes' individual population prevalence and observer bias (how observers distribute individual codes). In the present study, Cohen's kappa was used to assess for inter-observer agreement to ensure reliable findings (see Results).

The researcher acknowledges that the use of audio and not video recording, excludes much that is interpersonal (e.g. facial expressions, gestures, eye contact) from the data by focusing on verbal interactions, which is just one of several aspects of interpersonal communication relevant to consultation. However, the rationale for this was to avoid unnecessary intrusion which may cause participants to become self-aware, forfeiting the naturalistic nature of the data the researcher was keen to preserve. Furthermore, this study sought to analyse linguistic interactions, only. An asset of sequence analysis is that it allows for examination of 'live' interactions that are representative of the phenomena examined.

4.7 Summary

This study used structured observational methods to gather 'live' data from school-based consultations between educational psychologists and teachers in applied practice. Quantitative methods were prioritised in the sequential analysis. Some qualitative information, including pre and post measures and extracts from the consultation transcripts are used to supplement quantitative findings (Cohen, Manion, & Morrison, 2018). In the present study, the researcher was interested in coding behaviour that occurred in the consultation in a way that that would preserve its sequential nature, to allow for exploration of the research questions of interest.

The first step was to observe and carry out audio-recordings of consultations. The researcher then segmented the stream of talk in consultation into utterances. Each of these utterances were coded using an adapted version of the MI-SCOPE (Martin et al., 2005). This provided a continuous record of how different kinds of talk were sequenced in the consultation. This data was then entered sequentially and analysed using the Generalized Sequential Querier (GSEQ), a program for analysing sequential observational data. The GSEQ was used to calculate descriptive statistics and transition probabilities. The results derived from this data are presented in the next section.

5. Results

Results are presented in this section. Firstly, inter-rater reliability scores are detailed. Following this, frequency analyses and descriptive statistics derived from the observational data are shown. These include frequency counts, pre- post scaling measures, and MI-SCOPE summary scores. The next step was to perform the sequential analysis. This involved counting how many times transitions between events occurred in the dataset. The results from the SA are presented in a transition frequency matrix. The results from statistical analyses (g2) as performed upon the transition frequency matrix are presented. Those with sufficiently strong relationships are then depicted in a state transition diagram. Finally, a summary of the results is provided, in relation to the research questions.

5.1 Inter-rater Reliability

The adapted form of the SCOPE (Martin et al., 2005) was used to code consultations between an EP and a teacher. The coding was assessed for inter-rater reliability using Cohen's Kappa. Inter-rater reliability was maintained via meetings in which both coders discussed problematic items and resolved rating discrepancies. A 25% subsample of consultation transcripts were selected to be independently rated for inter-reliability: after initial coding, a segment of 403 utterances was chosen and assigned to the second coder. Kappa scores were computed using the GSEQ. Cohen suggested the Kappa result be interpreted as follows:

Table 10.

Kappa Interpretation for Inter-rater reliability (Cohen, 1960)

Value of Kappa	Level of Agreement	% of Data that are Reliable
0-.20	None	0-4%
.21-.39	Minimal	4-15%
.40-.59	Weak	15-35%
.60-.79	Moderate	35-63%
.80-.90	Strong	64-81%
Above.90	Almost Perfect	82-100%

Table 10. This table presents kappa interpretation values

For the coding of utterance-level data, the mean kappa (κ) statistic was 0.89, which indicated strong overall agreement (Cohen, 1960). In respect of the interpretation indicated in Table 10, this would suggest that 64 – 81% of the data could be considered reliable, overall. A breakdown of the individual kappa scores for each code is presented in Table 11. Of the individual codes, only two (Problem Description and Ability) fell below the threshold for strong agreement. Nonetheless, both codes indicated a moderate level of agreement and thus indicate a sufficient level of reliability.

Table 11.

Kappa Inter-rater Reliability Scores for Individual Event Codes

	Code	**(κ)**
Consultant	Advise	0.92
	Affirm	0.96
	Closed Question	0.91
	Complex Reflection	0.91
	Direct	1.0
	Simple Reflection	0.87
	Emphasise Control	0.98
	Facilitate	0.97
	Give Information	0.91
	Opinion	0.93
	Open Question	0.9
	Problem Description	0.68
Consultee	Follow Neutral	0.97
	Desire+	0.86
	Ability+	0.67
	Reason/Need+	0.84
	Reason/Need-	0.83
	Taking Steps+	0.9
	Child Change Talk-	0.87
	Child Change Talk+	0.9

Table 11. This table presents inter-rater kappa scores for individual event codes

5.2 Descriptive Statistics and Frequency Analyses

To gain insight into the events that occurred during the consultations, the researcher completed frequency analyses. Table 12 shows the frequency counts for both consultations side by side.

Table 12.

Frequency Counts of Behaviour Codes in Consultation 1 and 2

		Consultation 1	Consultation 2
	Behaviour Codes	Frequency	Frequency
Consultant	Advise	50	8
	Affirm	28	45
	Closed Question	40	6
	Complex Reflection	25	48
	Direct	5	0
	Emphasise Control	54	16
	Facilitate	85	176
	Filler	2	6
	Structure	2	2
	Give Information	39	15
	Open Question	14	23
	Opinion	31	9
	Simple Reflection	36	20
Consultee	Change Talk	135	239
	Counter-Change Talk	31	14
	Follow Neutral	159	78
	Ask	15	4
	Problem Description	63	87

Table 12. This table presents the total frequency counts for Consultation 1 and Consultation 2

Examples of the codes as they occurred during consultation are presented in Table 13 below in their qualitative form to provide the reader with a richer sense of the data.

Table 13.

Qualitative Examples of Codes in the Consultations

		Qualitative Extract from Consultation Transcripts
	Behaviour Codes	
Consultant	Advise	*EP: maybe just a yeah get that detailed in certainly wants to look at where his social skills are up to and what intervention we want want to look at*
	Affirm	*EP: Absolutely and you know, you do that so well [teacher] you know you as a SENCo and you as a school you do keep [child] very much at the forefront of your priorities, which is you know, really lovely*
	Closed Question	*EP: so is that still something you might hope to look into next year?*
	Complex Reflection	*EP: Right yeah absolutely, and sounds like you've had experience of that benefitting a lot of children's wellbeing in the past*
	Direct	*EP: so still do that but then do another angle on it, it's very multisensory isn't it where she's making a c and then we're gonna check her fluency anyway aren't we yeah on precision teaching*
	Emphasise Control	*EP: Is that something we could think about do you think as well?*
	Filler	*[inaudible disruption] "Sorry, can you hear me okay?"*
	Facilitate	*EP: Mmm*
	Structure	*EP: okay so we're here today to talk about a problem*
	Give Information	*EP: yeah so that the purpose of that would be for him to start building that that relationship with his new class teacher*
	Open Question	*EP: is there anything else you'd add to that that might help that to happen for him to get him where we're wanting to get to?*
	Opinion	*EP: Well at the moment she's just copying the sequence of the play which I'm not saying I think that's quite good because we're building sequencing skills in my head*

		Qualitative Extract from Consultation Transcripts
	Simple Reflection	*EP: I'm hearing a lot about your transition planning*
Consultee	Change Talk	*TEACHER: and I've noticed the difference so I was in but we've had this training [Change Talk: Taking Steps], we know it works, you know, we had children who were doing it last year and it and we know it can benefit [Change Talk: Reason/Need], so I will be definitely pushing for that that next year [Change Talk: Commitment]*
	Counter-Change Talk	*TEACHER: just thinking I'm not sure how much, it's gonna take me a long time to try out a lot of these things*
	Follow Neutral	*TEACHER: Yes*
	Ask	*TEACHER: yeah and I guess in terms of your ideas for achieving some of those steps, if we were to think about sort of our actions from this morning where what what might we want to look at do you think*
	Problem Description	*TEACHER: because [child] has a tendency to get upset, angry, cross and display his emotions as any child would through behaviour that is not the behaviour that people would want to see*

The frequency data was then transformed into pie charts to offer a visual overview of the composition of each consultation in terms of overall behaviour codes, consultant codes, consultee codes, consultee change and counter-change talk. These are presented in the next section.

Frequency Analysis of Consultation 1

Figure. 4

Total Frequency of Consultant and Consultee Codes in Consultation 1
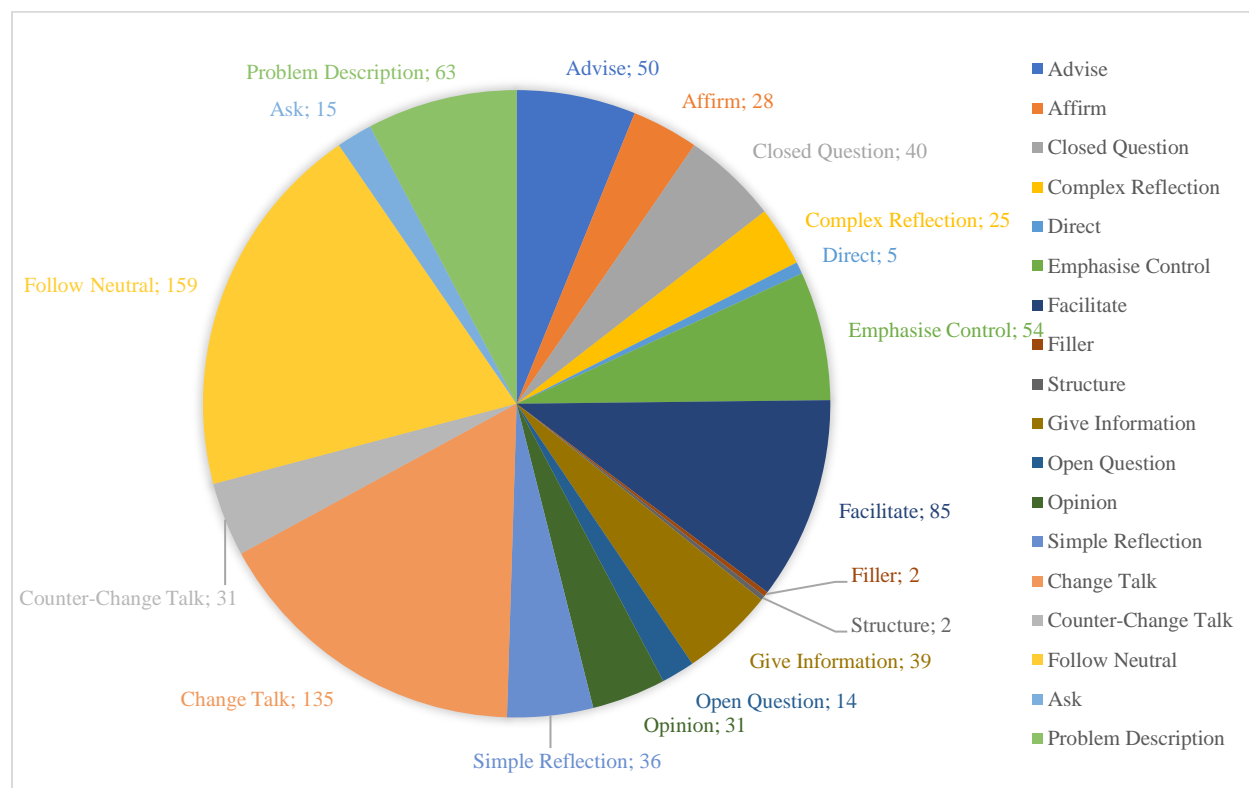
Figure 4. This figure presents the total frequency counts for Consultation 1 including both consultant and consultee codes.

A significant variety of types of talk occurred in the consultation. As seen in Figure 4, the most frequently occurring codes in Consultation 1 were Follow Neutral (n = 159), Change Talk (n = 135), and Facilitate (n = 85). The least frequently occurring codes were Structure (n = 2), Filler (n = 2), and Direct (n = 5).

Figure 5.

Total Frequency of Consultant Codes in Consultation 1
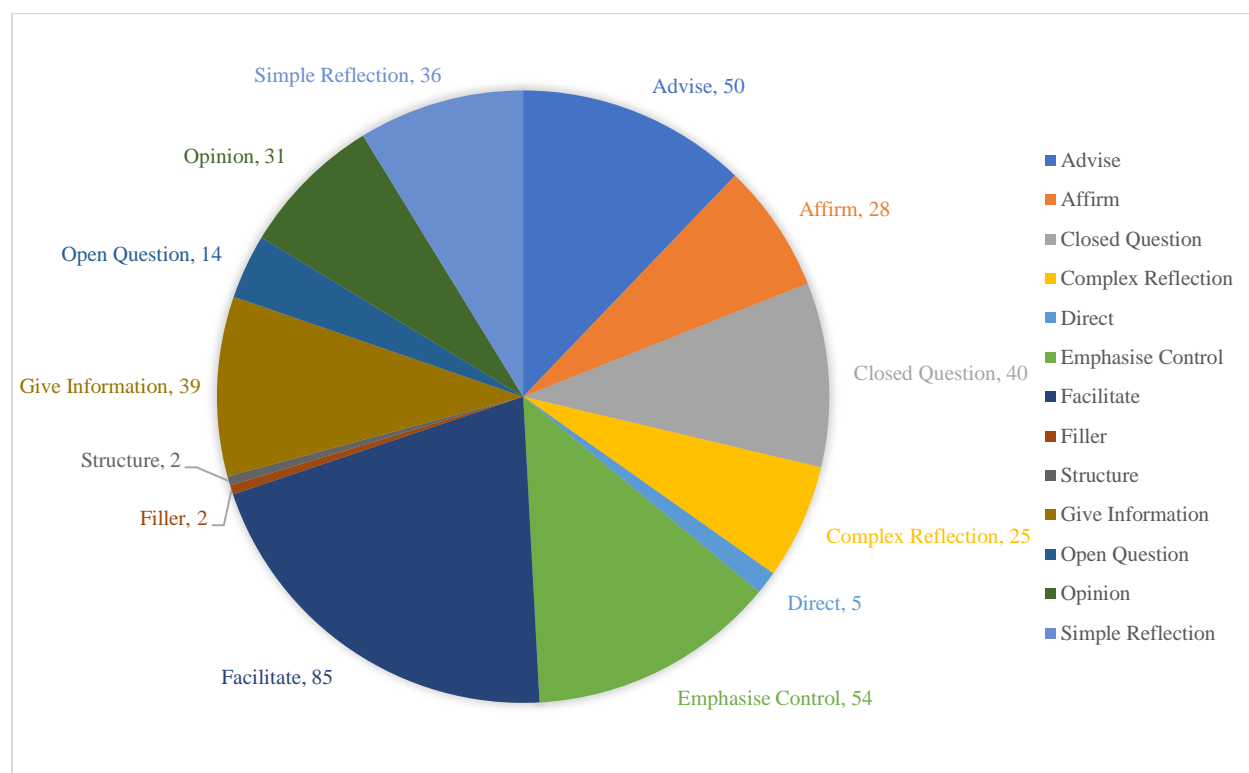
Figure 5. This figure presents the frequency counts for all consultant codes occurring in

Consultation 1

Figure 5 shows the total frequency counts for consultant event codes occurring during

Consultation 1. The most frequently occurring consultant codes in Consultation 1 were Facilitate

($n = 85$), Emphasise Control ($n = 54$), and Advise ($n = 50$). A number of consultant event codes

that might be considered to be consistent with MI were observed, including the use of

affirmations (Affirm, $n = 28$), statements that emphasise control ($n = 54$), and reflections

(Complex Reflection, $n = 25$; Simple Reflections, $n = 36$). Some consultant event codes that

might be viewed as inconsistent with MI were also observed, including Advise ($n = 50$), Opinion

($n = 31$), and Direct ($n = 5$).

