

**PHYSICAL RESTRAINT USE WITHIN
LONG TERM CARE SETTINGS
FOR OLDER PERSONS IN MALTA**

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Prayer of St Francis

Lord, make me an instrument of your peace;
where there is hatred, let me sow love;
where there is injury, pardon;
where there is doubt, faith;
where there is despair, hope;
where there is darkness, light;
and where there is sadness, joy.

O Divine Master,
grant that I may not so much seek to be consoled as to console;
to be understood, as to understand;
to be loved, as to love;
for it is in giving that we receive,
it is in pardoning that we are pardoned,
and it is in dying that we are born to Eternal Life.
Amen.

Abstract

Purpose: To study this locally unexplored scenario and provide a platform of knowledge base and information on physical restraint use, securing relevant information of essence to the older person, care provider and policy makers within care homes.

Aims and objectives: This dissertation focuses on care providers' observations and perceptions concerning (a) the types of restraint devices used in government and privately managed long term care homes for older persons in Malta, (b) their mode and extent of application, (c) older person characteristics which may be conducive to physical restraint use, (d) older persons' reactions to restraint use (e) care providers' perceptions to physical restraint use within the context of work, environmental and safety concerns, and (f) how the effects of physical restraint use could influence the older person's rights, autonomy and integrity.

Relevance: The demand for long term care for older persons increases as the population ages. This, coupled with an increasing demand for human resources, aggravates the risk for less humane care for frail and vulnerable older persons. Person centred care is the fulcrum for the quality of service delivery in the care of older persons. It recognises the distinctiveness of each and every person irrespective of mental and functional capabilities, and moves away from the routine-driven, task-oriented and depersonalised services to focus on specific personal needs.

Although there is an increasing international body of literature, exploring the concept of physical restraint use in care homes, there is a lack of research-based evidence exploring care providers' holistic approach to physical restraint use in long term care settings in Malta. More importantly, published papers fail to captivate the human and humane elements of the physically restrained older person. The relevance of physical restraint use is central within care home environments. The knowledge of the framework within which this use operates is necessary for the establishment of a paradigm that places the older person within the hubs of her/his care.

Study design: A questionnaire booklet incorporating quantitative and qualitative components was developed, designed and adopted. The questionnaire was anonymous and self-administered by care providers within all Maltese care homes ($n=13$), managed by the government and private sectors. All care providers within these care homes were eligible for study participation, (medical, allied health, nursing, and nursing support staff). Care providers have direct contact with the older persons, and are therefore in a position to provide first-hand information about the use of physical restraints. Participants were requested to complete and return 'Physical Restraint Use' (PRU) questionnaire booklet developed for this study. Four hundred and thirty four questionnaire booklets were distributed and 180 booklets were returned over a 3 month time frame, providing a response rate of 41.5%.

Findings: A high observed incidence of physical restraint devices particularly for bed rails and harnesses was registered within both the government and privately managed care homes. Moreover, respondents acknowledged the use of 16 different types of devices, which raised questions as to multiple use of restraining. Privately managed

care homes reported a slightly higher incidence of observed devices in use. The observed total duration of restraints in excess of 2 hours by far exceeded durations less than 2 hours in both government and privately managed care homes. Data pertaining to the private care homes points to the existence of potential *continual* application of restraint.

With respect to observations of modalities of physical restraint use (person recommending, explaining, monitoring and deciding, and documentation), within government and privately managed care homes, a consistent statistically higher involvement of management staff in all of the procedures related to the use of restraining was reported. This was however not evident with respect to documenting restraint use within the private sector. Additionally family members/substitute decision makers had a greater influence on recommending restraint use and its removal within privately managed care homes. Nursing support staff offered a greater contribution to monitoring, documenting restraint use in private than in government managed care homes, whilst nurses in government homes contributed more to monitoring restraint use than their professional counterparts within private homes.

Care providers' attitudes on the use of restraining were reported to be the strongest advocates for using physical restraints within care homes, rather than issues related to older persons themselves such as mobility and physical limitations, cognitive problems, continence issues, problems with communication/hearing/vision and activity participation and pharmacological treatment.

Respondents also acknowledged observing adverse reactions to restraint use. Care providers reported restlessness to be the most observed reaction from older persons to physical restraint use (87.9%), followed by physical and cognitive consequences (66.7%) and apathy (30.3%).

Participants were uncertain that there would be no serious concerns related to work, environment, safety, and caring, should restraints be reduced, scoring between 3.0 and 4.0 on a 5-point Likert scale, with high scores expressing high concerns. Further analysis revealed that both care home sectors tended to favour least restraint use but were reluctant to remove restraint completely. Similarly, private care home respondents disagreed more than government care home respondents with the statement that the majority of physical restraints in use are necessary while nursing and nursing support staff showed a higher agreement with physical restraining being an invasion of a human right than did managers.

Training did not impact on the use of restraining within the care homes.

Conclusion: This study highlighted the sensitivity surrounding physical restraint use. It substantiated published data and also offered novel contributions to the body of knowledge pertaining to the physical restraints and their use. Primarily, the study indicated that training had no impact to effecting restraint minimisation approaches within the care homes. Secondly, respondents acknowledged the use of 16 different types of restraining devices. Also, arguments that bed rail use was not considered a restraining device, having become unconditionally and unquestionably the accepted norm within care homes was corroborated through the high reported observed

incidence of use. The study also offered a fresh insight into the modalities of physical restraint use, (recommendation to, explaining on, and monitoring/removing restraint device).

Few insights into the impact of physical restraining on the human and humane aspects of older person care were captivated in this study, more so as the sensitivity surrounding physical restraining required that the investigation be carried out through care providers' observations. This situation, within this project, was perhaps the biggest contribution yet, moreover when the study was indicative that care providers' attitudes towards restraint use were reported to be the strongest advocator for their use.

At its most basic level, physical restraining is tantamount to blocking or limiting a person's free ability to move as she/he pleases, thus infringing on the older person's human rights. Indeed, physical restraining is the inability of care providers' to identify and address the needs of the older persons and provide innovative paradigms of care. Restraining implies a failure in people relationships and consequently in the system of care delivery.

The message in the bottle must address the urgent provision for personalised services that enable the older person to make full decisions about her/his care through the support of care providers when called for and at later stages through advocates. It is only through these approaches that policies and guidelines could be put in place and managed effectively and efficiently.

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Abbreviations

| | |
|--------------|---|
| ADL | Activities of daily living |
| BI | Barthel Index |
| CP | Care provider |
| CPD | Continuous professional development |
| DECC | Department of the Elderly and Community Care |
| G* | government-managed care homes |
| MMSE | Mini-Mental State Examination |
| MNS | Manager Nursing Services |
| NO | Nursing Officer |
| OP | Older person |
| P* | privately-managed care homes |
| PPP | Public Private Partnership |
| PRI | Physical Restraint Interview |
| PRLTC | Physical Restraint in Long Term Care questionnaire tool |
| PRU | Physical Restraint Use questionnaire tool |
| SDM | Substitute decision maker |
| SOP | Standard Operating Procedure |
| SVP | St Vincent de Paul Residence |
| SVPR | St Vincent de Paul Residence |
| y | years |

Glossary of terms

| | |
|--------------------------------------|---|
| Activities of daily living | Routine activities that persons tend to do every day without needing assistance. There are six basic ADLs: eating, bathing, dressing, toileting, transferring (walking) and continence. |
| Barthel Index | An ordinal scale used to measure performance in activities of daily living. |
| Care provider | Professional and support staff having direct clinical contact with the older persons. |
| Furniture restraints | Furniture eg bed side table and cabinet which is used to block the older person's free movement. |
| Government managed care homes | Care homes for which the Government of Malta is directly responsible for the care and service delivery towards the older persons. |
| Harnesses | Straps and/or fittings by which the older person is held in bed/armchair and preventing free movement. |
| Mini Mental State Examination | A tool that assesses mental status. |
| Older person | Older person aged 60 years and over residing within the care homes. |
| Privately managed care home & PPP | Care homes employing a scheme referred to as the Public Private Partnership scheme where the Private Sector is accountable for care and service delivery towards the older persons. |
| Physical Restraint Interview | Physical Restraint Interview, the tool devised by the researcher and planned for use in the 'Project as intended.' |
| Physical Restraint in Long Term Care | 40-item questionnaire tool allowing for the investigation of nursing staff and nursing assistants regarding physical perceptions on restraint use. |
| Physical Restraint Use | Physical Restraint Use questionnaire tool devised by the researcher and used in the 'Project as conducted.' |

Publications

Fenech, M. A. (2015). Elder Abuse. In: Formosa, M. and Scerri, C. (Eds). *Elder abuse in population ageing in Malta: Multidisciplinary perspectives*, pp.345-365. Malta: Malta University Press.

Fenech, M. A., Fiorini, A., Fiorentino, R., Lilley, J., and Ward, C. D. (2011). Physical restraint use in the care of the older person, Research Showcase, University of Nottingham.

Chapter 1

Introduction

1.0 Introduction

The hypothesis underlying this project is based on preliminary work on potential abuse of the older person within long term care settings in Malta. This work suggested that significant harm, particularly related to the inappropriate use of physical restraining, might be experienced at an individual older person level within long term care institutions in Malta, (Fenech, 2001). In the aforementioned research, I concluded that older persons were potentially subject to physical intimidation because of the inappropriate use of restraints such as use of sheets/harnesses, bed rails and furniture restraints.

My research aim was therefore to investigate this hypothesis and establish whether evidence of restraint-induced older person harm exists. Thus the project aims to obtain a holistic and extensive picture on the use of physical restraining in care homes in Malta, adding a new understanding on the use of this practice, and contributing to the existing knowledge on the topic.

Initially I had hoped to achieve these aims by direct involvement of the older person as the key constituent and the *raison d'être* of long term care facilities, but, ultimately, because of circumstances beyond my control, I had to rely on obtaining their views and insights on the subject through carers' opinions, (Chapter 3).

I anticipate that the data emerging from this study will enable the local development of sound current and future practices, guidelines and policies related to the use of physical restraining. Moreover, the data obtained should help ensure that the older person's opinions be given the necessary exposure. The detailed aims are expounded in Section 1.2.

Although there is an extensive international body of literature exploring physical restraint use within care homes (Pellfolk *et al.*, 2012; Saarnio and Isola, 2010; Evans and Cotter, 2008; Evans *et al.*, 2002a, Gallinagh *et al.*, 2002a, 2002b), locally there is a lack of research based evidence that provides for a sound basis on the extent of this practice and its effect on the older persons within Maltese long term care settings. More so, confounding arguments (Fenech 2015; Fenech *et al.*, 2011; Fenech 2001; Cassar 2002; Delicata 1999; Fenech and Troisi, 1994), related to this topic provided a platform for further investigation.

In the first section of the introduction, I outline the rationale behind this work, highlighting its importance. In the second section I outline the project overview describing the research aims and objectives and the content material for each chapter.

1.1 The relevance of this project

1.1.1 Institutional care of older persons in Malta

The care of older persons in Malta has been an issue for the State since the mid-sixteenth century, when provisions were made to provide for the needs of the older and sick persons on the Island within a *Casa di Carita'* or Charitable Home, (Cassar, 1994).

This issue was further exacerbated during the Second World War period which resulted in war casualties also being cared for in this Charitable Home, which was renamed St Vincent de Paul Hospital. The influx of admissions necessitated the modernisation of the hospital and a change in policy so that the hospital could also accommodate younger persons. To-date this residence is known as St Vincent de Paul (SVP) and accommodates around 1,200 older persons. Over the span of some years, 42 smaller care homes mushroomed on the Island through State, Private or Church initiatives. The Health Standards Department, 2014 estimated that around 4,500 older persons currently resided within Maltese long term care facilities.

1.1.2 Demographic trends

The older person population is growing very rapidly in Europe. By 2050, it is projected that persons over 65 years of age will account for 27.5% of the European population. The fastest growing age group is oldest old population aged 80 and over, (European Commissions, 2011).

The National Strategic Policy for Active Ageing, 2014-2020 indicated that in 2012, the 65 plus age group reached 17.2%, with the Maltese population moving out of the traditional pyramidal shape to a more even-shaped block distribution of equal numbers at each cohort, (except at the top), (Parliamentary Secretariat for Rights of Persons with Disability and Active Ageing, 2014), (Figure 1.1).

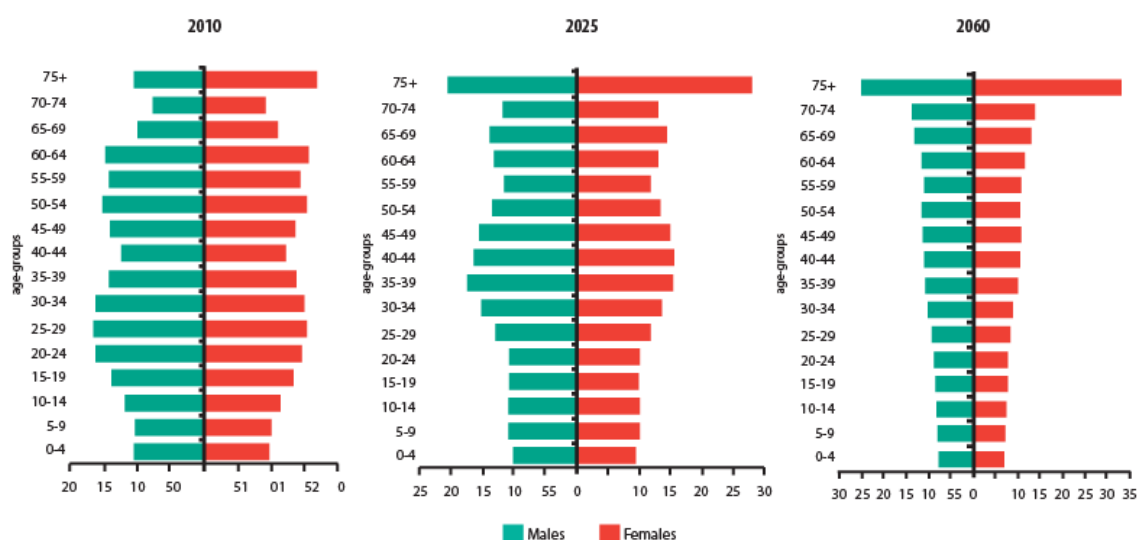


Figure 1.1: Maltese present and projected population pyramids (2010, 2025, and 2060). (Cited in National Strategic Policy for Active Ageing, 2014-2020).

Statistics based on the 2011 census indicated that nearly a quarter of the total population was 60 years old and over, with the number of 80-plus population reaching 15,643 or 3.7% of the population. The largest share of both the 60+ and 80+ older person population is made up of women. The sex ratios for the aforementioned age cohorts numbered 84 and 54 respectively, to the extent that the number of older women triples the number of older men, (Table 1.1). The European Commission estimated that for the period 2010-2060, life expectancy in Malta at 65 years will increase by 5.2 years, that is, from 20.2 to 25.4 years for females and from 17.0 years to 22.2 years for males. The National Strategic Policy for Active Ageing, 2014-2020

also indicated that the 75-plus population will increase from 6.8 to 13.7% of the total population, that is, from 28,500 to 57,100 older persons, (Parliamentary Secretariat for Rights of Persons with Disability and Active Ageing, 2014).

Table 1.1: Total population by age, gender, and sex ratio (31 December 2012). ^a Ratio of males per hundred females. (Cited in National Strategic Policy for Active Ageing, 2014-2020).

| Age | Male | Female | Total | Gender ratio ^a |
|-------|---------|---------|---------|---------------------------|
| 0-59 | 163,419 | 155,919 | 319,338 | 105 |
| 60-64 | 14,741 | 15,007 | 29,748 | 98 |
| 65-69 | 13,243 | 14,260 | 27,503 | 93 |
| 70-74 | 7,039 | 8,292 | 15,331 | 85 |
| 75-79 | 5,890 | 7,911 | 13,801 | 74 |
| 80-84 | 3,291 | 5,558 | 8,849 | 59 |
| 85-89 | 1,684 | 3,136 | 4,820 | 54 |
| 90+ | 573 | 1,401 | 1,974 | 41 |

1.1.2.1 A growing need for institutionalisation in Malta

Population projections in Malta indicate a continuously ageing population. Malta's population is expected to reach 429,000 persons by 2025 (National Statistics Office, 2013, 2011). The European Commission (European Commission, 2011), anticipates that within the time frames of 2010-2060, Maltese life expectancy at birth is projected to increase from 82.3 years to 88.9 years for females and 77.6 years to 84.9 years for males. Within the same period life expectancy at 65 years of age will increase by 5.2 years for both females and males. This implies there will be a marked increase in the older person population in the future. Projections suggest within the period 2011–2035, the 65-plus older person category will increase from 16.2% to 24.8% of the total population. Simultaneously, the 75-plus older person population will also increase

from 6.8% to 13.7% of the total Maltese population. On the other hand, the number and percentage of children between 0-14 years will decrease from 15.0% to 12.9% of the population. The working population (15-64 years) will also register a decrease, from 68.7% to 62.4%, (European Commission, 2011; National Statistics Office, 2013, 2011).

Undeniably, the aforementioned demographic trends are suggestive of low birth and mortality rates. Additionally, the diminished size of the Maltese family (8 siblings in 1950 vs. 1.3 siblings in 2011) and the shift in traditional roles for females and males, where the woman is expected to partake more in tertiary education and career/workforce paradigms. This will result in less time being available for caring for children or taking care of older parents. There are many other factors which will increase these pressures including (a) change in family values, (b) income security or the inability for Malta's comprehensive pension system to ensure that all older persons will experience financial stability, (c) age discrimination or the failure for the older person to remain or re-enter the labour market, effectively denying the person of making economic and social contributions, (d) citizenship or when the older persons are no longer members of an easily defined community, (e) challenges in the community services targeting the older persons because of an increase in the numbers and expectations of older persons, decline in informal carers and the need for a larger workforce, and (f) healthcare challenges because of the projected increases of older persons which would test the funding and delivery of health care. These issues would catapult the older person's decision and that of the informal carers to seek admission into long term care, (Parliamentary Secretariat for Rights of Persons with Disability and Active Ageing, 2014).

1.1.3 Physical restraint use in care homes

Physical restraint or the restriction of the older person's movement or access to her/his body, thus impeding intentional free movement (Hughes, 2008a; Horl, 2007), has been a common practice for many years within long term care settings, despite results from research based evidence indicating otherwise, (Demir- Zencirci, 2012; Demir- Zencirci, 2009; Kingdom *et al.*, 2004). Within a span of 6 years (1998 – 2004), Neufeld *et al.*, (1999), Capezuti *et al.*, (2002), Capezuti, (2004), Hamers *et al.*, (2004), Capezuti *et al.*, (1999) and Capezuti *et al.*, (1998), reported a strong prevalence of use in care homes ranging from 41.0%-64.0%.

Care homes still insist on physical restraining older persons to (a) reduce the risk of falls, (b) prevent older persons from wandering, (c) control behaviours of aggression and restlessness, (d) promote positional support, (e) stop medical devices from being pulled out and (f) reduce the risk of the older person injuring herself/himself, or other older persons or care providers, (Capezuti, 2004; Hamers *et al.*, 2004; Choi, 2003; Gallinagh *et al.*, 2002a; Werner, 2002; Meyer *et al.*, 2008; Neufeld *et al.* 1999; Ryden *et al.*, 1999; Sullivan-Marx *et al.*, 1999; Hantikainen 1998; Karlsson *et al.*, 1996).

Irrespective of the resounding knowledge that physical restraining has been shown to increase the risk of deaths, falls and serious physical and psychological injury amongst older persons, (Berzlanovich *et al.*, 2012; Pellfolk, 2010; Evans *et al.*, 2003; Miles and Irvine, 1992), as well as evoke guilt feelings amongst care givers, various devices continue to be employed (bilateral and unilateral bedrails and belts commonly used in bed, chairs with a table and belts, tipping chairs, blankets or sheets, vests, wrists and elbow restraints, and manipulation furniture), (Hamers *et al.*, 2004; Choi and Song,

2003; Evans *et al.*, 2003; Hoffman *et al.*, 2003; Maccioli *et al.*, 2003; Gallinagh *et al.*, 2002).

1.1.4 Physical restraint use: An invasion of an older person's basic human right

It is the purpose of this project to provide a platform of knowledge base and information on physical restraint use, securing relevant information of essence to the older person, care provider and policy makers within care homes.

1.1.4.1 An on-going debate

As early as 1977, Covert *et al.*, had reported that physical restraining was “*fraught with potential abuse*”. The older person's expertise and competence within care homes is often overlooked (Shura *et al.*, 2010). It has been suggested that there is a slow steady development of a culture that imposes change from ‘outside-in’ through a top-down bottom approach, where the older person is effectively the passive receiver of care, without meaningful social engagement and age integration, (Shura *et al.*, 2010; Randers and Mattiasson, 2004; Fenech, 2001; Davies *et al.*, 2000).

More so, care givers generally argue in favour of physical restraint use for a number of reasons, namely (a) home's lack of suitability to address the needs of the older person, (b) safety concerns, (c) insufficient human resource and (d) a difficulty to compromise between the needs of all those who fall within the establishment's remit (older person herself/himself, other older persons, other care givers, relatives, establishment's agenda). Faced with an unfair and an inequitable distribution of resources, the care giver might be potentially justified when considering and even implementing physical restraint use, (Fenech, 2015; Heeren *et al.*, 2014; Hickman,

2004; Fenech, 2001). Autonomy and its associates of integrity, dignity, privacy, respect, etc., are at best unaffordable luxuries which at best avoidable, (Hughes, 2008a).

Whilst not condoning care providers' aforementioned reasoning and decisions *vis-à-vis* restraint use, it is indeed absurd when politicians, administrators and policy makers continue to introduce, push forward and advertise terms such as "*person-centred or resident-centred care*" (Korean, 2010; Kitwood, 1997), "*person-directed care*", (White *et al.*, 2008), "*individualised care*" (Casper *et al.*, 2009) and "*consumer-driven health promotion*", (White-Chu *et al.*, 2009). In these instances, it is not surprising, that the older person's worth and that of the care provider is other than upheld, (Boyle, 2008; Hughes, 2008a; Agich, 1990).

McCormack, (2005), and Scott *et al.*, (2003), aptly recognise that "*person-centred moments*" happen sporadically and that the older person engaging directly in any change process is not forefront in the care home's agenda, (Shura *et al.*, 2010; Mozley *et al.*, 2004).

1.2 Overview of the project

1.2.1 Aims

This project is an in-depth evaluation of physical restraints and restraining of older persons within all Maltese care homes managed by the government, and care homes managed by the private sector which operate through a public private partnership (PPP) scheme. (PPP involves a contract between the government through the Director within the Department of the Elderly and Community Care, (DECC) and the private sector, in which the private consortium is responsible for providing a public service through ‘bed deployment’, assuming substantial technical, financial and operational risk in the project.) The work aimed to:

- a) Obtain a clear profile of the types of physical restraint devices used, and the extent of their application.
- b) Analyse the factors, characteristics and situations associated with the use of physical restraints.
- c) Investigate care providers’ perceptions to physical restraint use within the context of work, environmental and safety concerns.
- d) Explore how the effects and reactions to restraint by the older persons, as perceived by the care providers can influence the older person’s rights, autonomy and integrity.

1.2.2 Methodology and methods

A questionnaire-based study was designed and addressed to care givers within government and privately managed care homes over a 3-month period, January-March 2011. The tool was sensitive to the care givers' observational views as sourced from their daily practice. In order to contextualise the research outcomes to the Maltese long term care community, I devised and adopted a specific definition of physical restraint which was based on definitions used within the international community and cited in published studies. It was considered mandatory for participants to relate and be familiar with the proposed definition, which in itself was specific, objective and devoid of interpretive factors. The topics dealt with in questionnaire tool are reflected in Figure 1.2.

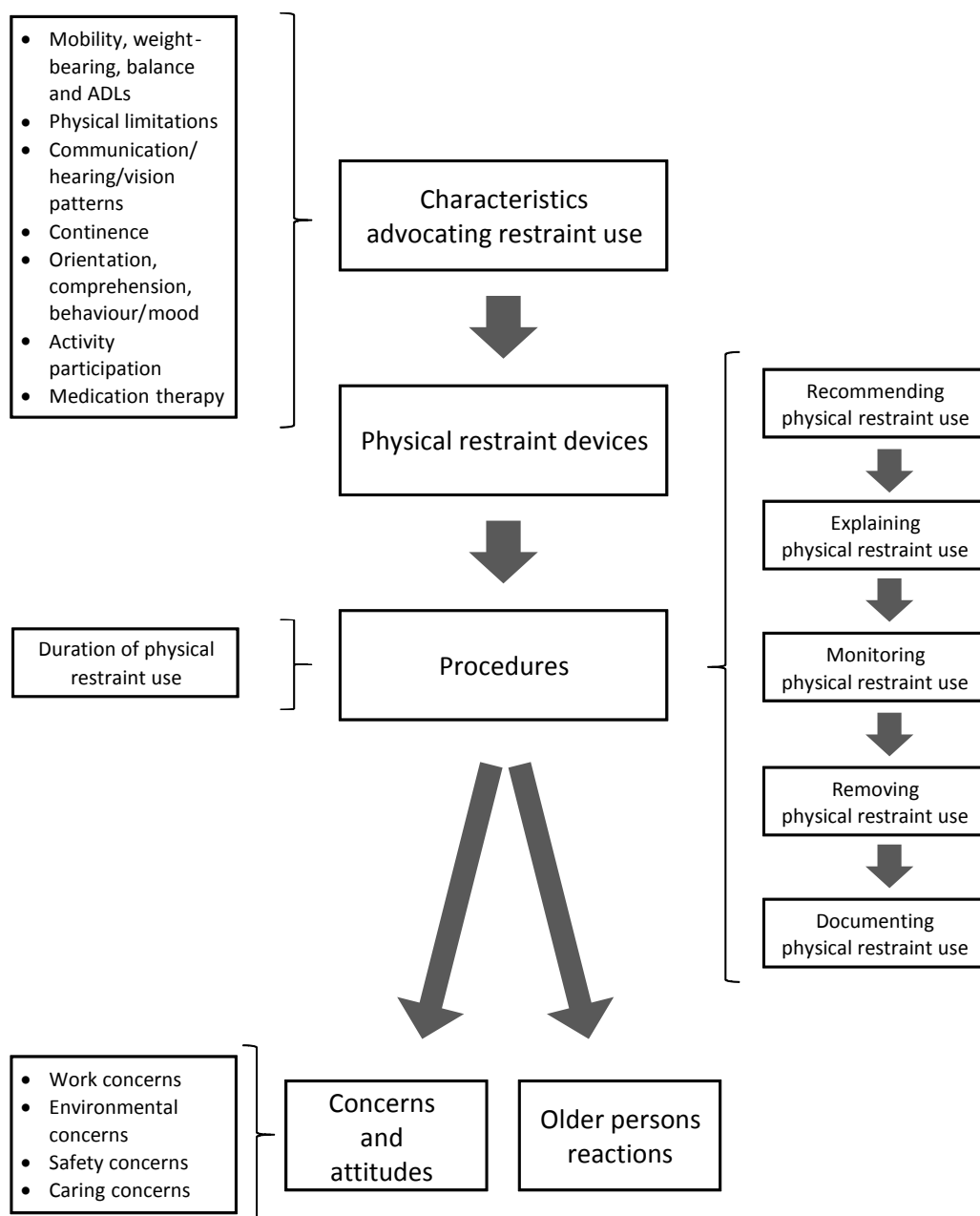


Figure 1.2: Representation of the focus of the project as expounded in the Physical Restraint Use (PRU) questionnaire tool. (ADLs: activities of daily living).

1.2.3 Structure of the thesis

This thesis comprises nine chapters, including this introductory chapter and bibliography chapter at the end. This section focuses on the chapter content.

1.2.3.1 Chapter 2: Literature review

This chapter provides a background for the study by presenting a review of the literature pertaining to physical restraint and its use, through describing and explaining (a) restraining devices and restraining including the inconsistencies of defining physical restraint and forms thereof, (b) bed rails as a controversial form of restraint, (c) local and international physical restraint use legislation and guidelines, (d) the prevalence of physical restraint use within the international and local scenes, (e) modalities of physical restraint use, including documentation and duration, (f) older persons' characteristics and reactions to physical restraint use, (g) care providers' concerns and attitudes to physical restraining, and (h) physical restraint use and its association to autonomy issues.

1.2.3.2 Chapter 3: Methodology and methods

This chapter consists of two parts and provides a rationale for the chosen research design and methods of data collection. Part 1 of the chapter, describes the earlier project, 'Physical Restraint Use within St Vincent de Paul Residence (SVPR)' which was designed using a large long term care setting as a basis for study. This section describes (a) SVPR, the setting, (b) aims and objectives, (c) setting and participants, (d) design of the project including the Physical Restraint Interview tool (PRI), (e) pilot study, (f) data collection, (g) ethical considerations, and (h) forfeiture of the project.

The second part of the chapter is based on the development of the questionnaire tool, Physical Restraint Use questionnaire (PRU), its use within a defined setting, and evaluation of the data obtained. This part subsequently describes (a) settings and participants, (b) regional indicators, (c) development and design of the PRU questionnaire tool, (d) bilingualism of the tool, (e) pilot work, (f) distribution and collection of questionnaire booklets, (g) ethical considerations, and (h) statistical data entry and analysis.

1.2.3.3 Chapter 4: Demographics and older person ratios within care homes

This section outlines the statistical data of respondents from the government and privately managed care homes to the PRU questionnaire, with emphasis attached to older person/care provider ratios within the respective care homes. Sub-sections included analysis with respect to, (a) demographic data of questionnaire respondents categorised by work status, (b) age and time working with older persons, (c) attendance to training sessions, and (d) older person to care provider ratios within care homes. These were analysed respectively with training and time working with older persons.

1.2.3.4 Chapter 5: Physical restraint devices, modality of use and characteristics potentially supporting the use of physical restraining

Physical restraint devices within the various care homes were analysed in this section. This chapter studied the (a) categorisation of the restraint devices, (b) physical restraint duration over a 24-hour period and also categorised on a 2-hour threshold, (c) modalities of physical restraint use, and (d) older person characteristics that potentially increased the likelihood for the older person to be restrained.

1.2.3.5 Chapter 6: Response to physical restraint use

This chapter analyses reports from care providers concerning the older persons' reactions to restraint use, within government and privately managed care homes. Categories of older persons' reactions to restraint use were also studied within the context of older person/care provider ratios.

Furthermore, the chapter also looks at concerns related the long term care setting, namely, (a) work, (b) environment, (c) safety, and (d) caring. Staff attitudes associated with physical restraint use primarily across government and privately managed care homes was also explored. The overall care providers' concerns and attitudes against older person characteristics potentially influencing the use of physical restraining were also analysed.

1.2.3.6 Chapter 7: Discussion and conclusion

This chapter includes salient findings pertaining to the use of physical restraints within Maltese care homes. The implications of the findings are discussed at length and recommendations towards future policy, practice and research are made.

1.3 Chapter summary

This chapter described the reasoning behind this project. The aims to the project, method employed, structure and content of the project were outlined. The next chapter describes the literature review.

Chapter 2

Literature Review

2.0 Introduction

This chapter provides a review of the literature on physical restraining. The initial part of the chapter describes the approaches I undertook in order to review the literature in depth. The second part describes and explains (a) restraining devices and restraining including the inconsistencies of defining physical restraint and forms thereof, (b) bed rails as a controversial form of restraint, (c) local and international physical restraint use legislation and guidelines, (d) the prevalence of physical restraint use within the international and local scenes, (e) modalities of physical restraint use, including documentation and duration, (f) older persons' characteristics and reactions to physical restraint use, (g) care providers' concerns and attitudes to physical restraining, and (h) physical restraint use and its association to autonomy issues. The third part of the chapter focuses on the aims and objectives of the project.

2.1 Approaches to the literature review

In view of the varied types of existing publications related to the use of physical restraining, I opted for a narrative literature review. This approach provided for a thorough examination of all the relevant peer-reviewed recent/current literature which covered a wide range of subject matter at various levels of completeness and comprehensiveness. Such an option identified and allowed for consolidation/summation of previously accomplished work, laying a foundation for the current project, (Grant and Booth, 2009).

The weaknesses identified by Grant and Booth (2009), namely related to issues of potential bias were considered to be out-weighed by the benefits of this approach as I was not limited by publication types using a narrative approach.

In this qualitative synthesis, I consulted and evaluated published research literature and user manuals related to physical restraint devices in use, and their effects on the older persons and care providers within care homes, nursing homes and long term care settings. The published literature provided me with information on the modalities of physical restraint use and how its use thereof impinges on the autonomy of the older person and care provider decisions to restrain. Published reviews included authors from across Europe, North America and Canada, the UK, Ireland, Scotland, Japan, Hong Kong and China as well as Australia and New Zealand.

Database searches were conducted for relevant literature using the CINAHL, PubMed, Ovid and Wiley InterScience abstracting services. Searches were also conducted through the Joanna Briggs Institute (Australia) and Cochrane Library. The selection criteria for the required literature were original studies and reviews relating to the use and effect of physical restraint in older persons in long term care settings. Both qualitative and quantitative studies and all geographic locations were considered. Original studies were given priority in the construction of the actual literature review. Single words or a combination of terms (*physical restraints and their use, long-term care, care homes, nursing homes, older person, autonomy issues, effects of restraining, attitudes towards physical restraint*) were used.

Initial data base searches based on the above criteria revealed 816 citations while records obtained through the Joanna Briggs Institute (Australia) amounted to 23. These were imported into bibliographic software and duplicate citations were filtered out. This process revealed 641 unique references. Records amounting to 318 were excluded on the basis of (a) hospital/acute based settings, (b) respite, (c) home/community environment, (d) chemical (drug) related restraint, (e) restraint within mental health settings, and (f) physical restraining related to crime. This exercise generated 323 full-text articles which were assessed for eligibility based on their content. A further 29 full-text articles were excluded on the basis of (a) being based on a mixed target population and/or environments/settings, or (b) one of the aforementioned ((a) – (f)) exclusion criteria that was not immediately evident from the title or abstract.

A final reference count of 294 publications was used for the literature review, (Liberati *et al.*, 2009), (Figure 2.1).

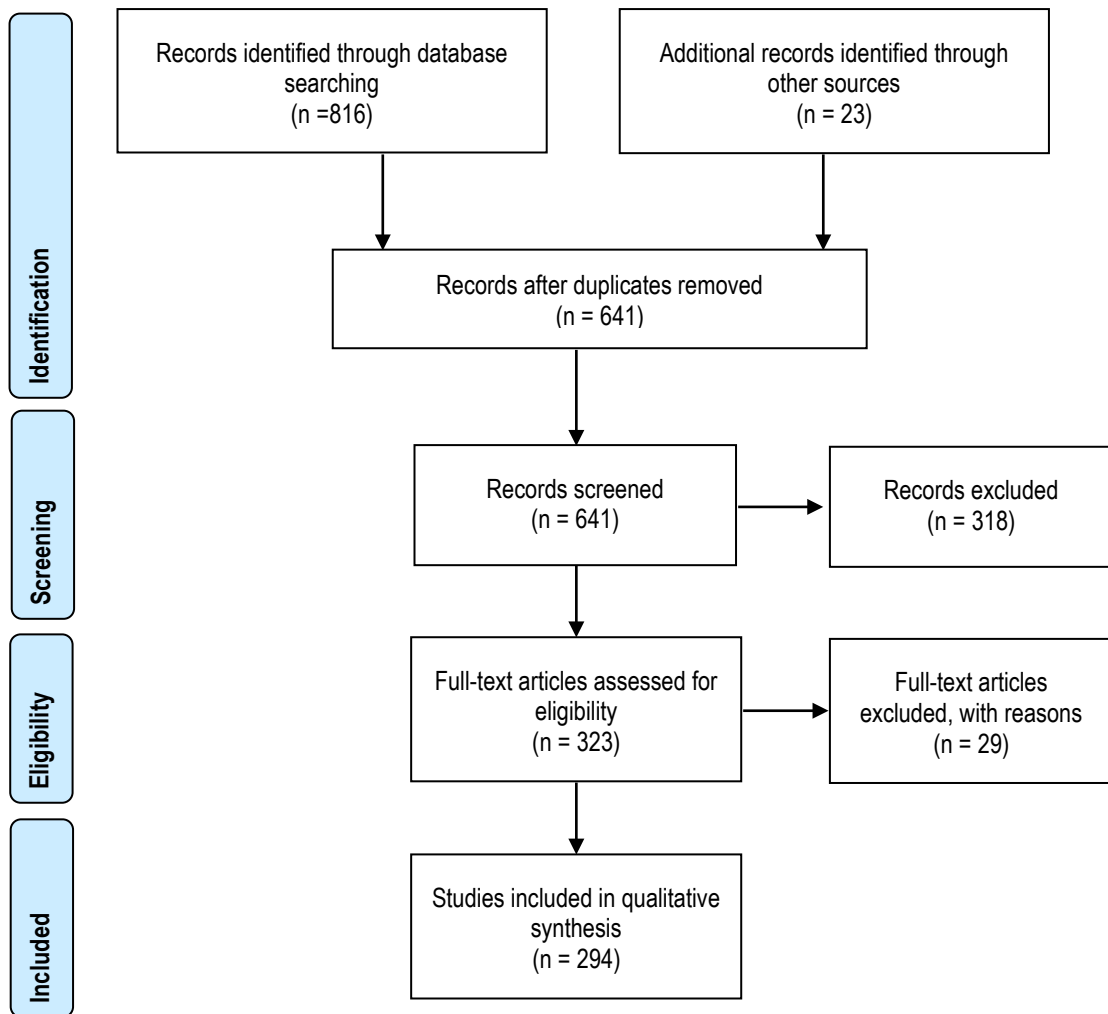


Figure 2.1 PRISMA study selection flow diagram.

2.2 Restraint devices and restraining

The introductory part of this section amplifies on the contradictions surrounding the use of restraining. Then I will explore some inconsistencies to describing physical restraining. Successively forms of restraints are defined highlighting particularly two broader definitions emerging from Nordic and UK published reviews by Saarnio and Isola (2010), Hughes (2008a), Kirkevold *et al.*, (2004b, 2003); and Kirkevold *et al.*, (2004c). Towards the end I will look at the controversies surrounding bed rails use.

Central to arguments to and against the use of restraining is the declaration by the United Nations General Assembly (1991) that insists that respect for the dignity of the older person is upheld at all times,

“Older persons should be able to enjoy human rights and fundamental freedoms when residing in a shelter, care or treatment facility, including full respect for their dignity, beliefs, needs and privacy and for the right to make decisions about their care and the quality of their lives.” (United Nations General Assembly, 1991)

This is but a contradiction in the wake of a vast body of reviews across Europe calling for care providers to exercise their duties to safeguard the older person, and urging restraining measures (such as bed rails, limb or jacket restraints, etc.). Care providers however are concerned about their liable responsibilities. They lend support to these claims by stressing that their decisions in favour of restraint use is a measure geared to putting the older person at the centre of care. (OECD/European Commission, 2013; Hughes, 2008a; Hughes, 2008b; Hughes 2008c; Hughes 2008d; Hughes 2008e; Braine, 2005).

Notwithstanding, other reviews recognise the major leading breach of the older person's basic rights when physically restrained. This happens, when the decision to restrain or otherwise is based on judgement rather than on the wishes and choices of the older person or on scientifically validated guidelines and protocols, (OECD/European Commission, 2013; Boyle, 2008; Teeri *et al.*, 2007; Hickman, 2004; Slettebo and Haugen Bunch, 2004).

This debate continues unabated and remains inconclusive despite much rapidly growing research into physical restraint use.

2.2.1 Inconsistencies when defining physical restraining

“There is currently no consistent definition of what constitutes a physical restraint”, (Kane, 2001), as definitions most often focus on the restriction of the older person’s movement or access to her/his body, impeding intentional free movement, (Lane and Harrington, 2011; Huizing *et al.*, 2007; Lai, 2007). Such definitions make no reference to (1) the physical restraint device *per se*, (2) the psychological effects of the device on the older person, and (3) whether the restraint has been placed on the older person with/out her/his consent (Horl, 2007; Kane, 2001; Dodds, 1996).

Dimant (2003) postulates the definition of a restraint to be a functional one, based on the effect and individual circumstance of the older person and care provider. Dimant (2003) explains that the same device could potentially have the effect of restraining one person but not another. He highlighted the importance of considering the care provider’s *intent* to restrain. The care provider has to consider restraint use as either used as a treatment procedure or assistance to the older person e.g. in securing a safe sitting position. Hughes (2008a) and Dimant (2003) then contend that it would be irrelevant to label the device as being a restraint, more so if a similarly effective alternative device/intervention is not available, (Hughes, 2008a).

Along similar lines, Hagan-Hennessy, (1997), lent support towards physical restraining in the absence of a definitional clarity, supporting care providers’ perceptions and decisions to/against physical restraint use. In fact, Karlsson *et al.*,

(2001) opted to explore only devices or situations that were construed by care providers to be forms of physical restraining. They rested on the questionable assumption that carers' consideration of what was understood to be a physical restraint was correct. Although this omission may seem trivial, it is in fact crucial in terms of the current concern regarding physical restraint use and the adverse effects related to its use. These arguments are also supported by Heeren *et al.*, (2014), when their definitions on physical restraining concentrated mainly on (1) the necessity of the devices for treatment purposes and (2) to protect the older person. As with the other published literature, his arguments failed to reflect on the humane issues or on the effects of the device on the older person.

Indeed other reviews still, overlooked the importance of addressing the older person's involvement in the decision making processes to physical restraining or otherwise and rather focused on the "*intent to restrict movement of a patient's whole body or a portion of the body to protect the patient or others from injury*", arguing that this interactional form of restraining had its benefits in treatment and care giving activities, (Heeren *et al.*, 2014, Royal College of Nursing , 2008; Kirkevold, 2004a, Kirkevold, 2004b, Kirkevold, 2003, Karlsson *et al.*, 2001, Food and Drug Administration and Health Care Financing, 2000; Joint Commission on Accreditation of Healthcare Organisations (JCAHO), 1996; Mion *et al.*, 1989).

But the Irish Department of Health (2010), through the policy document, "Towards a Restraint Free Environment in Nursing Homes", moved closer towards asserting and recognising the older person's important role when physical restraint use is considered. They maintained that including *easily remove* and *freedom of movement*

within the broader definition of physical restraining was crucial. Their definition of physical restraint centres around the older person's ability to remove the restraint in the same way as it was initially applied by the care provider, bearing in mind the older person's physical condition and ability to achieve her/his goal and easily remove the device and "... *change in place or position for the body or any part of the body that the person is physically able to control.*" This in stark contrast to reviews supporting the popular notion that all equipment which promotes the independence, comfort or safety of a resident or which is specifically requested by the resident, is not to be construed as a physical restraining device, (Karlsson *et al.*, 2001; Food and Drug Administration and Health Care Financing, 2000).

Other publications positively associated restraint use with abuse that involved the denial of choice and freedom of movement, and focused on the "*effect*" of the device rather than on "*the purpose or intent of its use*", (Mohler *et al.*, 2012; Lane and Harrington, 2011; Evans and Cotter, 2008; Centers for Medicare and Medicaid Services, Long-Term Care Resident Assessment Instrument (RAI) User's Manual, 2008; Watson, 2002; Nay *et al.*, 1999, Hantikainen, 1998; Mahoney, 1998; Retsas, 1998a; Retsas 1998b; Strumpf and Evans, 1998; Retsas and Crabbe, 1997; Liukkonen and Laitinen, 1994, and Counsel and Care, 1993, 1992).

In 2003, Averis and Pearson had also criticised several authors' attempts to define physical restraint use by focusing on the restraint *per se*, rather than on the loss of self-determination, loss of dignity and the disregard for the older person's legal rights caused by the intervention. Amin *et al.*, (2010), and Currie (2008) seconded Averis and Pearson (2003) earlier comments and criticisms and maintained the importance of

establishing gold standards of effective evidence-based, person-centred care plans for the older person, so as to decrease the negative impact the physical restraining device would have on the well-being of the person.

Further inconsistencies were noted in Norwegian appraisals of what construed a physical restraint device. Interestingly, Norway speaks of *constraint devices* rather than *restraint devices* (Kirkevold *et al.*, 2004a; Kirkevold *et al.*, 2004b; Kirkevold *et al.*, 2004c; Kirkevold *et al.*, 2003). Technically both words have the same meaning, and Kirkevold and colleagues offered no explanation to favouring one nomenclature over the other. They described (a) *restraint* as ‘... *the restriction of the freedom of movement or normal access to the body by any manual method or by physical or mechanical device*’, (Kirkevold *et al.*, 2004), and (b) *constraint* as ‘... *the holding of hands, legs or the head during assistance with the activities of daily living and during medical examinations and treatments, the use of electronic devices for the surveillance of patients, or the mixing of drugs into food or beverages against the patient’s will or without their knowledge*’, (Kirkevold *et al.*, 2004). Kirkevold’s and co-workers’ expositions of restraint and constraint use are nonetheless broader in context when compared to previous evaluations. Their views are supported and further investigation and recognition is necessary in order to broaden and standardise the portrayal of physical restraining.

The Royal College of Nursing (2008, 2007) also attempted to broaden the description of physical restraining, and associated physical restraints with, (a) physical through restrictions on a person’s freedom to move (holding, moving or blocking a person), mechanical (mittens, lap belts, sleeping belts), (b) everyday equipment (wedging

furniture, chair and top trays, soft or low chairs) and (c) psychological (repeated instructions and deprivations).

2.2.2 Forms of restraint

This section is concerned with forms of restraints and explains how past and current literature abounds with examples of physical restraining devices, (De Veer, 2009; Royal College of Nursing, 2008; Meyer *et al.*, 2008; Hamers *et al.*, 2004; Karlsson *et al.*, 2001; Hantikainen, 1998; Retsas, 1998a, 1998b; Ljunggren *et al.*, 1997; Molassiotis and Newell, 1996).

International published literature from countries including in the Nordic Regions, UK, Europe and the USA, show no visible consensus on the variations of restraining devices. Mostly mentioned restraint devices include trunk restraints (in the form of safety vests and belt restraints with chair/wheel chair use, and lap boards), chairs that prevent rising, bed rails, and physical locking the older person within the unit, (Meyer *et al.*, 2008 ; Kirkevold and Engedal, 2004a; Kirkevold, *et al.*, 2003; Karlsson *et al.*, 2001; Hantikainen, 1998; Ljunggren *et al.*, 1997; Karlsson *et al.*, 1996; Lever *et al.*, 1994; Tinetti *et al.*, 1991). Limb restraining was reported to be the least restraining device in use, (Ljunggren *et al.*, 1997).

Kirkevold *et al.*, (2004c), and Kirkevold and Engedal (2004b) in Norway and Hughes (2008a, 2008b, 2008c, 2008d, 2008e) in the UK, addressed the issue of physical restraint use through a different perspective. Their detailed exposition on the various types of restraint devices drawing from past and current international research propounded the view that there was more to physical restraining than the device *per*

se, (De Veer, 2009; Royal College of Nursing, 2008; Meyer *et al.*, 2008; Hamers *et al.*, 2004; Karlsson *et al.*, 2001; Kirkevold and Engedal, 2004b; Hantikainen, 1998; Retsas, 1998; Ljunggren *et al.*, 1997; Molassiotis and Newell, 1996).

As indicated repeatedly, published literature focused primarily on the device *per se* and fell short of portraying a wider picture of other methods potentially construed as being forms of physical restraining. These incongruences were aptly tackled by Hughes, (2008a-e) and Kirkevold and Engedal (2004b), and Kirkevold *et al.*, (2004c), (Table 2.1). The authors' underlying descriptions of the various forms of restraints rested on the premise that besides being a device, physical restraining could also encompass actions such as forced pressure, explicit environmental design, confinement, electronic surveillance and bad care practices, (Hughes, 2008a; Kirkevold and Engedal, 2004b and Kirkevold *et al.*, 2004c).

Table 2.1: Main themes for describing categories of restraining.

| Major types of restraint proposed in the literature | |
|--|---|
| 1. | Physical restraint, or the tying or strapping of the older person |
| 2. | Physical intervention, moving the older person against her/his will, pushing or using holding techniques |
| 3. | Covert medication and chemical restraint, or the use of major or minor tranquillisers to make the older person more docile and compliant |
| 4. | Medical restraint or the use of hand mittens to prevent the older person from tugging or snagging at her/his feeding tube |
| 5. | Environmental restraint or environmental design to limit the older person's ability to move freely, example complicated door handles, stair-gates or disguised entrances and exits |
| 6. | Seclusion or solitary confinement |
| 7. | Aversive care practices/institutional abuse, or tidying away walking frames and wheelchairs or not enabling the older person to wear spectacles or hearing aids |
| 8. | Surveillance, or tagging and tracking technology |
| Hughes (2008a, 2008b, 2008c, 2008d, 2008e) | |
| 1. | Mechanical restraint (bed rails without the patient's consent, belts or other fixing to bed, belts or other fixing to chair) |
| 2. | Non-mechanical restraint (locked in a room, physical retention, other physical restraint) |
| 3. | Electronic surveillance (devices on patients that automatically lock the door, devices on patients that alert the staff, devices to track patients, devices that sound when a patient leaves the bed, other types of electronic surveillance) |
| 4. | Force or pressure in medical examination or treatment (mixing drugs in food or beverages, use of force to perform examination or treatment, other) |
| 5. | Force or pressure in the activities of daily living (holding hands, legs or head for washing or dressing/undressing, showering or bathing when the patient resists physically, showering or bathing when the patient resists verbally, forcing the patient to the bathroom, feeding a patient against his/her will, other) |
| Kirkevold and Engedal (2004b) and Kirkevold et al., (2004c) | |

Similarly, Saarnio and Isola (2009), in Finland, included direct or indirect or encompassing both forms simultaneously of physical restraining. Interestingly they also referred to the restraint as an *instrument* and the action *per se* as *mode of operation* (Table 2.2).

Table 2.2: Direct and indirect methods for restraining.

| Direct methods | Indirect methods | Direct and indirect methods |
|--|--|--|
| Some kind of equipment is used or restricting the older person with 'something' she/he was already in contact with e.g. harness. | Indirect <i>instrument</i> e.g. bed rails. | Using two <i>instruments</i> simultaneously e.g. bed sheets and bed rails. |
| Preventing the older person from moving by using physical force and strictly telling her/him to 'stay put.' | <p>A <i>mode of operation</i> that promotes passivity, including</p> <ol style="list-style-type: none"> 1. Restricting the older person's walking only to designated locations related to care procedures, 2. Taking away the person's mobility aid, 3. Preventing the older person from calling for help (removing the nurse call), 4. Situations where the older person intentionally does not receive the required help, 5. Keeping the older person inadequately dressed and 6. Feeding the older person over the bed rails. | |

2.2.3 Bed rails as a controversial form of restraint

For more than 15 years, the argument maintaining that bed rails prevented falls and ensured safety of the older persons has been supported indisputably by one and all, (Dermot Frengley, 1999). Moreover, Jukelestad (2001) expounded on the innovative idea of having 'bed days' within some Norwegian care homes, in order to lessen the workload on care providers. Indeed, years later, Shanahan (2011) in Israel, and Shanahan and Evans (2009), also conceded that care providers acquired their knowledge on bed rail use through such a '*tenacity*' or resolve that was impossible to modify if at all their indiscriminate use of bed rails even in the face of the new evidence that indicated the contrary.

Reviews across the Nordic Regions, USA and Europe supported the notions that bed side rail use was an unacceptable restraining device, highly unethical and even dangerous as the older person was made to spend long hours in bed or in an armchair, besides being exposed to serious injury or even death (Berzlanovich *et al.*, 2012; Pellfolk, 2012; Evans *et al.*, 2003; Oliver, 2002; Gallinagh *et al.*, 2001; Guidance to Surveyors for Long Term Care Facilities, 1999; Jehan, 1999; Evans and Strumpf, 1990; Watson and Burton, 1990. Dermot Frengley and Mion (1986) both acknowledged that bed side rails' design did not allow the older person the necessary manoeuvrability to lower the side herself/himself.

In turn, Centres for Medicare and Medicaid Services, Long-Term Care Resident Assessment Instrument (RAI) User's Manual, 2008 in the USA also put forward the idea of "*bed rail the enhancer*" vs. "*bed rail the restraint*." This suggested a dual function for bed rails, i.e. "*a device to improve the resident's mobility and also have the effect of restraining the individual*." Nonetheless, the Manual advocated caution and recommended that facilities always assessed the appropriateness of the bed rail, particularly when "*... the side rail has the effect of restraining the resident and meets the definition of a physical restraint for that individual*." The Manual weighed on the older person's particular needs, feelings and emotions and stressed that the aforementioned by far outweighed the objective or intent of the bed rail.

Bright (2001), also evaluated the relative significance of using bed rails, exposing the real conflicts surrounding restraint use which centred on what care providers *set out to do* in contrast to what care providers *say they would like to do*. Furthermore, Bright (2001) contended that care providers' automatic response to the sight of bed rails is to simply pull them up out of habit. They fail to consider critical reflective thinking and practice. Central to bed rail use is the concept put forward by Capezuti *et al.*, (2007), Capezuti, (2004), Capezuti *et al.*, (2002), Capezuti *et al.*, (1999), Capezuti *et al.*, (1998) in the USA and later Bright (2001) in the UK, that many older persons for whom bed rails are used, lack the cognitive ability to interpret correctly the intended use of the rails. Older persons may potentially respond to the rails as a barrier to go over or around, sustaining falls, injuries or entrapment within the bed rails in the process, (Berzlanovich *et al.*, 2012; Pellfolk, 2012), (Figure 2.1).

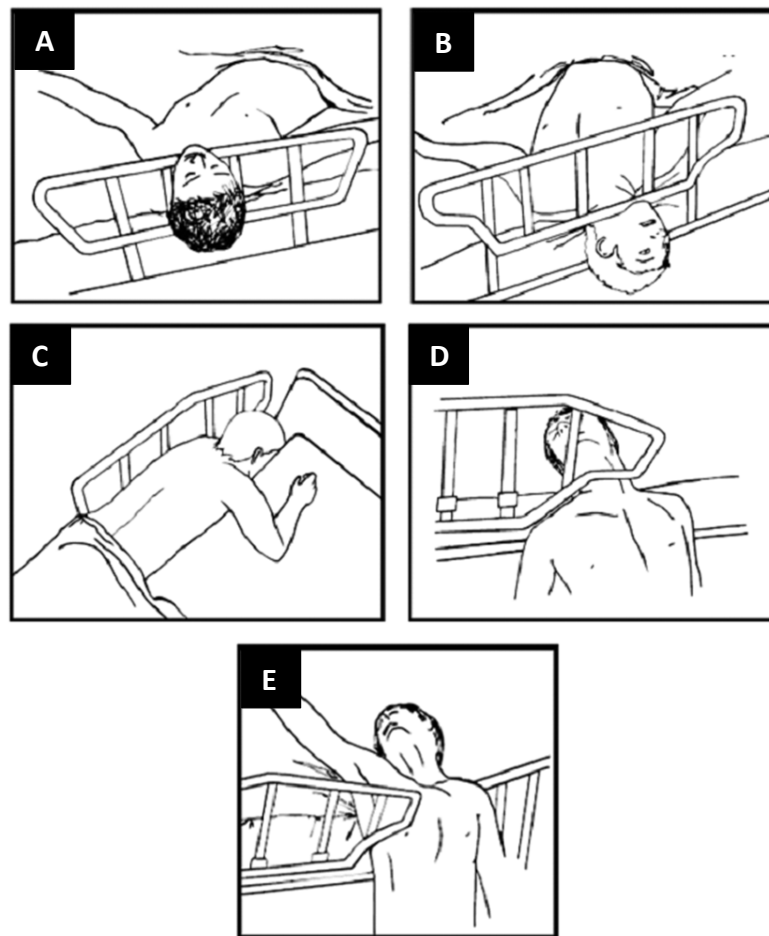


Figure 2.2 Bed rails related injuries. A: Entrapment within rail, B: Entrapment between top of compressed mattress to bottom of rail, between rail and supports, C: Entrapment in horizontal space between rail and mattress, D: Entrapment between top of compressed mattress and bottom of rail at end of rail, E: Entrapment between split rails (Kendall Corporation, 2008).

Other reviews in the USA focused on bed rails as being part of the bed's design not requiring external interventions as for 'attaching a harness', (Dermot Frengley, 1999; Dermot Frengley, 1996). The authors contended that this reasoning would exonerate bed rails as physical restraint devices.

Other arguments put forward by researchers within the Nordic Regions failed to challenge the assumption that bed rails are promoters of independence, safe mobility, dignity and autonomy of the older person, which denied the older persons' physical and psychological well-being, (Hamers *et al.*, 2009; De Veer *et al.*, 2009; Healey and Oliver, 2009; Healey *et al.*, 2008; Hamers and Huizing, 2005; Hamers *et al.*, 2004; Hickman, 2004). This was reflected in the in-depth analysis of several restraint-free care homes within the UK and Norway which did not include bed rails as forms of restraining devices, (Hamers *et al.*, 2004; Castle and Fogel, 1998a; Castle and Morr, 1998b). Juklestad (2001), expounded on the innovative idea in some Norwegian nursing homes of having "*bed days*" in order to lessen the workload on care providers.

Other detailed examinations of bed rail use in the UK focused on the appropriateness and safety of bed rail use rather than the actual frequency of use and dangers associated with this practice, (Hignett *et al.*, 2013; O'Keeffe, 2013; Chiba *et al.*, 2012; Laurin *et al.*, 2004; O'Keeffe *et al.*, 1996; Powell *et al.*, 1989) and stressed that their use was particularly limited to the prevention of bed related falls at night time. Moreover, Healey *et al.*, (2008) reported that bed rails did not increase the risk of falls or falls-associated injuries, and argued that serious direct injury from bedrails was related to "*outmoded designs and incorrect assembly.*" Healey and Oliver (2009) in the UK, insisted that a proportion of reviews reacted negatively to bed rail use merely as its use was considered to be "*morally impermissible and unethical*", which reasoning in my opinion does not at its best validate the use of bed rails. The authors based their arguments on having identified only one older person who was distressed by bed rails. Similarly, Healey and Oliver (2009), and Healey *et al.*, (2008) also reported that a resounding 89.5% of older persons were reluctant not to use bed rails,

and also maintaining the term cot-side to be demeaning, (Healey and Oliver, 2009; Healey *et al.*, 2008).

The main limitations and inconsistencies in the above arguments lies with bed rail use having become unconditionally and unquestionably the accepted norm within care homes within Europe and the USA, (Hignett *et al.*, 2013; O’Keeffe, 2013; Chiba *et al.*, 2012; Laurin *et al.*, 2004; Schirm *et al.*, 1993; Michello, 1990). The main problems to this approach stands with care providers failing to focus on person-centred care through comprehensive assessment and individualised care, and continue to push forward the notion that the ‘device’ is the safe-guard towards protecting the older persons’ vulnerability and frailty, (Capezuti *et al.*, 2002).

Whilst acknowledging that bed rails serve many purposes, their routine use to restrict the older person’s voluntary movement should not be supported, (Hignett *et al.*, 2013, O’Keeffe 2013, Capezuti *et al.*, 2007, Capezuti, 2004, Capezuti *et al.*, 2002). Millard’s (1978) very early remarks that ‘*bed rails treat the bed not the patient, because if the bed is at the right height, cot sides (bedrails) are unnecessary,*’ must be recognised. Indeed, published reviews concluded that bed rails were not designed to be lowered by the older person whilst in the bed and hence would fall within the remit of a physical restraint, (Hignett *et al.*, 2013; O’Keeffe, 2013; Capezuti *et al.*, 2007; Capezuti *et al.*, 2002).

2.3 International and Maltese physical restraint use legislation and guidelines

This section explores the differing and often contrasting international legislation and guidelines related to the use of restraining. Successively it also explores the Maltese scenario with the intent of comparing the local scene to that internationally.

2.3.1 International legislation and guidelines on physical restraint use

International legislation and guidelines favour least restraint use or its abolishment, (Demir-Zencirci, 2012 in Germany, 2009; Mental Capacity Act 2005, in Department for Constitutional Affairs, and Department of Health, 2007; Mental Welfare Commission for Scotland (2013); Kingdon *et al.*, 2004; Currie, 1995). Similarly, various agencies and departments in the UK have also argued extensively in favour of (a) the older person's right to freedom of movement, (b) the informed and voluntary consent to decision-making processes and (c) not restricting or depriving the older person of her/his liberty within long term care.

Their arguments and discussions, although only applicable in the UK, are in fact crucial in terms of today's concerns over the use of physical restraining, as they challenge care providers on the importance of obtaining consent before any treatment or care delivery, invasive or otherwise. They underscore the mistaken impressions and assumptions held by many within the care home that treatment procedures are a ritual and rather insist on the importance of the older person's involvement and consent, (Mental Capacity Act 2005 in Department for Constitutional Affairs, and Department of Health, UK, 2007; National Institute for Health and Clinical Excellence, UK 2005; The Code: Professional Standards of Practice and Behaviour for Nurses and Midwives, UK 2015; Royal College of Nursing, UK, 2008, 2007; The

Lord Chancellor's Department UK, 2003a, 2003b; Department of Health UK, 2000; Mental Capacity Act 2005, in Department for Constitutional Affairs, and Department of Health, UK, 2007). England and Wales, is but one example, where the Mental Capacity Act, (2005), sets out a clear definition of restraint,

“The use or threat of force to help do an act which the person resists, or the restriction of the person's liberty of movement, whether or not they resist. Restraint may only be used where it is necessary to protect the person from harm and is proportionate to the risk of harm.”

Departments and agencies internationally have also pushed forward valid templates for action, which must be considered with importance, (Health Service Executive, 2010; Canada: Patient Restraint Minimisation Act, 2001; Mental Welfare Commission for Scotland, 2013; The National Centre for State Long Term Care Ombudsman Resources (OBRA, USA) (1989).

Scotland avails itself of the Adults with Incapacity Act through the Mental Welfare Commission for Scotland, 2013, based on similar pillars as to the Mental Incapacity Act UK 2005, cited in Griffith, (2009), Griffith and Tengnah (2008). These acts focus mainly on (1) the protection of the older person's capacity and (2) on giving a voice to older persons lacking capacity, Restraint use in Ireland, (HSE National Policy on the use of Physical Restraints in Designated Care Units for Older People, 2010), is also covered by legislation. Consequently the application of a physical restraint without the older person's consent is construed as unlawful.

Physical restraint use in Australia is regulated through the Standards for Residential Aged Care Facilities, cited in Maccioli *et al.*, 2003 and Van Norman and Palmer, 2001. Canada endorses the Patient Restraint Minimisation Act, 2001. Restraint use in the care of older persons in Finland is not regulated through legislation whilst in Sweden coercive (forceful) measures are not allowed and restraint use can only be endorsed by the medical practitioner upon the approval of the older person, (Pellfolk, 2012, 2010). Within the USA, restraint use is covered by legislation, (Hamers and Huizing, 2005; Maccioli *et al.*, 2003; Van Norman and Palmer, 2001). Furthermore, through the National Centre for State Long Term Care Ombudsman Resources, Omnibus Budget Reconciliation Act, (OBRA, USA), 1989, the USA advocated against restraint use, and insisted that “... *a patient has the right to be free from any physical restraints imposed for purposes of discipline or convenience and not required to treat the medical symptoms.*” However, in-depth research into the efficacy of this Act within American care homes only indicated a slight shift towards the reduction of physical restraint use, (Sirin *et al.*, 2002).

Whilst, policy makers and service providers continue in their endearing attempts to provide for and understand restraint in the context of the law, Amin and colleagues in Sheffield (2010) maintained that, “*the key to lawful intervention is the proportionate and least restrictive use of physical restraint through assessment and planning*” with Averis and Pearson (2003) earlier recommending that physical restraining should be considered as a last resort, “*when the potential benefits are greater than the potential harm secondary to the enforced immobility of a resident.*”

Despite these repeated calls and on-going debates regarding the use of physical restraining, there is currently no European directive compelling member states to restrict forms of physical restraining, (OECD Health Policy Studies, 2013).

2.3.2 Maltese legislation and guidelines on physical restraint use

Within the Maltese Islands, the Mental Health Act, (2014) ratified in Parliament and intended towards “*promoting and upholding the rights of those persons suffering from mental health disorders*” is only binding whilst the older person is within the mental institution, reiterating that “*seclusion and/or restraint shall only be permissible if they are the only means that will prevent imminent harm and danger to self and others and is prescribed by a medical practitioner duly authorized by the clinical director of the facility to order such interventions ... A person who is restrained and/or secluded shall be kept under humane conditions and under the care and close and regular supervision of qualified members of staff*”, (Mental Health Act Malta, 2014).

Acute hospitals and some long term care settings (be them government or privately managed) such as care homes in Malta provide their own standard operating procedures (SOP) and guidelines related to physical restraint devices and their use. However, these standard operating procedures are not essentially legally binding. More so, a number of care homes on the Maltese islands still do not possess SOPs regulating physical restraint use. Indeed, care providers in Fenech’s (2001, 2015) investigation into issues related to abuse had suggested that an SOP regulating physical restraint use had to ensure a middle-ground position capturing both (1) the protection for the care provider from potential liability issues and (2) the safety for the older person from harm.