Figure 6.

Total Frequency of Consultee Codes in Consultation 1

Figure 6. This figure presents the frequency counts for all consultee codes occurring in

Consultation 1

Figure 6 shows the total frequency counts for consultee event codes occurring during

Consultation 1. The most frequently occurring consultee codes in Consultation 1 were Follow

Neutral (n = 159), Change Talk (n = 135), and Problem Description (n = 63). Change Talk (n =

135) appeared to outweigh Counter-Change Talk (n = 31). The last frequently occurring

consultee code was Ask (n = 15).

Figure 7.

Expanding Consultee Commitment Language (+/-) in Consultation 1
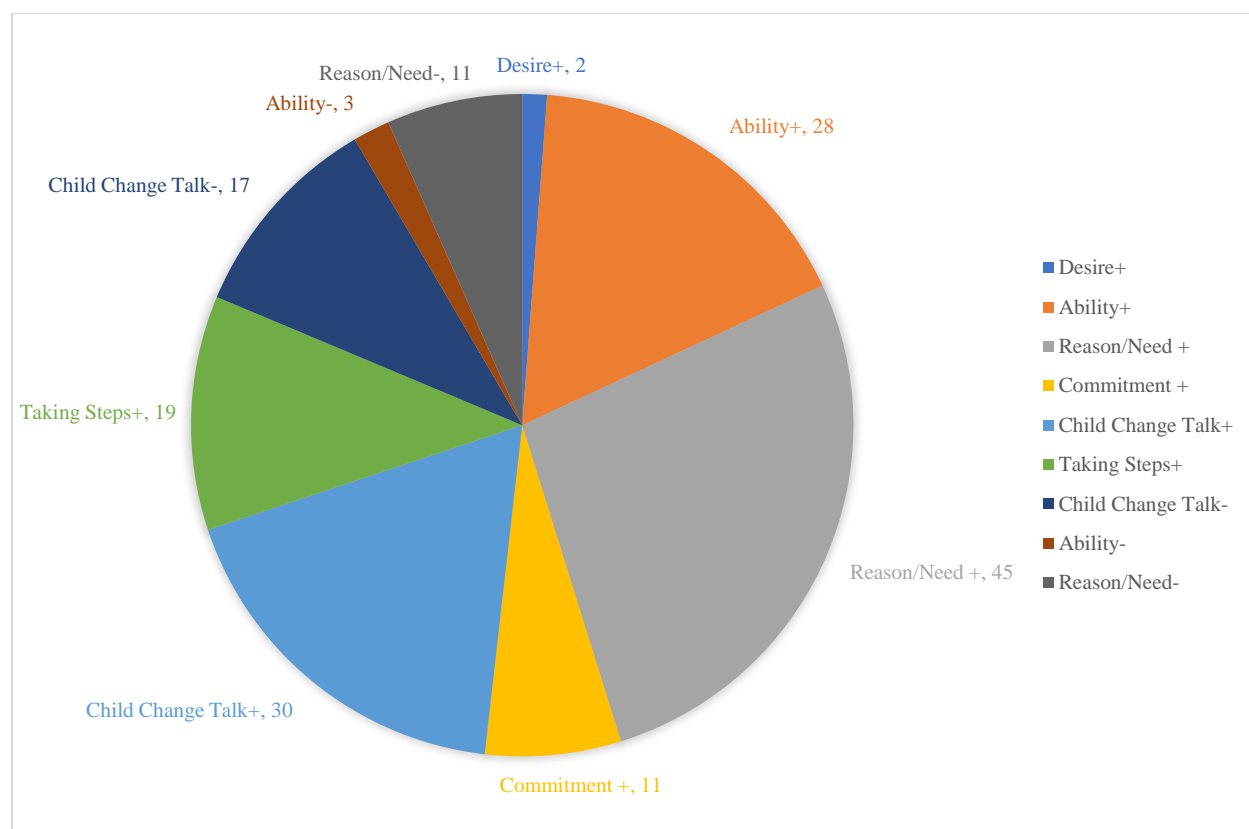
Figure 7. This figure presents the frequency counts for all consultee change or counter-change talk occurring in Consultation 1

For visual simplicity, change or counter-change talk (Desire, Ability, Reason/Need, Commitment, Child Change Talk, and Taking Steps +/-), were earlier presented in their collapsed form as two categories of Change Talk (CT) and Counter-Change Talk (CCT). Figure 6 shows the expanded categories of change and counter-change talk occurring during Consultation 1. The most frequently occurring change or counter-change talk was made up of Reason/Need+ (n = 45), Child Change Talk+ (n = 30), and Ability+ (n = 28). The least frequently occurring change or counter-change talk, was Desire+ (n = 2), Reason/Need- (n = 11), and Ability- (n = 3).

Frequency Analysis of Consultation 2

Figure 8.

Total Frequency of Consultant and Consultee Codes in Consultation 2
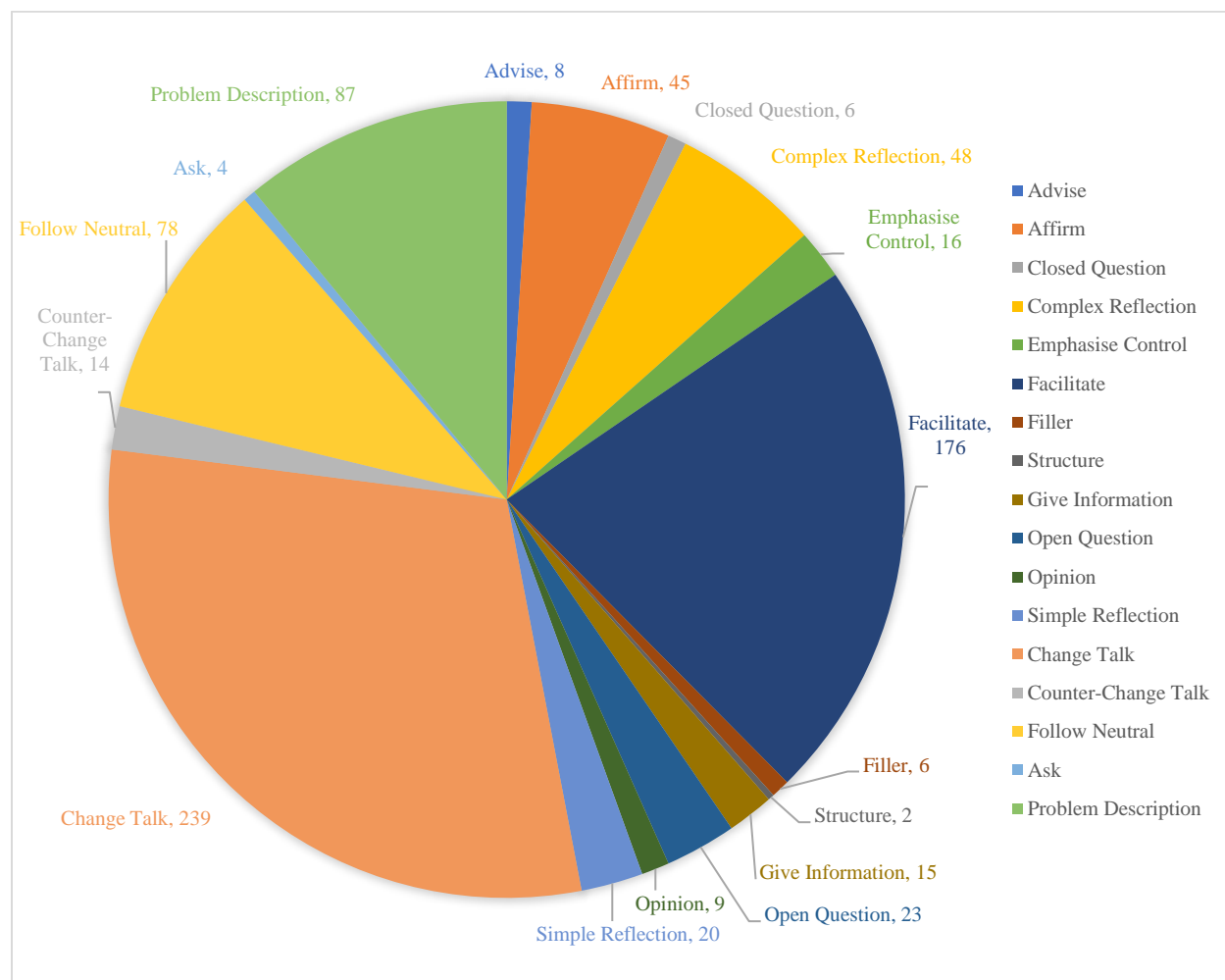
Figure 8. This figure presents the total frequency counts for Consultation 2 including both consultant and consultee codes

     As seen in Figure 7, the most frequently occurring codes in Consultation 2 were Change Tak(n = 239), Facilitate (n = 176), and Problem Description (n = 87). The least frequently occurring codes were: Structure (n = 2), Ask (n = 4), and Filler/Closed Question (n = 6).
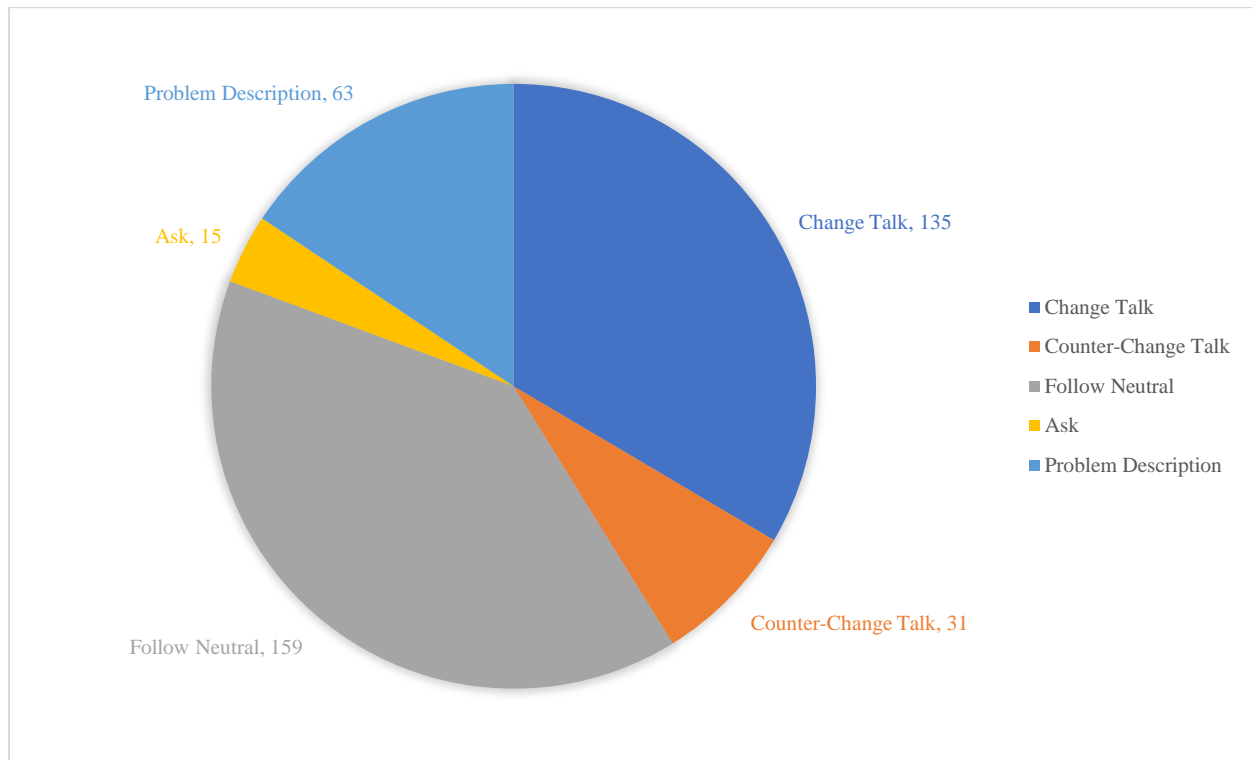
Figure 9.

Total Frequency of Consultant Codes in Consultation 2
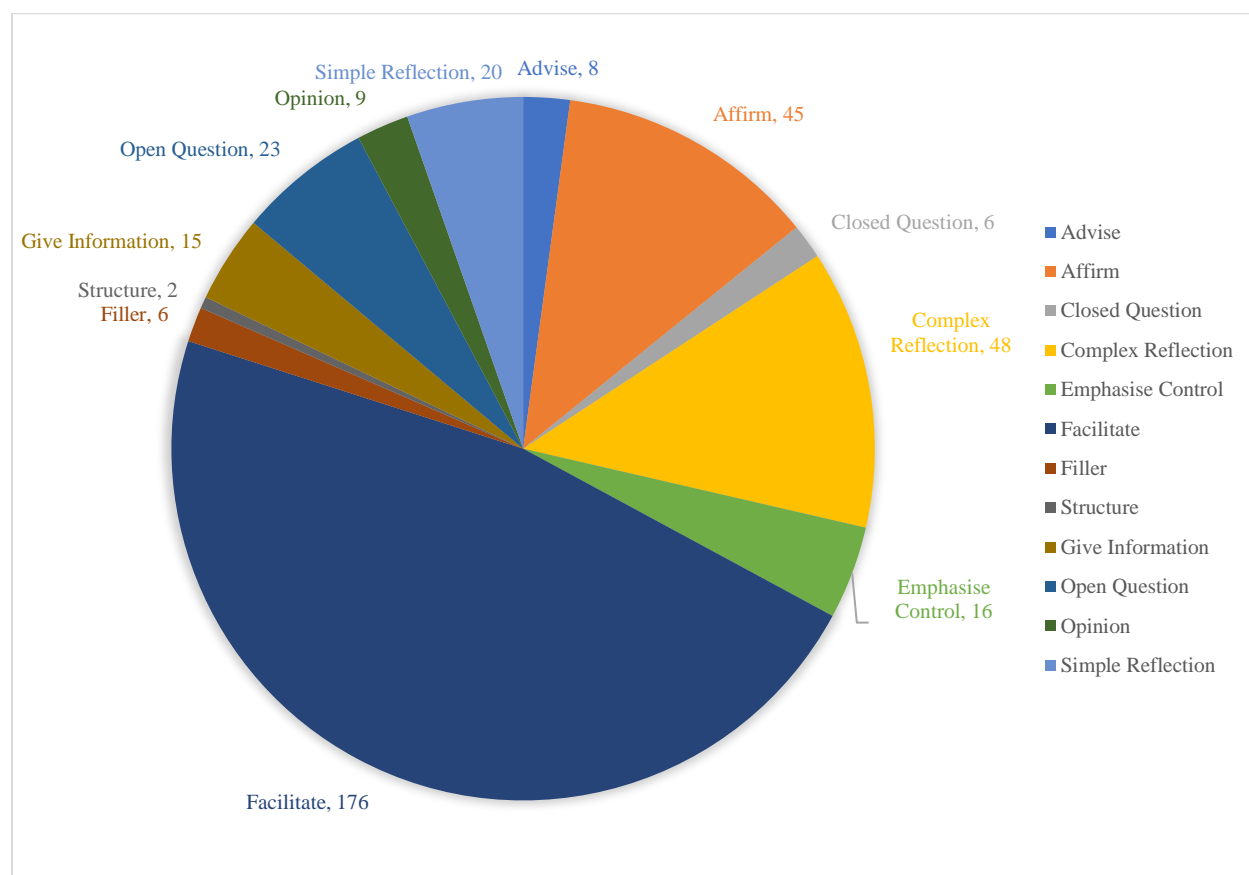
Figure 9. This figure presents the frequency counts for all consultant codes occurring in

Consultation 2

Figure 9 shows the total frequency counts for consultant event codes occurring during

Consultation 2. The most frequently occurring consultant codes in Consultation 1 were Facilitate

(n = 176), Complex Reflection (n = 48), and Affirm (n = 45). A number of consultant event codes

that might be considered to be consistent with MI were observed, including the use of

affirmations, statements that emphasise control, and reflections. Some consultant event codes

that might be viewed as inconsistent with MI were also observed, including Advise (n = 8), and

Opinion (n = 9).

Figure 10.

Total Frequency of Consultee Codes in Consultation 2
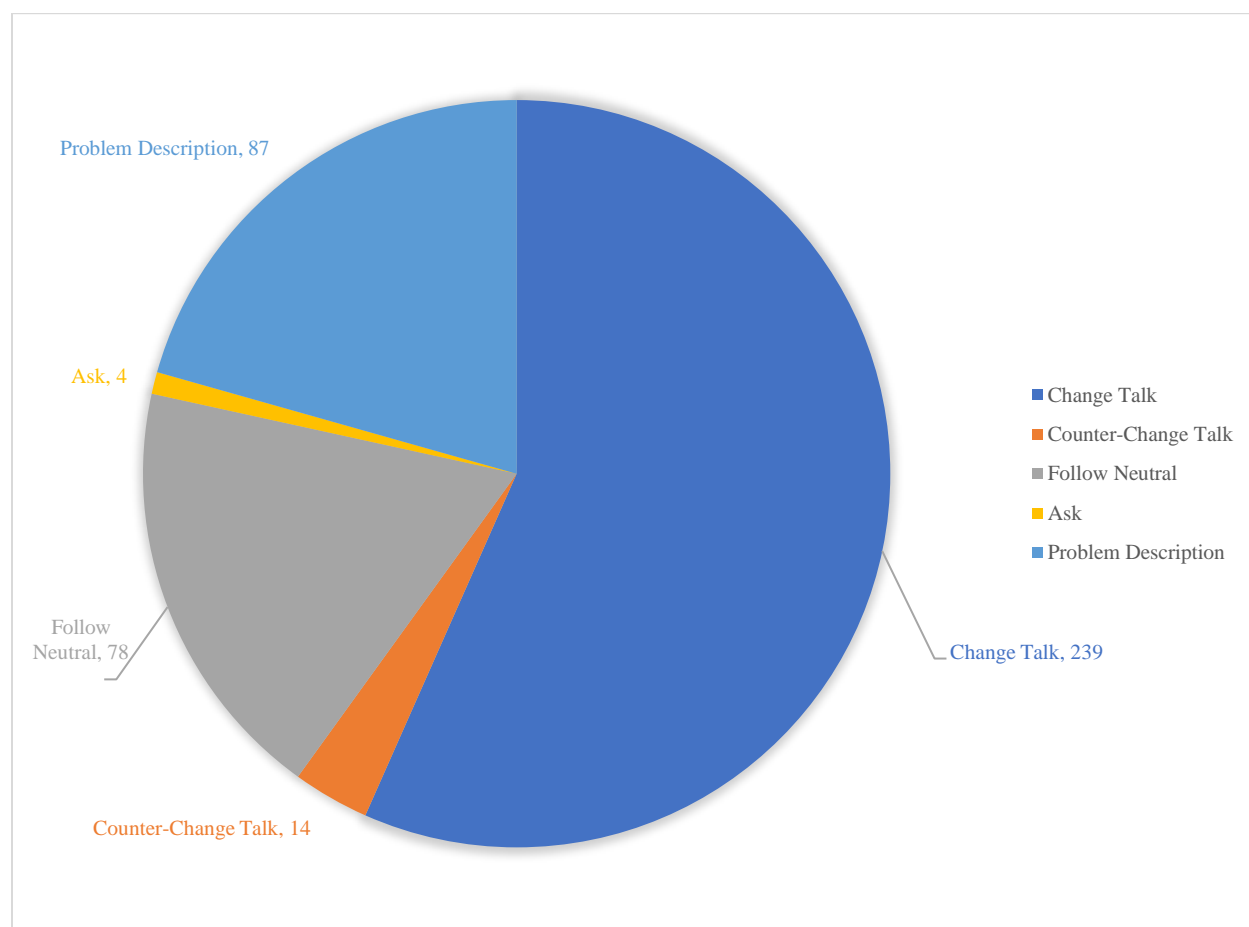
Figure 10. This figure presents the frequency counts for all consultee codes occurring in

Consultation 2

Figure 10 shows the total frequency counts for consultee event codes occurring during

Consultation 2. The most frequently occurring consultee codes in Consultation 2 were Change

Talk (n = 239), Problem Description (n = 87), and Follow Neutral (n = 78). Change Talk (n =

239) appeared to outweigh Counter-Change Talk (n = 14) in a sizeable way.

Figure 11.

Expanding Consultee Change and Counter-Change Talk in Consultation 2
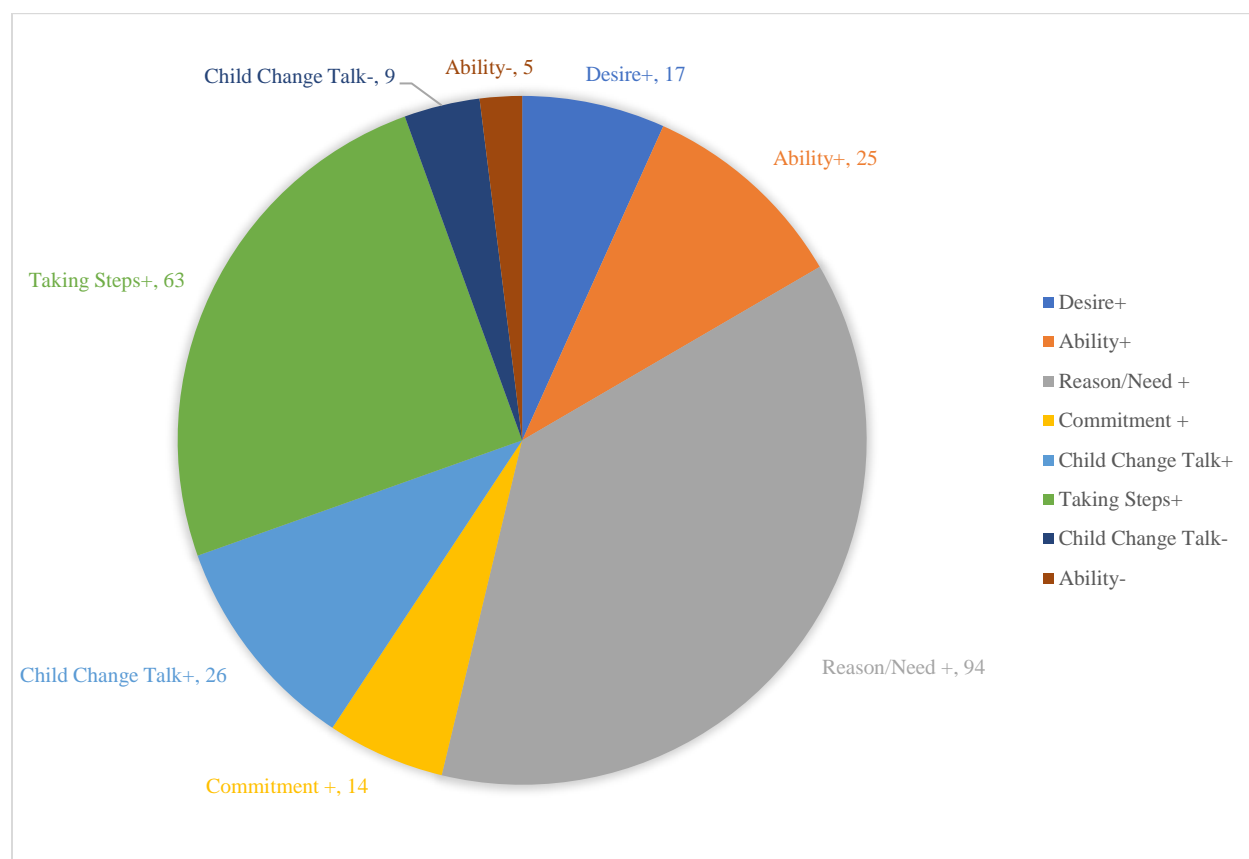
Figure 11. This figure presents the frequency counts for all consultee change and counter-change talk prior to collapsing the coding categories occurring in Consultation 2

Figure 11 shows the expanded categories of change talk and counter-change talk occurring during Consultation 2. The most frequently occurring change talk in Consultation 2 was made up of Reason/Need+ (n = 94), Taking Steps+ (n = 63), and Child Change Talk+ (n = 25). The least frequently occurring change or counter-change talk was made up of Ability- (n = 5), Child Change Talk- (n = 9), and Commitment+ (n = 14).

5.2.1 MI-SCOPE Summary Scores for Consultation 1 and 2

As indicated by the MI-SCOPE (Martin et al., 2005), summary scores were extracted from the coded consultations (see Table 14). These scores offer some insight into the broad content of the consultations in MI terms. These scores included: Ratio of Reflections to Questions, Percent Open Questions to all Questions, Percent Complex Reflections (CR) to all Reflections, MI-Consistent Responses (the number of MI consistent responses out of the total number of MI consistent plus MI inconsistent responses), and Percent Change Talk (all change talk divided by the sum of all change and counter-change talk). For the purposes of the MI-SCOPE summary scores, MI-consistent responses included: Emphasise Control and Affirm codes. MI inconsistent responses included: Advise, Direct, and Opinion.

Table 14.

MI-SCOPE Summary Scores in Consultation 1 and 2

MI-SCOPE Summary Statistics	Consultation 1	Consultation 2
Ratio of Reflection to Questions (R/Q)	61:54	68:29
Percent Open Questions (%OQ)	26%	79%
Percent Complex Reflections (%CR)	41%	71%
Percent MI-Consistent Responses	48%	78%
Percent Consultee Change Talk	81%	94%

The MI-SCOPE summary scores show that both consultants used a higher ratio of reflections to questions over the course of the consultations. A higher percentage of open questions, complex reflections, and MI-consistent responses were observed in Consultation 2. Both consultations elicited a high ratio of change talk, 81% and 94%, respectively.

5.2.2 Pre- Post Self-Report Measures – Consultation 1

Teacher participants responded to a scaling measure prior to and following the consultation. This was designed to offer an indication of teacher self-efficacy. In the post-consultation measure, teacher participants responded to an additional open question about what they found helpful in the consultation. The data collated from this measure is presented below.