Indeed at the time of completion of this project, the Parliamentary Secretariat for Rights of Persons with Disability and Active Ageing (2015) presented in parliament the ‘National Minimum Standards for Care Homes for Older People.’ Though still not legally binding, the national minimum standards recognise and address the issue of restraining. The standard significantly raises the bar to physical restraint use on the Maltese Islands in that restraint is defined as,

‘... the control to prevent a person from harming themselves or other people by the use of,

(a) Physical means (actual or threatened laying on of hands on a person to stop them carrying out a particular action),

(b) Mechanical means (wrapping someone in a sleeping bag or strapping them in a chair),

(c) Environmental means (using cot sides to prevent someone from getting out of bed),

(d) Medication, (using sedative or tranquilising drugs for the symptomatic treatment of restless or agitated behaviour).’

The national minimum standards also recognise and maintain that *‘direct care staff shall be appropriately trained in the recognition of behaviour of concern as well as management of such behaviour without resorting to the use of restraints or while applying least restraints.’*

Such assertions are indeed a breakthrough on the Islands and put the issue of restraining at par with international fora. However, in order to ascertain enforcement,

- (a) National Minimum Standards for Care Homes for Older People need to be established as legally binding,
- (b) Care homes need to establish SOPs within the context of these standards,
- (c) Quality assurance needs to be ascertained through monitoring and auditing of the outcomes of the SOP,
- (d) The care providers' and older persons' understanding of the standards and guidelines needs to be ensured, more so in the wake of disagreements emerging from local data as per section 2.4.1.

2.4 Prevalence of physical restraint use: International and local scenes

Early comparative global study within 8 long term care facilities in Denmark, France, Iceland, Italy, Japan, Spain, Sweden and USA, Ljunggren *et al.*, (1997), reported Denmark, Iceland and Japan with the lowest prevalence of physical restraint use (9.0%). France, Italy, Sweden and the USA indicated overall percentages of 15.0% - 17.0% of physical restraint use in care homes, with Spain revealing a high prevalence of use of 40.0%. The overwhelming evidence from all 8 countries confirmed a constant increase in the use of physical restraining associated with increasing activities of daily living and cognitive problems. A similar study in 14,504 long term care facilities providing nursing home level services in Canada, Finland, Hong Kong, Switzerland and the United States indicated that the prevalence of physical restraint use varied more than five-fold across the study countries, from an average of 6% in Switzerland, 9% in the United States, 20% in Hong Kong, 28% in Finland and over 31% in Canada, (Feng *et al.*, 2009). Chiba *et al.*, 2012, in Japan reported the average

rate of restraint use to be 25.5% within a sample of 718 care homes (representing 20.0% of the registered care homes in Japan). Hong Kong and China also observed overall high percentages of reported physical restraint use, (20.7% and 3.5% respectively), (Mamun and Lim, 2005) and an Australian nation-wide survey of long term care facilities, reported 27.0% restraint use, (Retsas, 1998a, 1998b; Retsas, 1997a, 1997b; Retsas and Crabbe, 1997c).

The Netherlands indicated an overall prevalence of 56.0% of restraint use, Germany of 26.0% and Switzerland of 40% which does not reflect the existing legal frameworks regulating physical restraint use within the Netherlands, (De Veer, 2009; Meyer *et al.*, 2008; Meyer and Kopke, 2007; Huizing *et al.*, 2006; Lindenmann, 2006; Hamers and Huizing, 2005) with Switzerland reporting a prevalence of physical restraint use of 6% within member states of the Swiss confederation, (Feng *et al.*, 2009) possibly associating this difference to culture indicators. Between the time period 2000-2007, Sweden also registered an increase in physical restraint use in a census survey of care homes, reporting a prevalence of use of 16.0% in 2000 compared to 18.2% in 2007, (Pellfolk *et al.*, 2012, 2010).

Similar anomalies were noted in the study by O’Keeffe *et al.*, (1996) and in the report published successively by Molassiotis and Newell in 1996. O’Keeffe *et al.’s.*, (1996) study in the UK established the absence of restraint use within long term care facilities. However, 43.6% of nurses surveyed within another UK study of care homes, (Molassiotis and Newell, 1996), reported that 43.6% of the nursing profession indicated restraint use within their homes, with Hughes (2008a) later recognising the dearth of UK prevalence studies related to physical restraint use. Hignett *et al.*, (2013)

also in the UK, reported an alarming increase of physical restraint use indicating, a prevalence of 52% compared with 8.4% in 1996, 25.7% in 2006 and 46% in a subsequent survey in 2011. There may be several reasons as to this increase but potentially care givers had different, changing perceptions to what construed as being a restraint.

A report by the OECD/European Commission (2013), *“A Good Life In Old Age? Monitoring and Improving Quality in Long Term Care”* reiterated some of the findings reported by Ljunggren *et al.*, (1997) noting how physical restraint use greatly varied within European Countries, for example, 0.3% in Norway to 16% in Finland. The report explains that within 2008-2011, Portugal reported an increase of 5.0% in the use of restraints within in-patient units, (Portugal Ministry of Health, 2011 in OECD/European Commission (2013)). Norway observed a 0.2% increase in use within care homes in the period 2009-2010, (Norwegian Directorate of Health, National Register of LTC, 2010 in OECD/European Commission (2013)). Evidence in Finland on restraint use within a sample of care homes, indicated an approximate increase of 30% between the periods 2003-2009, (OECD/European Commission, 2013). The report acknowledges the international dearth of a consistent decline in the incidence of physical restraint use.

The aforementioned international reporting of the prevalence of physical restraint use is indicated in Table 2.3. The inconsistency in the reported prevalence is noticeable as well as the marked increase of use in some countries.

Table 2.3: Reported prevalence of physical restraint use

| Country | Reported prevalence of physical restraint (%) | Reference |
|-----------------|---|--|
| Denmark | 9.0% | Ljunggren <i>et al.</i> , (1997) |
| Iceland | 9.0% | Ljunggren <i>et al.</i> , (1997) |
| Japan | 9.0% | Ljunggren <i>et al.</i> , (1997) |
| France | 15.0%-17.0% | Ljunggren <i>et al.</i> , (1997) |
| Italy | 15.0%-17.0% | Ljunggren <i>et al.</i> , (1997) |
| Sweden | 15.0%-17.0% | Ljunggren <i>et al.</i> , (1997) |
| USA | 15.0%-17.0% | Ljunggren <i>et al.</i> , (1997) |
| Spain | 40.0% | Ljunggren <i>et al.</i> , (1997) |
| UK | 0.0% | O'Keefee <i>et al.</i> , (1996) |
| UK | 43.6% of interviewed nurses indicated restraint use; no data was forthcoming | Mosassiotis and Newell (1996) |
| UK | Reported a dearth of data in physical restraint use prevalence | Hughes (2008a, 2008b, 2008c, 2008d, 2008e) |
| UK | Reported 52.0% of use compared to 8.4% in 1996, 25.7% in 2006 and 46.0% in 2011 | Hignett <i>et al.</i> , (2013) |
| The Netherlands | 56.0% | Lindenmann (2006) |
| Germany | 26.0% | Hamer and Huizing (2005) |
| Germany | 4.0% - 59.0% | Meyer <i>et al.</i> , (2009) |
| Germany | 30.0% | Heinz <i>et al.</i> , (2012) |
| Switzerland | 40.0% | Meyer and Kopte (2007) |
| Switzerland | 6.0% | Feng <i>et al.</i> , (2009) |
| Hong Kong | 20.7% | Mamun and Lim (2005) |
| China | 3.5% | Mamun and Lim (2005) |
| Norway | Reported an increase of 0.2% | Norwegian Directorate of Health, National Register of LTC, 2010 in OECD/European Commission (2013) |
| Finland | Reported an increase of 30.0% | OECD/European Commission (2013) |
| Finland | 50.0% | Heeren <i>et al.</i> , (2014) |
| Portugal | Reported an increase of 5.6% | Portugal Ministry of Health (2011) in OECD/European Commission (2013) |
| Sweden | 16.0% in 2000 | Pellfolk <i>et al.</i> , (2012) |
| Sweden | 18.2% in 2007 | Pellfolk <i>et al.</i> , (2012) |

Melchiorre *et al.*, (2013) created further controversies through their report on the investigation of the social support, socio-economic status, health and abuse among older people in seven European countries (Germany, Greece, Italy, Lithuania, Portugal, Spain and Sweden). Their investigations revealed that 2.7% or 4 million older persons experienced some form of physical abuse. The project however left several questions unanswered in that no data was forthcoming on the actual percentages of physical restraint use often associated with physical abuse.

It is not surprising then that various researchers within Japan, Europe, USA and Malta, have recognised physical restraining as a form of physical abuse, indeed as a form of imprisonment which imposition the older persons accept as a routine part of growing old, (Fenech, 2015; Kalache, 2013; OECD/European Commission, 2013; Cassar, 2012; Chiba *et al.*, 2012; Demir-Zencirci, 2012; Fenech *et al.*, 2011; Feng *et al.*, 2009; Cooper *et al.*, 2008; Meyer *et al.*, 2008; Chuang and Huang, 2007; Huizing *et al.*, 2007; Pritchard, 2007; and Flaherty, 2005; Hamers *et al.*, 2004; McDonald, 2003; Evans *et al.*, 2002b; Gallinagh *et al.*, 2002; Fenech, 2001; Bright, 2001; Gallinagh *et al.*, 2001; Phillips *et al.*, 2000; Retsas and Crabbe, 1997c; Pritchard, 1996; Fenech and Troisi, 1994; Evans and Strumpf, 1989; Mion *et al.*, 1989).

Few publications addressed the issue of uninformed consent to physical restraint use, (Demir-Zencirci, 2012, 2009; Castle, 2002; Castle 2000). Indeed, this creates a bone of contention amongst researchers with Demir-Zencirci (2012), revealing that 97.6% ($n=248$) of nurses providing care within a sample of long term care settings used restraining without informed consent.

2.4.1 Prevalence of physical restraint use in Maltese long term care settings

There is a dearth of statistics related to the prevalence of physical restraint use within Maltese care homes. In-depth analysis of the local scene through unpublished dissertations revealed contrasting and conflicting views on the topic.

During structured interviews, 150 older persons residing in a state-funded long term care facility had invariably associated physical restraining with abuse, (Fenech, 2015; 2001). In-depth study of their perceptions revealed that the older persons associated restraining with (a) raised bedrails such that the older person was unable to remove them, (b) raised (elevated) bed rendering it difficult for the older person to get up safely from, (c) sheets tightly tucked under the mattress, (d) restricted free movement through the use of harnesses and sheets, and (e) inverse use of the bedside table whilst sitting down on an armchair. Older persons reiterated that potential reduction of physical restraining would help them “*regain functional independence.*” Indeed, the aforementioned notion was not supported by care providers who had favoured safety issues rather than the functional independence of the person.

Earlier, nursing officers within the aforementioned long term care facility indicated that physical restraining restricted the older person’s freedom albeit the beneficial aspects of actually restraining, (Delicata, 1999). Nurses appeared to be well versed on the physical and psychological implications of physical restraint use and contrasted their previous views indicating their dislike to the actual use of any devices to restrain an older person. Cassar (2002) reported on care providers’ mixed findings to physical restraint use within a care home. While some participants noted the beneficial aspect of the physical restraint device, others were against the use of any form of restraining.

Indeed, Brincat in 2008 indicated 72.7% of respondents acknowledged the use of restraining or using restraining themselves with 27.3% denying restraint use altogether, (Brincat, 2008). Brincat (2008) expressed her surprise with the latter results as *“denial about the use of restraint seemed strange to the author, since it was used in plain sight of any person passing through corridors, and was observed by the author on various occasions while conducting the interviews.”* Despite this fact, older persons in her study only reported minor cases of negligent behaviour associated with physical restraint use which the older persons related to care provider shortages. Nonetheless, sampling in Brincat’s (2008) study was limited in the number of participants ($n=22$), potentially offering an unrepresentative opinion of the scenario in general.

The older person’s denial of physical restraint use in Brincat (2008) was explained in Cauchi Carter (2008), through investigations into whether residential care was providing the apt environment for a good quality of life. Cauchi Carter (2008) and earlier Fenech (2001) had reported that older persons were afraid to voice their opinions or worries within the long term care environment. More so, the majority of older persons had indicated that had they been aware of what would befall them within the long term care setting, they would have never decided in favour of their admission.

Indeed, Delicata’s (1999), Brincat’s (2008) and Cauchi Carter’s (2008) studies raise doubt regarding the veracity of the participants’ responses (both older persons and care providers). On the one hand participants put forward the notion of being against restraint use, yet maintained the benefits of physical restraining. This is congruent

with Brincat's (2008) and Fenech's (2001) indications (from older persons themselves), as 72.7% of Brincat's (2008) cohort acknowledged the use of restraints, while the older person participants in Fenech's (2001) project reported "*excessive use of restraints*." Whilst older persons in Fenech's study (2001) associated physical restraining with abuse, older persons in Brincat's (2008) study, stopped short of making such a claim. These reports complicated the overall analysis of the scenario, more so in the wake of Cauchi Carter's indications. Indeed, a quarter of the older persons in the cohort sample of Brincat's (2008) project denied the use of restraints within the facility, while nursing officers in Delicata's (1999) study perceived restraints as being beneficial.

Indeed the outcomes of the aforementioned researches, point to the necessity of in-depth follow-up studies into the field of physical restraints and restraint use within Maltese care homes, more so in the wake of the recently inception of 'National Minimum Standards for Care Homes for Older People', (Parliamentary Secretariat for Rights of Persons with Disability and Active Ageing, 2015).

2.5 Modalities of physical restraint use

There was a noticeable lack of published material on the person, (1) recommending physical restraint use, (2) explaining physical restraint use, (3) monitoring physical restraint use, (4) deciding to remove or otherwise physical restraining, (5) documenting restraint use and (6) the duration of physical restraint use. This also applied to the information regarding documentation and duration of restraint use.

2.5.1 Documentation

Indeed, Castle, 2002 in the UK, elaborated on what he termed '*deficiency citations*' of physical restraint use which he concluded translated into documentation issues. He stressed that improper documentation reflected on the quality of care. He reported on instances where care providers regularly monitored and cared for the restrained older person, but where documentation records were unavailable. Castle, 2002 also revealed how documentation records (when available) lacked informed consent from the older person and the inexistence of careful care planning pertaining to the use of restraining.

Kirkevold and Engedal, 2004b in Norway, also substantiated the aforementioned published reviews. They reported on the overwhelming evidence 65% (1362 residents in 160 care homes) of the lack of documentation in the older person's care plans and records.

2.5.2 Duration of physical restraint use

Early on, Tinetti *et al.*, (1991) in Australia established that within a cohort of residents, with a one year follow-up care providers reported a mean duration of restraint use of 86.5 days, ranging from 1 to 350 days. Other published reviews within Europe, Australia and USA, consistently indicated that the term *regular* or a *routine daily measure* as implying a wide-ranging restraint duration of a minimum of either (1) 1 to 6 hours per day or (2) 7 to 12 hours per day or (3) 1 to 13 days or 1 to 3 weeks or 20 days per month, or (4) between 1 month – 3 months, (Chiba *et al.*, 2012; Engberg *et al.*, 2008; Hamers *et al.*, 2004; Restsas, 1998; Tinetti *et al.*, 1991; Dermot Frengley and Mion, 1986; Appelbaum and Roth, 1984).

Similarly, Heeren *et al.*, (2014) in Finland have also conclusively shown that restraint use was high, 50% of older persons of whom, 80% were physically restrained on a daily basis. (570 older persons in 23 care home wards). Evans *et al.*, (2002b) in a systematic review also reported on restraint application in residential care settings of 20 days at least in each month.

These inconsistencies, more so in the wake of collaborative national surveys to abolish or minimise restraint use remain a paradox. No adequate explanation or insight was offered to these variations in restraint use, where care providers potentially considered these variances as a state of the art.

Of concern is the argument put forward by Engberg *et al.*, 2008, in Pennsylvania. They believed that restraint durations were on the low side and put forward the plausible argument that potentially restraint use durations were as such merely because counts were often made during the day. They maintained that restraint use was potentially higher during the night when staffing levels were lower. Earlier research, (Koch, 1993; Tinetti *et al.*, 1991) appeared to validate Engberg *et al.*'s, 2008 arguments. Koch (1993) and Tinetti and colleagues (1991) within Australian care homes had maintained that with respect to bed rail use, 51% of residents were restrained at night only, whilst 11% were restrained during the day.

No information was available on the duration of *continual* restraint use, i.e. it was not clear whether the aforementioned indications of daily restraint duration data referred to *continual* application of the device or a *summation* of intermittent restraint intervals

over 24 hours. This is of relevance in view of recommendations from published studies, (Evans *et al.*, 2003, 2002b), indicating that restraint should never be applied for individual periods exceeding 2 hours in duration, which threshold the authors had hoped would gain the necessary exposure from international studies. In contrast to this finding, however, no further published reviews were detected corroborating or otherwise this notion.

Notwithstanding this assertion, physical restraint use remains in use in excess of 2 hours, (Engberg *et al.*, 2008). Evans *et al.*, (2003), and Evans *et al.*, (2002a and 2002b) associated the onset of multiple medical, cognitive and psycho-social problems with restraint use in excess of 2 hours. This assertion is of vital importance and indeed this project intends to validate or otherwise the Maltese scenario in relations to Evans and colleagues (2003, 2002a, 2002b) perpetuations.

Research on the duration of physical restraint use was also reported by Pellfolk and colleagues (2012) in Sweden. Data from 2 comparable cross-sectional census surveys performed in 2000 and 2007 within long term care facilities revealed restraint duration to vary between 1 week and more than 6 months, where a significant increase from 50.4% in 2000 to 68.3% in 2007 was noticeable.

Investigation into the night-time physical restraint removal in a sample ($n=62$) of severely cognitively impaired nursing home residents within 3 large nursing homes in the USA, did not lend to an increase in falls or fall-related injuries from bed amongst older persons in these care homes. Indeed prolonged physical restraint use (older persons restrained during day, evening shift and at night) of 59% of these older

persons were implicated in deteriorating cognitive and physical functioning. During the night, 97% of the older persons from the sample continued to have bilateral and full-length bed side rails. In contrast the 2 residents who were not restrained at night maintained the higher cognitive functioning, (Capezuti *et al.*, 1999).

2.6 Older person characteristics: Predictors of physical restraint use

Predictors of restraint use will be described in this section. Successively, older persons' reactions to being restrained will also be explored in Chapter 6.

Ljunggren *et al.*, (1997), conceded that the use of physical restraints amongst older persons exhibiting physical and cognitive decline increased even in the absence of reliable data.

Tinetti *et al.*, 1991 in Australia, revealed that mobile older persons experiencing cognitive difficulties were restrained 37.0% more when compared to their mobile counterparts and experiencing no cognitive difficulties. Whilst Sloane *et al.*, (1991) in the USA, indicated that 18.1% of older persons having a diagnosis of dementia were restrained within Special Care Units, when compared to 51.6% of residents having cognitive problems albeit, residents in care homes. Indeed, a rapid growing body of literature across the USA, Europe and Japan, suggested that restraint use was more prevalent in the 70+ age groups exhibiting mobility and cognitive problems, (O'Keeffe, 2013; Huizing *et al.*, 2007; Cheung and Yam, 2005; Sullivan-Marx *et al.*, 1999; Castle and Mor, 1998b; Ljunggren, *et al.*, 1997; Capezuti *et al.*, 1996; Karlsson *et al.*, 1996; Burnton *et al.*, 1992). In contrast, Engbert and colleagues (2008) maintained that few studies were published with respect to the association between

restraint initiation and health decline. This lent support to the earlier notion indicated by Evans *et al.*, 2003, 2002b in the USA which suggested that restraint should not be applied for time frames in excess of 2 hours duration.

Such findings severely challenge the work practices within care homes where investing in ‘dementia friendly environments’ and ‘training care providers for bettering service provision’ is rendered aimless.

The OECD/European Commission (2013) also reported on the physical function and cognition with respect to physical restraint use within Ontario, Canada; Michigan, United States; Finland, United Kingdom, Belgium, Italy, Hong Kong, China; and New Zealand. Significant differences in physical restraint use were noticeable amongst older persons with poor physical function albeit good cognition, Finland (9.2%), Belgium (9.5%) and Hong Kong, China (19.2%), as compared to those reported in the United Kingdom (1%) and Michigan (2.7%). The rates in the other countries were higher, Ontario (23.1%), Finland (18.7%), Italy (23.1%), and Hong Kong, China (54.2%). The OECD/European Commission (2013) associated these differences with diverse legislations and policies within the countries.

More recently, Heeren *et al.*, (2014) in Finland reported bathing dependency, transfer difficulties, risk for falls, frequent restlessness/agitation and depression as independent predictors of restraint use.

Indeed this is suggestive of resolving problems associated with growing old through restraining, a defeatist approach to a person-centred approach to care provision.

Potentially, the changing demands of the older persons fails to elate them into dynamic and capable experts in the areas of life, routines and interpersonal relationships within the care homes, rather labelling them as passive and incompetent recipients of medical care. Indeed, Goldsmith (1996) in the UK puts forward the view that, *“if we spent as much time trying to understand behaviour as we spent trying to manage or control it, we might discover that what lies behind it is a genuine attempt to communicate.”*

2.7 Older persons’ reactions to physical restraint use

Gallinagh *et al.*, (2001), Strumpf *et al.*, 1998; Hardin *et al.*, (1993), and Strumpf and Evans, (1988) in the USA, described older persons’ mixed feelings to physical restraint use, ranging from indifference to perceiving the device as a ‘safety net’, echoing their positive feelings towards the device.

Physical restraint use has also been associated with agitation, increased social isolation, and a decrease in the physical and cognitive functions of older persons, (Castle and Engberg, 2009; Engberg *et al.*, 2008; Castle, 2006) in the UK and Pennsylvania, USA. It is therefore to be expected that ‘antagonistic’ older persons will certainly become more combative when restrained, resulting in social isolation as they are avoided by other older persons and care providers (Castle, 2006; Castle and Mor, 1998b). These attitudes will impact negatively on the older person’s quality of life within the care home. Indeed a considerable number of deaths each year from asphyxia or strangulation caused by the use of physical restraints were also reported within care homes, in Europe and USA (Berzlanovich, 2012; Rader *et al.*, 1999; Rubin *et al.*, 1993; Weick, 1992). Nonetheless published data in this area is lacking.

Similarly, Engberg *et al.*, (2008), examined the cognitive performance, levels of depression, behavioural problems and physical outcomes associated with falls, problems with mobility and activities of daily living (ADL), pressure sores, and contractures 3 months post physical restraint use. Early on, it was ascertained that the care home's environment, market factors, and prior health status had no impact on the outcome of the results. Indeed, the researchers indicated that restrained older persons were significantly more likely to exhibit poor cognitive performance, low ADL performance and walking dependence than their non-restrained counter parts. Engberg *et al.*'s (2008) results were also endorsed by Luo *et al.*, (2011). Luo and colleagues collected data from 13,507 older persons within 1,174 nursing homes in Pittsburgh, USA. Residents with dementia or Alzheimer's disease were also more likely to be physically restrained (9.99% vs. 3.9%) than residents without the disease.

In fact analysis of the health and psychosocial consequences towards physical restraint use in care homes by various researchers, was invariably associated with (a) orientation, comprehension and behaviour/mood problems, (b) falls and associated mobility problems associated with the breakdown of muscle cells (this is the result of strenuous exertion to untie/release self or prolonged immobility, (c) dependence in the activities of daily living, (d) pressure sores, (e) contractures (f) incontinence, (g) infections, (h) feelings of anger, discomfort, agitation, resistance, and fear leading to a catecholamine rush resulting in the sudden death of the older person, (i) older person's resignation over her/his loss of freedom, personal integrity and dignity, (j) serious injury, (k) increased duration of hospitalisation, (l) deprivation of exercise, (m) exposing the older person to abuse, (n) objectification of the older person, (l) institutionalisation of the older person, (o) breaching of ethical considerations if

informed consent was not obtained from the older persons or family member/substitute decision maker, and (p) injuries that may result in death (asphyxia, blunt trauma to the chest, aspiration, thrombosis, (Fenech, 2015; Barnett *et al.*, 2012; Berzlanovich, 2012; Ridley and Jones, 2012; Paterson *et al.*, 2011; Mohr, 2010; bCastle and Engberg, 2009; Demir-Zencirci, 2009; Saarnio and Isola, 2009; Engberg *et al.*, 2008; Gatens, 2007; Castle, 2006; Hamers and Huizing, 2005; Paterson *et al.*, 2003; Evans *et al.*, 2003; Mohr *et al.*, 2003; Evans *et al.*, 2002b; Castle and Mor, 1998b; Dawkins, 1998; Marini *et al.*, 1998; Dodds, 1996; Graber and Sloane, 1995; Evans *et al.*, 1989; Dube and Mitchell, 1986).

2.8 Concerns and attitudes towards reduction in physical restraint use

Despite that evidence indicating the benefits of physical restraint use is miniscule, with evidence corroborating associated adverse effects, their use thereof by care providers within care homes continues unabated, (Mohler and Meyer, 2014; Tolson and Morley, 2012; Neufeld *et al.*, 1999).

Of importance to this current project is the study by Schirm and colleagues, in 1993 employing the 40-item Physical Restraint in Long Term Care (PRLTC) questionnaire tool within a sample of nursing homes in Ohio, USA. Their study investigated perceptions of nursing staff and nursing assistants regarding physical restraint use. Their findings confirmed the potential for the occurrence of misunderstandings between nursing staff and nursing assistants to physical restraint use. As opposed to nurses, nursing assistants believed physical restraining to be unavoidable and a harmless intervention. Significant differences were also registered regarding care givers' beliefs that increased use of psychotropic drugs would be potentially necessary

to reduce physical restraining. However, both care giver categories agreed that (a) physical restraint use was evident within the care homes, (b) they shared opinions about related liability issues to restraint use, (c) restraint reduction required input from more care providers within the care home, and (d) an increase in supervision and activities would be necessary as alternatives to decrease physical restraint use.

In Germany, care providers, generally considered the use of physical restraints in clinical practice to be appropriate, also maintaining that bed rail use or any other form of physical restraining actually elicited no feelings of discomfort, (Hamers *et al.*, 2009). The authors offered no explanation to this argument rather placing the onus on the effectiveness of the educational interventions aimed to reducing physical restraining, without in-depth investigation or questioning care providers' feelings *per se*.

Studies across Japan, USA and the Nordic countries have also considered the relationship between older person and care giver characteristics and the organisational and environmental variables, (Hamers *et al.*, 2009; Hamers *et al.*, 2004; Cheung and Yan; 2005; Evans *et al.* 2002a, 2002b, 2002c, 2003; Bourbonniere *et al.*, 2003; Karlsson *et al.*, 2001). The proportion of older persons with decreased mobility function, number of behavioural disturbances and the care providers' attitudes towards restraint use were the strongest advocates towards physical restraint use. Reasons of (a) safety of the older person, (b) preventing the older person from wandering, (c) providing physical support, (d) achieving care providers' and organisational goals and work schedules as well as maintaining a comfortable social environment (to facilitate the completion of work schedules and insufficient care providers), (e) not to disturb

other older persons and (f) facilitation of treatment interventions were also identified, (Mohler *et al.*, 2012; Pellfolk *et al.*, 2012; Lane and Harrington, 2011; Pellfolk, 2010; Hamers *et al.*, 2009; Suen *et al.*, 2006; Pekkarinen, *et al.*, 2006; Wang and Moyle, 2005; Hendel *et al.*, 2004; Weiner *et al.*, 2003; Evans *et al.*, 2002b; Sullivan-Marx, 2001; Sullivan-Marx *et al.*, 1999; Haintikainen, 1998; Karlsson *et al.*, 1998).

Indeed, Heeren *et al.*, 2014, reiterated that despite the need for adequate numbers of care providers within care homes as well as the relevant training, however what mattered were older person characteristics *not* care provider characteristics. Undeniably, this pushes in favour for deciding in the best interest of the older person, but adversely affects the working conditions and the carers' willingness to take the risk not to restrain the older person, often causing moral conflicts, (Karlsson *et al.*, 2000).

It is obvious then that care providers within care homes regard safety as first and foremost on their agendas, rather preferring to use physical restraints than allow the older person to fall. Goethals *et al.*, (2012), Luo *et al.*, (2011), Gastmans (2010), Gastmans and Milisen, (2006); Koch *et al.*, (2006) and Koch (1993) shared similar opinions and concluded that when care providers prioritised safety, they were ultimately sacrificing good care that satisfied the person's psychological, social, moral, and spiritual well-being. The authors maintained that such repetitive decisions rendered the care provider immune to her/his personal feelings further creating a distance between themselves and the older person. The underlying argument rested with the care provider finding it easier to apply the physically restraining device. Another confounding factor may potentially be that care providers are also guided by

the opinions/wishes of the administration/relatives/other carers not by what they personally believe to be important, often rendering them impotent victims of the system, (Goethals *et al.*, 2010; Lai, 2007; Fenech, 2001).

These claims were also supported by Natan and colleagues (2010), who concluded that care providers did not favour restraining residents. However, their conclusions overlooked the fact that 67.2% of respondents in their study had revealed applying physical restraining more than 10 times within one year. Similarly, a comprehensive study over 4 years within 21 nursing homes in Sweden to identify risk factors for falls in older persons, (Fonad *et al.*, 2008), did not associate wheel-chairs with safety belts and bed rails as eliminating falls, further supporting the theory that restraint use by care providers was considered to be a *fait-accompli* task.

Indeed, Mohler and Meyer (2014), Goethals *et al.*, (2012), Ludwick *et al.*, (2012), Mohler *et al.*, (2012), and Amin *et al.*, (2010) suggest of putting on the front line (a) the older person's perspective toward restraint use, (b) supporting care givers' thoughtful and appropriate decisions about the use of physical restraining, (c) combining education, expert clinical consultation and evidence-based guidelines and implementation towards physical restraint reduction and (d) providing care providers with tools to replace the physical restraint devices and minimise the negative effects of not using restraining devices.

Truly, the available evidence seems to suggest that (a) higher staff-to-older person ratios, (b) a richer mix of nursing staff and nursing support staff, (c) individualised care that focuses on an older person-centred philosophy of care and a relationship based care approach, (d) an appropriate safety culture, and (e) care providers who felt valued and supported, (f) active partnering with families, inviting their participation as vital members of the care delivery team, are considered as relevant pointers associated with reductions in or elimination physical restraint use (Ludwick *et al.*, 2012; Pellfolk *et al.*, 2012; Bonner *et al.*, 2009; Darcy, 2007; Leadbetter, 2004a; Leadbetter, 2004b; Evans *et al.*, 2002b; Castle, 2000; Castle, 1998a; Castle, 1998b). Encouraging are Saarino and colleagues (2008) and later Saarino and Isola (2010) findings in Finland that recognised that older nurses and other care providers with the longest working experience were the more active in managing successfully individualised modes of operation (one-to-one with the older person) where physical restraint was applied.

Potentially, the results are indicating that more tailored, culturally sensitive interventions would be necessary to minimise the use of physical restraining within care homes. More so analysis is also suggesting that there could also be a hypothetical weakness in care providers' rush assessments to using physical restraining or otherwise in their clinical practices.

Hantikainen's (2001, 2000) and Saarnio and Isola (2012, 2010), Saarino *et al.*, (2008), lend support to these claims and recognise how unquestionably care providers resort to physical restraining when faced with a frail and vulnerable older person, taking no risks. The findings are important in the broader domain of physical restraint use. Hantikainen (2001, 2000) maintained that care providers indicated a deficit-

oriented approach when they perceived older person's *behaviour in terms of difficulty or handicap rather than a challenge* and categorically assumed that older persons' behaviour was state of the art, a behaviour which they were familiar with and already knew. More so, Hantikainen (2001, 2000, 1998), also emphasised that care providers' pre-conceived ideas and successive language and actions were often extreme and without concession, often compromising potential assessment and intervention *vis-à-vis* physical restraint use.

2.9 Physical restraint use and autonomy issues

Given the centrality of the issue of restraint use, it is important to focus on 'care' which implies, (1) the actions that persons carry out for others and (2) performing these actions with kindness and consideration, (Siviter, 2013). Notwithstanding that these actions complement each other, nonetheless care providers need not love the older person, but merely demonstrate respect to and give their time and effort with dedication, in the right way even when no one is watching, (Siviter, 2013). Similarly, McCormack (2005, 2004, 2003, 2001) postulated that the "*way we treat an older person is reflective of how we treat all older people ... how we behave as individuals is a reflection of how we respect older people in general.*" It must be borne in mind that within the context of the life course, ageing is an individualised, unique process involving changes in many aspects of life. Indeed, the association of ageing with body decline must not be overlooked as the decline does not at all reflect the diversity of experience relating to old age, (Skilbeck, 2014; Grenier, 2012; Marcoen *et al.*, 2007).

Indeed the aforementioned notions need not be the focus of the paternalistic approaches, fear, helplessness and hopelessness, and constraints on autonomy associated with the inevitable ethical, tight-rope realities faced by care providers when considering physical restraint use, (Mohr, 2010; Mullins and Hartley, 2002). Care providers are often torn between the duties to care and uphold the older person's (a) right to self-determination or liberty, (b) capacity to make decisions and intentionally act upon them, (c) access to fair and equitable resources, and (d) boundaries, that is, the duty to protect other older persons (or the others working within the care home), (Mohr, 2010; Boyle, 2008; Hickman, 2004; Parkin, 2001; MacParland *et al.*, 2000a; MacParland *et al.*, 2000b; MacParland *et al.*, 2000c; Dawkins, 1998; Hill and Schirm, 1996; Beauchamp and Childress, 1994), irrespective that physical restraint use in its broadest sense, is the restriction of someone's freedom, (Hughes, 2008a). The duty to respect the individual autonomy and integrity of a physically and cognitively *capable* older person is not disputed but this should nonetheless be extended to all restrained older persons more so those who potentially could have ceased being legally competent, (Chuang and Huang, 2007; Cheung and Yan, 2005; Hantikainen and Kappeli, 2000; Hantikainen, 1998). Unnecessary use of physical restraints is an affront to the dignity of human respect of the older person, and the person is still entitled to accurate, relevant and understandable explanations of what is to be done, (Gallinagh *et al.*, 2002; Lothian and Philp, 2001; MacParland *et al.*, 2000c). Older persons retain the right, albeit diminished capacity to know what is happening to them and why, (Hantikainen, 2000; Hantikainen, 1998).

Research in the USA, is rampant with emphasis on person-centred care that fails to put into practice the (a) *whole person including the ailing brain*, (b) remaining abilities, emotions and cognitive abilities, not on losses (c) older person within the context of the family, marriage, culture, ethnicity, gender, and (d) fact that laws are grounded firmly in the interests of the older person safety. The idea that physical restraint use protects the older person lacks both vision and evidence as it does not take into account person-centred care that is centred within a wide society and its core values, (Evans and Cotter, 2008; Fullbrook, 2007; Charleston and Bender, 1999 cited in Epp, 2003; Kitwood, 1997; Kitwood, 1996; Kitwood, 1995).

Jakobsen and Sorlie (2010) also contended that care providers within care homes find it difficult to strike a balance between “*the ideal, autonomy and dignity*.” The authors further stressed that the setting’s administrations often harbour cultures that demanded efficiency that effectively reduced competence. Care providers’ burnout, complaints and lack of human resources resulting in organisations that are demeaning and unsatisfactory to care givers, e.g. poor working environments, (Jakobsen and Sorlie, 2010).

Unfortunately, care providers fail to recognise that autonomy does not at all require that the older person be “*entirely untouched by outside influence and constraint*.” They fail to realise and respond to factual evidence that as residents in long term care, older persons retain the ability of recognising and responding to external factors, by freely choosing and accepting them. This is what at the end renders the older person a truly autonomous decision-maker, (Collopy, 1998).

Worth noting is the idea put forward by some countries (Ontario, Canada; Finland; Germany; Korea; Iceland; Netherlands; Norway; Portugal). The authors pushed forward the notion that physical restraint use or otherwise within long term care facilities was a major quality indicator of humane service provision and best delivery outcomes within their facilities, (OECD/European Commission, 2013). This rendition resulted in the setting up of clinical registers with respect to the use of physical restraint within these countries, (OECD/European Commission, 2013).

The United Kingdom, the United States, Japan, the Netherlands, Germany and Sweden also provided physical restraining report outcomes at an individual care provider level. They agreed that this decision potentially allowed poor performers to undertake improvement measures, (OECD/European Commission, 2013; Dimant, 2003).

Unfortunately, not all countries have managed to reach a national consensus as to the importance and relevance of collecting, collating data and setting quality indicators with respect to physical restraint use within their care homes, (OECD/European Commission, 2013; Aylward *et al.*, 2003; Frank *et al.*, 1996). Therefore the application of physical restraint has gone unhindered resulting in a disproportionate infringement of the respect of the older person's autonomy, (Gastmans and Milisen, 2006) in Germany.

Potentially, this lack of control when using physical restraints, demonstrates a fear of adverse public reactions towards their use, who without doubt given their prevalence, risks putting care within these homes in bad light. More so, this inconsistency may be

indicative of a *laissez-faire* attitude within the care homes. The result of potential disagreement (involving restraints and their use) between the various stakeholders within the home *per se* and the lack of standards in policies and guidelines.

Indeed, the following ought to be considered and recognised as potential measurable quality indicators that would significantly promote the service provision and delivery of care for older persons within care homes, more so when considering that the '*the use of restraint reflects a failure*' to meet and address the older person's needs, (Hughes, 2008a). These include, (a) physical restraints can never be used as punishments or as a 'feeling of security', (b) care providers do not have the legitimate right (merely as care providers) to limit the older persons' freedom, (c) careful consideration to restraining the older person as a way to protect others who are believed to be at risk of harm is in order, (d) the provision of in-service training programmes to tackle ethical issues and how care providers coped with their feelings while using restraints, (e) unconditional worth and dignity favouring the protection of autonomy towards older persons, where the older persons realise that they can trust care providers and also express their needs, (g) interpreting the older person's behaviour in case of unmet needs, (h) regular checks for changes in cognition and/or physical status, (i) focuses on communication, consistency, surveillance, appropriate environments, (j) flexible team approach (k) regular checks to assure that treatments and devices are applied, monitored and removed correctly and timely, (l) the provision of educational intervention and (m) and appropriate assessment and documentation, (Siviter, 2013; Hoffman *et al.*, 2003; McDonald, 2003).

Paterson *et al.*, 2011, declared that “*banning restraint as a response to the potential for misuse in settings where restraint may actually be needed is akin to the ostrich sticking its head in the ground when approached by a lion – disaster will inevitably follow.*” Indeed the authors also put forward the contentious and conflicting argument that care providers must “*understand that restraint should be used in a way that respects dignity and protects human rights wherever possible.*” As a rebuttal to the aforementioned ironic notions, it might be convincingly argued that higher levels of care provider education or education *per se* improve the knowledge, practice or attitudes to restraint use and effectively better the quality of care in care homes. Indeed if care providers are to make significant changes in least restraint use, it is important for them to acknowledge that their thinking and action is affecting the lives of the older persons within care homes. Potentially, more robust, stronger regulations might be necessary, for example vetoing the use of physical restraining for falls prevention.

Michael Ignatieff (2000) aptly wraps this argument,

“... human rights alone are not enough ... we need extra resources, especially humour, compassion, and self-control. These virtues must in turn draw on a deep sense of human indivisibility, a recognition of us in them and them in us, that rights doctrines express but in themselves have no power to instil in the human heart.”

2.10 Aims and objectives

This project aimed to identify and address some of the gaps identified in the literature on issues related to physical restraints and restraining. It also aimed to expand on the existing knowledge both internationally and locally.

This project consisted of an in-depth study and evaluation of physical restraints and physical restraining of older persons, using the complete cohort of government and privately managed Maltese Care Homes as a template for analysis.

Specifically, the project aimed:

1. To obtain a clear profile of the types of (a) physical restraint devices used, (b) the modalities of use and (c) the extent of their application.
2. To analyse older person characteristics and situations associated with the use of physical restraints.
3. To investigate care providers' perceptions to physical restraint use within the context of work, environmental and safety concerns.
4. To explore how the effects and reactions of restraint by the older persons, as perceived by the care providers can influence the older person's rights, autonomy and integrity.

The above aims were investigated within the context of observations by care providers and home managers. The views expressed by care providers from government and privately managed care homes were independently studied and compared.

2.11 Chapter summary

The dearth of field work in Malta on the use and effects of physical restraint use in long term care settings strongly contrasts with the international scenario. However, anecdotally it is clear physical restraining does take place in Malta context although its use may potentially be shrouded in secrecy or justified on the basis of older person safety. The potential result of this is that the benefits of restraining are applauded as being the necessary safety net towards the older person's quality of life, and the possibility of harm tends to be too often overlooked. This contrasts with the general consensus in the international literature that recognises the deleterious effects of physical restraining.

Of relevance is the residential/nursing capacity of the settings *per se*. Generally, international long term care settings tended to be of smaller capacity (commonly 30-50 bedded settings) than those found in Malta (46-167 bed capacity with a mean of 115 older persons per residence), Table 3.3.

This chapter explored the literature through research results, arguments and debates on the issues of restraints and physical restraining. These have informed the development of the aims and objectives. The methods used to attain these aims will be described in the next chapter.

Chapter 3

Methodology and methods

3.0 Preamble

The previous chapter presented a review of the literature which led to the development of the aims and objectives of the work described in this thesis. These focused on care providers' knowledge and awareness related to physical restraining within care homes. This chapter presents quantitative and qualitative research methodologies that were employed to answer the aforementioned aims and objectives. This chapter is divided into 2 main parts, (a) Part 1 the "Research as intended" and (b) Part 2 the "Research as conducted".

Part one of this chapter, "Research as intended", describes initial work which was designed using a large long term care setting as the basis for the study. The necessary administrative permission for execution of this project was obtained, but unfortunately the study had to be abandoned at the early stages of applied fieldwork, due to lack of support of a local trade union. Further details regarding this are provided in Section 3.6. This led to the development of the second project, "Research as conducted."

Part 2 of the chapter, "Research as conducted", includes the development of the questionnaire booklet, 'Physical Restraint Use' questionnaire (PRU), and provides a rationale for the chosen research design and the methods of data collection: the data collected using this approach provided the basis for the results presented later in the thesis.

Part 1: Research as intended

“Research as intended” details the forfeited project and covers, (a) physical restraint use at St Vincent de Paul Residence (SVPR), (b) the aims and objectives, (c) setting and participants, (d) procedures related to design, development and implementation of the study, (e) ethical considerations and (f) forfeiture of the project.

3.1 Physical restraint use at St Vincent de Paul Residence

“Research as intended” describes the original project which had to be abandoned prematurely. The project had intended to evaluate the use of physical restraints within a long term care setting, St Vincent de Paul Residence (SVPR), through a qualitative approach employing interviews with older persons, formal and informal carers. However, even though no data were forthcoming, I was able to use the experience to re-design the project successfully. This decision paved the way for an approach using more detailed qualitative research. Whilst this approach had some weaknesses (discussed in later chapters) it still allowed me to address my original hypothesis and aims. This will be described in more detail in “Research as conducted.”

3.2 Aims and objectives

The overall aims and objectives of “Research as intended” were based on the hypothesis that older persons residing within long term care facilities were experiencing significant harm related to the inappropriate use of physical restraining. The aims and objectives further explored the concept of physical restraining within long term care, and looked into aspects related to older person characteristics advocating to restraint use, associated injuries, older persons’ experiences and perceptions of family members.

The specific aims for the “Research as intended” project included:

1. To determine the number of older persons who were physically restrained at the time of the study, the duration (with a 24-hour timeframe) of the restraint device and the types of devices in use.
2. To analyse older person characteristics that increased the likelihood for the initiation of restraint use, (a) unable to eat and drink unassisted, (b) dually incontinent, (c) auditory/visual/speech impairment, (d) mobility problems, (e) anti-depressant medication (f) inability to integrate and participate in social activities.
3. To analyse whether documentation was kept and whether alternatives to restraint use were considered.
4. To explore the reasons why care providers decided in favour of restraint use and their feelings when they physically restrain the older person.
5. To obtain data of older persons who suffered a restraint related injury (physical or emotional).

6. To explore older persons' experiences when physically restrained.
7. To study relatives' perceptions of the impact of having a physically restrained relative.

3.3 Setting and participants

The field work was intended to take place within SVPR, the largest long term care facility on the island comprising of some 1000 older persons and a staff complement of approximately 385 care providers (nurses, allied health practitioners and nursing support staff), as of May 2009.

Care providers with direct clinical contact and fulfilling the inclusion criteria included,

1. *Allied health professionals* (occupational therapists, physiotherapists, podiatrists, speech language pathologists, radiographers, social workers),
2. *Nursing staff* (nursing officers, deputy nursing officers, staff nurses, enrolled nurses),
3. *Nursing support staff* (nursing aides, health assistants, care workers, social assistants, and assistant care workers), (Table 3.1).

The majority of nursing cohort consists of university degree graduates with a minority of diploma holders in nursing.

Within the Maltese context, care workers are further categorised into senior care workers, care workers and assistant care workers. At the time of the study, health assistant and nursing aide grades did not require prerequisites of knowledge on older person care or GCSE certification. During the post-study period, health assistants

started to be offered 2 years training programmes with subsequent promotion to nursing aides. Care workers, social assistants and care assistants need a caring certificate for employment. Typically, such posts undertake delegated care with basic knowledge of facts, principles and general concepts related to caring for an older person. Working autonomously, these staff categories require a fair theoretical knowledge on caring for a frail, vulnerable older person.

Staff that did not have direct contact with the older persons were excluded from the project.

Table 3.1: Complement of allied health practitioners, nurses and nursing support staff together with the number of older persons in each of the ward settings within St Vincent de Paul Residence as on 22 May 2009.

| Ward | Allied health & nurses | Carers | Older Persons |
|---------------------|------------------------|------------|---------------|
| Female Wards | | | |
| Mother Theresa 1 | 9 | 4 | 42 |
| Mother Theresa 2 | 8 | 10 | 43 |
| Mother Theresa 3 | 9 | 5 | 42 |
| Serenity 1 | 7 | 4 | 40 |
| Serenity 2 | 7 | 4 | 40 |
| Serenity 3 | 8 | 4 | 42 |
| St Francis 5/6 | 6 | 6 | 43 |
| St Francis 7/8 | 7 | 5 | 44 |
| St Francis 9/10 | 7 | 2 | 29 |
| St Francis 11/12 | 6 | 4 | 44 |
| St Joseph 13 | 8 | 5 | 25 |
| St Joseph 15/16 | 8 | 9 | 44 |
| Ruzar Briffa 1 | 7 | 7 | 45 |
| Ruzar Briffa 2a | 8 | 5 | 30 |
| Ruzar Briffa 2b | 7 | 10 | 45 |
| Ruzar Briffa 3 | 6 | 5 | 24 |
| Sub-total | 118 | 89 | 622 |
| Male Wards | | | |
| St Joseph 5/6 | 6 | 10 | 44 |
| St Joseph 7/8 | 7 | 9 | 29 |
| St Joseph 9/10 | 7 | 10 | 42 |
| St Joseph 14 | 7 | 6 | 23 |
| St Joseph 20/21 | 7 | 6 | 32 |
| St Joseph 22 | 7 | 5 | 21 |
| Loreto | 7 | 6 | 38 |
| Lourdes | 8 | 6 | 38 |
| Fatima | 6 | 7 | 38 |
| Sub-total | 62 | 65 | 305 |
| Mixed Wards | | | |
| St Joseph 11 | 7 | 5 | 22 |
| St Joseph 12 | 6 | 6 | 20 |
| Ruzar Briffa 4 | 7 | 6 | 17 |
| Admission ward | 6 | 8 | 16 |
| Sub-total | 26 | 25 | 75 |
| Total (n=29) | 206 | 179 | 1002 |

3.4 Procedures

Verbal permission was obtained from the medical superintendent, senior consultant geriatrician and manager nursing services (MNS), mainly responsible for the management and care delivery within SVPR to work on the pilot study and if successful to proceed to actual field work. No written consent was forthcoming.

3.4.1 Structure of the research project

The project was divided into 3 parts. Figure 3.1 is a representation of the research project design. It involved the following,

Part 1

(1) Comparisons of Barthel Scores (BIs), (Mahoney and Barthel, 1965, cited in Shah, 1998 and Shah et al., 1989) using the Barthel 100 scoring index (Appendix 1), and Mini-Mental State Examinations (MMSEs), (Kurlowicz and Wallace, 1999; Foreman *et al.*, 1996; Foreman and Grabowski, 1992; Folstein *et al.*, 1975), (Appendix 2), of physically restrained to non-physically restrained older persons.

The BI is an ordinal scale used to measure performance in activities of daily living (ADLs). Each performance item is rated on this scale with a given number of points assigned to each level or ranking, (1) 0-24, very severely disabled/highly dependent, (2) 25-49, severely dependent, and (3) 50-74, moderately dependent, (4) 75-90, mild dependency, and 91-99, minimal dependency.

The MMSE is a tool that assesses mental status. The maximum score is 30. A score of 23 or lower is indicative of cognitive impairment, (Kurlowicz and Wallace, 1999; Foreman *et al.*, 1996; Foreman and Grabowski, 1992; Folstein *et al.*, 1975).

Part 2

(2) Semi-structured interviews with the nursing officers (NO) in the 29 ward settings at SVPR, using the Physical Restraint Interview (PRI) (Appendix 3). I was able to collect information on the rationale, implementation and outcomes of physical restraint use.

Part 3

(3a) Consultation with the 'Physical Restraint Register', and explore whether registered physical restraints mirrored those within the ward settings,

(b) Observations of physically restrained older persons,

(c) Interviews with physically restrained older persons and their relatives/substitute decision makers (SDM), (Appendix 4) on experiences related to physical restraining.

Appendix 4 is a compendium of questions to facilitate the interviews.

(d) Consultation with documentation recorded in the older person's medical file, including the older person's and/or relatives'/substitute decision makers' (SDM) consent.

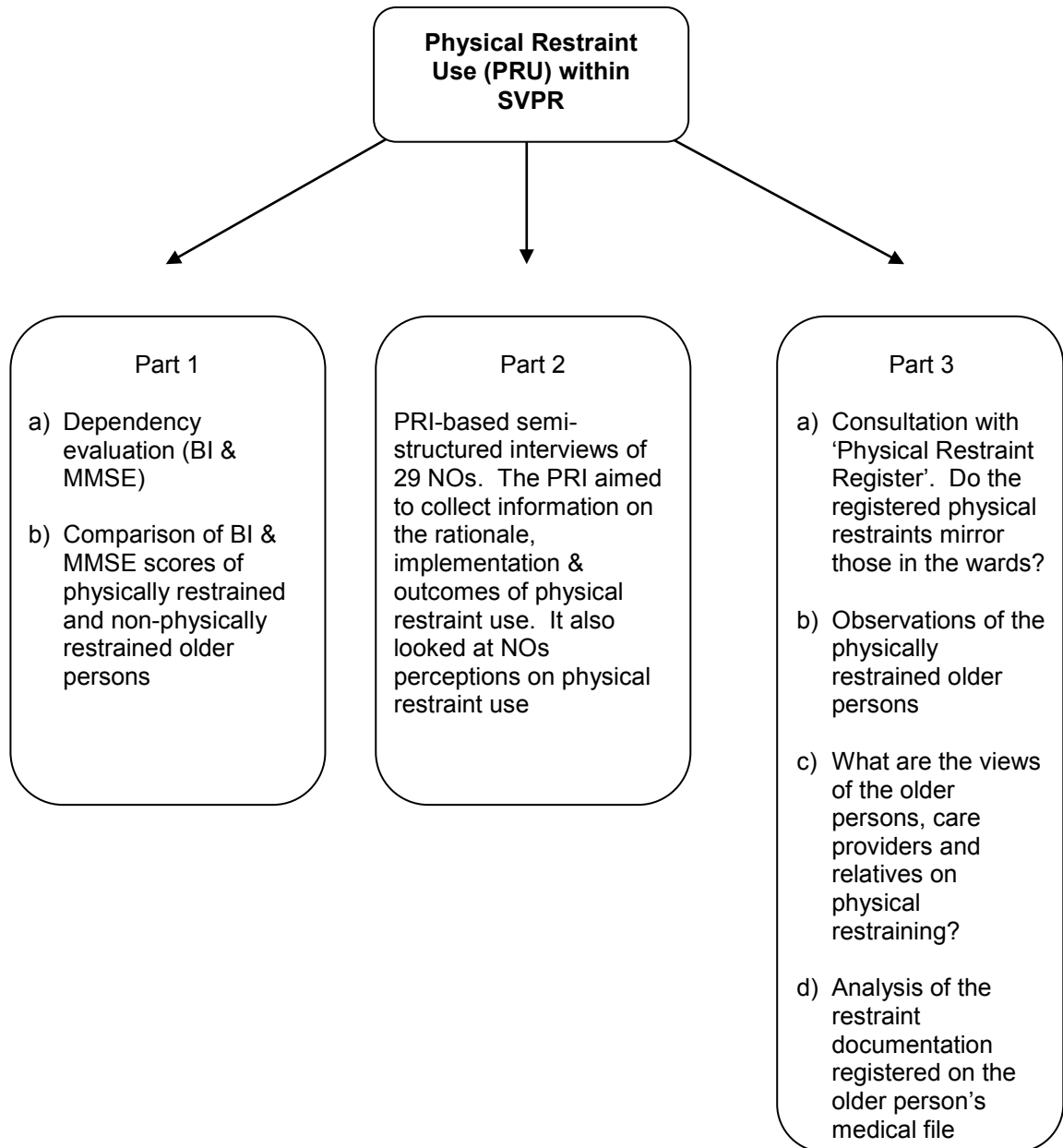


Figure 3.1: Forfeited project design. BI: Barthel Index, MMSE: Mini mental state examination, NO: Nursing officer; PRI: Physical restraint interview

3.4.2 Design of the Physical Restraint Interview

I devised an interview, the ‘Physical Restraint Interview’ (PRI) Table 3.2, (Appendix III) entirely based on findings from the Joanna Briggs systematic review, (Evans *et al*, 2002b). The interview captured current scenarios related to physical restraint use within a Maltese long term care setting. The interview statements related to physical restraint use were geared towards care providers’ reflections on current practices, evaluation of, devising and implementing best ways forward *for each of the restrained older persons within each ward setting*.

Table 3.2: Summary of the 6 main sections of the Physical Restraint Interview (PRI)

| Demography | Section A | Section B | Section C | Section D | Section E | Section F |
|--|--|--|---|--|---|--|
| | <i>Characteristics of restrained older persons</i> | <i>General information related to physical restraint use</i> | <i>Use of physical restraint</i> | <i>Reasons for initiating physical restraint use</i> | <i>Injuries related to physical restraint use</i> | <i>Practices minimising physical restraint use</i> |
| Name of ward | Unable to eat & dress unaided | Pre-restraint assessment | Physical restraint devices | Staff & organisation | Direct injury Nerve injuries, ischaemic injuries, asphyxiation and/or near asphyxiation, death | |
| Number of older persons in ward | Dually incontinent | Availability of a care plan | Length of time restraint has been in use | Social groups | Indirect injury | |
| Number of restrained older persons in ward | Impairments in vision, hearing & speech | Alternative methods to restraint use | Duration of restraint use within 24 hours | Treatment | | |
| Age of each of the restrained older persons | Requiring help from a person/s and/or mobility aid | Consent obtained | | Safety | | |
| Gender | On anti-depressant medication | Restraint used as a punishment | | Behavioural control | | |
| Length of stay within SVPR of each of the restrained older persons | Inability to partake in social activities | Assigning of an appropriate room | | Agitation | | |
| Cognitive impairment or otherwise | | Staff levels according to pre-established criteria | | Wandering | | |
| | | Prescription of restraint use | | Support | | |
| | | Recommendation | | | | |
| | | Monitoring | | | | |
| | | Removal of physical restraint | | | | |

The introductory part of the interview tool included (a) name of ward, (b) number of older persons within the respective wards, (c) gender, number and age of restrained older persons (d) length of time residing at SVPR (e) medical diagnosis of cognitive impairment.

A definition of physical restraining was included in the PRI,

“.... any device, material or equipment, attached to, or near a person’s body, and which cannot be controlled or easily removed by the person, and which deliberately prevents or is deliberately intended to prevent a person’s free body movement to a position of choice and/or a person’s normal access to their body.” (Retsas, 1998a, 1998b)

Within *Section A* of the PRI, I explored characteristics that could potentially predict or otherwise older persons at greater risk of being restrained, namely (a) unable to eat and drink unassisted, (b) dually incontinent, (c) auditory/visual/speech impairment, (d) mobility problems, (e) anti-depressant medication, and (f) inability to integrate and participate in social activities.

In *Section B*, I looked at general information on restraint use namely, (a) pre-restraint assessment, (b) availability of a care plan, (c) alternative methods to restraint use, (d) written consent, (e) whether restraint was used as a punishment, (f) assigning an appropriate room during actual restraining, (g) staffing levels according to SVPR established criteria and (h) modalities of use including consent to being restrained.

Through *Section C* of the PRI, I investigated the types of physical restraint devices in use and the restraint duration within 24 hours. I included devices that I had observed in use during my clinical experience, namely, (a) bed-side rails, (b) in-house produced and commercially manufactured harnesses, (c) mittens, (d) splints, (e) sheets, (f) wheel chair straps, (g) lapboards, (h) height-adjustable tables, (i) too low/high armchairs, (j) reclining wheel chairs/geriatric armchairs, (k) locked rooms.

In *Section D* of the PRI, I looked at potential reasons for initiating restraint use, namely,

- a) Staff and organisation oriented reasons and included reasons related to (a) legal liability, (b) compensation for understaffing and (c) enabling work schedules,
- b) Social group oriented reasons and included (a) preventing interference with other older persons, relatives, visitors and (b) to maintaining the peace and harmony of the living and work environment,
- c) Treatment oriented reasons and included, (a) to prevent treatment interference and (b) to protect medical devices,
- d) Older person oriented reasons related to (a) safety, (b) behavioural control (c) to control agitation, (d) to prevent wandering and (e) physical support.

In *Section E* of the PRI, I wanted to know about restraint-related injuries resulting from (a) direct injury or (b) indirect injury.

During the final part of the interview, *Section F* of the PRI, I explored potential restraint minimisation techniques.

3.4.3 Pilot study

Two nursing officers (a female and a male) were randomly selected for the pilot study which involved evaluation of the PRU interview. Both nursing officers objected to the use of a voice recorder during the interviews and asked that I write myself the necessary feedback during the interview *per se*. The voice recorder was withdrawn.

The pilot study was taken to completion.

3.4.4 Data collection

I aimed to collect the following data,

- (1) Comparative data of restrained vs. non-restrained older persons related to BI and MMSE scores,
- (2) Data on the characteristics of restrained older persons,
- (3) Modalities of physical restraint use, documentation (pre-restraining assessment, consent, care plan) and staffing levels in respective ward settings,
- (4) Physical restraint devices in use, frequency and duration of use,
- (5) Reasons for restraint use that included staff and organisational reasons, social reasons, treatment associated reasons and reasons related directly to the older person,
- (6) Data on direct/indirect injuries.

3.5 Ethical considerations

Participation in the research project was on a voluntary basis.

In the absence of a Government Health Ethics Committee in Malta at the time of the project, the researcher sought confirmation from the medical superintendent, senior consultant geriatrician and MNS.

The protocol was rigorously explained and discussed with all stakeholders. Thus all interested parties and professional representatives were involved in the discussions leading to the project.

Nursing officers and/or their delegates were invited to participate in the project. Prospective participants were provided with in-depth details regarding the field work, which included,

- (1) Interviews and explanation of the PRI to all NOs and/or her/his delegate,
- (2) Observations of the physically restrained older persons within the ward setting
- (3) Conversations with physically restrained older persons and their relatives/SDMs,
- (4) Analysis of the physical restraint documentation recorded in the older person's medical file.

The interview was to take place within the individual ward settings and nursing officers and interested members of staff were free to participate in the discussion. All the 29 nursing officers and/or their delegates representing each of the wards at SVPR accepted to participate in the project.

3.6 Forfeiture of the project

Nursing officers and nursing support staff were initially very keen and enthusiastic to share their views and ideas. However, I noticed that friction was gaining momentum when I consulted the older persons' medical files for documentation records. Similarly I perceived their resistance to my observations of restrained older persons as well as to speaking with them/relatives/SDMs.

Care providers challenged the project's safeguards of anonymity and argued that the project was actually a '*mask hiding my values and/or concerns*'. Care providers were increasingly worried that their hard work was being put to the test. They feared that their daily perseverance in the wards would not highlight their specific "work related needs." Rather, they would be held accountable for situations and actions beyond their control, considering that they were the sole protagonists in the field, spending the most time 'hands on' with the older person. Participants and prospective participants became apprehensive, suspicious and even antagonistic. Care providers requested representation from the manager nursing services (MNS) and their union representatives who asked for a debriefing. MNS and the union representatives argued favourably that care providers should cease support for the research. I therefore stopped the project at this point and redesigned the research to ensure these concerns were taken into account: this forms part 2.

Part 2: Research as conducted

Part 2 of this chapter, “Research as conducted” details the actual completed project and delves into the, (a) care home settings and participants, (b) procedures, (c) ethical considerations and (d) statistics.

In the re-defined study design I obtained the data through a more ‘distant’ approach, using a quantitative approach through a questionnaire format.

There were some limitations and difficulties in this study design namely, (a) I could not directly observe and communicate with the older persons when restraint was being used or considered and (b) I was unable to discuss openly with formal and informal carers on the use of physical restraining.

The re-defined aims and objectives of the “research as conducted” were targeted towards,

- a) Obtaining a clear profile of the types of physical restraint devices used and the extent of their application,
- b) Analysing the factors, characteristics, and situations with the use of physical restraints,
- c) Investigating care providers’ perceptions to physical restraint use within the context of work, environmental and safety concerns,

d) Exploring how the effects and reactions to restraint by the older persons, as perceived by the care providers can influence the older person's rights, autonomy and integrity.

3.7 Settings and participants

Research participants comprised medical officers, allied health professionals, nursing staff and nursing support staff working within long term care homes within the government and private sector. The Government of Malta is responsible for care delivery within 5 care homes, but has over recent years purchased a number of beds within a further 8 care homes within the private sector, through the public private partnership scheme (PPP Scheme), Table 3.3. The geographical location of the care homes is shown in Figure 1. In order to maintain anonymity within published data, care homes were randomly assigned a code ranging from G1 to G5 for government-managed homes and P1 to P8 for privately managed care homes, and are referred to in this way in the analysis chapter of this dissertation.

The *inclusion criteria* for the study comprised all care homes managed by the government and care homes managed by the private sector which operated through the PPP scheme. *Exclusion criteria* included (a) church homes, (b) private care homes not operating through the PPP scheme, (c) SVPR. SVPR could not be considered for this study as it was the area of the forfeited project design.

Table 3.3: Care homes used together with the older person bed occupancy and care provider staffing at the time of data collection, January-March 2011.

| Care home | Location | Older person bed occupancy | Care providers (managers, medical/paramedical, nursing and nursing support staff) |
|----------------------------------|---------------|----------------------------|---|
| <i>Government managed</i> | | | |
| Floriana Home | Floriana | 46 | 15 |
| Gzira Home | Gzira | 21 | 15 |
| Mellieha Home | Mellieha | 154 | 51 |
| Mosta Home | Mosta | 68 | 17 |
| Msida Home | Msida | 64 | 15 |
| Mtarfa Home | Mtarfa | 123 | 27 |
| Subtotal | | 476 | 140 |
| <i>Privately managed</i> | | | |
| Bormla Home | Bormla | 130 | 33 |
| Casa Arkati | Mosta | 114 | 41 |
| Casa Serena | St Paul's Bay | 108 | 21 |
| Central Home | Mosta | 98 | 36 |
| RoseVille | Attard | 130 | 68 |
| Villa Messina | Rabat | 162 | 52 |
| Zejtun Home | Zejtun | 167 | 43 |
| Sub-total | | 909 | 294 |
| Total | | 1385 | 434 |

All care providers within the care homes were eligible for study participation. The care providers being the main stakeholders and having direct contact with the older persons were in a position to provide first-hand information about the use of physical restraints. Participants were requested to answer and return a questionnaire booklet. The gender of eligible participants within each individual care home was not available to the researcher.

The study population consisted of the following care providers,

1. *Care home managers* because of their administrative role and their responsibility for the day-to-day running of the care home,
2. *Medical and allied health professionals* (medical officers, occupational therapists, physiotherapists, podiatrists, speech language pathologists, radiographers, social workers),
3. *Nursing staff* (nursing officers, deputy nursing officers, staff nurses, enrolled nurses), (As described previously in section 3.3)
4. *Nursing support staff* (nursing aides, health assistants, care workers, social assistants, and assistant care workers). (As described previously in section 3.3)

3.7.1 Regional indicators

The location of the care homes was such that all regional indicators defined by the National Statistics Office Malta (1993) were represented, ensuring an even representation. The locations marked in bold indicate the town for the respective care home, Figure 3.2.