Figure 12.

Consultee Self-Report Scaling Change – pre- to post Consultation 1
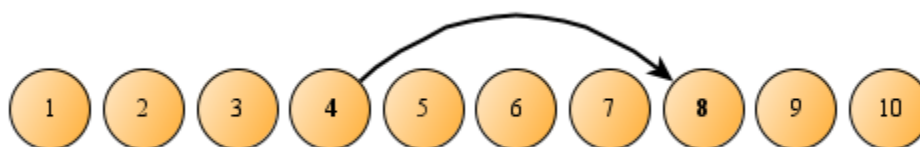
Figure 12. This figure illustrates the consultee (teacher) response to the pre- post intervention question: "How able do you feel to manage this problem?" 1 = Not at All, 10 = Completely

As indicated in Figure 12, the results derived from the pre- post measure showed that the consultee in Consultation 1 reported feeling more able (4 → 8) to manage the problem situation that had led to the consultation. As part of the pre- post questionnaire, the consultee reported that it was helpful to have "*someone to look at the whole picture and provide clarity on direction of approach*". In addition to this, Consultee 1 noted that it was helpful to *"...[gain] external specialist opinion removed from school setting and priorities of the school*", and stated that "*talking through issues so that a joint approach [was] gained*" led to [intervention] being "more likely to be […] achievable".

5.2.3 Pre- Post Self-Report Measures – Consultation 2

Figure 13.

Consultee Self-Report Scaling Change – Consultation 2
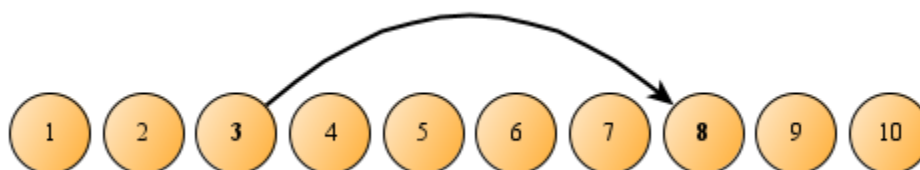
Figure 13. This figure illustrates the consultee (teacher) response to the pre- post intervention question: "How able do you feel to manage this problem?" 1 = Not at All, 10 = Completely

Similarly, the results derived from the pre- post questionnaire indicated that the consultee in Consultation 2 reported feeling more able (3 → 8) to manage the problem situation following the consultation, than reported prior. In response to the pre- post questionnaire, Consultee 2 reported that it was helpful to "know that [they] engaged appropriately and were able to utilise the support around [them] effectively." The consultee reported that the consultant "was happy with [their] hypothesis (short term and long term) in terms of what next steps [were] needed to support engagement." In addition to this, Consultee 2 reported that: the consultant "did not make [them] feel that any statement [they] made or question […] asked was unsuitable" which "put [them] at ease..." Consultee 2 mentioned some steps from the consultation such as: "keeping in touch with [young person] and the family" as being "crucial both in short term on a week-to-week basis as well as long term…" Consultee 2 reported feeling "that having the initial consultation supported […] findings from evidence collated already", and stated: "…even if things do not go to our initial plan, this is ok as I know that [Consultant 2] will be there to support me or to discuss anything further."

5.3 Sequence Analysis

5.3.1 Collapsing Codes

The adapted form of the MI-SCOPE offered a rich coding system. The depth of the coding system allowed the researcher to obtain a detailed view of the interaction in consultation, as presented in the frequency analysis, qualitative extracts, and summary statistics. The next step was to analyse the data sequentially. In order to calculate reliable transition probabilities, guidelines suggest the minimum expected cell frequency should be at least 3. The data, in its initial form, did not meet this requirement. To resolve this, it was necessary to collapse codes across categories. The researcher collapsed the initial 28 event codes to construct an optimal combination of 12 categories, such that as much detail was preserved as possible, while being sufficiently powerful enough to perform the sequential analyses. An overview of how the collapsed categories were constructed is presented in Table 15.

Table 15.

From Initial Event Codes to Collapsed Categories for Sequential Analysis

	Initial Event Codes	→	Collapsed Category	Abbreviation
Consultant	Advise Give Information Direct Opinion		Advise/Suggestion	Adv
	Affirm		Affirm	Aff
	Open Question		Open Question	OQ
	Closed Question		Closed Question	CQ
	Simple Reflection Complex Reflection		Reflection	Ref
	Emphasise Control		Emphasise Control	Econ
	Facilitate		Facilitate	FA
	Structure Filler		Filler	Fill
Consultee	Desire+ Ability+ Reason/Need+ Commitment+ Taking Steps+ Child Change Talk+		Change Talk	CT
	Desire- Ability- Reason/Need- Commitment- Taking Steps- Child Change Talk-		Counter-Change Talk	CCT
	Follow Neutral Ask		Follow/Neutral	FN
	Problem Description		Problem Description	PD

5.3.2 Transition Frequency Matrix

To calculate the sequences occurring within the consultations, the joint frequency of transitions

between events were calculated to see how often codes followed one another. These transitions

were calculated in a table to produce a Transition Frequency Matrix (see Table 16). The

Transition Frequency Matrix shows that there were 1610 transitions in total.

Table 16.

Transition Frequency Matrix of Collapsed Codes

	Sequitur												
Antecedent	Adv	Aff	CCT	CT	CQ	Econ	FA	Fill	FN	OQ	PD	Ref	Totals
Advise/Suggestion	6	0	3	25	2	12	0	1	99	0	3	6	157
Affirmation/Support	5	4	2	15	2	1	0	1	20	2	7	14	73
Counter-Change Talk	2	2	3	13	3	1	15	0	1	0	2	3	45
Change Talk	19	31	18	90	7	10	140	0	2	4	21	32	374
Closed Question	2	0	2	10	1	1	1	1	20	0	7	1	46
Emphasise Control	27	1	0	15	3	1	0	0	10	5	1	7	70
Facilitate	6	1	12	128	2	3	0	1	18	2	86	2	261
Filler	0	1	0	2	1	2	0	2	3	0	1	0	12
Follow/Neutral	78	19	1	15	14	27	30	4	1	14	7	46	256
Open Question	1	1	1	14	0	0	0	1	11	4	4	0	37
Problem Desc.	6	4	2	28	9	3	73	1	2	2	5	15	150
Reflection	5	9	1	19	2	9	2	0	69	4	6	3	129
Totals	157	73	45	374	46	70	261	12	256	37	150	129	1610

Table 16. This table presents the joint frequencies of collapsed codes

The transition frequency matrix in Table 16 shows the antecedent behaviour, followed by the

sequitur. Following from left to right, the table shows how many times each transition was seen

in the dataset (Keatley, 2018). For example, the most frequent transition within the frequency

matrix was between Change Talk and Facilitate (CT → FA; *n* = 140). Another highly frequent

transition (*n* = 128) was between Facilitate and Change Talk (FA → CT).

Transitions between Facilitate (n = 261) and Follow/Neutral (n = 256) also occur

frequently. These codes encompass talk such as: "okay", "right", "yeah", "mmm", and so on.

Naturally, these kinds of utterances occur frequently in consultation, and as seen in the frequency

analysis, consultants and consultees produced these utterances regularly during consultation. As

a result of this, there were numerous transitions to-and-from these codes. To delve further into

the relationships between the talk, it was necessary to identify the transitions that occurred more

than would be expected by chance, to pinpoint transitions of interest.

To do this, the researcher analysed transition frequencies compared to expected

frequencies, using the g² test for significance. The statistical analyses were performed upon all

transitions except 'Filler' as this occurred infrequently and represented 'white noise' in the data.

In addition to identifying significant transitions observed, a number of authors have used the

Standardised Residual (SR) as a measure of the strength of the difference between observed and

expected values (Marono, Clarke, Navarro, & Keatley, 2017; Townsend et al., 2016). It is argued

that the SR can be more informative than frequencies as it indicates which transitions are

contributing the most to the g² statistic. Table 17 shows the SR scores in the transition frequency

matrix.

Table 17.

Transition Frequency Matrix of Collapsed Codes (Standard Residuals)

	Sequitur										
Antecedent	Adv	Aff	Econ	CQ	OQ	FA	Ref	FN	CT	CCT	PD
Adv	-2.66	-2.87	**2.22**	-1.23	-2.03	-5.83	-2.06	**17.08**	-2.3	-0.72	-3.36
Aff	-0.86	0.43	-1.24	-0.03	0.26	-3.85	**3.6**	**2.81**	-0.53	-0.03	0.1
Econ	**8.22**	-1.28	-1.21	0.75	**2.73**	-3.8	0.59	-0.38	-0.4	-1.46	-2.33
CQ	-1.24	-1.48	-0.69	-0.25	-1.05	-2.61	-1.47	**5.3**	-0.19	0.66	1.44
OQ	-1.45	-0.51	-1.28	-1.04	**3.53**	-2.69	-1.8	**2.43**	**2.22**	-0.02	0.36
FA	-4.48	-3.52	-2.72	-2.19	-1.82	-7.82	-4.75	-4.34	**10.74**	1.89	**14.33**
Ref	-2.39	1.39	1.58	-0.92	0.61	-4.76	-2.51	**12.16**	-2.43	-1.47	-1.92
FN	**12.21**	**2.5**	**5.5**	**2.84**	**3.7**	-2.12	**6.42**	-7.35	-7.14	-2.54	-3.92
CT	-3.56	**3.99**	-1.76	-1.28	-1.85	**12.53**	0.35	-9.31	0.33	**2.64**	-2.86
CCT	-1.24	-0.03	-0.69	1.57	-1.05	**3.1**	-0.36	-2.55	0.88	1.57	-1.15
PD	-2.52	-1.14	-1.44	**2.48**	-0.84	**11.27**	0.91	-5.11	-1.4	-1.15	-2.65

Table 17. This table presents standard residual scores (SR). Individual cells with **z-scores numerically greater than 1.96** are indicated in bold.

The transition frequency matrix (Table 17) offers a view of the data, whereby SR scores greater than 1.96 reflect a transition between the antecedent and the subsequent behaviour, sequitur, that is more likely to occur than chance. Transitions of interest (transitions that meet the SR criteria) are highlighted in bold. To illustrate the transitions of interest in an accessible way, a State Transition Diagram was created. This is presented in Figure 13.

5.3.3 State Transition Diagram

Transitions that occur within the set of sequences are shown using a state transition diagram. This diagram displays each behaviour as a node. Consultant behaviour is displayed in blue, and consultee behaviour in orange. Lines were drawn between codes to depict the strength of transitions between them. The direction of the arrowhead indicates the direction of each transition. The thickness of lines has been adjusted to reflect the strength of the SR score, this is indicated in the Key in Figure 13. In order to ensure the transitions of interest are examined (those with an SR of more than 1.96), only transitions that met the SR criteria are depicted in the diagram. The diagram can be read by moving from **one** behaviour (the antecedent) and following the arrow to the **one** next to it (the sequitur). For example, Change Talk → Facilitate. The type of analyses shown in this dataset are lag-one analyses only, so while the transition diagram might seem like an ongoing chain, this is not how the analyses have been conducted, and thus should not be interpreted in this way (Keatley, 2018).
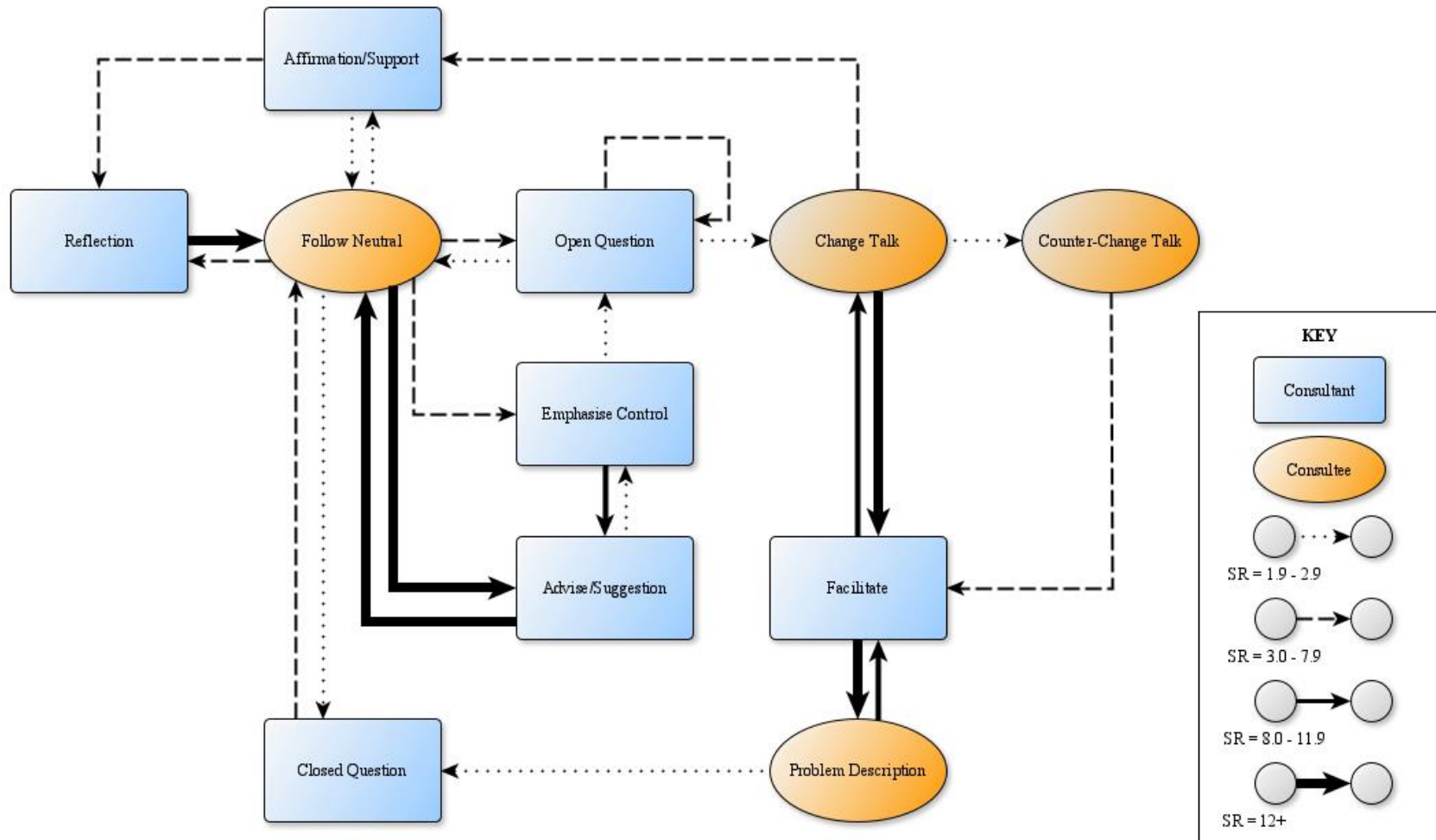
Figure 14.