1. *Southern Harbour Region* encompassing the regions of Zabbar, Xghajra, Valletta, Tarxien, Santa Lucija, Paola, Marsa, Luqa, Kalkara, Senglea, **Floriana**, Fgura, **Cospicua**, Vittoriosa,
2. *Northern Harbour Region* encompassing the regions of Ta' Xbiex, Swieqi, Sliema, Santa Venera, San Gwann, St Julians, Qormi, Pieta', Pembroke, **Msida**, Hamrun, **Gzira**, Birkirkara,
3. *South Eastern Region* encompassing the regions of Zurrieq, **Zejtun**, Safi, Qrendi, Mqabba, Marsaxlokk, Marsascala, Kirkop, Gudja, Ghaxaq, Birzebbuga,

4. *Western Region* encompassing the regions of Zebbug, Siggiewi, **Rabat**, **Mtarfa**, Mdina, Lija, Iklin, Dingli, Balzan, **Attard**,
5. *Northern Region* encompassing the regions of **St Paul's Bay**, Naxxar, **Mosta**, Mgarr, **Mellieha**, Gharghur.

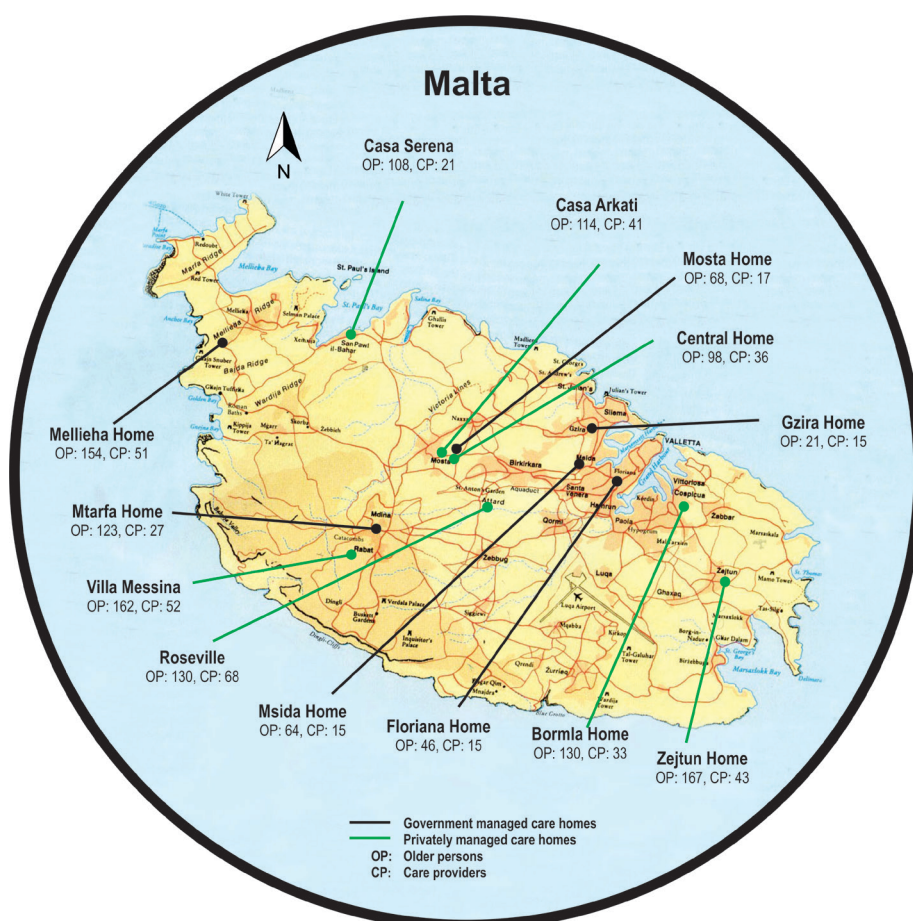


Figure 3.2: Geographical locations of the 13 care homes used in the study. The figure also provides the bed occupancy for each of the care homes, together with the numbers of care providers (nurses and nursing support staff) within these homes.

Regional indicators were included in the questionnaire as a standard demographic parameter. However, during the data analysis stage of the project it was considered appropriate to avoid regional classification as this would have enabled identification of the single care home in the Southern Eastern Region.

3.8 Procedures

In order to conduct the study, the necessary permission was obtained from the following, (Appendix 5),

- (a) The director, Department for the Elderly and Community Care within the Ministry for Family and Social Solidarity within the Government of Malta, (DECC) and responsible for the government care homes,
- (b) The chief executive officers for the private care homes,
- (c) Managers of the respective government and private care homes.

3.8.1 Development of the Physical Restraint Use (PRU) questionnaire

The PRU questionnaire is a 5-section booklet consisting of a total of 54 items which sought to provide information on how care providers perceived the use of physical restraining in care homes for older persons. The questionnaire was targeted to care providers and was designed to be self-administered. Questions were designed to be answered by check list selection, Likert scales (agreement/disagreement-based) or open-ended replies, depending on whether the particular question sought to list respondents' observations, obtain their opinions or invite their free expression respectively.

The design for the self-administered questionnaire tool was based on,

1. Physical Restraint in Long-Term Care (PRLTC) questionnaire, Michello, 1990,
2. Physical Restraint in Acute and Residential Care: A Systematic Review, Evans *et al*, 2002b.

Statements from the PRLTC were selected and re-grouped under specific headings, retaining the same 5-point Likert scale (strongly disagree to strongly agree), assigned in the PRLTC. The following section of the PRU questionnaire is PRLTC-derived,

1. Work concerns (Appendix VI and VII, PRU, Section E2.1),
2. Environmental concerns (Appendix VI and VII, PRU, Section E2.2),
3. Safety concerns (Appendix VI and VII, PRU, Section E2.3),
4. Care providers' concerns towards the use of restraining (Appendix VI and VII, PRU, Section E2.4),
5. Care providers' concerns about their caring roles (Appendix VI and VII, PRU, Section B1-B2).

Work, environmental and safety issues (Appendix VI and VII, PRU, E2.1-E2.3), are extrinsic factors on which care providers have little or no control. These issues are controlled directly by the management of the establishment. Intrinsic factors are associated with core values based on the individual's attitude. The care provider is responsible for her/his outlook on these fundamental, key issues. Janet Michello, author and designer of the PRLTC questionnaire tool, (Appendix VIII), provided a copy of the questionnaire. Appendix VIII comprises the consent from Prof Michello to use the questionnaire tool as well as a scanned copy of the tool provided by Prof Michello herself.

The systematic review conducted by the Joanna Briggs Institute, Evans *et al.*, (2002b) was used as a repository of information on the use of physical restraint in residential settings, for the development of specific parts of the PRU questionnaire. The specific review components which were applied to the PRU are summarised in Table 3.4.

Table 3.4: Summary of information (through the Joanna Briggs’s systematic review, Evans *et al.*, 2000b) that was applied in the development of the PRU.

| Physical restraint devices (Appendix VI and VII, PRU, C1) | Physical restraint duration (Appendix VI and VII PRU, C7) | Older person characteristics (Appendix VI and VII PRU, D1.1-D1.7) | Older person’s experience when restrained (Appendix VI and VII PRU, E1) |
|---|---|---|---|
| Full bed rails | Up to 2 hours | Mobility, weight-bearing, balance & activities of daily living | Passivity |
| Partial bed rails | More than 2 hours but not more than half a day | Physical limitations | Anger |
| H-harness | More than half a day but not all day | Communication, hearing & vision patterns | Increased agitation |
| T-harness | All day | Continence | Withdrawal |
| Belt harness | | Orientation, comprehension, & behavioural/mood | Plea for release |
| Manufactured Y-harness | | Activity participation | Calls for help |
| Sheets | | Medical therapy | Constant attempts to untie or release self |
| Wheel-chair straps | | | Decline in cognition |
| Lifter straps | | | Decline in mobility |
| Limb restraints | | | Increase in development of pressure sores |
| Lapboards | | | Increase in urine & faecal incontinence |
| Low/high armchairs | | | Increase in dependence in activities of daily living |
| Tilted wheel-chairs/armchairs | | | |
| Bed harness | | | |
| Boxing gloves | | | |
| Height adjustable tables | | | |

Through her clinical experience, and from the preliminary observations and data gathering from the “intended project”, the researcher observed absence of specific procedures related to physical restraint use. This laid the foundation for the development of Sections C2-C6 within the PRU (Appendix VI and VII), namely, (a) recommendation of physical restraint use, (b) explanation of physical restraint use, (c)

monitoring of the physically restrained older person, (d) the decision for the removal of the device, and (e) documentation of physical restraint use.

Supplementary sections were included at the end of the tool in order to invite participants to elaborate their opinions on physical restraint use, (Appendix VI and VII), PRU, E2.5-E2.6). This was particularly important and necessary as it was not otherwise possible for the researcher to approach the field of study.

Table 3.5 is a synoptic representation of the PRU questionnaire highlighting those parts where (a) selection of statements from the PRLTC was undertaken, (b) contributions from the systematic review by the Joanna Briggs Institute (Evans *et al.*, 2002) were identified, and (c) researcher's input provided by her clinical experience. Care was taken to make the final product of the PRU sensitive to the Maltese culture and context (thus avoiding a recurrence of trade union interference, as referred to in Sections 3 and 3.10) while maintaining a content that would allow the gathering of the necessary information.

Table 3.5: Synoptic representation of the PRU questionnaire.

| PRU Questionnaire sections | | Structure |
|--|---|----------------------|
| Section A: Demographics | | |
| A | Developed by researcher | Check list |
| Section B: Health care professional/nursing support staff concerns about caring roles | | |
| B1-B2 | Derived from the PRLTC (Michello, 1990) | 5-point Likert scale |
| B3-B6 | Developed by researcher | 5-point Likert scale |
| Section C: The use of physical restraint | | |
| C1-C7 | Developed by researcher | Check list |
| Section D: The use of physical restraint | | |
| D1.1-D1.7 | Contributions from the systematic review by Evans et al, 2002 | 5-point Likert scale |
| Section E: Perceptions regarding physical restraint and its use | | |
| E1 | Developed by researcher | Check list |
| E2.1-E2.4 | Derived from PRLTC (Michello, 1990) | 5-point Likert scale |
| E2.5 | Developed by researcher | Open questions |

3.8.2 Design of the Physical Restraint Use (PRU) questionnaire

An introduction at the beginning of the tool briefly described the research, emphasised the confidentiality of responses and included the researcher's contact details.

The researcher adopted a *general definition of physical restraint* based on international reviews described extensively in the literature review,

“... the older person is ... physically restrained through the planned or unplanned, conscious or unconscious actions of health care professionals and/or nursing support staff, preventing the older person from doing what he/she wishes to do and as a result places limits on his/her freedom.”

The researcher also indicated that *physical restraining amounted to*,

“Any manual method, or physical or mechanical device, material or equipment attached of adjacent to the older person’s body so as to limit movement (i.e. the older person cannot remove the device easily and there is restriction of freedom of movement).”

The definition also indicated instances that were *not considered to be forms of physical restraining*,

1. Immobilisation of a part of the body as required for medical treatment (splints and casts),
2. Temporary immobilisation of a part of the body during a nursing procedure,
3. Temporary immobilisation during transportation,
4. Devices used to maintain the desired and comfortable body position of the older person.

The definition addressed *bed side rail as a physical restraint device* when the device,

1. Stopped or restricted the older person’s desired movement or activity,
2. Served multiple purposes, that is, facilitating in-bed mobility but also keeping the older person in bed even when the person wanted to get out of bed.

Conversely, *bed side rail was not considered as a restraining device* when its purpose was to,

1. Prevent an older person from falling out of bed,
2. Enhance the older person's mobility in and out of bed.

Section A of the questionnaire (Appendix VI and VII, PRU), comprises a '*Demographics Section*' that includes,

1. Date,
2. Age,
3. Gender,
4. Professional Status (medical/allied health professional),
5. Place of work (Government Residential Home/Private Home),
6. Place of work by region, including the 5 regional indicators of the Island of Malta, National Statistics Office Malta (1993) Southern Harbour Region, Northern Harbour Region, South Eastern Region, Western Region and the Northern Region,
7. Length of time working with the older person,
8. Attendance or otherwise to training on issues related to physical restraint use.

The flow chart in Figure 3.2 is a summary the PRU questionnaire structure. Physical restraint devices, (Appendix VI and VII, PRU, C1), highlighted in Table 3.4, are the focus of the questionnaire. Procedures that need careful attention when considering physical restraint use were covered in sections C2-C6 of the questionnaire, (Figure 3.3, C2-C6; Appendix VI and VII, PRU, C2-C6). The duration of physical restraint use, C7 summed up this part of the questionnaire, (Table 3.4; Figure 3.3, PRU, C7).

Section D of the questionnaire (Appendix VI and VII, PRU, D1.1-D1.7) looked at seven characteristics that previous research (Evans *et al.*, 2002b) suggested may contribute towards the use of physical restraint. These items were underlined in Table 3.4; Figure 3.3).

Care providers' perceptions regarding the use of physical restraining were presented in Section E of the PRU, (Appendix VI and VII, PRU, E1-E2.6; Figure 3.3). Section E1, studied the older person's responses when physically restrained, and included reactions most typically observed in the research, (Evans *et al.*, 2002b) (Table 3.4; Figure 3.3). Sections E2.1-E2.4 measured how the care provider perceived physical restraining in relation to (a) work concerns, (b) environmental concerns, (c) safety concerns, and (d) general concerns about physical restraint use. Sections E2.5-E2.6 allowed room for respondents to express their own views on this important reality. This part of the tool was further strengthened through the inclusion of caring concerns, indicated in Section B, (Appendix VI and VII, PRU, B1-B6; Figure 3.3).

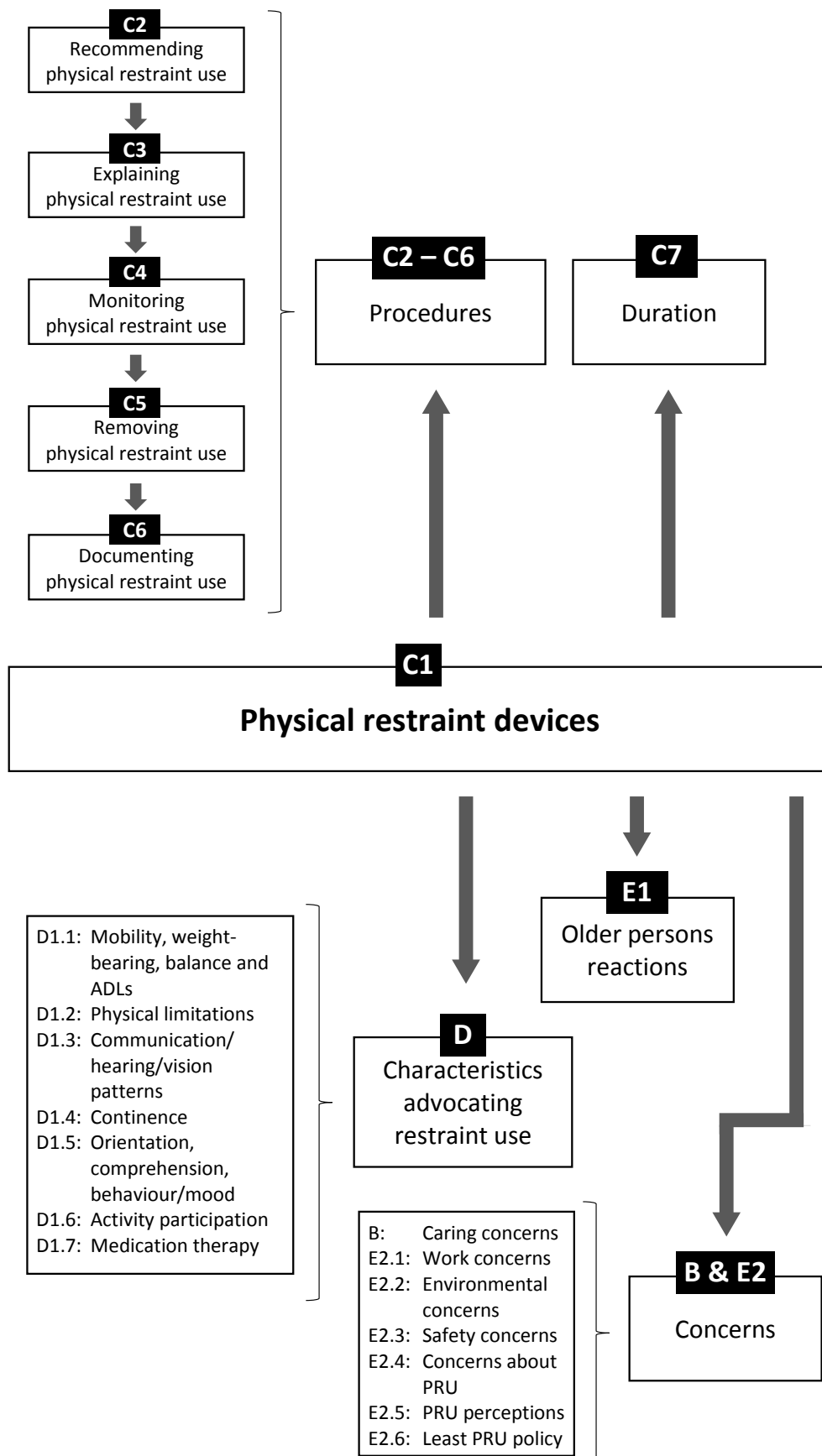


Figure 3.3: Summary of the PRU questionnaire structure.

3.8.3 Design considerations of the questionnaire

Bearing in mind the sensitive nature surrounding this topic and providing respondents with a questionnaire that maximised their compliance was a priority within the local care home environments. An indirect consolidated rapport of trust had to be developed with the respondents, allowing for concrete critical reflection and evaluation on the issue of physical restraining and its use. The researcher ensured that statements were easy to understand. Providing responses with ease, re-assured the care provider.

Particular care was given to,

1. The use of simple day-to-day, common and easily understood vocabulary,
2. The avoidance of emotional and dramatic language,
3. Discussion of one topic at a time,
4. Avoidance of statements that may potentially lead the respondent to an expected answer,
5. Avoidance of questions that potentially were beyond the care provider's capabilities and knowledge,
6. Focus on statements that were more relevant to the local context within which the respondents worked, rather than considering a hypothetical scenario,
7. Avoidance of double negative statements,
8. The inclusion of introductory remarks at the beginning of each section that ensured that statements were interpreted well by participants and maintained that the PRU was a consultation process,
9. A comments section at the end of each section for additional remarks,

10. The application an inverted funnel approach, (Siniscalco & Auriat, 2005), to the questionnaire design,
11. The inclusion of tick lists that provided a large selection of items and allowed respondents to check the best suited options,
12. Open-ended statements that gave respondents the opportunity to be critical and reflective on their interpretations and perceptions on the effects physical restraining had on the older person's rights and autonomy,
13. Providing an option for participants to state whether they had filled the questionnaire on their own or with assistance,

3.8.4 Bilingualism of the questionnaire

Malta is a bilingual country, and respondents could potentially have preference to either Maltese or English as a communication medium. Therefore the PRU questionnaire was designed in both Maltese and English versions. Back translations for each of the Maltese and English versions of the PRU (Appendix VI and VII) were carried out in Malta. Back translations elicited minor modifications in syntax and sentence construction in order to ease and clarify the text flow.

3.8.5 Pilot work

A pilot study was carried out within 1 randomly selected government-managed care home and 1 randomly selected privately managed care home. Pilot study booklets in the Maltese and English versions of the questionnaire were tested in the chosen homes, (Table 3.6). Pilot study outcomes only recommended (a) numbering of check lists within the questionnaire, and (b) omission of repeated items. Nursing and nursing support staff partially completed the questionnaire particularly omitting the open-ended questions. Contributions from the nursing staff in the other sections were comprehensive and detailed.

Table 3.6: Care homes selected for pilot testing.

| Care Home | Pilot Cohort | Gender | | Total |
|----------------------|-----------------------|--------|--------|-------|
| | | Male | Female | |
| Government care home | Nurses | 0 | 2 | 2 |
| | Nursing support staff | 1 | 5 | 6 |
| | | | | |
| Private care home | Nurses | 0 | 1 | 1 |
| | Nursing support staff | 2 | 8 | 10 |

3.8.6 Reliability and validity

Cronbach alpha values for internal consistency (reliability) of the questionnaire Likert scales and dichotomous variable questions were calculated using SPSS v22 for Microsoft Windows, (Table 3.7). These values were calculated following the pilot study and at the termination of the research study. Validity consistency was not carried out as the questionnaire tool could not be compared to an established tool, since a comparable tool does not exist.

Table 3.7: Internal consistency for the Likert scales and dichotomous variables for pilot and research study data of the Physical Restraint Use questionnaire.

| Reliability | Cronbach alpha |
|--------------------------------------|----------------|
| <i>Pilot study (n=19)</i> | |
| Likert scales | 0.968 |
| Dichotomous variables | 0.884 |
| <i>Research study (n=180)</i> | |
| Likert scales | 0.923 |
| Dichotomous variables | 0.813 |

3.8.7 Distribution and collection of questionnaire booklets

Questionnaire booklets ($n=434$) were distributed to medical, allied health professionals, nursing staff, nursing support staff and managers during the month of March 2011. A pack containing a Maltese and an English version of the questionnaire booklet, (Appendix VI and VII, PRU) together with a semi-personal letter note was distributed.

Anonymity constraints, did not allow the researcher to have a staff list that included the number of nursing staff and nursing support staff or their gender variables. The total numbers of eligible participants per home was the only information available.

Completed questionnaire booklets were collected by the respective care home manager. The completed booklets were returned to the researcher within a two-week time frame. Care home managers agreed to help participants fill in the questionnaire booklet should the need arise.

3.9 Ethical considerations

Participation in the research project was on a voluntary basis. A broad participant sample size and number of long term care settings rendered it difficult for participants to be identified. The self-administered questionnaire where participants could express their views and opinions augured towards securing anonymity issues. The tool required no right or wrong answers and allowed for participants to respond in a true and real manner, irrespective of their perceptions of the researcher and/or predictions/expectations of the study. This was of importance as the topic in question was the centre of debates and controversies locally and the questionnaire could be perceived as impinging on the care provider's beliefs, actions and behaviours on a very delicate and sensitive matter.

In the absence of a Government Health Ethics Committee in Malta at the time of the project, the researcher sought and obtained verbal and written confirmation from senior management within the government and private care homes, (Appendix V). Prospective participants had the choice of not participating in the project should they have wished to do so. The researcher was not involved in the distribution, completion and collection of the questionnaires.

3.10 Statistics

3.10.1 Data entry

I sought advice from a medical biostatistician in order to conduct the statistical analysis of this data, (refer to Acknowledgements). Data was entered into SPSS version 22 for Microsoft Windows and analysed using this platform. The following coding approaches were applied,

1. Continuous variables (*A2 and A7*) were directly entered into SPSS. With respect to sections dealing with dichotomous data; *A3*, male was coded as '1' and female was coded as '2' and for *A8*, yes was coded as '1' whilst no was coded as '2',
2. With respect to questions requiring the selection of 1 mutually exclusive answer, (*A4, A5, A6 and C7* i.e. nominal data), statements were encoded from 1 to 'x' where 'x' was the number of selections relative to the respective question,
3. All statements in Section B (*B1-B6*) required responses based on a 5-point Likert Scale ranging from strongly agree to strongly disagree. Responses were scored with a '5' for strongly agree, '4' for agree, '3' for uncertain, '2' for disagree and '1' for strongly disagree. Higher respondent scores in Section B imply a scenario that would potentially require in-depth evaluation of the service delivery and provision within the care homes,
4. Questions *C1, C2, C3, C4, C5, C6 and E1* contained multiple statements where respondents were asked to mark all that apply. Each individual statement was allocated a code of 1 if marked and 2 if unmarked,

5. All questions in *Section D (D1.1 – D1.7)* required responses based on 5-point Likert Scale ranging from strongly agree to strongly disagree. Responses were scored with a ‘5’ *for strongly agree*, ‘4’ *for agree*, ‘3’ *for uncertain*, ‘2’ *for disagree* and ‘1’ *for strongly disagree*.
6. *E2.1 – E2.4* required responses based on 5-point Likert Scale ranging from strongly agree to strongly disagree. Responses were scored with a ‘5’ *for strongly agree*, ‘4’ *for agree*, ‘3’ *for uncertain*, ‘2’ *for disagree* and ‘1’ *for strongly disagree*. In order to maintain consistency in the weighting of Likert responses, the highest score (5) was always allocated to statements that implied the necessity for additional action by the care provider should restraint reduction be considered. In this respect statements 2.1.5, and 2.2.3, were scored in reverse order, that is, ‘1’ strongly agree, ‘2’ agree, ‘3’ uncertain, ‘4’ disagree and ‘5’ strongly disagree.
7. With respect to Section 2.4, statements 2.4.2, 2.4.3, 2.4.4 were scored with a ‘5’ *for strongly agree*, ‘4’ *for agree*, ‘3’ *for uncertain*, ‘2’ *for disagree* and ‘1’ *for strongly disagree*. Statement 2.4.1 was scored in reverse order. Therefore, high scores within this section imply a positive outlook towards restraint reduction.
8. In situations where analysis required re-categorisation of specific replies, this is indicated in the respective results section.

3.10.2 Approach to analysis

The main approaches to analysis comprised:

1. Analysing all data globally,
2. Analysing data stratified by a management-dependent variable (government, private management),
3. Analysing data stratified by a profession-dependent variable (managers, nursing staff, nursing support staff),
4. Analysing data stratified by a home-dependent variable (older person/care provider ratio) in order to gain an appreciation of inter-home differences in responses.

For the purposes of analysis involving staff/resident ratios, all data from Gzira Home was omitted, since all residents were undergoing relocation at the time of the study, due to the planned eventual closure of the home. The staff/resident ratios for this home were therefore deemed not to reflect the real situation at the time of the study.

Data analysis focussed on,

1. The different types of restraint devices that were used (Appendix VI and VII, PRU, C1),
2. The duration of physical restraint use over a 24-hour period (Appendix VI and VII, PRU, C7),
3. The reactions of the older persons to being restrained (Appendix VI and VII, PRU, E1),
4. Older person characteristics (Appendix VI and VII, PRU, D1),
5. The relationship between the duration of the restraint over a 24-hour period and staff members' concerns to restraint use (Appendix VI and VII, PRU, E2.4.1-E2.4.4).

The hypothesis of whether an increase/decrease in older person to care provider ratios within the care homes affected restraint use was also tested through analysis of these ratios with the,

1. Reported frequency and duration of restraint and the types of device in use (Appendix VI and VII, PRU, C1 and C7),
2. Older person characteristics (Appendix VI and VII, PRU, D1.1 – D1.7),
3. Observed reactions (from older persons) to physical restraint use (Appendix VI and VII, PRU, E1),
4. Staff members' attitudes to restraining, and to work, environmental and safety concerns (Appendix VI and VII, PRU, E2.1-E2.4).

Associations between responses to the questionnaire and demographic variables including age, gender, and professional status, place of work and length of time working with the older persons (Appendix VI and VII, PRU, A2-A7) were also tested. Attendance to training sessions (Appendix VI and VII, PRU, A8) was also studied. The rationale for this was that attendance to training could potentially be an indicator of the professional culture of the individual and/or of the care home, which in turn potentially influenced attitudes in the practice of physical restraining.

3.10.3 Statistical analysis

To determine the appropriate statistical approaches, data distributions for each variable were tested for normality, using both the Kolmogorov-Smirnov and Shapiro-Wilk tests, (Appendix IX). A significant result denoted that data were non-normally distributed and therefore non-parametric testing needed to be applied. In any comparative statistical analysis, non-parametric analysis should always be applied unless *all* data sets being compared show normal distributions, in which case a parametric approach should be used.

Since all variable data distributions resulted to be non-normal, (Appendix IX), all statistical testing in this project utilised a non-parametric approach (Mann-Whitney, Kruskal-Wallis, Spearman rho, or as appropriate). Nominal data was analysed using χ^2 testing. Statistical significance was considered at a probability level of less than 0.05.

3.11 Conclusion

This chapter provided an in-depth description of the study designs for the “research as intended” and “research as conducted” projects. The chapter described the rationale behind the projects, highlighted the reasons that mandated this change and discussed the limitations and difficulties associated with re-designing of the project.

The next chapter details the results following distribution and collection of the questionnaire booklet.

Chapter 4

Demographics and older person ratios in care homes

4.0 Introduction

Chapters 4 to 7 present the statistical analysis of data collected through the Physical Restraint Use (PRU) Questionnaire. The project was carried out within Maltese care homes fitting the selection criteria described in the Methods Chapter 3. There is a lack of data on the use of physical restraint in care homes in Malta, and the attitudes of care providers to the use of this intervention. Consequently, the analyses that ensue in Chapters 4 to 7 provide important information on these issues within Maltese care homes. This is of relevance internationally and locally, in informing long term care management and policy direction with respect to the use of physical restraining in facilities caring for older persons.

Throughout the analyses chapters, data are presented in tabular as well as graphical format. Within tables, statistical significance is highlighted in bold. The *n*-values considered within subgroup statistical analyses are dependent on the number of respondents that actually replied to the questions being analysed. This becomes especially relevant when analysing the relationships between responses to different questions, and explains why reported *n*-values for the same subgroup may vary according to the specific analysis that subgroup is being subjected to.

For data analysis purposes, throughout chapters 4 to 7,

1. Medical & allied health professionals were omitted from the sample as the numbers were too small ($n=3$) to be considered for statistical analysis.
2. For the purposes of care provider/resident ratio analysis, the Gzira Home sample was eliminated as residents within the care home were being relocated pending closure of the Home and therefore an atypical care provider/resident ratio was prevalent at the time.
3. For the purpose of care provider/resident ratios, care home managers were incorporated into the care provider cohort.
4. Place of work (Appendix VI and VII, A5) i.e. Care Malta and private managed care homes were grouped under one private care home category as both organisations are private enterprises
5. No analysis was possible for the qualitative parts of the questionnaire because response to these sections was poor. No questions in Section E2.5 and E2.6 obtained more than 2 responses, (Table 4.1).
6. Only 2 respondents out of a total of 180 indicated that they required help to complete the questionnaire. The sample as the numbers were too small ($n=2$) to be considered for statistical analysis.

Prior to data analysis, all variables were tested for normality using Kolmogorof-Smirnov and Shapiro-Wilk approaches. The tabulated results are presented in Appendix IX. Since no variables from the whole questionnaire were identified to follow normal statistical distributions, non-parametric testing was applied throughout the questionnaire analysis, and data is presented as median and interquartile ranges

Table 4.1: Summary of qualitative data pertaining to E2.5 and E2.6 of the PRU tool.

| Question | Respondent 1 | Respondent 2 |
|---|------------------------------|--|
| E2.5 In this section you are being invited to give your perceptions regarding physical restraint use, whilst relating this use with the environment you work in. | | |
| 2.5.1 How do you feel when you physically restrain someone or when you see someone physically restrained? | <i>Not good</i> | No response |
| 2.5.2 How do you think the Older Person feels when physically restrained? | No response | <i>I don't know</i> |
| 2.5.3 In what ways do you feel that reducing/eliminating physical restraints will affect the health care professional/nursing support staff's life on a day to day basis? | No response | No response |
| 2.5.4 In what ways do you feel that reducing/eliminating physical restraints will affect the Older Person's life on a day to day basis? | No response | No response |
| 2.5.5 What are your feelings and concerns regarding the reduction/elimination of physical restraints? | <i>Mixed feelings</i> | <i>Just get on with the job</i> |
| E2.6 In the event that a Least Restraint Use Policy is introduced | | |
| 2.6.1 What do you see as advantages to a Least Restraint Use Policy for the health care professional, nursing support staff and the Older Person? | No response | <i>Let sleeping dogs lie</i> |
| 2.6.2 What do you see as disadvantages to a Least Physical Restraint Use Policy for the health care professional, nursing support staff and the Older Person? | No response | No response |
| 2.6.3 Would you support a Least Physical Restraint Use Policy within your Residential Home? | <i>Unsure</i> | <i>No</i> |

4.1 Estimated margin of error

The confidence interval for the estimated maximum margin of error for the questionnaire was calculated using PiFace v.1.76, authored by Russel V Lenth and available at <http://homepage.stat.uiowa.edu/~rlenth/Power/>.

The following parameters were considered in this analysis:

- a) Statistical significance was considered at a p-value of less than 0.05
- b) The largest confidence interval for response variability was considered to occur in a hypothetical scenario where 50% of the respondents gave a positive reply to a question and 50% gave a negative reply to the same question. This is the worst case scenario, where the uncertainty in population response is greatest. At the other hypothetical extreme, if 100% of the respondents gave a positive reply or 100% of the respondents gave a negative reply, this would imply maximum certainty with zero confidence interval.
- c) The number of respondents was $n=165$. This was the number of respondents actually used in the analysis, with those who failed to report their professional status ($n=15$) being eliminated from the total of 180 questionnaires received.

The estimated margin of error for the above parameters at the worst case scenario of 50% respondent agreement was ± 0.076 or $\pm 7.6\%$. This means that for questions whereby half the respondents disagreed with the other half, one could expect a maximum margin of error of $\pm 7.6\%$ in the obtained replies. Essentially, this means that if the whole questionnaire distribution and data collection stage was to be repeated multiple times with the same respondents, such questions would be expected to vary by not more than $\pm 7.6\%$ between the repeated data collections. Any other

questions, for which more than half the respondents agreed on a particular answer, would have an estimated margin of error of less than 7.6%. For example, for a question in which 90% of the respondents provided the same reply, the estimated margin of error is ± 0.015 , or $\pm 1.5\%$.

4.2 Demographics

Chapter 4 outlines the statistical data of respondents from the government and privately managed care homes to the Physical Restraint Use questionnaire (PRU questionnaire). Particular emphasis was attached to older person/care provider ratios within the respective care homes. Attendance to training sessions and care providers' experience working with older persons in the long term care were also explored. Table 1 within this section also includes the unspecified data from the complete cohort of respondents, which data however was not included in any of the analysis.

4.2.1 Demographic data of questionnaire respondents categorised by work status

A total of 180 questionnaire booklets from 434 distributed booklets were returned. Of these, 165 indicated work status of the respondent and 15 failed to do so. In addition, no responses were obtained from medical staff and only 3 allied health professionals tendered their questionnaires. These were therefore omitted from analyses and are only included in the demographic overview presented in Table 4.2. The demographic characteristics of the questionnaire respondents according to professional status are summarised in Table 4.2. The respondents' cohort ($n=165$) was mainly composed of nursing support staff ($n=136$, 82.4%), followed by nurses ($n=18$, 10.9%) and managers ($n=11$, 6.7%). A high cohort component of nursing support staff was expected as this is the largest category of care givers within care homes.

The mean ages across the professional categories were not statistically different (Kruskal-Wallis $p=NS$), indicating that the groups were age matched. The majority of respondents hailed from the private sector ($n=120$, 73.6%), Table 4.3, Figure 4.1. The majority of respondents ($n=127$, 78.9%) had attended CPD sessions where physical restraint use was mentioned or discussed.

Table 4.2. Summary of demographic data of questionnaire respondents categorized by work status. All percentages are expressed out of the total cohort size of $n=180$. Unspecified data are included. ** $p<0.01$ ($\chi^2=12.25$, $df=2$) (CPD: Continuous professional development; y: years)

| | Managers ($n=11$) | | Nursing ($n=18$) | | Nursing support ($n=136$) | | Unspecified profession ($n=15$) | | Total ($n=180$) | |
|------------------|------------------------|-------------|-----------------------|--------------|--------------------------------|--------------|---|-------------|----------------------|---------------|
| Gender | n | % | n | % | n | % | n | % | n | % |
| Male | 6 | 3.33 | 2** | 1.11 | 19** | 10.56 | 2 | 1.11 | 29 | 16.11 |
| Female | 5 | 2.78 | 15** | 8.33 | 115** | 63.89 | 10 | 5.56 | 145 | 80.56 |
| Unspecified | 0 | 0.00 | 1 | 0.56 | 2 | 1.11 | 3 | 1.67 | 6 | 3.33 |
| Total | 11 | 6.11 | 18 | 10.00 | 136 | 75.56 | 15 | 8.33 | 180 | 100.00 |
| | | | | | | | | | | |
| Age group (y) | n | % | n | % | n | % | n | % | n | % |
| 0-20 | 0 | 0.00 | 0 | 0.00 | 15 | 8.33 | 0 | 0.00 | 15 | 8.33 |
| 21-30 | 1 | 0.56 | 3 | 1.67 | 25 | 13.89 | 0 | 0.00 | 29 | 16.11 |
| 31-40 | 4 | 2.22 | 2 | 1.11 | 23 | 12.78 | 0 | 0.00 | 29 | 16.11 |
| 41-50 | 4 | 2.22 | 10 | 5.56 | 42 | 23.33 | 8 | 4.44 | 64 | 35.56 |
| 51+ | 2 | 1.11 | 2 | 1.11 | 20 | 11.11 | 3 | 1.67 | 27 | 15.00 |
| Unspecified | 0 | 0.00 | 1 | 0.56 | 11 | 6.11 | 4 | 2.22 | 16 | 8.89 |
| Total | 11 | 6.11 | 18 | 10.00 | 136 | 75.56 | 15 | 8.33 | 180 | 100.00 |
| | | | | | | | | | | |

| Place of work | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
|--------------------|-----------|-------------|-----------|--------------|------------|--------------|-----------|-------------|------------|---------------|
| Government managed | 5 | 2.78 | 5 | 2.78 | 33 | 18.33 | 5 | 2.78 | 48 | 26.67 |
| Privately managed | 6 | 3.33 | 13 | 7.22 | 101 | 56.11 | 8 | 4.44 | 128 | 71.11 |
| Unspecified | 0 | 0.00 | 0 | 0.00 | 2 | 1.11 | 2 | 1.11 | 4 | 2.22 |
| Total | 11 | 6.11 | 18 | 10.00 | 136 | 75.56 | 15 | 8.33 | 180 | 100.00 |
| | | | | | | | | | | |
| Region | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Southern Harbour | 1 | 0.56 | 2 | 1.11 | 27 | 15.00 | 1 | 0.56 | 31 | 17.22 |
| Northern Harbour | 2 | 1.11 | 0 | 0.00 | 6 | 3.33 | 4 | 2.22 | 12 | 6.67 |
| South Eastern | 1 | 0.56 | 0 | 0.00 | 20 | 11.11 | 0 | 0.00 | 21 | 11.67 |
| Western | 3 | 1.67 | 8 | 4.44 | 30 | 16.67 | 7 | 3.89 | 48 | 26.67 |
| Northern | 4 | 2.22 | 8 | 4.44 | 53 | 29.44 | 1 | 0.56 | 66 | 36.67 |
| Unspecified | 0 | 0.00 | 0 | 0.00 | 0 | 0.00 | 2 | 1.11 | 2 | 1.11 |
| Total | 11 | 6.11 | 18 | 10.00 | 136 | 75.56 | 15 | 8.33 | 180 | 100.00 |
| | | | | | | | | | | |
| Attended CPD | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Yes | 10 | 5.56 | 14 | 7.78 | 103 | 57.22 | 6 | 3.33 | 133 | 73.89 |
| No | 1 | 0.56 | 4 | 2.22 | 29 | 16.11 | 5 | 2.78 | 39 | 21.67 |
| Unspecified | 0 | 0.00 | 0 | 0.00 | 4 | 2.22 | 4 | 2.22 | 8 | 4.44 |
| Total | 11 | 6.11 | 18 | 10.00 | 136 | 75.56 | 15 | 8.33 | 180 | 100.00 |

Analysis of the overall response rates of care providers indicated a higher percentage of responses within the private sector (40.8%) as opposed to the response rate from government-managed homes (30.7%), Table 4.3. Similarly, response rates for the 3 professional categories for the privately managed care homes were higher than for those managed by the government sector, Figure 4.1.

Table 4.3: Response rates obtained from care providers working within government and private care homes, as a percentage of the total eligible staff.

| Care home management | Eligible staff | Respondents | Response rate (%) |
|----------------------|----------------|-------------|-------------------|
| Government | 140 | 48 | 34.3 |
| Private | 294 | 128 | 43.5 |
| Total | 434 | 176 | 40.6 |

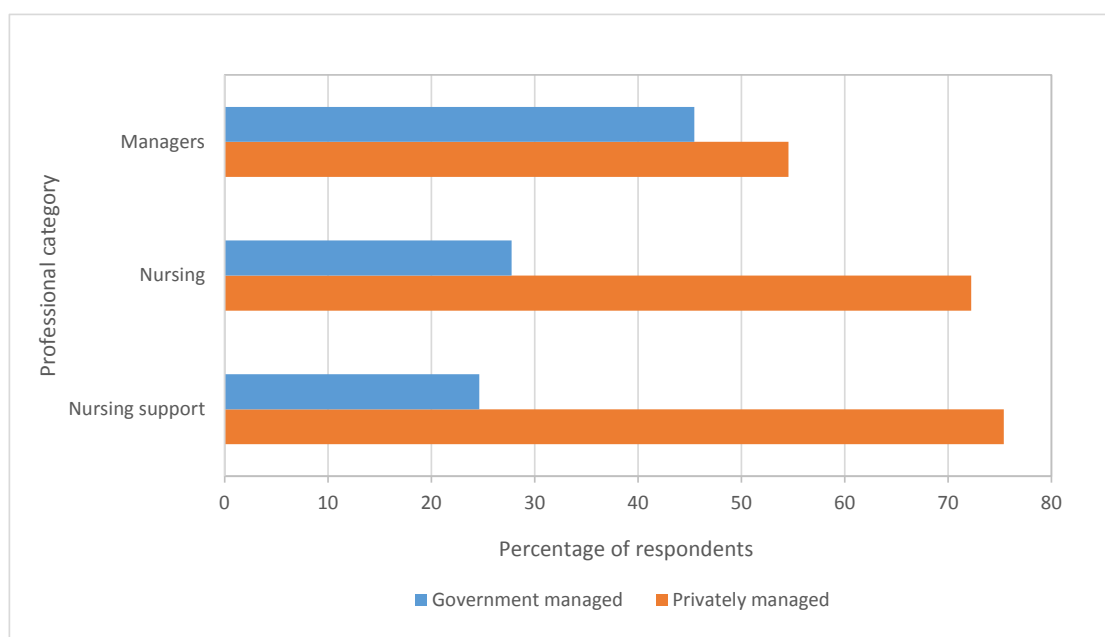


Figure 4.1: Graphical representation of the government and private work environment responses by professional status. The bars denote the percentage composition of respondents originating from government and privately managed care homes, for each professional category.

Females outweighed males by 6 to 7 fold within both nursing and nursing support staff categories while a more balanced ratio was observed in the managerial category ($\chi^2=12.25$, $df=2$, $p<0.01$) (Table 4.2 and Figure 4.2). Due to the low numbers of male respondents compared to females, gender dependent analysis was not performed. The higher age groups (41 years +) were more frequent in the nursing category (70.6%) than in the nursing support staff (49.6%) and managers (54.5%) while the lower age groups (0-30 years) were more prevalent within the nursing support staff category (32.0%) than nurses (17.7%) and managers (9.1%).

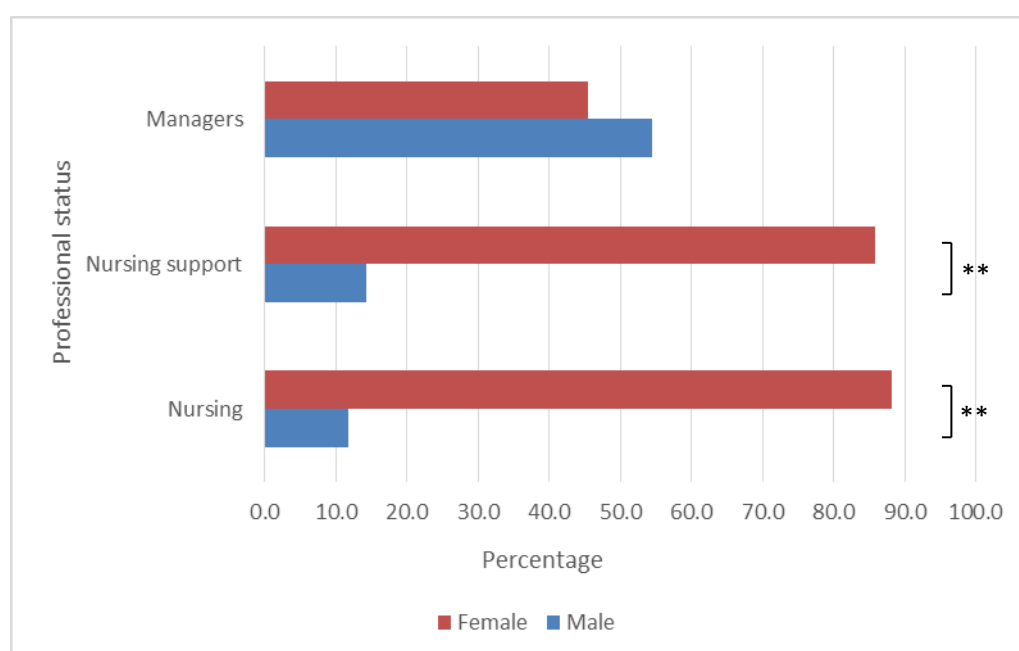


Figure 4.2: Percentage composition of males and females within each professional status. A gender-dependent statistical difference was observed in responders coming from the nursing and nursing support staff categories ($\chi^2=12.25$, $df=2$, $p<0.01$).

4.2.2 Age and time working with older persons

The overall median age of all categories was 42.5 (IQR: 27.5-48.0) years. The median ages for male and female respondents within each category were similar. Within professional categories, nursing support staff tended to be younger (median: 40.0, IQR: 26.0-47.0 years) than either nurses (median: 40.0; IQR: 26.5-47.5 years) or managers (median: 43.0; IQR: 33.5-47.0 years), but Kruskal-Wallis analysis showed that this did not attain statistical significance (Table 4.4, Figure 4.3).

Table 4.4: Age of respondents categorised by professional status. (y: years). The *n*-values for the different professional categories and totals are different from those described in Table 1, because of instances of different combinations of missing variables of status, gender, age, and length of time working with older persons occurring within the same questionnaires. The mean rank values refer to Kruskal-Wallis comparisons across professional status, for the male, female and total categories. IQR: interquartile range. All Kruskal-Wallis comparisons were non-significant, indicating age-matching across professional categories.

| | Managers | | | Nursing | | | Nursing support | | | Kruskal-Wallis | Total | |
|--------|----------|---------------------|-----------|----------|---------------------|-----------|-----------------|---------------------|-----------|--------------------------|----------|---------------------|
| Gender | <i>n</i> | Median (IQR) | Mean Rank | <i>n</i> | Median (IQR) | Mean Rank | <i>n</i> | Median (IQR) | Mean Rank | Statistical significance | <i>n</i> | Median (IQR) |
| Male | 6 | 41.5 (31.0-47.0) | 14.1 | 2 | 49.0 (48.0-50.0) | 21.5 | 18 | 41.0 (24.0-47.0) | 12.4 | <i>p</i> =NS | 26 | 42.5 (29.5-47.0) |
| Female | 5 | 45.0 (34.0-47.0) | 73.5 | 15 | 45.0 (39.5-48.5) | 76.9 | 107 | 40.0 (26.5-47.5) | 61.8 | <i>p</i> =NS | 127 | 42.0 (30.0-48.0) |
| Total | 11 | 43.0 (33.5-47.0) | 84.3 | 17 | 47.0 (40.0-49.0) | 95.8 | 125 | 40.0 (26.0-47.0) | 73.8 | <i>p</i> =NS | 153 | 42.0 (27.5-48.0) |

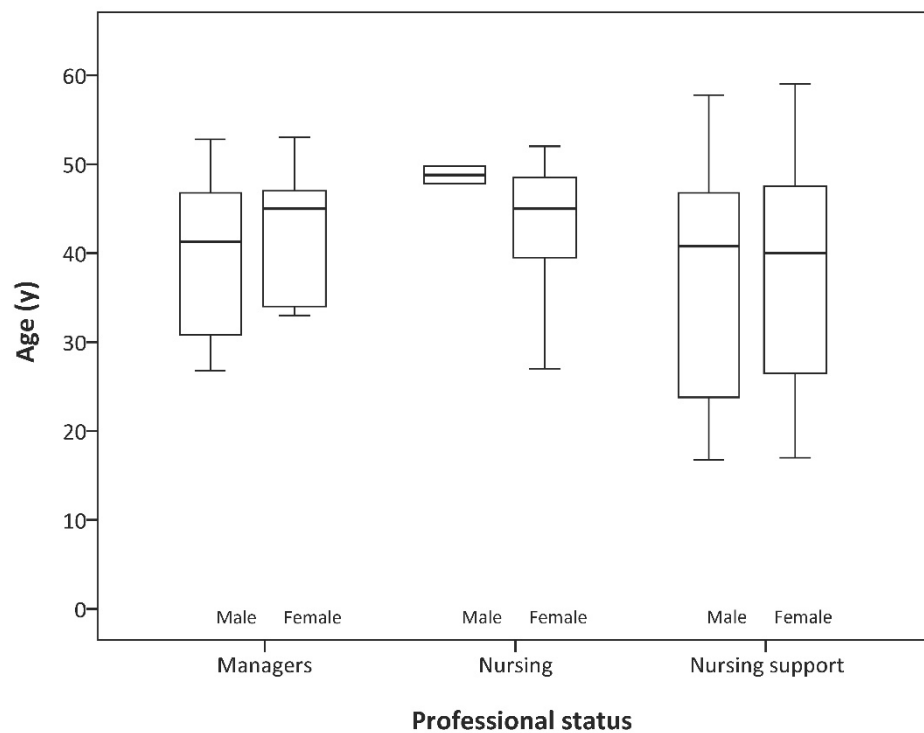


Figure 4.3: Age of respondents categorised by professional status and gender. The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively.

Table 4.5 expands on the mean ages of respondents, providing a breakdown of ages in ten year brackets. The most common age group in both nursing and nursing support staff categories was 41-50 years. Interestingly, 12.0% of respondents from the nursing support staff category were 20 years old or less.

Table 4.5: Age categorisation (in 10-year brackets) of respondents according to professional category.

| | Managers | | Nursing | | Nursing support | | Total | |
|--------------|-----------|---------------|-----------|---------------|-----------------|---------------|------------|---------------|
| Age group | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| 0-20 | 0 | 0.0 | 0 | 0.0 | 15 | 12.0 | 15 | 9.8 |
| 21-30 | 1 | 9.1 | 3 | 17.7 | 25 | 20.0 | 29 | 19.0 |
| 31-40 | 4 | 36.4 | 2 | 11.8 | 23 | 18.4 | 29 | 19.0 |
| 41-50 | 4 | 36.4 | 10 | 58.8 | 42 | 33.6 | 56 | 36.6 |
| 51+ | 2 | 18.2 | 2 | 11.8 | 20 | 16.0 | 24 | 15.7 |
| Total | 11 | 100.00 | 17 | 100.00 | 125 | 100.00 | 153 | 100.00 |

Kruskal-Wallis analysis identified a difference in years of work experience between females of different professions, but not between males ($\chi^2=14.02$, $df=2$, $p<0.01$). Pairwise comparisons with Dunn-Bonferroni *post hoc* correction for multiple comparisons, identified this observation to be due to female nursing support staff having fewer years' experience than female nursing staff ($p<0.01$), (Table 4.6, Figure 4.4).

Table 4.6: Respondents' time working with older persons categorised by work status and gender. (OP: Older Persons; y: years). The *n*-values for the different professional categories and totals are different from those described in Table 4.1, because of instances of different combinations of missing variables of status, gender, age, and length of time working with older persons occurring within the same questionnaires. There was a statistical difference in the length of time working with older persons across the 3 professional categories (Kruskal-Wallis $\chi^2=16.8$, $df=2$, $p<0.001$). Pairwise comparisons with Dunn-Bonferroni *post hoc* correction for multiple comparisons, identified statistical difference between nursing support staff and nurses ($p<0.01$) and managers ($p<0.05$) respectively. Kruskal-Wallis analysis identified a difference in years of work experience between females of different professions, but not between males ($\chi^2=14.02$, $df=2$, $p<0.01$). Pairwise comparisons with Dunn-Bonferroni *post hoc* correction for multiple comparisons, identified this observation to be due to female nursing support staff having fewer years' experience than female nursing staff (** $p<0.01$). The mean rank values refer to Kruskal-Wallis comparisons across professional status, for the male, female and total categories. IQR: interquartile range.

| | Managers | | | Nursing | | | Nursing support | | | Total | |
|----------|----------|---------------------|-----------|----------|---------------------|-----------|-----------------|-------------------|-----------|----------|-------------------|
| Gender | <i>n</i> | Median (IQR) | Mean Rank | <i>n</i> | Median (IQR) | Mean Rank | <i>n</i> | Median (IQR) | Mean Rank | <i>n</i> | Median (IQR) |
| Male | 6 | 13.5 (5.0-22.0) | 15.0 | 2 | 10.5 (10.0-11.0) | 15.3 | 16 | 7.0 (2.0-12.0) | 11.2 | 24 | 9.5 (3.0-18.5) |
| Female** | 5 | 15.0 (11.0-22.0) | 96.9 | 13 | 10.0 (6.0-14.0) | 93.9 | 110 | 4.0 (2.0-8.0) | 59.6 | 128 | 5.0 (2.0-10.0) |
| Total*** | 11 | 15.0 (7.0-22.0) | 111.7 | 15 | 10.0 (6.5-13.0) | 108.9 | 126 | 4.0 (2.0-9.0) | 70.9 | 152 | 5.0 (2.5-11.0) |

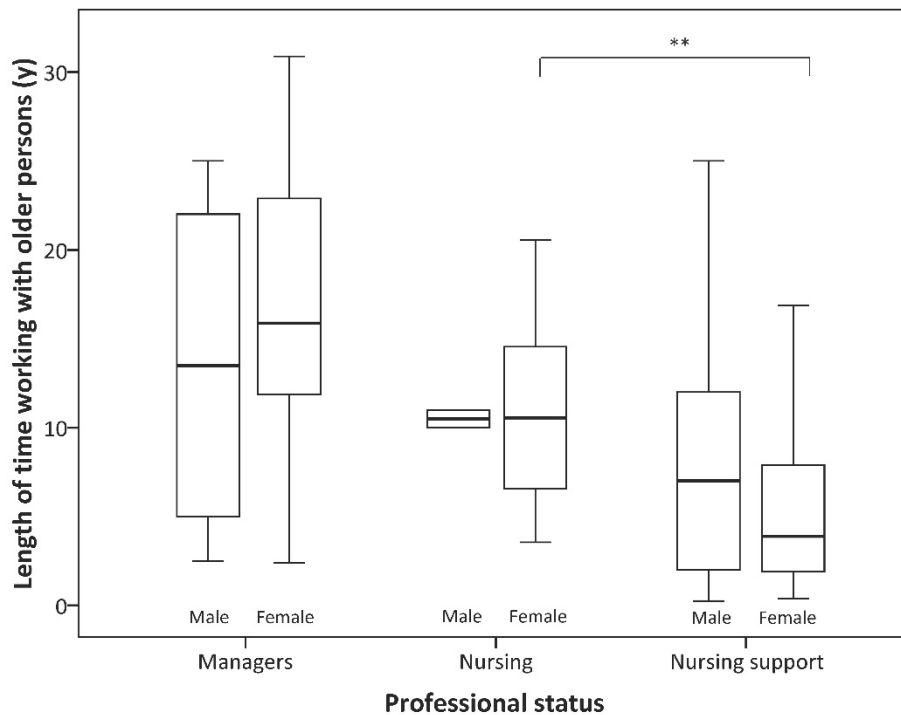


Figure 4.4: Length of time working with older persons, categorised by professional status and gender. The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively. Kruskal-Wallis followed by pairwise testing with Dunn-Bonferroni *post hoc* correction for multiple comparisons, identified female nursing support staff having to have fewer years work experience than female nursing staff ($p < 0.01$).

A positive correlation was identified between respondent's age and their length of time working with older persons for all respondents (Spearman's $\rho = 0.484$, $p < 0.001$), implying it perhaps might be expected that older respondents had higher years of experience working with the older persons. This correlation was also true for the grouped nursing and nursing support staff categories ($\rho = 0.513$, $p < 0.001$), but did not hold for managers when analysed independently from other staff.

4.2.3 Attendance to training with respect to physical restraints and their use

Attendance to CPD sessions was equally high in both government and private care homes (76.1% and 77.4% respectively). No statistical difference was observed when these data were analysed by either gender or length of time working with older persons. Managers, nursing and nursing support staff, also showed similar rates of CPD attendance (Table 4.7).

Table 4.7: CPD stratification of government and privately managed care homes, professional categories, respondents' gender and length of time working with older persons. Statistical analysis was carried out using χ^2 testing or Mann-Whitney as indicated. CPD: Continuous Professional Development; y: years; IQR: interquartile range.

| | Attended CPD | | Did not attend CPD | | Statistical significance |
|-------------------------------------|----------------|-----------|--------------------|-----------|------------------------------------|
| Home management | <i>n</i> | % | <i>N</i> | % | χ^2 analysis |
| Government | 35 | 76.1 | 11 | 23.9 | $\chi^2=0.034$, df=1 <i>p</i> =NS |
| Private | 96 | 77.4 | 28 | 22.6 | |
| Professional status | | | | | |
| Mangers | 10 | 90.9 | 1 | 9.1 | $\chi^2=1.026$, df=2 <i>p</i> =NS |
| Nursing | 14 | 77.8 | 4 | 22.2 | |
| Nursing support | 103 | 78.0 | 29 | 22.0 | |
| Gender | | | | | |
| Males | 23 | 82.1 | 5 | 17.9 | $\chi^2=0.35$, df=1, <i>p</i> =NS |
| Females | 107 | 76.4 | 33 | 23.6 | |
| | | | | | |
| | Median (IQR) | Mean rank | Median (IQR) | Mean rank | Mann-Whitney |
| Time working with older persons (y) | 5.0 (2.5-11.0) | 79.0 | 8.3 (2.2-13.5) | 87.9 | U= 2002.5, <i>p</i> =NS |

4.3 Older person to care provider ratios within the care homes

In order to investigate if response rates were related to care provider ratios, I also considered the response rates and older person/care provider ratios for each participating care home. These data were generated from the eligible and actual respondents as well as from the number of older persons residing in the respective homes at the time of data collection.

Table 4.8 and Figure 4.5 describe the 13 care homes, (5 government-managed and 8 privately-managed), comprising 434 care providers and care home managers eligible to participate in the study. A total of 1385 older persons resided in the care homes at the time of sampling. G6 was in the process of closure and older persons were being relocated at the time of the study. Therefore, the older person/care provider ratio for this home was artificially low. Consequently, G6 was omitted in all statistical analysis which used older person/care provider ratios. This is specifically indicated in the analysis where relevant. Response rates of eligible participants (i.e. nursing and nursing support staff, excluding medical and paramedical personnel) varied from 18.5% for G5 to 72.7% for P1 with an overall response of 41.5%. Older person/care provider ratios for government homes tended to be higher than those which were privately managed. P1, exhibited the highest response rate whilst also having a relatively high older person/care provider ratio of 3.9.

Table 4.8: Descriptive data including older person to care provider ratios, pertaining to care homes and PRU response rates. (PRU: Physical Restraint Use questionnaire; OP: Older person; CP: Care provider). ^aG6 was in the process of closure and older persons were being relocated at the time of the study. Therefore, older person/care provider ratio for this Home was artificially low. Consequently, G6 was eliminated in all statistical analysis which used older person/care provider ratios. OP/CP ratios with G6 omitted are as follows: government managed: 3.64, Global: 3.26. Mann-Whitney analysis of Government and Private OP/CP ratios: U=111.0, $p=NS$.

| Care Home | Number of Older Persons | Eligible Care Providers | Respondents | Response rate (%) | OP/CP ratio |
|----------------------------------|-------------------------|-------------------------|-------------|-------------------|-------------|
| <i>Privately managed</i> | | | | | |
| P1 | 130 | 33 | 24 | 72.7 | 3.9 |
| P2 | 114 | 41 | 16 | 39.0 | 2.8 |
| P3 | 108 | 21 | 4 | 19.1 | 5.1 |
| P4 | 98 | 36 | 9 | 25.0 | 2.7 |
| P5 | 130 | 68 | 29 | 42.7 | 1.9 |
| P6 | 162 | 52 | 15 | 28.9 | 3.1 |
| P7 | 167 | 43 | 21 | 48.8 | 3.9 |
| Total | 909 | 294 | 118 | 40.1 | 3.1 |
| <i>Government managed</i> | | | | | |
| G1 | 46 | 15 | 9 | 60.0 | 3.1 |
| G2 | 154 | 51 | 32 | 62.8 | 3.0 |
| G3 | 68 | 17 | 6 | 35.3 | 4.0 |
| G4 | 64 | 15 | 3 | 20.0 | 4.3 |
| G5 | 123 | 27 | 5 | 18.5 | 4.6 |
| ^a G6 | 21 | 15 | 7 | 46.7 | 1.4 |
| Total | 476 | 140 | 62 | 44.3 | 3.4 |
| | | | | | |
| Global | 1385 | 434 | 180 | 41.5 | 3.2 |

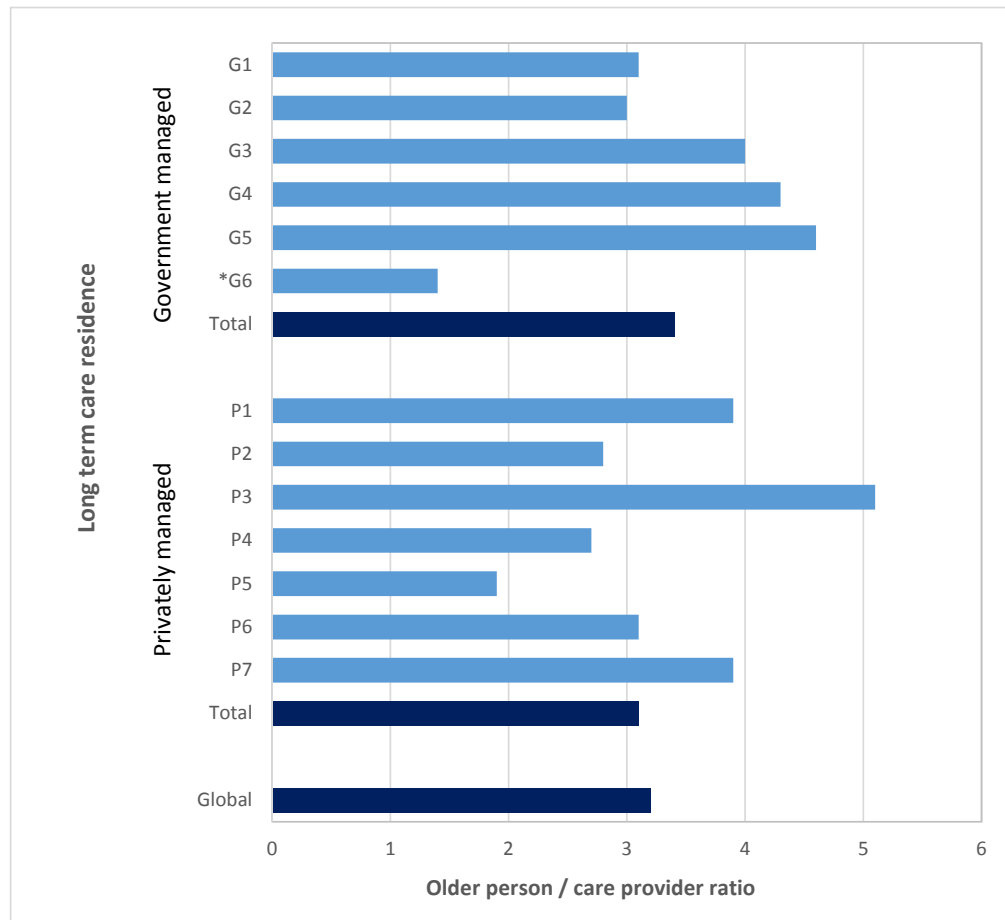


Figure 4.5: Older person/care provider ratios within the care homes. (OP: older person; CP: care provider). *G6 was in the process of closure and older persons were being relocated at the time of the study. Therefore, older person/care provider ratio for this Home was artificially low. Consequently, G6 was eliminated in all statistical analysis which used older person/care provider ratios. If G6 is omitted from the data shown in this figure, the OP/CP ratios would read as follows: Total for government managed: 3.64:1; Global: 3.26:1.

4.3.1 Older person/care provider ratios with CPD and time working with older persons

I next investigated the hypothesis that high older person/care provider ratios might influence attendance to training as well as the duration of their employment. Table 4.9 describes the attendance to continuous professional development and the length of time participants had spent working with the older persons alongside the respective older person/care provider ratio for each of the care homes.