State Transition Diagram with Standard Residuals

Figure 14. Note that the thickness of the lines in this diagram indicate the strength of the relationship between events

Transitions of Interest

The state transition diagram (Figure 14) shows significant transitions between the talk in consultation. This includes transitions from consultant to consultee, consultee to consultant, consultee to consultee and consultant to consultant.

Among the transitions in the diagram, 5 specific event pairs stand out immediately due to the strength of the relationship - codes with SRs of more than 12. First, a clear and reciprocal relationship exists between Follow Neutral and Advise/Suggestion (FN → Adv; Adv → FN). Another of the strongest relationships is between Facilitate and Problem Description (FA → PD). Change Talk was significantly more likely than chance to be followed by Facilitate (CT → FA). Reflection was more likely than chance to be followed by Follow Neutral (Ref → FN).

There are 3 events pairs with SRs between 8.0 and 11.9. These connections occurred considerably above the level of chance. The consultees problem descriptive utterances were more likely than chance to be followed by Facilitate from the consultant (PD →FA). Similarly, the consultant's facilitative utterances (FA) were likely to be followed by Change Talk (FA → CT). Consultant utterances of Emphasise Control were also more likely than chance to be followed by a consultant utterance of Advise/Suggestion (Econ → Adv).

There are 8 event pairs with SRs between 3.0 and 7.9. These occurred moderately above the level of chance. Affirming utterances were more likely than chance to be followed by a simple or complex reflection by the consultant (Aff → Ref). Consultee Change Talk was more likely than chance to be followed by an affirmation from the consultant (CT →Aff). Consultant's closed questions were more likely than chance to be followed by a follow neutral utterance from the consultee (CQ → FN). Consultee's Follow Neutral was more likely than chance to be

followed by open questions from the consultant (FN → OQ). Follow Neutral was more likely

than chance to be followed by Emphasise Control (FN →Econ). Consultant's open questions

were also likely to be followed by another open question (OQ → OQ). Counter-Change Talk was

more likely than chance to be followed by Facilitate (CCT → FA).

There are 9 event pairs with SRs between 1.9 and 2.9. These pairings occurred

significantly more than chance, but toward the lower end in terms of SR scores. If a consultee

produced change talk, that utterance would be likely to be followed by an affirmation from the

consultant (CT → Aff). The consultee's problem description was likely to be followed by closed

questions from the consultant (PD → CQ). The use of open questions by the consultant, was

more likely than expected by chance to be followed by change talk (OQ → Change Talk).

Consultee Follow/Neutral utterances were likely to be followed by Affirmations and vice versa

(FN → to Aff; Aff → FN). Follow/Neutral was likely to be followed by Closed Questions (FN

→ CQ), and Open Questions were likely to be followed by Follow/Neutral (OQ → FN).

Consultants were likely to Emphasise Control before offering Open Questions (Econ → OQ).

Similarly, consultants were also more likely than chance to Emphasise Control after making a

suggestion or offering advice (Adv → Econ). Consultee Change Talk was more likely than

chance to be followed by Consultee Counter-Change Talk (CT → CCT).

5.4 Summary of Results

   1. **What kinds of motivational talk occur in consultation?**

The frequency analyses demonstrate the array of talk that occurred in the consultations as observed in this study. The adapted version of the SCOPE allowed the researcher to see the talk in consultation through the lens of MI. A number of consultant utterances that might be considered to be consistent with MI were observed during the consultations. These included the use of affirmations, statements that emphasise control, open questions, and complex reflections. Some consultant talk that might be viewed as inconsistent with MI were also observed across the consultations, including directive statements, advice giving, and opinions. It is important to note, however, that the sequential analysis showed that advise/suggestion utterances were preceded and followed by statements that emphasise control. As a result, the frequency counts might not fully account for this behaviour, which could be seen as more in line with MI principles (e.g. elicit – provide – elicit). This is expanded upon further in the discussion.

The frequency of the kind of motivational talk that occurred in the consultations differed between consultants, and descriptive statistics showed that there were differences between consultants in terms of their MI-consistent responses. Both consultants used a higher ratio of reflection to questions. Consultant 2 used more open questions, complex reflections, and MI-consistent responses overall. Both consultations elicited a high ratio of change talk from consultees, 81% and 94%, respectively, a key feature of the MI technical hypothesis.

2. **What is the relationship between EP talk and teacher response?**

The transitions of interest, as indicated in the state transition diagram, show meaningful relationships between EP talk and teacher response in the consultations in this study. Specifically, EP talk that included reflections, affirmations, closed and open questions, advice and suggestions were more likely than chance to be followed by a follow/neutral statement by the teacher. From an MI perspective, of interest are change talk statements from the teacher/consultee. In this study, EP open questions and facilitative statements were more likely than chance to elicit change talk from the teacher. Additionally, EP facilitative statements were also more likely than chance to elicit problem description from the teacher.

3. **What are the effects of MI-consistent talk on teacher self-efficacy?**

Both consultants demonstrated MI-consistent talk in the consultations. Teacher self-reports indicated that they felt more able to manage the problem-situation that they brought to consultation. Consultee 1 reported an increase of 4 points in how able they felt to manage the problem on a 10-point scale. Consultee 2 reported an increase of 5 points on the scale. With regard to the research question, high levels of MI-consistent talk (78%) in Consultation 2 were associated with a higher increase in the teacher's reported self-efficacy. This was slightly above the increases observed in Consultation 1, which demonstrated a reduced level of MI-Consistent responses in total (48%). This is ideographic data, illuminating, but not explaining potential mechanisms.

6. Discussion

The purpose of this study was to explore the role of motivational talk in consultation. This study has identified a number of key findings which merit further discussion and interpretation. The sequential analyses of the interactions in consultation between EPs and teachers has provided a map of key interactions as they occur in consultation. The sequential analysis revealed a number of transitions of interest, including change talk, open and closed questions, facilitative utterances, reflections, affirmations, emphasise control statements, and advice-giving. Herein, the discussion considers pertinent results from the frequency and sequential analyses of the consultative interactions in this study. Interpretations are offered in relation to theories and concepts of behaviour change, including: Motivational Interviewing (MI), Self-Efficacy (SE) and Self-Determination Theory (SDT). Throughout the discussion, the results of this study are considered with reference to the consultation literature. The discussion then considers the limitations of the present study and methodology, addressing issues of reliability and validity. Fruitful areas for future research are outlined. Finally, the implications of this study for the professional practice of educational psychologists are discussed.

6.1 Examining Consultation Through the Lens of MI

6.1.1 Change Talk

One form of motivational talk that occurred in the consultations is change talk ($n = 374$). In this section, the author will briefly introduce change talk, before outlining its role in the consultation in this study. Change talk is a concept in MI that refers to any language in favour of change (Miller & Rollnick, 2012). In the literature, change talk is conceptualised as being either preparatory change talk (DARN; desire, ability, reason, and need) or mobilising change talk (CATS; commitment, activation, and taking steps). Examples of DARN change talk statements to illustrate the concept are presented below:

"I want to help this young person." [Change Talk: Desire]

"That sounds very do-able, I would be able to do that" [Change Talk: Ability]

"I think this intervention might benefit other children too" [Change Talk: Reason]

"I need some help with this situation" [Change Talk: Need]

Whereas the DARN statements above indicate preparatory change talk (e.g. the arguments for change), mobilising change talk signifies action in favour of change (Miller & Rollnick, 2012). Examples are presented below:

"I will definitely do this." [Change Talk: Commitment]

"We've started precision teaching" [Change Talk: Taking Steps]

All these forms of change talk can be reversed to form counter-change (or sustain talk), which would involve a person voicing arguments or committing to actions that move away from change. Ambivalence in MI refers to the presence of both change and counter-change talk at the same time. This is seen as a natural linguistic feature in conversations about change (Miller & Rollnick, 2012). An illustrative example is presented below:

> *"I'd like to set this intervention up [Change Talk: Desire] but I just don't have time to do it" [Counter-Change Talk: Ability]*

In this study, the SA revealed that change talk was more likely than chance to be followed by counter-change talk ($SR = 2.64$). From an MI perspective, this relationship between change and counter-change talk may be seen as indicative of teacher ambivalence in the consultations. Miller and Rose (2009) suggested that ambivalence should be worked with and not avoided, and that a higher proportion of change talk within an MI session is a good predictor of change. In the present study, the data showed a higher proportion of change talk to counter-change talk across both consultations. An example of change talk in the data is presented below:

> *TEACHER: We know it works, you know, we had children who were doing it last year and we know it can benefit [Change Talk: Reason/Need], so I will be definitely pushing for that next year [Change Talk: Commitment]*

From an MI perspective, this higher proportion of change to counter-change talk appears promising as reviews of the MI-technical hypothesis suggest that a higher proportion of client

statements in favour of change is a good predictor of actual behaviour change (Magill et al., 2014). Taken in this light, the higher proportion of change talk seen in the consultations in this study might be indicative of teacher behaviour change following the consultation. This is relevant as it is argued that the effectiveness of school-based consultation hinges on the conceptual and behavioural changes of teachers (Truscott, 2012). The findings of this study suggest that change talk may be helpful concept drawn from MI which can be used to develop our understanding of how school-based consultation might mediate changes in teacher behaviour (Noell & Gansle, 2014; Truscott et al., 2012).

And so, if the proportion of change talk in consultations is a good indicator of behavioural change, it seems important to consider: how does the consultant communicate to elicit such change talk? In the data drawn from the consultations in this study, and as shown in the state transition map, two transitions of interest appear to evoke change talk from the consultee more than would be expected by chance: Open Questions and Facilitate. Both of these categories of talk will be discussed in more detail below.

6.1.2 Open (and Closed Questions)

"It's surprising how much change talk you can evoke just by asking the right questions"

– Miller & Rollnick (2012, p. 178)

In the consultations in this study, EP open questions were more likely than chance to evoke change talk from the consultee ($SR = 2.22$). This is illustrated below in a brief exchange taken from the transcript:

EP: yeah, I guess if we were to kind of imagine like our ideal in an ideal situation where you would realistically like him to be? [Open Question]

TEACHER: So obviously I'd want him to be in our school. I think [Change Talk: Desire]

EP: Mmmm [Facilitate]

TEACHER: So if obviously I'd be part of the planning of where he would be as in with which his who his class teacher would be [Change Talk: Desire]

From an MI perspective, open questions help the interviewer to understand a person's internal frame of reference, strengthen the collaborative relationship and find direction. Open questions also play a key role in evoking motivation and navigating a course toward change (Miller & Rollnick, 2012). The relationship between open questions and change talk in this study aligns with MI literature which suggests that one of the simplest ways to elicit change talk is to ask for it (Miller & Rollnick, 2012). Within the consultations, the EP made use of open questions in a way that invited the consultee to reflect or elaborate. Further, the focus of the questioning appeared to guide the direction of the conversation. Some examples of the open questions in the transcript are presented below:

EP: What would you like to get out of our meeting today? [Open Question]

EP: If we were to kind of think about ideally speaking where we'd like him to get to let's say. I did a let's say and in in the Autumn term, where would you where do you think you'd like [young person] to be? [Open Question]

EP: I guess if, in terms of scaling wise if we were to think about where you want to get to

so if ten was where you wanted to get to and zero is as far away from that as possibly

could be we're asking you where do you think you got to this term [...] despite all the

challenges? [Open Question]

This use of open questions contrasts with the EPs use of closed questions. In the

consultations, closed questions were frequently followed by short answers. This might go some

way to explaining the likelihood of closed questions being followed by Follow/Neutral

statements in the sequential analysis ($SR = 5.3$). An example of such an exchange is presented

below:

EP: What's her favourite thing to do? [Closed Question]

TEACHER: I'd say things like colouring and things like that she is quite…

[Follow/Neutral]

EP: Is she quite neat? [Closed Question]

TEACHER: Mmm, I'm not sure I don't know [Follow Neutral]

The consultee's part in this exchange is mostly responding to the consultant's questions.

From an MI perspective, this could be construed as what is known as the 'expert trap' – whereby

a consultant or interviewer asks a series of questions to a person (Miller & Rollnick, 2012). This

communicative approach is thought to contribute to the positioning of the questioner as expert.

The implicit message when asking such a run of closed questions is that "once you have

collected enough information you will have the answer" (Miller & Rollnick, 2012, p. 59).