Table 4.9: Highlights of demographic data for each of the government and privately managed care homes. (OP: older person; CP: care provider; CPD: Continuous Professional Development; y: years). G6 was in the process of closure and older persons were being relocated at the time of the study. Therefore, older person/care provider ratio for this home was artificially low. Consequently, G6 was eliminated in all statistical analysis which used older person/care provider ratios. OP/CP ratios with G6 omitted are as follows: government managed: 3.64:1, Global: 3.26:1. When analysed on a government/private managed care home basis, respondents from government managed care homes reported a longer length of time working with older persons (median: 14.30; IQR: 8.0-22.0y) than did those from privately managed care homes (median: 4.0; IQR: 2.0-8.0. *** Mann-Whitney U=983.0, $p<0.001$.

| Care Home | OP/CP ratio | CPD attendance (%) | Length of time working with older persons (y) Median (IQR) | Response rate (%) |
|---------------------------|-------------|--------------------|---|-------------------|
| Government managed | | | | |
| G1 | 3.1 | 75.0 | 11.0 (8.0-22.5) | 60.0 |
| G2 | 3.0 | 86.7 | 3.0 (3.0-8.0) | 62.8 |
| G3 | 4.0 | 100.0 | 21.0 (10.0-22.0) | 35.3 |
| G4 | 4.8 | 66.7 | 13.0 (12.8-15.5) | 20.0 |
| G5 | 4.6 | 60.0 | 16.0 (15.0-22.0) | 18.5 |
| G6 ^a | - | - | - | - |
| Overall | 3.6 | 77.68 | 14.30 (8.0-22.0) | 39.3 |
| Privately managed | | | | |
| P1 | 3.9 | 87.0 | 5.0 (3.0-8.0) | 72.7 |
| P2 | 2.8 | 57.1 | 2.0 (0.5-5.5) | 39.0 |
| P3 | 5.1 | 75.0 | 8.8 (2.3-20.0) | 19.1 |
| P4 | 2.7 | 88.9 | 2.3 (1.5-5.0) | 25.0 |
| P5 | 1.9 | 75.9 | 4.0 (1.0-8.0) | 42.7 |
| P6 | 3.1 | 53.3 | 9.3 (8.0-11.0) | 28.9 |
| P7 | 3.9 | 89.5 | 5.0 (3.0-7.5) | 48.8 |
| Overall | 3.1 | 75.2 | 4.0 (2.0-8.0) *** | 40.1 |
| Global | 3.2 | 75.2 | 5.0 (2.5-11.0) | 41.5 |

When analysed on an individual care home basis, government managed care homes had care providers that had longer work experience in the field of ageing as compared to the privately managed care homes (median values 14.30 (IQR: 8.0-22.0) vs. 4.0 (IQR: 2.0-8.0), Mann-Whitney analysis, $p<0.001$) (Table 4.9, Figure 4.6) in keeping with historic data suggesting a higher turnover of care providers within the private sector care homes.

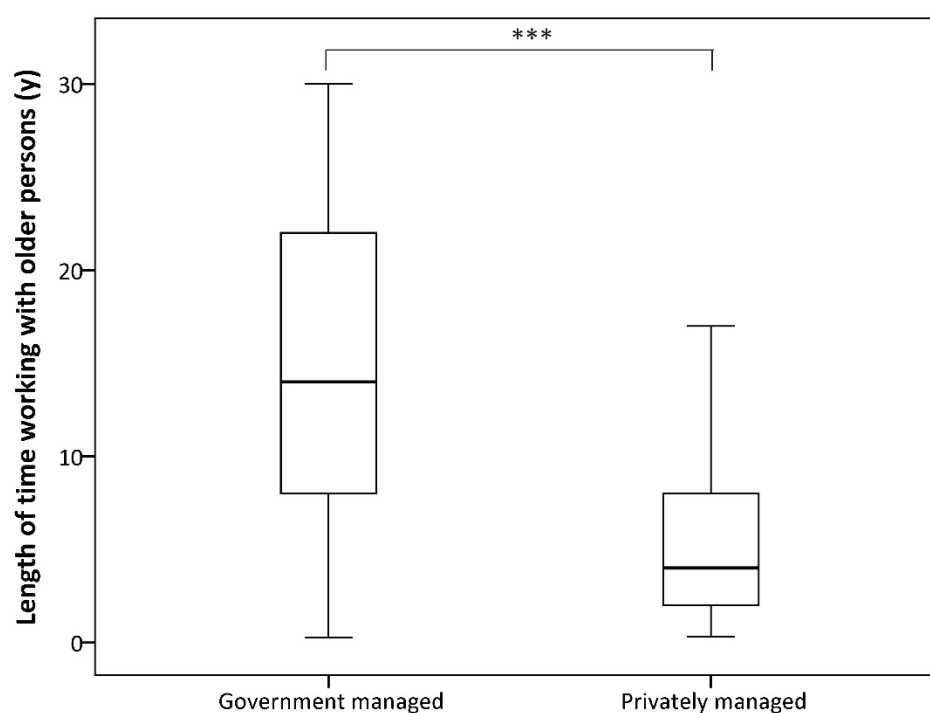


Figure 4.6: Comparison of the mean length of time working with older persons reported from respondents within government care homes to their counter parts within the privately managed sector. Mann-Whitney U=983.0, $p<0.001$.

Analysis of the older person/care provider ratio on a home by home basis did not indicate a correlation with the rate of attendance at sessions involving continuous professional development.

However a positive correlation was identified between the older person/care provider ratio and length of time care providers had been working with older persons, on a per home basis. This correlation was evident within the government managed care homes ($n=5$, $\rho=0.90$, $p<0.05$ but marginally missed significance within the privately managed sector ($n=7$, $\rho=0.75$, $p=0.052$). When all homes were analysed together this correlation was maintained ($n=12$, $\rho=0.762$, $p<0.01$) (Figure 4.7).

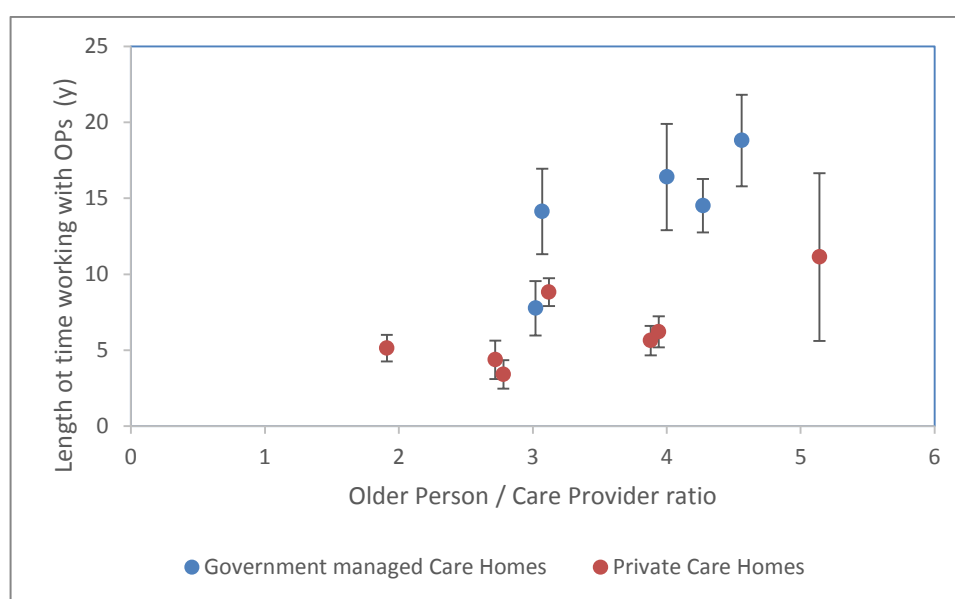


Figure 4.7: Spearman correlation between the mean lengths of time working with older persons reported by all respondents per care home, and the respective older person/care provider ratio. (y: years). The error bars denote the SEM. G6 is not included. Government managed care homes: $n=5$, $\rho=0.90$, $p<0.05$; privately managed care homes: $n=7$, $\rho=0.75$, $p=0.052$; Overall: $n=12$, $\rho=0.762$, $p<0.01$.

4.4 Discussion

No responses were elicited from medical practitioners visiting the respective care homes. Medical officers at the time of study operated from the private sector or Primary Health Service' or department of the elderly and community care (DECC), hence the 0% response rate.

Three allied health professionals tendered their responses to the questionnaire booklet, their interest in the project primarily stemming from their experiences at St Vincent de Paul Residence (SVPR). These were omitted from analyses and included only in the demographic overview in Table 4.2.

Occupational Therapists stood out during the pilot study as valuing the importance of this project. For a considerable period of time, they were the professionals directly responsible for assessing the older person *vis-à-vis* restraint use and 'ordering' the necessary devices both within SVPR and the care homes. They had indicated that the training sessions held by the researcher at SVPR prior to and following forfeiture of the original project were a turning point in their decisions regarding their 'dispensing' of the devices. They acknowledged that decisions related to physical restraint use or otherwise was a team decision involving thorough explanations of its use to the older persons and relatives as well as strict monitoring and thorough documentation on its use.

A lack of investigation into medical officers' and allied health professionals on the use of restraining was noticeably absent in the studies I reviewed.

4.4.1 Response rates

There was a greater response rate from the private care homes than from their government counterparts, 43.5% vs. 34.3%, (Table 4.3). This distinction was particularly evident in the responses obtained from the nursing and nursing support staff within both sectors, (Figure 4.1). Forfeiture of the original project could have contributed to this low response rate from the government sector, as care providers within SVPR also worked within the government care homes in their off-duties or on a part-time basis. Nursing and nursing support staff had not favoured this project within SVPR. Re-designing the project might still not have sparked enough interest in the project or re-designing their project might have altogether not proved to be enough to alleviate care providers' concerns on the practices in use or they could have altogether agreed between themselves not to participate at all.

Results indicated more females (nursing and nursing support staff) to be involved in the caring sector than males, $p < 0.01$, (Table 4.2 and Figure 4.2). It is common knowledge that locally male nursing and nursing support staff favour working within the acute health sector rather than within care homes.

4.4.2 Age and time working with older persons

The median ages for the 3 professional categories were similar, (Table 4.4, Figure 4.3) although male nurses had the highest median age (49.0 years) and were closely clustered within an interquartile range of 2 (48.0-50.0) (Table 4.4). This is expected as upon reaching near retirement ages, male nurses tend to shift careers from the acute (more challenging) sector to the more 'quiet' long term care environments.

Nursing support staff respondents were the youngest when compared to managers and nurses, with 12% of these respondents being 20 years old or less, (Table 4.5). One potential reason for a younger employment age could be due to less post-secondary educational training required for nursing support staff to be employed. School leavers, thus are able to secure a full-time job early on. Managers and nursing staff required university qualifications and hence commenced their careers later on, (Table 4.5).

Nursing support staff logged less times working with older persons than did managers or nurses, $p < 0.01$, (Table 4.6 and Figure 4.4). This was expected in view of the higher staff turnover generally observed within this category. Mercer *et al.*, 1993, Diamond 1986, and Waxman *et al.*, 1984 suggested that 60%-70% of care providers within long term care settings were nursing support staff providing an estimated 80%-90% of the actual personal care. The authors indicated that under-trained, over-worked, and under-appreciated nursing support staff provided the vast majority of care within institutions for older persons. They reiterated that the job turnover rate was thus high, with estimates ranging from 70-100% per year.

More over a positive correlation was noticeable between the age and length of time working with older persons for the 3 respondent categories ($p < 0.001$). This implied that older respondents had longer years of experience in care delivery within the care homes. This correlation was maintained for the nursing and nursing support staff categories. Whilst such a correlation does not push in favour of physical restraining or otherwise, studies by Cooper *et al.*, (2008); Baillon *et al.*, (1996), McGrath *et al.*, (1989) and Livingston & Livingston (1984) indicated that the most vulnerable nurses were those in the early stages of their careers, who tended to be younger, were more

involved in the routine care of the older person and who undertook a large amount of clinical contact. The authors suggested that young staff members were particularly prone to stress and tension because of what they termed “reality shock.” The authors also suggested that older care providers, because of their experiences and maturity were a valuable coping model resource for younger nurses.

The aforementioned conclusions contrasted sharply to a local exposition by Busuttil (1992) that contended that the longer the years of service, the more chances care providers had of developing stress. Whether the age or time spent by care providers in care delivery in effect impinges on the increased use of physical restraining or otherwise, is something that merits further investigation. Hamers *et al.*, (2009) and Hamers *et al.*, (2004), also argued that nursing staff with longer clinical experience showed a more negative disposition towards reducing restraint use than nursing staff with less experience. Potentially this indicates *laissez-faire* attitude and passivity associated with long shifts, poor human resource within the care home and overall lack of empathy from administration where the latter demand more despite the often critical work environments. In marked contrast to these arguments, Saarino and colleagues (2008) and earlier Saarino and Isola (2010) in Finland recognised that older nurses and those with the longest working experience were the more active in using successfully individualised modes of operation in situations where physical restraint was applied.

4.4.3 Attendance to training

Training programmes on physical restraint use were regularly organised by DECC at the time of the study, (Section 5.8.1.1 and Appendix X). These programmes were running in parallel with a draft Standard Operating Procedure (SOP) launched within SVPR relating to restraint use and being evaluated at the time. A similar exercise pertaining to care homes was initiated concurrently; however the programme was running at a slower pace.

A high attendance to continuous professional training sessions was registered within both government and privately managed care homes (76.1% and 77.4% respectively) with a similar trait expressed within each of the 3 professional categories (managers registering an overall higher percentage of attendance (90.9%), possibly suggesting leading by example), (Table 4.7). However, this does not necessarily imply that attendees favoured applying recommendations or advice regarding physical restraints or their use.

How education programs impacted on physical restraint use or increased care providers' competence and effectively changed their attitudes within Maltese care homes needs to be further explored. These results lend towards indications by Mohler *et al.*, (2012), and Mohler *et al.*, (2011). The authors reported on their expectations that training would enrich the knowledge on physical restraining and successively change the process outcomes towards restraining. Indeed, the authors concluded that there was insufficient evidence to support the effectiveness of training targeting care providers for preventing or reducing the use of physical restraining within long term care.

Further, the increase in knowledge base about adverse effects of physical restraining did not induce care providers to consider alternatives to physical restraining in that the observed physical restraint use in excess of 2 hours within a 24-hour timeframe by far exceeded restraint durations of less than 2 hours within both care home sectors, (Chapter 5, Table 5.12). Indeed, this was also reflected in the number of observations of different restraint devices reported by each care provider within the government and privately managed sectors (3.40 observed devices per care provider within government care homes and 5.0 within the private sector, Chapter 5, Table 5.1).

These results, that is, care providers' attendance to training and the duration of restraint use in excess of 2 hours within this project is different from indications by Karlsson, *et al.*, (2001, 2000, and 1998) that care providers with less knowledge about regulations relating to physical restraint use were more prone to consider physical restraining. Suen *et al.*, (2006) argued that the increase in knowledge changed care providers' attitudes, which in turn affected physical restraint use. It is, however, difficult to conclude whether their attitudes were affected by an increase in knowledge.

Werner, (2002), Werner *et al.*, (1994), and Werner *et al.*, (1989) reported that 58% of care providers perceived physical restraints to be less important following an education program. Similarly, Hannan *et al.*, (2001) concluded that one way to enhance the work environment for nursing staff is to implement staff training and education. Clinical supervision and support have also been found to improve the work environment, by reducing the level of burnout and strain and increasing job satisfaction among the nursing staff, Begat & Severinsson (2006), Davidson *et al.*,

(2006), Hallberg *et al.*, (1995), Berg *et al.*, (1994), and Hallberg & Norberg (1993). Likewise, Huang *et al.*, (2009) found that a 90-minute in-service education programme for nurses increased their knowledge, changed their attitudes and also affected their practice regarding physical restraint use.

In contrast, other researchers, Myers *et al.*, (2001), Godkin & Onyskiw (1999), Schott *et al.*, 1995, found no association between staff attitudes and self-reported use of physical restraints and no change in staff knowledge or attitudes following an education program.

The difference in the outcomes in previous intervention studies might be due to different contents in the education programs, the duration of the programs and also the difference in how the outcomes were measured. Worth noting that locally, the outcomes of the education programmes were never measured and this project may potentially be a first attempt in this direction. To date the most effective intervention for reducing physical restraints remains education for care providers combined with consultation by a specialist, Evans *et al.*, (2002b) and Godkin & Onyskiw (1999).

4.4.4 Older person to care provider ratios within care homes

As I indicated earlier, anonymity constraints allowed me only to have information relating to *the total number of eligible care providers (nurses and nursing support staff)* within each care home. *I was therefore unaware of the individual numbers of nurses and nursing support staff providing care within the respective care homes.*

Indeed analysis relating to older person to care provider ratios was generated from the eligible care providers and from the number of older persons residing in the respective care homes at the time of the study, (Table 4.8 and Figure 4.5).

Older person/care provider ratios for government care homes tended to be generally higher than those which were privately managed (3.4:1 vs. 3.1:1) although this difference did not attain statistical significance (Table 4.8 and Figure 4.5). P1 exhibited the highest response rate whilst also having a relatively high older person/care provider ratio of 3.9:1. This is suggestive of an overall proactive interest in the questionnaire content despite an expected higher workload than other homes. P3 indicated the highest older person/care provider ratio (5.1:1) and the lowest response rate (19.1%) within the privately managed care homes. Similarly, G5 within the government managed sector revealed the highest older person/care provider ratio (4.6:1) and also the lowest response rate (18.5%). In such cases, low response rates were to be expected. Restraint use within these 2 care homes could potentially be higher in virtue of the high older person/care provider ratios. A low response rate could be indicative of care provider categories potentially being irked by the project, or they could have perceived as superfluous their comments on physical restraining and its use within their current work circumstances or lack of interest.

Data revealed that employees within the government sector had longer work experience in the field of ageing when compared to employees within the private sector ($p<0.001$), (Table 4.9, Figure 4.6). Potentially, employees within the government sector favoured the *job security* offered in this area. This had also been reverberated in previous studies carried out locally within long term care settings. Respondents rather regarded job security and stability within government employment as a right and an obligation of the State in turn for their commitments to service provision and delivery, (Fenech, 2001; Fenech 1996).

Interestingly, this analysis revealed that respondents had spent longer periods of time working within the government sector despite having higher older person/care provider ratios (Table 4.9, Figure 4.6). One may postulate that as management within the State run care homes as well as the private sector had observed excellent work practices for a number of years, such a scenario did not call for an increase in care providers. Notwithstanding this hypothesis further research is indicated in the advent of proven serious consequences of care provider mental and physical exhaustion, deleterious to the older person, (Fenech, 2001).

It is also worth noting that despite high older person/care provider ratios, and approximate 10 years duration of service provision amongst older persons, respondents within the both government and privately managed care homes, indicated a high global attendance to training on physical restraint use of (Table 4.7), 76.1 % attendance for respondents within the government care homes and 77.4% attendance within the private sector. This high attendance supposedly resonates with care providers favouring least restraint use. However, this high attendance puts forward

questions as to why, despite the care providers' knowledge on physical restraint use, restraint duration within both care home sectors was significantly higher than the 2-hours duration indicated in the literature, Evans *et al.*, 2002b. This in congruency should be explored further.

4.5 Conclusion

Summarising, this chapter analysed and discussed demographics of populations within Maltese care homes. Age, time working with older persons, attendance to training with respect to restraint use and older person/care provider ratios were discussed.

Chapter 5

Physical restraint devices, modality of use and characteristics potentially supporting the use of physical restraining

5.0 The use of physical restraint

The aim of the work presented in this chapter was to investigate the use of physical restraint devices within the various care homes. In particular, I investigated the use of different restraint devices and tried to identify major differences in the use of different types of restraint devices. The ways in which physical restraint were used in a 24-hour period were categorised and 2 main categories based on a 2-hour threshold were studied. Modalities of physical restraint use and additional details including (a) recommending, (b) explaining, (c) monitoring, (d) deciding and (e) documenting restraint use were investigated across the government and privately managed care homes. Finally, a number of older person characteristics that potentially increased the likelihood for the older person to be restrained were explored: these were (a) mobility, weight-bearing, balance and activities of daily living, (b) physical limitations, (c) communication/hearing/vision patterns, (d) continence, (e) orientation, comprehension, behaviour/mood, (f) activity participation, and (g) medication therapy.

5.1 Restraint devices observed in use within government and private care homes

Table 5.1 presents a breakdown of the observed use of types of restraint devices within government and private care homes. The data pertaining to the percentages of older persons subject to restraint across care homes and/or individual care homes were not available, since data was retrieved through care providers' observations of restraint use. This stance will be amplified in the discussion of the chapter. Across both home categories, full bed rails (84.1%) were the most common type of restraint observed followed by belt harnesses (53.4%) and T-harnesses (50.6%). The least common devices observed in use were limb restraints and bed harnesses, both 4.0%.

Every respondent reported the total number of different restraining devices observed in use. Consequently, the mean overall observations per respondent stood at 4.6 different restraint devices. When these data were normalised to the numbers of respondents within government and private care homes, it was observed that care providers within the private sector reported 1.48 times their government counterparts. This is suggestive of approximate 50% greater differences of restraint devices observed within privately managed homes.

Table 5.1: Types of physical restraint devices observed in use within government and private care homes. (Obs: observations; CP: care provider; w/c: wheelchair). Percentages are calculated as a proportion of the home category observing use of the device. The Rank column stratifies the restraint types according to the most commonly observed by respondents (χ^2 analysis: * $p<0.05$, *** $p<0.001$).

| | Government (n=48) | | Private (n=128) | | Total (n=176) | | Statistical significance |
|---------------------------------|----------------------|------|--------------------|------|------------------|------|-----------------------------|
| Restraint type | n | % | n | % | n | % | χ^2 analysis |
| Full bed rails*** | 33 | 68.8 | 115 | 89.9 | 148 | 84.1 | $\chi^2=11.61, p<0.001$ |
| Partial bed rails | 21 | 43.8 | 55 | 43.0 | 76 | 43.2 | $\chi^2=0.01, p=NS$ |
| H-Harness*** | 14 | 29.2 | 72 | 56.3 | 86 | 48.9 | $\chi^2=10.25, p<0.001$ |
| T-Harness | 20 | 41.7 | 69 | 53.9 | 89 | 50.6 | $\chi^2=2.09, p=NS$ |
| Belt harness*** | 8 | 16.7 | 86 | 67.2 | 94 | 53.4 | $\chi^2=35.81, p<0.001$ |
| Y-Harness | 3 | 6.3 | 16 | 12.5 | 19 | 10.8 | $\chi^2=1.42, p=NS$ |
| Sheets | 6 | 12.5 | 26 | 20.3 | 32 | 18.2 | $\chi^2=1.43, p=NS$ |
| Wheelchair straps* | 10 | 20.8 | 52 | 40.6 | 62 | 35.2 | $\chi^2=5.99, p<0.05$ |
| Lifter straps | 20 | 41.7 | 65 | 50.8 | 85 | 48.3 | $\chi^2=1.16, p=NS$ |
| Limb restraint | 0 | 0.0 | 7 | 5.5 | 7 | 4.0 | $\chi^2=2.73, p=NS$ |
| Lapboards* | 13 | 27.1 | 15 | 11.7 | 28 | 15.9 | $\chi^2=6.16, p<0.05$ |
| Too high/too low armchairs | 3 | 6.3 | 11 | 8.6 | 14 | 8.0 | $\chi^2=0.26, p=NS$ |
| Tilted w/c or armchair | 4 | 8.3 | 15 | 11.7 | 19 | 10.8 | $\chi^2=0.42, p=NS$ |
| Bed harness | 0 | 0.0 | 7 | 5.5 | 7 | 4.0 | $\chi^2=2.73, p=NS$ |
| Boxing glove | 0 | 0.0 | 9 | 7.0 | 9 | 5.1 | $\chi^2=3.56, p=NS$ |
| Height adjustable tables | 8 | 16.7 | 25 | 19.5 | 33 | 18.8 | $\chi^2=0.19, p=NS$ |
| Summary | | | | | | | |
| Total observations ^a | 163 | - | 645 | | 808 | - | - |
| Respondents | 48 | - | 128 | | 176 | - | - |
| Obs/CP | 3.40 | - | 5.0 | | 4.6 | - | - |
| Normalized ratio | 1 | - | 1.5 | | 1.4 | - | - |

5.2 Restraint devices observed in use by the three professional respondents

The observed types of restraints in place together with the observed patterns of their use were studied. The compilation of restraints listed in the questionnaire tool, Section C1 in the Physical Restraint Use questionnaire (PRU) is based on those devices observed in use within care homes by the researcher throughout her professional career in Malta. This list may therefore differ from devices reported in use within international fora.

Table 5.2 and Figure 5.1 describes the responses ($n=165$) of observed restraint reported by home managers, nurses and nursing support staff. Observation of bed rail use by the 3 categories of care providers exceeded by far the use of other forms of physical restraint devices. There were interesting differences in observations reported by managers compared to care providers' responses. Nurses observed a higher number of restraints in use (5.3 observations/care provider) than did the other categories. Kruskal-Wallis analysis of the observed restraints per professional category did not reveal these differences to reach significance. Noticeable discrepancies were seen in the observations of certain physical restraint types amongst the different professional categories. Partial bed rail observations for managers (81.8%) were higher than for nurses (50.0%) and nursing support staff (38.97%) ($\chi^2=8.02$, $df=2$, $p<0.05$). Height adjustable tables were mostly observed by nurses (50.0%) compared to managers (27.3%) and nursing support staff (13.97%) ($\chi^2=14.08$, $df=2$, $p<0.001$).

Table 5.2: Types of physical restraint devices observed in use by the three main professional categories of respondents. (Obs: observations; CP: care provider w/c: wheelchair). Percentages are calculated as a proportion of the staff category observing use of the device. Data are listed in decreasing order of observed use. ^aKruskal-Wallis. Statistically different responses across the 3 professional categories were reported with the observations of partial bed rails ($\chi^2=8.022$, $p<0.05$) and height adjustable tables ($\chi^2=14.08$, $p<0.001$). All χ^2 analyses have $df=2$. (* $p<0.05$, *** $p<0.001$)

| | Managers (n=11) | | Nursing (n=18) | | Nursing support (n=136) | | Total (n=165) | |
|-----------------------------------|--------------------|----------|-------------------|----------|-------------------------------|----------|------------------|----------|
| Restraint type | n | % | n | % | N | % | n | % |
| Full bed rails | 9 | 81.8 | 15 | 83.3 | 113 | 83.1 | 137 | 83.0 |
| Belt harness | 4 | 36.4 | 8 | 44.4 | 78 | 57.4 | 90 | 54.6 |
| Lifter straps | 4 | 36.4 | 10 | 55.6 | 70 | 51.8 | 84 | 50.9 |
| H-Harness | 3 | 27.3 | 8 | 44.4 | 72 | 52.9 | 83 | 50.3 |
| T-Harness | 7 | 63.6 | 8 | 44.4 | 66 | 48.5 | 81 | 49.1 |
| Partial bed rails* | 9 | 81.8 | 9 | 50.0 | 53 | 39.0 | 71 | 43.0 |
| Wheelchair straps | 3 | 27.3 | 7 | 38.9 | 49 | 36.0 | 59 | 35.8 |
| Sheets | 2 | 18.2 | 4 | 22.2 | 25 | 18.4 | 31 | 18.8 |
| Height adjustable tables*** | 3 | 27.3 | 9 | 50.0 | 19 | 14.0 | 31 | 18.8 |
| Lapboards | 3 | 27.3 | 3 | 16.7 | 21 | 15.4 | 27 | 16.4 |
| Y-Harness | 2 | 18.2 | 4 | 22.2 | 12 | 8.8 | 18 | 10.9 |
| Tilted w/c or armchair | 1 | 9.1 | 4 | 22.2 | 11 | 8.1 | 16 | 9.7 |
| Too high/too low armchairs | 1 | 9.1 | 1 | 5.6 | 8 | 5.9 | 10 | 6.1 |
| Limb restraint | 0 | 0.0 | 1 | 5.6 | 6 | 4.4 | 7 | 4.2 |
| Boxing glove | 1 | 9.1 | 2 | 11.1 | 4 | 2.9 | 7 | 4.2 |
| Bed harness | 0 | 0.0 | 2 | 11.1 | 4 | 2.9 | 6 | 3.6 |
| Total^a | 52 | - | 95 | - | 611 | - | 758 | - |
| Observations/care provider | 4.7 | - | 5.3 | - | 4.5 | - | 4.6 | - |

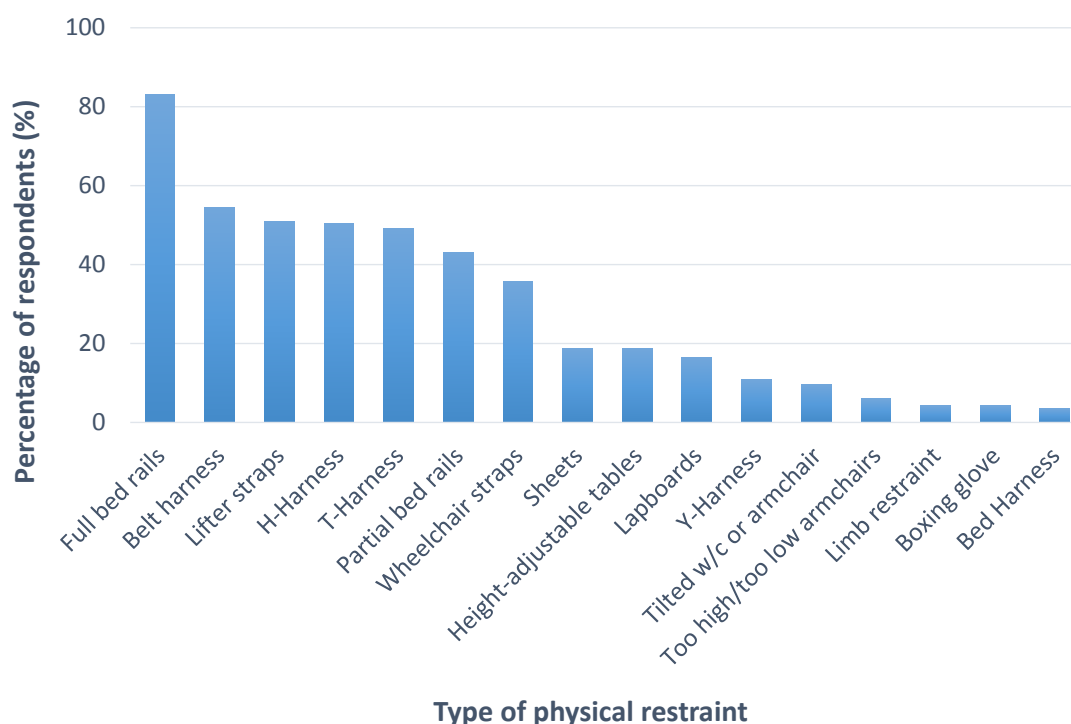


Figure 5.1: Types of physical restraint devices observed in use collectively by managers, nursing staff and nursing support staff, (PRU C1). (PRU: Physical Restraint Use questionnaire). Data are displayed in ranked order as percentage of respondents ($n=165$)

5.3 Categorisation of physical restraint devices

Physical restraint devices were then categorised according to the 4 main types of equipment used within the facilities under study namely, bed rails, harnesses, limb restraints and furniture restraints, (Table 5.3). This approach was adopted in order to focus on the major differences between the types of restraints in use.

Table 5.3: Categorisation of types of restraints as indicated in the questionnaire tool. The numbers in this table refer to the respective sub-sections within the PRU, Section C1. (PRU: Physical Restraint Use questionnaire).

| Bed rails | | Harnesses | | Limb restraints | | Furniture restraints | |
|-----------|-------------------|-----------|----------------------------|-----------------|-----------------|----------------------|--------------------------------|
| 1.1 | Full bed rails | 1.3 | H-harness | 1.10 | Limb restraints | 1.11 | Lap board |
| 1.2 | Partial bed rails | 1.4 | T-harness | 1.15 | Boxing gloves | 1.12 | Low/High armchairs |
| | | 1.5 | Belt harness | | | 1.13 | Tilted wheelchair/ armchair |
| | | 1.6 | Manufactured Y- harness | | | 1.16 | Height adjustable tables |
| | | 1.7 | Sheets | | | | |
| | | 1.8 | Wheelchair straps | | | | |
| | | 1.9 | Lifter straps | | | | |
| | | 1.14 | Bed harness | | | | |

Harnesses and bed rails were the most observed use of restraint category followed by furniture and limb restraints, (Table 5.4).

Table 5.4: Observed use of the major restraint categories within government and private care homes. Percentages are expressed in terms of the respondents from Government and Private care homes who replied to PRU C1, ie 48 and 128 respectively. χ^2 analysis have df=1.

| | Government (n=48) | | Private (n=128) | | Statistical significance | Total (n=176) | |
|----------------------|----------------------|------|--------------------|------|-----------------------------|------------------|------|
| Restraint category | n | % | n | % | χ^2 analysis | n | % |
| Bed rails | 35 | 72.9 | 121 | 94.5 | $\chi^2=16.19, p<0.001$ | 156 | 88.6 |
| Harnesses | 35 | 72.9 | 124 | 96.9 | $\chi^2=22.96, p<0.001$ | 159 | 90.3 |
| Limb restraints | 0 | 0.0 | 13 | 10.2 | $\chi^2=5.26, p<0.05$ | 13 | 7.4 |
| Furniture restraints | 22 | 45.8 | 47 | 36.7 | $\chi^2=1.22, p=NS$ | 69 | 39.2 |

Analysis of the restraint categories across the 3 professional groups revealed that the most common type of observed restraints was harnesses and bed rails with a low observed frequency for limb restraints. Chi-squared (χ^2) analysis showed a marginal

difference in reported prevalence of furniture restraints from the 3 professional categories ($p<0.05$) while other restraint types were equally reported by the different care providers (Figure 5.2).