However, it is important to note that while the sequential analysis revealed that the EP closed questions did not evoke change talk in the same way that open questions did in this study, on some occasions closed questions appeared to serve the purpose of gathering relevant information or clarifying plans. An example of this is illustrated in the exchange below:

> *TEACHER: Therapeutic intervention could be very beneficial for him [Change Talk: Reason/Need]*
>
> *EP: That sounds a lovely idea [Affirm]. So, is that still something you might hope to look into next year? [Closed Question]*
>
> *TEACHER: Yeah, that's not, it doesn't mean that obviously if anything, I'm gonna push it even more so [Change Talk: Commitment]*

The importance of questioning is a key thread in the consultation literature, and the importance of careful questioning is consistent with many consultative approaches (Caplan, 1970; Meyers, 1989; Truscott et al., 2000; Rosenfield, 1987). The role of questions in this study aligns with the findings of the literature review, in which there was an emphasis on consultant's use of skilful questioning to move conversations forward (Nolan & Moreland, 2014; von Ahlefield Nisser, 2017). The findings here build upon the existing literature, highlighting the role of questioning in consultation. Further, the sequential analysis in this study shows that the EPs use of open and closed questions elicited differing responses from teachers in consultation in a predictable way, thus, contributing to understanding of how EPs use such questions in consultation in applied practice. The relationship between open questions and change talk appears to be a particularly fruitful finding, given that the proportion of change talk in MI

conversations is a good predictor of behaviour change. This may have implications for understanding how EP interaction in consultation may serve to mediate conceptual and behavioural change in teachers.

6.1.3 The function of 'mms and errs' in the talk in consultation

In addition to open questions, facilitative statements (FA) from the consultant evoked change talk (CT) from the consultee significantly more than would be expected by chance ($SR= 10.74$). Examples of facilitative utterances as they occurred in the transcript are presented below:

TEACHER: so yes his own personal zone board he had his own personal visual timetable so he knew exactly what the expectations were. I did backtrack it a little bit because I knew he just, because he was just taking on so much at the time [Change Talk: Taking Steps]

EP: Mmm [Facilitate]

TEACHER: and then he was he was also displaying emotions at home as well [Problem Description]

EP: Right [Facilitate]

TEACHER: we just wanted to really kind of give him things that we knew he could achieve so I just said [other teacher name] this work is going to I said to [teacher name] I said the work is going to look a lot easier for him [Change Talk: Taking Steps]

EP: Mmmm [Facilitate]

TEACHER: but he needs to feel that he can do it. And if he feels he can do it he will do a little bit more in time [Change Talk: Reason/Need].

The EP's facilitative statements appeared as brief verbal prompts such as 'mmm' and 'right' in the transcripts. In the present study, the results from the sequential analysis show that EPs use of facilitative prompts were significantly more likely than chance to be followed by change talk. As earlier discussed, this is significant as a higher proportion of change talk (to counter-change talk) is a good predictor of behaviour change in MI process research.

In addition to eliciting change talk, EP's facilitative utterances were also more likely than chance to be followed by problem description by the teacher (*SR = 14.33*). The role of the EP in using facilitative statements to evoke problem description is perhaps unsurprising given that problem identification and analysis have been demonstrated to be key stages in effective consultation (Gravois, Gickling, & Rosenfield, 2011). Overall, the EPs use of facilitative utterances in consultation appear to serve an important role in the consultation process, and thus should not be underestimated. Within the literature, EPs use of brief verbal prompts has been identified as a discursive feature of listening (e.g. Nolan & Moreland, 2014). The findings in this study further understanding as to how EPs use this kind of talk in consultation.

Theory development in MI, suggests that change talk may both 'prompt and produce' change (Carr, 2011, p. 236). To this extent, change talk could be hypothesized to be both the cause, and the effect. This finding is interesting, as it suggests that when EPs hear ambivalence, or change or counter-change talk in consultations, they have the opportunity to selectively attend to this, and interact in ways that may strengthen the potential for change. From this perspective, it appears that change in consultation between EPs and teachers is emerging during the interaction. The findings of the sequential analysis in this study, suggest that EPs use of brief verbal prompts that may indicate listening, or the use of open questions, are two ways they may interact that is more likely than chance to evoke change talk from the consultee.

6.1.4 Reflective Listening

"When I have been listened to and when I have been heard, I am able to reperceive my world in a new way and to go on. It is astonishing how elements that seem insoluble become soluble when someone listens, how confusions that seem irremediable turn into relatively clear flowing streams when one is heard. I have deeply appreciated the times that I have experienced this sensitive, empathic, concentrated listening" – Carl Rogers

Deep listening is considered essential to understanding the perspective of another person (Egan, 2013). From an MI perspective, reflective listening helps to clarify whether the interviewer's sense-making is accurate and helps to deepen understanding (Miller & Rollnick, 2012). A simple reflection drawn from the consultation is presented below:

> *TEACHER: exactly and I think that's helped in that sense because of it was really tricky for [child] and we knew it was, despite it being a supply teacher who does work at our school, you need to understand [child] [Change Talk: Reason/Need]*
> *EP: Absolutely and knowing him, his needs [Simple Reflection]*

In the present study, consultant reflections were more likely than chance to be followed by follow/neutral statements from the consultee ($SR = 12.16$). In this way, the consultant's use of reflections appeared to keep the consultee talking. This finding corresponds with the consultative literature, in which the application of reflective listening is identified as a key relational skill in consultative practice (Sundqvist, 2019). In the example above, the EP has listened to what seemed key and offered it back to the consultee: 'knowing him, his needs.' Here, the simple

reflection indicates that the EP has heard the consultee, but there is little emphasis or meaning added. This contrasts to EPs use of complex reflections in consultation as illustrated below:

TEACHER: like he was then finding, finding sometimes in my groups and because of the other the children with the other needs in my group as well I don't always have someone additional with me but I essentially have two main workstations and then the other children have their own individual things that they need as well [Problem Description]

EP: Right [Facilitate]

TEACHER: So it's a balancing out, balancing act [Problem Description]

EP: absolutely absolutely. That's a real challenge, you know, you're trying to match there [Affirm]

TEACHER: Yeah, yeah [Follow/Neutral]

EP: and I think you know, it sounds like you know, you knowing [young person] as well as you do and knowing his you have that insight into his emotional life and his experience and the context of his development [Affirm]. I think you know, your rationale for you know, the provision that you moved to with him sounds like you had a really sound rationale for that in terms of provide, providing that consistency providing with that key relationship with yourself, applying all those strategies that we've you know, we've talked to it for quite a long time haven't we around that sense of predictability, enabling that sense of competence through that accessible work. [Complex Reflection] So it sounds like you know, an awful lot of things were working really well, despite how challenging you were finding it, it sounded like it was meeting his needs really well at those morning sessions [Complex Reflection]. Have I got that right? [Emphasise Control]

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Here, in line with ideas drawn from MI, the EP uses complex reflections to inject emphasis and move the conversation forward (Miller & Rollnick, 2012). In the example above, the run of complex reflections come together to form a summary. The EP uses complex reflections to recap what the teacher has said and relay this back to them in a new form. Here the EP is highlighting specific aspects of what they have heard in a considered way. This supports findings in the consultation literature which identify summarising as a key discursive strategy used by EPs to communicate deep listening and a shared understanding (Nolan & Moreland, 2014). Here there are some parallels between the findings from this study and theoretical understandings offered by SDT. SDT emphasises the importance of relatedness and feeling significant among others (Ryan & Deci, 2000). In this study, it could be argued that the EPs used reflective listening in a way that fostered a sense of 'being with' and thus served to meet the consultee's need for relatedness, potentially influencing teacher's intrinsic motivation, commitment, and behaviour (Ryan & Deci, 2000).

6.1.5 Affirming

In addition to asking open questions, a core skill in MI is affirming. Affirming refers to the interviewer recognising and commenting upon a person's strengths, abilities, and efforts (Miller & Rollnick, 2012). In this study, affirmations occurred frequently in the data, with 73 occurrences across the consultations. Further, the sequential analysis showed that consultee change talk was more likely than chance to be followed by an affirming statement from the consultant ($SR = 3.99$). An example of an affirmation from the consultation is presented below:

EP: And it sounds like you know beyond that you've got quite a lot of ideas, really creative ideas [Affirm]

This is pertinent as one MI-consistent way to respond to change talk is with an affirmation (Miller & Rollnick, 2012). Here, the EP is recognising the teacher's strengths and commenting positively on what the teacher has said. The sequential analysis revealed that when consultees offered change talk, EPs were more likely than chance to respond with an affirming utterance that recognised and potentially strengthened the change talk. This strengths-based approach supports ideas from the consultation literature about how collaborative consultants attempt to understand and value consultee's unique strengths (Erchul & Marten, 2010).

From an SDT perspective, it could be suggested that through affirming a teacher's strengths, the consulting EP is communicating in ways that serve to promote their sense of competence. Further, drawing upon ideas from SE, the use of affirmations may serve to alter teacher's beliefs about how able they feel to change a situation. This could go some way to explaining the increases in the consultee's perceptions of their efficacy in this study. This is significant as teacher's beliefs about their competency to perform actions can positively influence intervention adoption, implementation and ultimately, outcomes (Rimm-Kaufman & Sawyer, 2004; Sanetti, Kratochwill, & Long, 2013; Higgins & Gulliford, 2014; Zee and Koomen, 2016).

In exploring the role of affirmations, it could be argued that there is some overlap between what is coded in this study as affirmation, and what has been explored elsewhere in the consultative literature as positive emotion words (Newman, Guiney & Barrett, 2017). The use of positive emotion words in consultation have been identified as a feature of consultation that

relates to outcomes. One possible explanation for this is that consultants use positive emotion words to reframe problem-situations (Newman, Guiney & Barrett, 2017). While this study did not explicitly examine positive emotion words per se, it could be argued that the EPs use of affirmations serves a similar function. The sequential analysis in this study revealed that the EPs use of affirmations were more likely than chance to be followed by reflections (*SR = 3.60*). It may be that in consultation, EPs use a combination of affirmations and reflections to reframe problems, and that positive emotions words play a key role in this.

6.1.6 Skilful Advice Giving and the Art of Collaboration

"I gave her the intervention last week, but the teacher isn't doing it."

"We collaborated to create an intervention that the teacher is implementing, and the teacher reports that it is working."

– Newman, Ingraham, & Shriberg, 2014, p 14

Consultative conversations can be seen as existing on a continuum. At one end you have a directive communication style in in which the consultant is offering advice. At the opposite end of this continuum, a following or non-directive style. This style is characterised by listening. However, as identified within the literature, there is a risk that in their desire to be collaborative, consultants can be overly passive or lack coherence. A classic finding from the school-based consultation literature, is that consultants can be both collaborative and directive simultaneously (Gutkin, 1999).

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EPs have a wealth of content expertise, and such information may be useful in supporting the development of teacher competencies, however, one of the pitfalls identified in the consultation literature is the risk of prematurely offering advice. In MI, this appears to fit with what is termed the 'righting reflex' - the desire to jump in and remedy what seems wrong (Miller & Rollnick, 2012). This is particularly problematic as MI process research has demonstrated that MI-inconsistent behaviour, including unsolicited advice-giving, is predictive of counter-change talk, and a high proportion of counter-change talk is related to poorer outcomes (Magill et al., 2014; Romano & Peters, 2016). From this finding, it might be seen that where consultants are offering unsolicited advice or communicating in a confrontational manner, they could serve to impede change. Thus, the consultant's artful use of content and process expertise is critical to successful consultation (Hylander, 2012).

In line with the consultative literature, there are occasions when it might be appropriate for an EP to draw upon their content expertise and offer advice or make suggestions. However, *how* this advice and information is shared appears key. MI occupies the middle ground on the directive/non-directive continuum and suggests a guiding style in helping conversations. MI posits that advice or information is shared with permission ('Would it be okay if I suggested something here?', and in such a way that communicates that the client is free to agree or not. This is referred to as the elicit–provide–elicit sequence (EPE; Miller & Rollnick, 2012).

In respect of the findings of this study, the frequency analyses showed that advising and information sharing occurred across both consultations. The sequential analyses showed that consultants were significantly more likely than chance to make statements that emphasised control prior to advising or making suggestions ($SR = 8.22$), and advice or suggestions were more likely than chance to be followed by a statement that emphasised the consultees control

(SR = 2.22). This appears to fit with the elicit-provide-elicit sequence advocated in MI. An example Emphasise Control – Advise – Emphasise Control exchange from the consultation is presented below:

EP: At the point you're able to get that to and is there some way we could maybe [Emphasise Control] summarise that for the receiving teacher or start to maybe map out I guess what ideal provision for [young person] looks like in terms of strategies etc. [Advise]. Is that something we could think about do you think as well? [Emphasise Control]

In the example above, one of the utterances directly emphasises control ('is that something we could think about…?'), in other utterances, the language used to emphasise control is more subtle or indirect, but serves the same purpose ('I'm wondering', 'we could maybe', 'whether or not'). In the extract above the EP is using the language of we. This is a discursive feature identified by Nolan and Moreland (2014), and more recently, explored by Newman, Guiney & Barrett (2015). Consultee use of we language may indicate to the consultant a shared ownership of the consultation process. In the consultative literature, we language used by consultants and consultees together in their sessions was positively correlated with consultee outcomes, including improved skills or positive changes in teacher perceptions of the focus child (Newman, Guiney & Barret, 2015). Although, this study has not explicitly examined the frequency of we language, it might be seen as a marker of a collaborative relationship between consultant and consultee. These findings serve to strengthen the idea that school-based consultants use language in consultation in ways that lessen their expert status. Further, the

sequential analysis illuminates how EPs may offer information or advice in consultation in a collaborative way (Nolan & Moreland, 2014).

> EP: that whether or not [Emphasise Control] that's something that could be shared across the home for his [carer] potentially having like that [Advise]

> EP: so I'm wondering, I don't know what her language skills are [...] but I'm wondering aloud [Emphasise Control] about involving her in it [Advise]

In the examples above, although not always explicitly asking for permission, the use of autonomy-supportive language (e.g. Emphasise Control) prior to and following advice-giving communicates that it is the consultee's choice to accept advice or not. Here, there appears to be some alliance between how EPs emphasised control prior to advising or making suggestions (SR = 8.22) and ideas drawn from SDT. The EPs use of autonomy-supportive language is consistent with SDT and its focus on autonomous motivation (Ryan & Deci, 2000). Notably, Carcone et al. (2013) found that support for autonomy was key to evoking motivation for behaviour change in MI sessions. The promotion of consultee autonomy through careful questioning is consistent with many consultative approaches as a way to work with consultee 'resistance' (Caplan, 1970; Meyers, 1989). This finding sheds light on how consultants communicate to promote autonomy in consultation by emphasising the control of the consultee in the interaction. Further, the sequence analysis revealed how consultants may advise or make suggestions in a way that avoids the 'expert trap', and serves to promote the autonomy of the consultee.

Egan (2013) adopts Thaler and Sunstein's (2008) concept of 'choice architects' and suggests that this can be applied to the role of helpers in helping conversations (p. 8). This notion might offer a useful way of making sense of how EPs interact in school-based consultations. Consultants could be seen as 'choice architects', using their content and process expertise to shape the consultative context in which consultees make decisions (Egan, 2013). In this study, EPs appear to do this in a predictable way through their use of open and closed questions, verbal prompts, simple and complex reflections, affirmations, and autonomy-supportive language.

6.1.7 The Relational Context of Interactions in Consultation

"Human interaction is not rocket science. It's far more complicated than that."

–   Ravitch & Riggan, 2017, p. 83

When interpreting the findings in this study, it is essential that they are considered in the relational context within which they exist. This study captured the technical components of the consultation in terms of the talk (e.g. open questions, affirmations and so on). There is a risk that findings could be interpreted in an oversimplified way, such that the takeaway would be to offer information or advice in consultation, but robotically insert it in the middle of autonomy supportive language. Another example of this would be to use reflections to mechanically 'parrot' back consultee statements without genuinely listening to the consultee. This is likened by Miller & Rollnick (2009) to knowing the "words but not the music" (Miller & Rollnick, 2012, p. 30). As earlier discussed, and reviewed in the literature, the collaborative relationship is seen as essential to effective consultation. This is important as the technical components in MI theory are theorised to be most efficacious when observed together with the spirit of MI or in the context of

a collaborative relationship. Thus, it is important that the language use in consultation is considered in the relational context within which it exists, and any implications are drawn in respect of this.

6.2 Limitations and Implications for Future Research

This study applied systematic methods to the collection and analysis of data. However, the limitations of this study need to be carefully scrutinised to ensure that implications are drawn out appropriately.

This study used a small sample of consultations. As a result of this, it may be that a limited view of consultation has been captured. However, as this study was exploratory in nature, it has identified consultation and MI as a research area worthy of further study. Future research may build upon the findings here by using a larger sample size, contributing to a sharper view of the interactions in consultation.

A further limitation of the present study is the level of inference used to code behaviour. Typically, change or counter-change talk is tracked according to a specific target behaviour (e.g. alcohol consumption), and the talk coded with this subject or object in mind. In the context of EP consultations in this study, the researcher was required to code change talk more broadly. To remedy this, the researcher used a well-specified coding system alongside inter-rater reliability checks. The inter-rater reliability indicated strong agreement. Further, both coders had requisite training in MI and consultation. Despite this, it may be that some codes could have been interpreted differently by different researchers, and findings must be considered in respect of this. For future research using the MI-SCOPE to examine EP interactions in school-based consultation, it may be helpful to further refine and adapt the schedule to ensure fitness for

purpose for the context of school-based consultation, specifically. Further to this, it may be helpful to examine consultations that may have a specific focus (e.g. implementation of an intervention), and monitor change talk against this target.

When considering the findings of this study, it is important to acknowledge that this research did not measure teacher's conceptual or behavioural change as a result of the intervention, beyond a self-report measure of teacher self-efficacy. As a result, the research uses existing consultative literature, meta-analyses of the mechanisms of change in MI, and theoretical understandings offered about SDT and SE to make inferences about the findings.

In addition to this, the scaling question used to measure teacher perceptions of self-efficacy relied on teacher self-reports, and thus may be subject to bias, a threat to validity. Future research might make use of more robust measures to examine how the process of consultation may contribute to changes in teacher attitudes and beliefs.

In this study, the research looked solely at dyadic consultations between EPs and teachers. Future studies may use SA to further explore how interactions unfold in joint consultations with parents/carers and other professionals, and how these processes may differ as a result.

This study explored the interaction that occurred in consultation by examining the language used by EPs and teachers. However, the role of nonverbal communication was not explored, and thus findings here may not adequately account for how facial expressions, gestures, and eye contact influence the interaction in consultation. Despite this, audio-recordings were used during parsing and coding such that the coder could hear changes in tone and intonation and judge the spirit in which statements were being made.

While the SA identified transitions of interest that occur in the interaction between EPs and teachers during consultation, and sequence analyses are thought to be more reliable than correlational studies, the relationships in this study are not causal, and should not be interpreted as such.

Another key feature of this study that is important to note is that the SA was a lag-one analysis. This means that only first-order events were captured (e.g. A → B). As a result, patterns among longer chains of behaviours have not been examined. Despite this critique, this study has acted as a preliminary, exploratory study and shown that SA is a very useful methodology to examine process and outcome in consultation. Future research may incorporate more sophisticated lag-two sequential analyses to capture second order event chains (e.g. A →B →C). These analyses would require much more data to be sufficiently powerful for the SA, however, this study has demonstrated the merits of SA as a methodology to look at consultation. Moreover, the richness of the qualitative data gathered, combined with the rigor of SA offers an ideal methodology suited to examining the processes of consultation. Therefore, it is reasoned that applying this analytic approach to a larger body of consultative data would be a worthwhile research endeavour.

Future research may usefully explore a timed analysis of the consultations to see how the conversation unfolds and evolves over time and whether the talk is different at different stages. For example, MI emphasises the processes of engaging, focusing, evoking, and planning, or in the consultation literature the stages of problem identification and analysis appear relevant (Kratochwill, Elliott, & Rotto, 1995).

In this study, one of the consultations was conducted via video-conferencing software. This was a routinely occurring consultation, but the extent to which this might have been

different to a face-to-face interaction is not known. Interestingly, the analysis of the interaction seems to show that the EP communicated in ways that were associated with increases in teacher perceived SE and that were congruent with MI. Here, the delivery of consultation remotely did not appear to impede the conversation, although the interaction may have been different in comparison to face-to-face consultation, and thus findings should be interpreted and applied accordingly.

A fruitful area for future research might be to build upon this study with more data to develop a more nuanced understanding of how consultation processes relate to outcomes in EP practice. One of the strengths of this study is that the data is taken from consultation as practiced by EPs in the field. It may be beneficial to expand upon this study to create a body of literature looking at EP consultation as delivered by competent consultants in the UK. From this, EPs could draw out learnings from what is happening in those interactions, and how this relates to outcomes. This could help to further refine and specify the features of consultation that optimise practice.

6.3 Implications for Practice

It is important to reiterate that this is a small-scale, preliminary study. Thus, implications are offered tentatively, and should be adopted critically considering limitations discussed.

Consultation is one of the five core functions of the EP (Scottish Executive, 2002). Despite this, there is a dearth of literature, or well-specified frameworks for practitioners to draw upon to inform practice in the UK. Up to now, our understanding of the process and outcome of consultation, and how it works has remained elusive. This can make it difficult to get a feel for what consultation is, and how best to do it to promote positive outcomes. This is concerning, as

consultative practice hurtles on apace, potentially lacking coherence. Thus, it is hoped that the literature review in this study has advanced understanding of consultation, and the features that optimise it, but also raised awareness of some potential pitfalls too. The findings from the review may be helpful to inform frameworks for consultative practice, training, supervision, and applied EP practice in the UK.

The researcher is hopeful that the empirical aspect of this study, and the SA and frequency analyses have illuminated the kinds of talk that occur in EP consultation in the UK in a useful way. This study has explored consultation through the lens of MI and shown that during consultation, EPs use a range of different kinds of motivational talk, and this talk evokes responses from consultees in a predictable way. A key takeaway from this is that the EP is influential during consultation. EPs can potentially harness this understanding, optimise their process skills to work with teachers to promote the likelihood of intervention implementation and thus support quality instructional practices or the implementation of evidence-based interventions to promote positive outcomes for children and young people in terms of their well-being and achievement.

One of the unique contributions of this study, is the mapping out of how different kinds of talk relate to each other in consultation. The findings indicate that MI appears to be a helpful way of looking at the process of school-based consultation. In respect of these findings, the researcher has theorised around concepts related to MI, SDT and SE, pulling out particular features that may be relevant to EP consultation practice, including: teacher change, change talk, the use of questions, affirmations and autonomy supportive language. As earlier discussed, change talk in MI may be relevant to EP consultation practices, given the predictive role of change talk in the MI technical hypothesis. Thus, an implication might be for consultants to recognise when they

hear a teacher voicing the arguments for change, that this may be a good indicator of potential change.

For EPs in training, or practising EPs who may want to develop their consultative competencies, it might be that through examining this study and the findings here, they could draw critically upon MI as a framework for consultation. This may involve EP consultants tuning their ear and paying careful attention to the language of change in consultation. MI offers some insight into what signposts or markers EPs might helpfully listen out for in the talk from consultees e.g. change talk made up of desire, ability, reason, need or commitment statements. When EPs hear this kind of talk from teacher consultees, they might helpfully pay attention to it and attempt to elicit more or respond in a way that strengthens it. In this study, the finding that EPs are more likely than chance to respond to change talk with affirmations, suggests that this might be one way EPs could amplify this in consultation. Although further study is needed to examine in more depth how EP consultation may differ from MI in unique ways that may have implications for practice.

Further, the SA in this study showed EPs can communicate in ways in consultation that are more likely than chance to evoke change talk by using open question and facilitative utterances. Thus, tentatively, one evident implication might be that EPs use these skills in consultation. Although, it is important to note, as earlier discussed, that these interactions are likely only helpful in the context of a collaborative relationship between consultant and consultee.

On the other side of change talk, there is counter-change or sustain talk. The MI process literature has highlighted the predictive and deleterious role of sustain talk on outcomes (Magill et al., 2014). This suggests that MI-inconsistent behaviours are likely to elicit sustain talk and

sustain talk is associated with poorer outcomes. An implication of this finding, as applied to school consultation, may be about raising awareness of communication styles in consultation that could potentially be unhelpful, or worse, risk doing more harm than if the consultation had not occurred at all. An implication of this, would be for EP consultants to be wary of using confrontational language in consultation, and maintaining an awareness about how they convey information or advice, as there is potential, from an MI perspective, that communicating in these ways could be detrimental to consultation outcome. Although in the data here, this was not evident.

A further finding from this study that may be helpful to inform practice is the way EPs use autonomy supportive language, similar to the elicit-provide-elicit sequence in MI, to advise or make suggestions. This way of communicating may go some way to supporting EPs to navigate the 'tightrope' between expert and egalitarian approaches in consultation, by honoring the knowledge and experience of both consultant and consultee. This may contribute to reduced resistance. EPs might do this through using explicit permission seeking language (e.g. 'Would it be okay if I suggested something here?') or in more subtle indirect ways (e.g. 'I'm wondering', the language of 'we,' 'could', 'maybe'), or by using questions to check out understanding (e.g. How does that sound? Have I got that right?). Again, it seems important that this is done in the context of an empathic, trusting relationship.

Another over-arching implication is that for EPs looking to develop skills and consultative competence, MI might be a fruitful area of professional development. MI offers a well-specified field of practice that can be drawn upon to develop process skills.

One of the personal learning points for the researcher has been the process of observing, listening to, parsing, and coding the interaction in consultation. This has formed a professional

development activity in and of itself, 'tuning in' to the different kinds of talk that occur. For EPs, EPS' and EP training providers, this activity might offer as a worthy professional learning task to make sense of the interaction during consultation at a deeper level whether this be 'real' data derived from consultations or mock role-play scenarios.

6.4 Conclusion

To conclude, this study has examined consultations between an EP and teacher as they occur in applied practice, through the lens of MI. The frequency analyses offered a snapshot of the interaction that occurs between EPs and teachers in consultation. This provides a sense of the kind of interactions that occur in consultation, information that was previously lacking in the UK literature. This may be valuable for both EPs, EPs in training, and EP services who apply consultative ways of working. This may have a range of implications for the EP profession, and indirectly for schools, teachers, and as a result children and young people. Further to this, the SA has revealed how the interaction in consultation unfolds in a predictable way. This enabled the researcher to identify key transitions and see how EP talk influences teacher response. This is a significant finding as it shows that the way EPs communicate can influence how the consultation unfolds. By drawing upon ideas from MI, SDT and SE, the researcher has explored how different kinds of EP talk evoke different kinds of teacher response in a predictable way, and how this might relate to conceptual and behavioral changes in teachers. This is an interpretation that has potentially far-reaching implications, as consultation is a fundamental role for EPs, and doing this effectively relies on working with teachers such that they go onto adopt and implement interventions effectively, and with fidelity.

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8. Appendices

Appendix 1 - Pre-Consultation Demographic Questionnaire for Educational Psychologist

Name: Date: Gender:

1. Could you provide me with a brief overview of your EPS (e.g., position within LA; model of service delivery; school/community context)?

_____
_____
_____
_____

2. Could you tell me your role within the EPS, including years in role?

_____
_____
_____
_____

3. Could you tell me a little bit about how you developed competence in consultation? (e.g. training during doctorate/ masters? External/ in-house CPD? Peer/ professional supervision?

_____
_____
_____
_____

4. Are there any psychological theories or frameworks that inform your consultative practice?

_____
_____
_____
_____

5. Approximately how often (as a percentage) do you use consultation in your work?

☐ %

Thank you

Appendix 2 - Pre-Consultation Questionnaire for Teacher

Date of consultation:
Consultee:
Consultant:

1. How able do you feel to manage the concern that you are bringing to consultation?
 (Please circle below)

Not at all   0   1   2   3   4   5   6   7   8   9   10   Completely

Thank you

Appendix 3 - Post-Consultation Questionnaire for Teacher

Date of consultation:
Consultee:
Consultant:

1. How able do you feel to manage the concern that you brought to consultation?
(Please circle below)

Not at all	0	1	2	3	4	5	6	7	8	9	10	Completely

2. What helped?

_____
_____
_____
_____
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Thank you

Appendix 4 – Table of Abbreviations for the adapted version of MI-SCOPE used in this study

Advise - Adv
Affirm - Aff
Confront - Con
Direct – Dir
Emphasize Control – Econ
Feedback – FB
Facilitate – FA
Filler – Fill
General Information – GI
Closed Question – CQ
Open Question – OQ
Opinion – Op
Raise Concern – RC
Simple Reflection – SR
Complex Reflection – CR
Support – Sup
Structure – Str
Warn – Warn
Ask – Ask
Follow/Neutral – FN
Problem Description – PD
Desire – D
Ability – A
Reason/Need – RN
Taking Steps – TS
Commitment – C
Child Change Talk - CCT

Appendix 5 – Recruitment Letter for Principal Educational Psychologists

The University of Nottingham

Contact: Grace Giles
Address: ###
Mobile: ###
Researcher e-mail: grace.giles@nottingham.ac.uk
Supervisor: Anthea Gulliford
Supervisor e-mail:

Dear _____ (Principal Educational Psychologist), I am a Trainee Educational Psychologist from the University of Nottingham. I am carrying out a doctoral research project to explore the role of motivational talk in consultation between educational psychologists and teachers. It is hoped that this will allow the researcher to identify the features of talk in consultation that may lead to changes in teacher motivation, behaviour, and ultimately improved outcomes for children. I would like to ask for your support in the project, through the identification of potential consultations between an educational psychologist and a teacher, with a problem-solving focus for a child/young person.

The study will involve the researcher completing audio recordings of the interactions between an educational psychologist and teacher during consultation. This means the researcher would record what they say to each other during a consultation. This would involve the use of audio recording equipment to capture the words which are said. These audio recordings will be written up but will only be used for research purposes. Participants will be asked to complete a brief questionnaire. Consent will be sought from the participating educational psychologist, teacher and the focus pupil's parents. It would be helpful if you could discuss this request with your educational psychologists. If any educational psychologists would be willing to take part in this study or would like to find out any further information, please could they contact me on the details provided.

Thank you for taking the time to read this information. If you have any questions or concerns, please do contact me or my supervisor via the contact details provided.

Yours Sincerely

[electronic signature]
Grace Giles
Trainee Educational Psychologist

Appendix 6 - Information Sheet for Teachers

The University of Nottingham

Researcher(s): Grace Giles (grace.giles@nottingham.ac.uk)
Supervisor(s): Anthea Gulliford (anthea.gulliford@nottingham.ac.uk)

This is an invitation to take part in a research study which looking at the interactions in consultation between educational psychologists and teachers, and the effects these may have. Before you decide if you wish to take part, it is important for you to understand why the research is being done and what it will involve. The purpose of this study is to explore the talk between teachers and educational psychologists in consultation. It is hoped that the study will help to identify the features of talk in consultation that may lead to changes in teacher motivation, behaviour, and ultimately improved outcomes for children.

Please take time to read the following information carefully.

If you decide to take part, the researcher would complete audio recordings of the interactions between you and your educational psychologist. This means the researcher would record what you say to each other during a consultation. This would involve the use of audio recording equipment to capture the words which are said. These audio recordings will be written up but will only be used for research purposes. In order to complete the study, I will also attend the meeting purely as an observer.

You will be asked to complete a questionnaire before and after the consultation to elicit your views on the process.

Participation in this study is voluntary, and you are under no obligation to participate. You are free to withdraw your consent at any point. All information collected will be anonymised. Additionally, all data will be kept confidentially, stored in line with GDPR regulations and used solely for research purposes. If you would prefer to have your information removed from this study before transcription takes place please contact me on grace.giles@nottingham.ac.uk by 15/12/2019. If you have any questions or concerns, please don't hesitate to contact me or my supervisor via the contact details provided.

Yours Sincerely
[electronic signature]
Grace Giles
Trainee Educational Psychologist
University of Nottingham

Appendix 7 - Information Sheet for Educational Psychologists

Researcher(s): Grace Giles (grace.giles@nottingham.ac.uk)
Supervisor(s): Anthea Gulliford (anthea.gulliford@nottingham.ac.uk)

This is an invitation to take part in a research study which looking at the interactions in consultation between educational psychologists and teachers, and the effects these may have. Before you decide if you wish to take part, it is important for you to understand why the research is being done and what it will involve. The purpose of this study is to explore the role of the talk in consultation between teachers and educational psychologists. It is hoped that the study will help to identify the features of talk in consultation that may lead to changes in teacher motivation, behaviour, and ultimately improved outcomes for children.

Please take time to read the following information carefully.

If you decide to take part, the researcher would complete audio recordings of the interactions between you and the teacher you will be speaking with during consultation. This means the researcher would record what you say to each other during a normal consultation. This would involve the use of audio recording equipment to capture the words which are said. These audio recordings will be written up but will only be used for research purposes. In order to complete the study, I will also attend the meeting purely as an observer. You will be asked to complete a questionnaire before the consultation to elicit some demographic information, including: gender, role, years in role, consultation training completed, model of service delivery, psychological theory and approach to consultation, how often (%) you use consultation in your work).

Participation in this study is voluntary, and you are under no obligation to participate. You are free to withdraw your consent at any point. All information collected will be anonymised. Additionally, all data will be kept confidentially, stored in line with GDPR regulations and used solely for research purposes. If you would prefer to have your information removed from this study before transcription takes place please contact me on grace.giles@nottingham.ac.uk by 15/12/2019. If you have any further questions or concerns, please don't hesitate to contact me or my supervisor via the contact details provided.

Yours Sincerely
[electronic signature]
Grace Giles
Trainee Educational Psychologist
University of Nottingham

Appendix 8 - Information Sheet for Schools

The University of Nottingham

Contact: Grace Giles
Address: ###
Mobile: ###
Researcher e-mail: grace.giles@nottingham.ac.uk
Supervisor: Anthea Gulliford
Supervisor e-mail: anthea.gulliford@nottingham.ac.uk

Dear _____ [Headteacher's name], I am a Trainee Educational Psychologist from the University of Nottingham. I am carrying out a doctoral research project to examine the talk that occurs between teachers and educational psychologists during school-based consultations. It is hoped that this will allow the researcher to identify the features of talk in consultation that may lead to changes in teacher motivation, behaviour, and ultimately improved outcomes for children.

It is my understanding that an educational psychologist and teacher will be holding a consultation regarding a child in your school. Before you decide if you wish for your school to take part, it is important for you to understand what this study will involve. Please take time to read the following information carefully.

If you decide to participate, the study will involve a researcher writing to the teacher participating in a consultation with an educational psychologist, and the parents of the focus child to ask for their permission for the consultation to be recorded. If parents and teachers give permission, I will visit your school to audio-record the consultation. I will also attend the meeting purely as an observer. The audio recordings will be transcribed and only accessed directly by the researcher. Participation in this study is voluntary and you are under no obligation to give permission for the recording of the meeting to take place. Within the research, the data collected will be anonymised. Anything that might identify your school or any of the participants will be removed from the research study materials and write up.

If you consent for your school to take part, you continue to have the right to withdraw from the research at any point up until the data is analysed. All data collected will be kept confidential and used for research purposes only. It will be stored in compliance with GDPR regulations (see attached privacy notice). If you have any questions or concerns please don't hesitate to ask. I can be contacted via the email above or on [contact number]. Alternatively, I can arrange to meet with you directly to answer any questions you may have at any stage.

Yours Sincerely
[electronic signature]

Appendix 9 - Information Sheet for Parents

The University of Nottingham

Contact: Grace Giles
Address: ###
Mobile: ###
Researcher e-mail: grace.giles@nottingham.ac.uk
Supervisor: Anthea Gulliford
Supervisor e-mail: anthea.gulliford@nottingham.ac.uk

Dear _____ [parent name], I am a Trainee Educational Psychologist from the University of Nottingham. I am carrying out a doctoral research project to examine the talk that occurs between teachers and educational psychologists during school-based consultations. It is hoped that this will allow the researcher to identify the features of talk in consultation that may lead to changes in teacher motivation, behaviour, and ultimately improved outcomes for children.

It is my understanding that an educational psychologist and teacher will be holding a consultation regarding your child. I am writing to you to ask for your permission for the consultation in which your child is being discussed to be recorded. If you give permission, the consultation will be audio-recorded and transcribed. These audio recordings will be transcribed and only accessed directly by the researcher. Please note: giving consent does not mean that your child will be involved in the study directly, only that we can look at the interactions between educational psychologists and teachers during the consultation. In order to complete the study, I will also attend the meeting purely as an observer.

Participation in this study is voluntary and you are under no obligation to give permission for the recording of the meeting to take place. Within the research, the data collected will be anonymised and your child's name will be changed so they cannot be identified. Anything that might identify your child or any of the participants will be removed from the research study materials and write up.

If you consent for your child to take part, you continue to have the right to withdraw them from the research at any point up until the data is transcribed. All data collected will be kept confidential and used for research purposes only. It will be stored in compliance with GDPR regulations (see attached privacy notice). If you would prefer to withdraw from this study before transcription takes place please contact me on grace.giles@nottingham.ac.uk by 15/12/2019. If you have any questions or concerns please don't hesitate to ask. I can be contacted via the email above or on [contact number]. Alternatively, I can arrange to meet with you directly to answer any questions you may have at any stage.

Yours Sincerely *[electronic signature]*
Trainee Educational Psychologist
University of Nottingham

Appendix 10 - Consent Form for Schools/Teachers/Educational Psychologists

Title of Project:
Using sequential analysis to explore the role of motivational talk in consultation

Researcher(s): Grace Giles (grace.giles@nottingham.ac.uk)
Supervisor(s): Anthea Gulliford (anthea.gulliford@nottingham.ac.uk)

Have you had the opportunity to ask questions about the study? YES/NO

Have all your questions been answered satisfactorily? YES/NO

Do you understand that you are free to withdraw from the study? YES/NO

I give permission for my data from this study to be shared with other researchers provided that my anonymity is completely protected. YES/NO

Do you agree to take part in the study? YES/NO

 "This study has been explained to me fully and I agree to take part. I understand that I am free to withdraw at any time. I agree that I allow the researcher to take audio recordings of my talk in consultation. I agree to take part in questionnaires regarding my demographic information and views:

Signature of the Participant:
Date:
Name (in block capitals):

I have explained the study to the above participant, and he/she has agreed to take part.

Signature of researcher: [electronic signature]
Date:

If you have any complaints about the study, please contact:
 Stephen Jackson (Chair of Ethics Committee)
stephen.jackson@nottingham.ac.uk

Appendix 11 - Consent form for Parent(s)

Title of Project:
Using sequential analysis to explore the role of motivational talk in consultation

Researcher(s): Grace Giles (grace.giles@nottingham.ac.uk)
Supervisor(s): Anthea Gulliford (anthea.gulliford@nottingham.ac.uk)

The participant should answer these questions independently:

Have you read and understood the Information Sheet? YES/NO

Have you had the opportunity to ask questions about the study? YES/NO

Have all your questions been answered satisfactorily? YES/NO

Do you understand that you are free to withdraw your child from the study? (at any time and without giving a reason) YES/NO

I give permission for my data from this study to be shared with other researchers provided that my anonymity is completely protected. YES/NO

I give permission for my data from this study to be shared with other researchers provided that my child's anonymity is completely protected. YES/NO

 "This study has been explained to me to my satisfaction, and I agree that notes and audio recordings can be taken during a consultation between an educational psychologist and teacher…

Signature of the Parent/Carer:

Date:
Name (in block capitals):

The study has been explained to the above parents/carers and they have agreed that their child can take part.

Signature of researcher:
Date:

If you have any complaints about the study, please contact:
 Stephen Jackson (Chair of Ethics Committee)
stephen.jackson@nottingham.ac.uk

Appendix 12 GDPR: Research Participant Privacy Notice

Researcher(s): Grace Giles (grace.giles@nottingham.ac.uk)
Supervisor(s): Anthea Gulliford (anthea.gulliford@nottingham.ac.uk)

Privacy information for Research Participants
For information about the University's obligations with respect to your data, who you can get in touch with and your rights as a data subject, please visit:
www.nottingham.ac.uk/utilities/privacy/privacy.aspx.

Why we collect your personal data
Your personal data is being collected as part of a research project. The researcher is part of a doctorate programme in Applied Educational Psychology, at the University of Nottingham. The purpose of the research is to explore the role of motivational talk in consultation.

Legal basis for processing your personal data under GDPR
 The legal basis for processing your personal data on this occasion is in line with GDPR Article 6(1e) processing is necessary for the performance of a task carried out in the public interest. We hope this research will help to identify the features of talk in consultation that may lead to changes in teacher motivation, behaviour, and ultimately improved outcomes for children.

Where the University receives your personal data from
Some personal data about you will be collected as part of the research, which will be kept confidential. This data will come from yourself as a research participant. Your personal data is being collected as part of a research project. The researcher is part of a doctoral training programme in Applied Educational Psychology, at the University of Nottingham. The purpose of the research is to explore the role of motivational talk in consultation between teachers and educational psychologists.

Special category personal data
We will be collecting some 'special category personal data', in line with GDPR Article 9(2a). We will collect, with your consent, data regarding your racial or ethnic origin.
How long we keep your data
The University may store your data for up to 25 years and for a period of no less than 7 years after the research project finishes. The researchers who gathered or processed the data may also store the data indefinitely and reuse it in future research. Any data stored will be anonymised, meaning that participants will not be identifiable. Any data that might identify a participant will be left out of transcriptions. All participants will be given a 'pseudonym' (a fake name) in the research to protect their identity.

Who we share your data with
Extracts of your data may be disclosed in published works that are posted online for use by the scientific community. Your data may also be stored indefinitely on external data repositories (e.g., the UK Data Archive) and be further processed for archiving purposes in the public interest, or for historical, scientific or statistical purposes. It may also move with the researcher who collected your data to another institution in the future