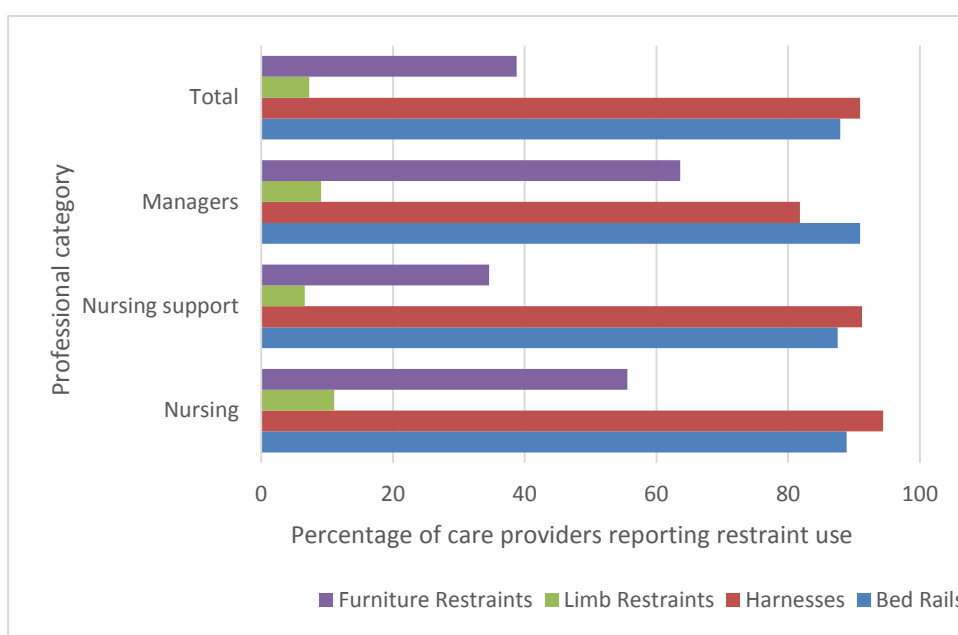


Figure 5.2: Use of restraint categories reported by the three professional categories within government and private care homes. The use of furniture restraints as reported by managers, nursing and nursing support staff, was statistically different, $\chi^2=6.017$, $df=2$, $*p<0.05$.

5.4 Differences in types of restraint between care homes

Table 5.5 summarises the percentage of respondents who observed the use of the different restraint categories in each of the care homes together with the respective older person/care provider ratio. These ratios were computed by dividing the total number of older persons resident in each care home at the time of the study, by the number of care providers employed at the time. This data is graphically depicted in Figure 5.3A and B.

A high incidence of reported bed rail and harness use was observed irrespective of the older person/care provider ratio. Limb restraints were the least category reported in use although P2 and P6 indicated a percentage use of 31.3% and 20.0% respectively. Three (3) privately managed care homes reported 100% of bed rail use (P1, P3, and P5). P5 indicated the least old person/care provider ratio as compared to all care homes and P3 had the highest ratio. Five (5) privately managed care homes, namely, P1, P2, P5, P6 and P7 indicated a 100% observed use of harnesses. More than four fifths (83.3%) of respondents from G3 reported the use of furniture restraints, (Table 5.5, Figure 5.3 (a) and (b)).

When the data were analysed over all care homes, a negative correlation was identified between reported use of limb restraints and the older person/care provider ratio ($\rho=-0.752$, $p<0.01$, $n=12$), (Table 5.5).

Table 5.5: Restraint categories reported in each of the care homes under study. (OP: older person; CP: care provider). The values denoted refer to the percentage of respondents from each home who observed the use of the restraint category. The older person/care provider ratio is also included. G6 has been omitted due to reasons described earlier. When the data are analysed over all care homes, a negative Spearman correlation exists between reported use of limb restraints and the OP/CP ratio ($\rho = -0.752$, $p < 0.01$, $n = 12$).

| Care Home | OP/CP ratio | Bed Rails (%) | Harnesses (%) | Limb Restraints (%) | Furniture Restraints (%) |
|---------------------------|-------------|---------------|---------------|---------------------|--------------------------|
| Privately Managed | | | | | |
| P1 | 3.9 | 100.0 | 100.0 | 4.2 | 16.7 |
| P2 | 2.8 | 93.8 | 100.0 | 31.3 | 68.8 |
| P3 | 5.1 | 100.0 | 75.0 | 0.0 | 25.0 |
| P4 | 2.7 | 88.9 | 88.9 | 11.1 | 33.3 |
| P5 | 1.9 | 100.0 | 100.0 | 6.9 | 24.1 |
| P6 | 3.1 | 93.3 | 100.0 | 20.0 | 46.7 |
| P7 | 3.9 | 90.5 | 100.0 | 0.0 | 38.1 |
| Government Managed | | | | | |
| G1 | 3.1 | 77.8 | 22.2 | 11.1 | 22.2 |
| G2 | 3.0 | 75.0 | 84.4 | 3.1 | 56.3 |
| G3 | 4.0 | 83.3 | 100.0 | 0.0 | 83.3 |
| G4 | 4.3 | 66.7 | 66.7 | 0.0 | 0.0 |
| G5 | 4.6 | 60.0 | 80.0 | 0.0 | 40.0 |

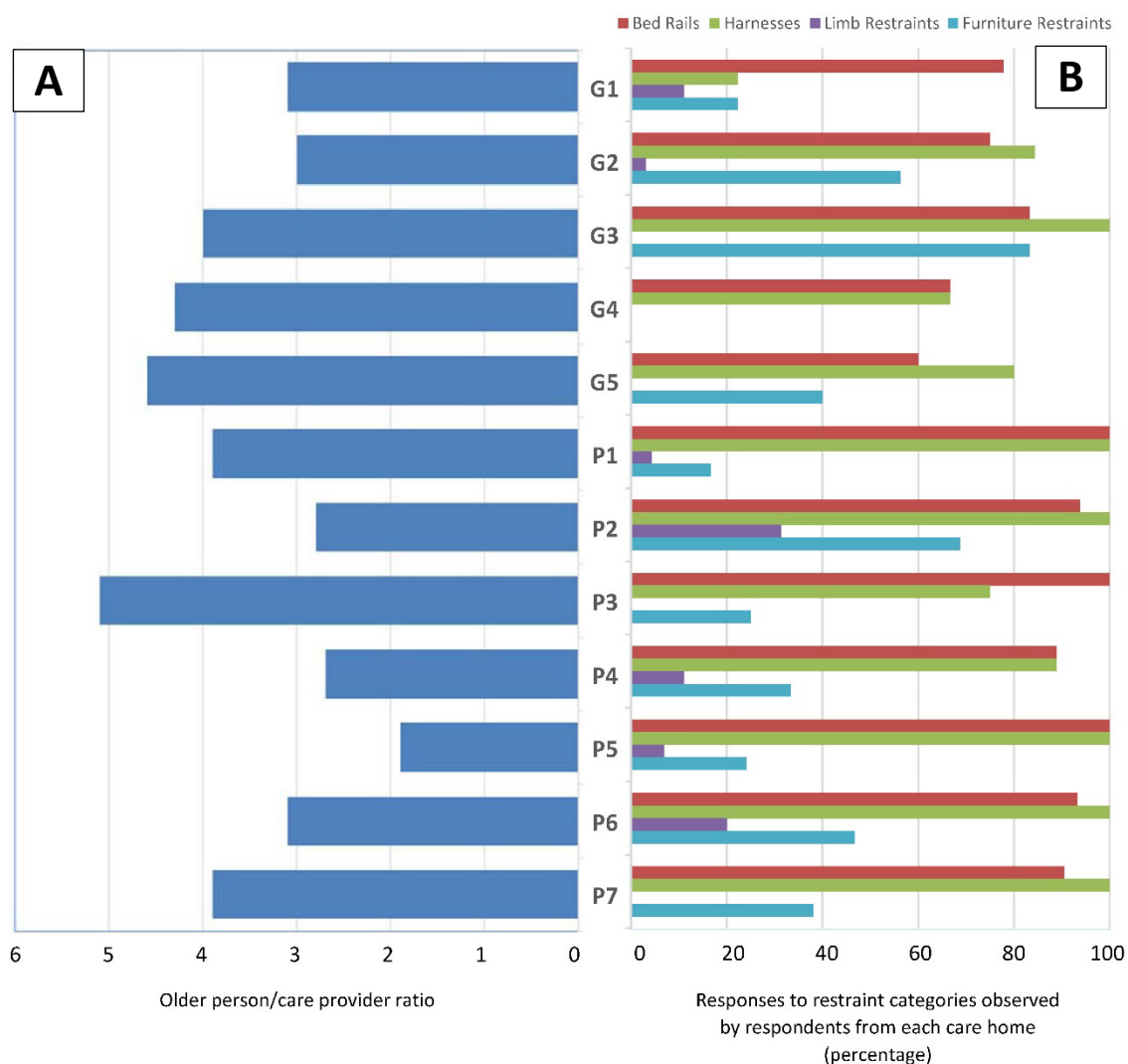


Figure 5.3 [A]: Older person/care provider ratios for each care home under study; [B] Restraint categories reported in each of the care homes under study. The values denoted refer to the percentage of respondents from each home who observed the use of the restraint category. G6 has been omitted.

5.5 Duration of restraint use

One specific aim of the work described in this chapter was to analyse restraint duration over a 24-hour period. The work described in this section investigates restraint duration with respect to (a) types of devices in use, (b) care providers' responses, (c) differences in the overall responses between government and privately managed care homes, (d) older person/care provider ratios, and (e) attendance at training sessions.

5.5.1 Data on physical restraint use over a 24-hour period

Differences or otherwise between government and privately managed care homes in terms of the observed duration of restraint within a 24-hour period was analysed, (Table 5.6, Figure 5.4). The overall major observed durations of restraint were within the combined mid-range brackets of “more than 2 hours but less than 24 hours.” While there was agreement between the government and private sectors regarding observed durations of “more than 2 hours but less than 12 hours” (government $n=20$, 41.7%; private $n=43$, 33.6%, $p=NS$), the private sector was observed to restrain more than government counterparts within the “more than 12 hours but less than 24 hours” bracket (government $n=11$, 22.9%; private $n=50$, 39.1%; $p<0.05$).

Table 5.6: Duration of restraint use within a 24-hour period, as reported by the government and private sectors. All χ^2 analyses have $df=1$.

| | Government (<i>n</i> =48) | | Private (<i>n</i> =128) | | Total (<i>n</i> =176) | | Statistical significance |
|-----------------------------|-------------------------------|------|-----------------------------|------|---------------------------|------|-----------------------------|
| Time period of restraint | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % | χ^2 analysis |
| 24h | 0 | 0.0 | 18 | 14.1 | 18 | 10.2 | $\chi^2=7.52, p<0.01$ |
| 24h > x > 12h | 11 | 22.9 | 50 | 39.1 | 61 | 34.7 | $\chi^2=4.02, p<0.05$ |
| 12h > x > 2h | 20 | 41.7 | 43 | 33.6 | 63 | 35.8 | $\chi^2=0.99, p=NS$ |
| ≤2h | 6 | 12.5 | 14 | 10.9 | 20 | 11.4 | $\chi^2=0.09, p=NS$ |

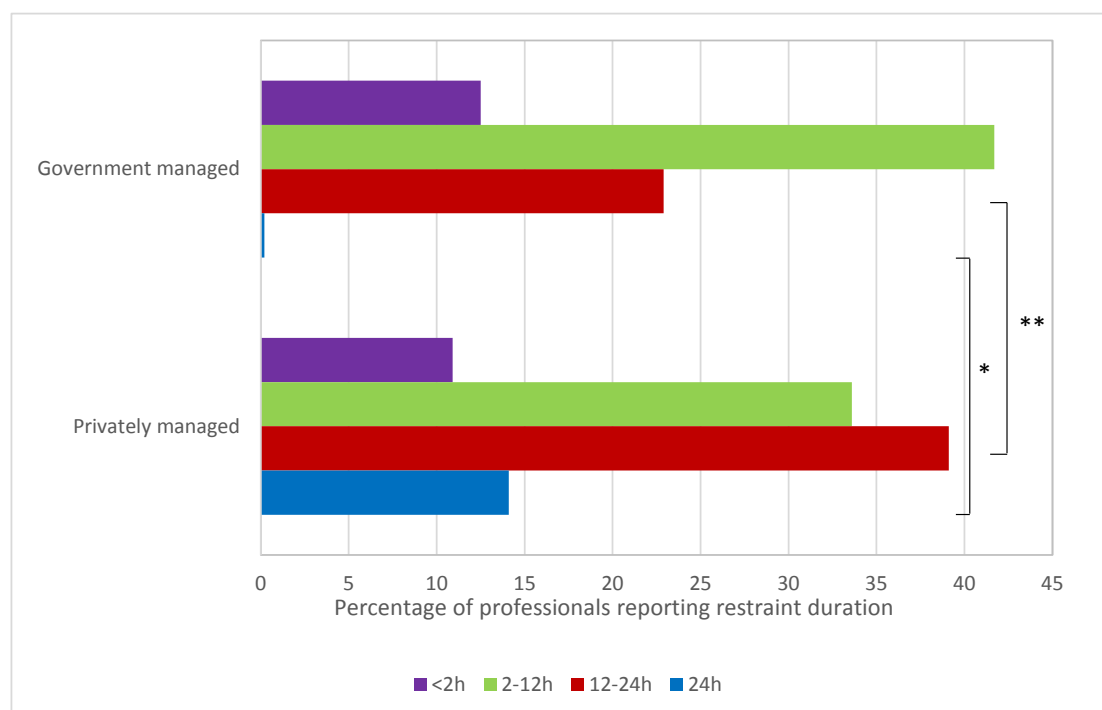


Fig 5.4: Duration of restraint use within a 24-hour period, as reported by the government and private sectors. * $p<0.05$, ** $p<0.01$

Differences or otherwise between responses provided by managers, nursing staff and nursing support staff in terms of the types of the observed duration over a 24-hour period of physical restraining (Figure 5.5) was examined. The attendance at CPD sessions relating to the appropriate use of physical restraining was also studied in terms of the possible influence of training on the observed rates of physical restraining.

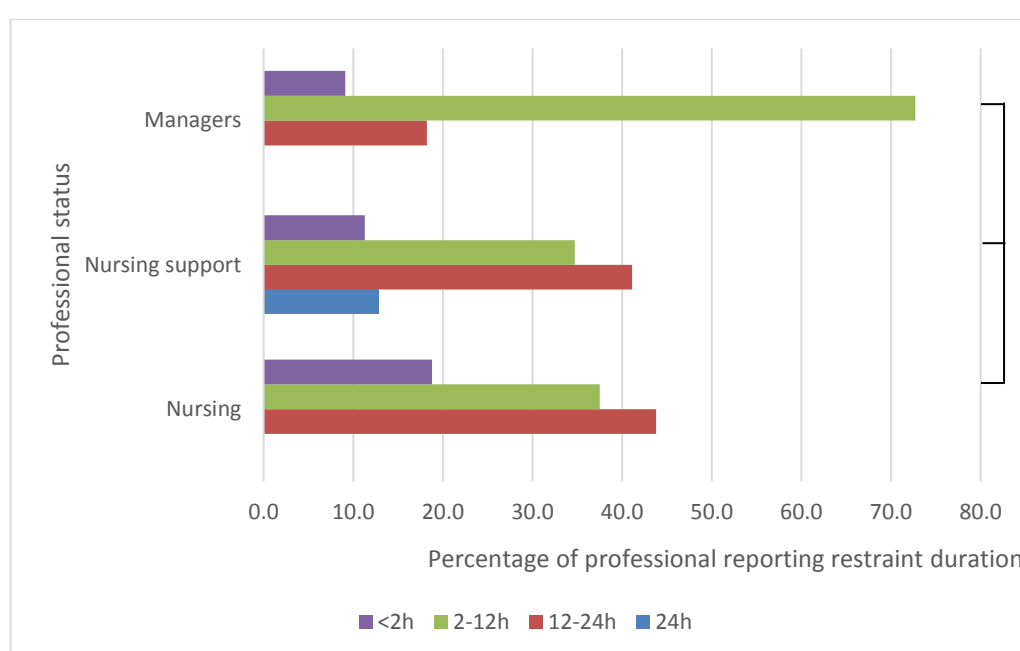


Figure 5.5: Duration of restraint within a 24-hour period categorised by professional status. There was a statistical difference in the observations of “2-12h” duration period as reported by managers, nurses and nursing support staff ($\chi^2=7.62$, $df=2$, $p<0.5$).

There was a statistical difference in the observations of “2-12h” duration period as reported by managers, nurses and nursing support staff ($\chi^2=7.62$, $df=2$, $p<0.05$), (Figure 5.5).

5.5.2 Restraint use categorised by a 2-hour threshold: Care providers

Time cut-off points based on Evans *et al.*, (2002b) research were analysed. Based on these indications, I also analysed the data on restraint intervals over a 24-hour period into 2 main categories using a 2-hour threshold (Table 5.7 Figure 5.6).

Chi-square (χ^2) testing for association between professional categories and duration of restraint use did not identify statistically significant differences in this analysis, although numbers in each group were small ($\chi^2=1.56$, $df=2$, $p=NS$), indicating that all professional categories observed similar restraint durations, across this threshold. In terms of observed “<2h” and “>2h” durations, managers claimed the highest “>2h” periods, with a 10-fold of observations reporting this duration compared to “<2h”. This was followed by nursing support (7.8 fold) and nursing staff (4.3 fold).

Table 5.7: Duration of restraint use within a 24-hour period, as reported by the three main professional categories of respondents. Duration is re-grouped based on a 2 hour threshold.

| | > 2h | | ≤ 2h | | Statistical significance | Total | |
|----------------------------------|----------|------|----------|------|-----------------------------------|----------|-------|
| Professional status | <i>n</i> | % | <i>n</i> | % | χ^2 analysis | <i>n</i> | % |
| Managers (<i>n</i> =11) | 10 | 90.9 | 1 | 9.1 | $\chi^2=1.56$ $df=2$ $p=NS$ | 11 | 100.0 |
| Nursing (<i>n</i> =16) | 13 | 81.3 | 3 | 18.8 | | 16 | 100.0 |
| Nursing support (<i>n</i> =124) | 110 | 88.7 | 14 | 11.3 | | 124 | 100.0 |
| Total | 133 | 88.1 | 18 | 11.9 | | 151 | 100.0 |

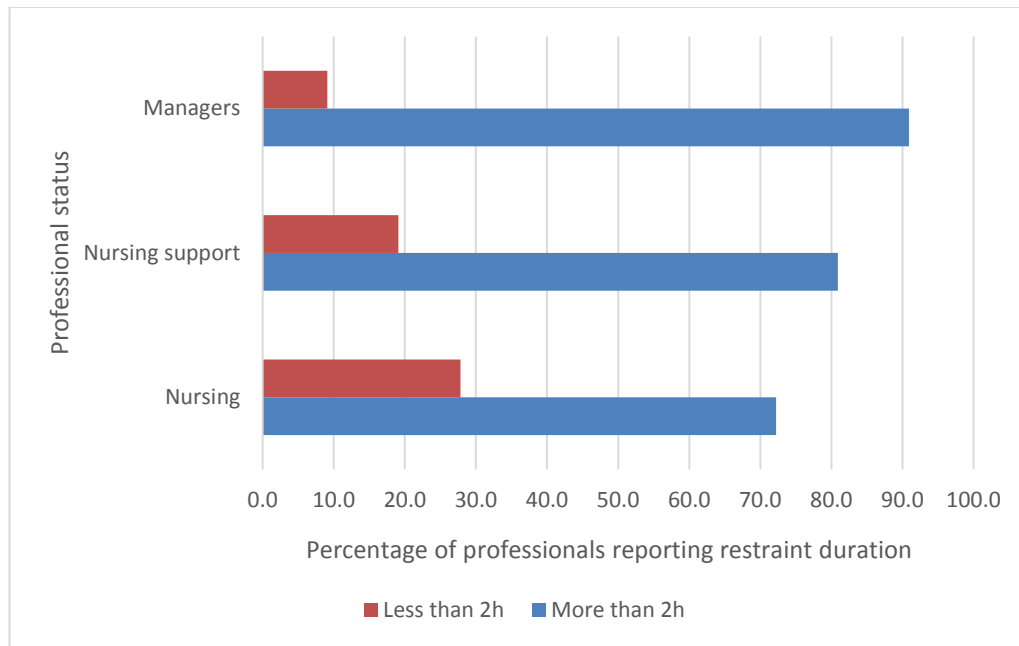


Fig 5.6: Reported observation of physical restraint across a 2-hour threshold by the 3 professional categories. ($\chi^2=1.56$, $df=2$, $p=NS$)

Analysis of restraint duration stratified by home management was subsequently carried out (Table 5.8). Care home management was identified to influence the duration of restraint across a 2 hour threshold ($\chi^2=10.97$, $df=1$, $p<0.001$), with private homes indicating a higher frequency of observed restraint in excess of 2 hours.

Table 5.8: Duration of restraint use within a 24-hour period, as reported by the three main professional categories of respondents categorised by government and private care homes. Duration is re-grouped based on a 2 hour threshold.

| | > 2h | | ≤ 2h | | Statistical significance |
|------------|----------|------|----------|------|-------------------------------------|
| Care Home | <i>n</i> | % | <i>n</i> | % | χ^2 analysis |
| Government | 31 | 64.6 | 17 | 35.4 | $\chi^2=10.97$, $df=1$, $p<0.001$ |
| Private | 111 | 86.7 | 17 | 13.3 | |

5.5.3 Restraint use categorised by a 2-hour threshold: Restraint devices

Testing for restraint durations in excess of 2 hours within a 24-hour period indicated that the majority of respondents reported observing restraint use for periods exceeding 2 hours (Table 5.9). The most frequently reported device used were full bed rails, which were most commonly used in excess of 2 hours (67.8% of respondents, $n=122$), and below the two hour threshold (16.1% of respondents, $n=29$). The least commonly used restraints were bed harnesses, which were observed to be used in excess of 2 hours by 3.3% of respondents ($n=6$) and for less than 2 hour by 0.6% of respondents ($n=1$). Only 3 restraint devices, showed a statistical association with observed duration of use across a 2 hour threshold, as identified by discrepancies in observed vs expected χ^2 contingency table data. These were belt harnesses (48.8% vs 5.6%, $\chi^2=11.81$, $df=1$, $p<0.001$), T-harnesses (43.3% vs 6.1%, $\chi^2=6.42$, $df=1$, $p<0.05$) and H-harnesses (42.8% vs 5.6%, $\chi^2=7.61$, $df=1$, $p<0.01$).

Table 5.9: Observed duration of restraint use within a 24-hour period, categorised by a 2 hour threshold and grouped by type of restraint and home management, as reported by all respondents. Data is sorted in descending order according to restraint use in excess of 2 hours. ^aThe statistical significance column refers to χ^2 analysis comparisons between government and privately-managed homes for durations of restraint greater than 2h within a 24-hour period. df=1 for all cases. ^bThe Total column provides the cumulative number of respondents who observed durations of restraint of more than 2h within both government and privately-managed care homes, and this total as a percentage of all questionnaire respondents ($n=176$). This n -value excludes four respondents who did not indicate their place of work, and therefore had to be omitted.

| not indicate their place of work, and therefore had to be omitted. | | | | | | | |
|--|----------|------|----------|------|---------------------------------------|-------------------------------------|------|
| Restraint type | > 2h | | ≤2h | | Statistical significance ^a | Total for duration >2h ^b | |
| Total respondents | | | | | | | |
| Government: <i>n</i> = 48 | <i>n</i> | % | <i>n</i> | % | χ^2 analysis | <i>n</i> | % |
| Private: <i>n</i>=128 | | | | | | | |
| Total: <i>n</i>=176 | | | | | | | |
| Full bed rails | | | | | | | |
| Government | 21 | 43.8 | 12 | 25.0 | $\chi^2=8.51, p<0.01$ | 120 | 68.2 |
| Private | 99 | 77.3 | 16 | 12.5 | | | |
| Belt harness | | | | | | | |
| Government | 7 | 14.6 | 1 | 2.1 | $\chi^2=21.96, p<0.001$ | 84 | 47.7 |
| Private | 77 | 60.2 | 9 | 7.0 | | | |
| T-Harness | | | | | | | |
| Government | 17 | 35.4 | 3 | 6.3 | $\chi^2=0.00, p=NS$ | 78 | 44.3 |
| Private | 61 | 47.7 | 8 | 6.3 | | | |
| H-Harness | | | | | | | |
| Government | 10 | 20.8 | 4 | 8.3 | $\chi^2=7.21, p<0.01$ | 76 | 43.2 |
| Private | 66 | 51.6 | 6 | 4.7 | | | |
| Lifter straps | | | | | | | |
| Government | 13 | 27.1 | 7 | 14.6 | $\chi^2=1.03, p=NS$ | 71 | 40.3 |
| Private | 58 | 45.3 | 7 | 5.5 | | | |
| Partial bed rails | | | | | | | |
| Government | 15 | 31.3 | 6 | 12.5 | $\chi^2=0.06, p=NS$ | 66 | 37.5 |
| Private | 51 | 39.8 | 4 | 3.1 | | | |
| Wheelchair straps | | | | | | | |
| Government | 8 | 16.7 | 2 | 4.2 | $\chi^2=2.51, p=NS$ | 54 | 30.7 |
| Private | 46 | 35.9 | 6 | 4.7 | | | |

| Height adjustable tables | | | | | | | |
|----------------------------|----|------|---|-----|-----------------------|----|------|
| Government | 4 | 8.3 | 4 | 8.3 | $\chi^2=0.78, p=NS$ | 26 | 14.8 |
| Private | 22 | 17.2 | 3 | 2.3 | | | |
| Sheets | | | | | | | |
| Government | 4 | 8.3 | 2 | 4.2 | $\chi^2=0.78, p=NS$ | 26 | 14.8 |
| Private | 22 | 17.2 | 4 | 3.1 | | | |
| Lapboards | | | | | | | |
| Government | 10 | 20.8 | 3 | 6.3 | $\chi^2=8.51, p<0.01$ | 22 | 12.5 |
| Private | 12 | 9.4 | 3 | 2.3 | | | |
| Y-Harness | | | | | | | |
| Government | 3 | 6.3 | 0 | 0.0 | $\chi^2=0.32, p=NS$ | 18 | 10.2 |
| Private | 15 | 11.7 | 1 | 0.8 | | | |
| Tilted wheelchair/armchair | | | | | | | |
| Government | 3 | 6.3 | 1 | 2.1 | $\chi^2=0.03, p=NS$ | 15 | 8.5 |
| Private | 12 | 9.4 | 3 | 2.3 | | | |
| Too high/too low armchairs | | | | | | | |
| Government | 3 | 6.3 | 0 | 0.0 | $\chi^2=0.01\ p=NS$ | 13 | 7.4 |
| Private | 10 | 7.8 | 1 | 0.8 | | | |
| Boxing gloves | | | | | | | |
| Government | 0 | 0.0 | 0 | 0.0 | $\chi^2=2.37, p=NS$ | 8 | 4.5 |
| Private | 8 | 6.3 | 1 | 0.8 | | | |
| Limb restraints | | | | | | | |
| Government | 0 | 0.0 | 0 | 0.0 | $\chi^2=1.75, p=NS$ | 6 | 3.4 |
| Private | 6 | 4.7 | 1 | 0.8 | | | |
| Bed harness | | | | | | | |
| Government | 0 | 0.0 | 0 | 0.0 | $\chi^2=1.75, p=NS$ | 6 | 3.4 |
| Private | 6 | 4.7 | 1 | 0.8 | | | |

Figure 5.7 graphically describes the percentage observed use of the physical restraint devices, collectively by the 3 professional categories, during a 24-hour period, categorised by the 2-hour threshold.

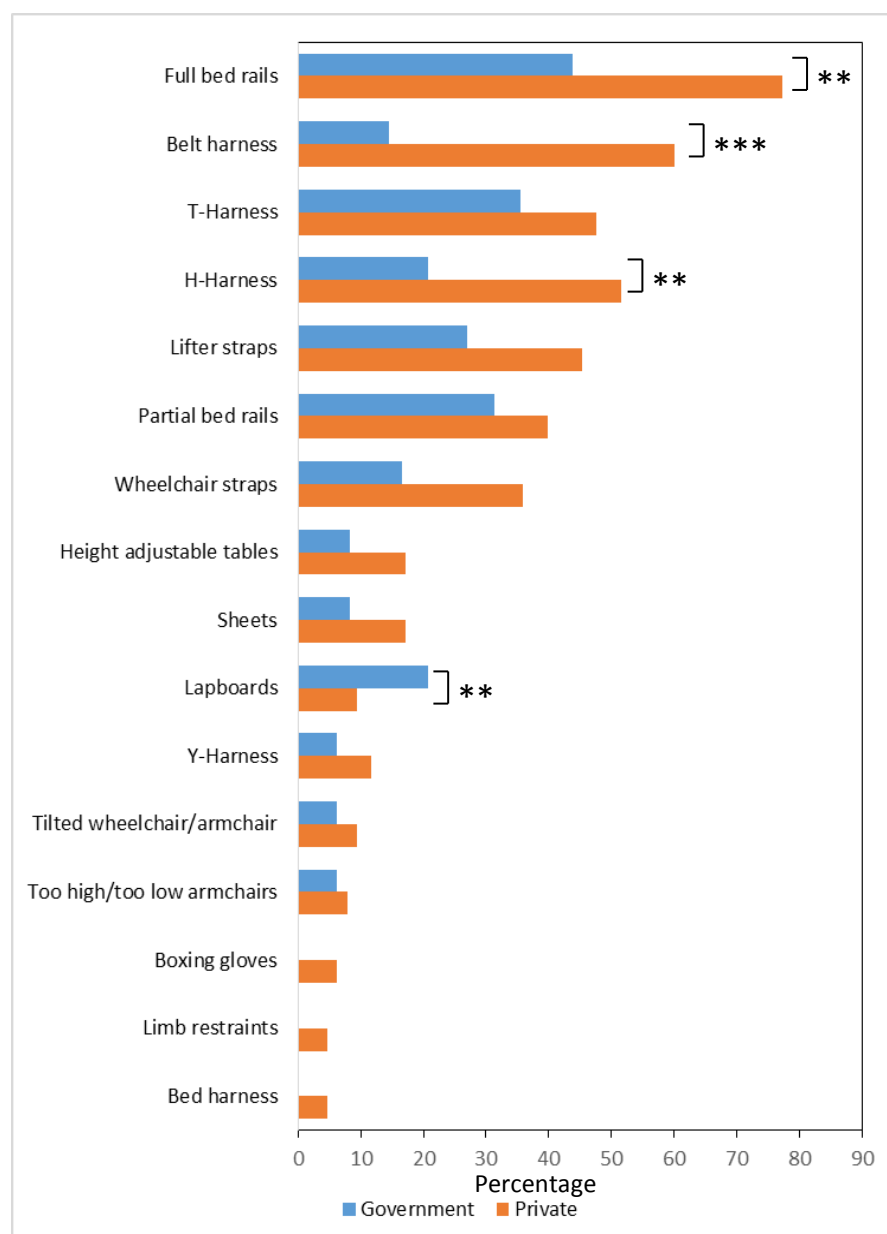


Figure 5.7: Duration of physical restraint device use in excess of 2 hours, observed collectively by managers, nursing staff and nursing support staff, during a 24-hour period. Data are displayed as percentage of respondents reporting the observation (government managed: $n=48$, privately managed: $n=128$). ** $p<0.01$, *** $p<0.001$, χ^2 analysis.

When the restraints were grouped into the respective 4 major categories, harnesses collectively retained their statistically significant association with restraint duration across a 2 hour threshold ($\chi^2=24.73$, $p<0.0001$), while no significance was observed for the other 3 categories, (Table 5.10).

Table 5.10: Duration of restraint use within a 24-hour period, categorised by a 2 hour threshold and grouped by the 4 major restraint categories, as reported by all respondents. Data is sorted in descending order according to restraint use in excess of 2 hours. ^aThe statistical significance column refers to χ^2 analysis comparisons between government and privately-managed homes for durations of restraint greater than 2h within a 24-hour period, $df=1$ for all cases. ^bThe total column provides the cumulative number of respondents who observed durations of restraint of more than 2h within both government and privately-managed care homes, and this total as a percentage of all questionnaire respondents ($n=176$). This n -value excludes four respondents did not indicate their place of work, and therefore had to be omitted.

| therefore had to be omitted. | | | | | | | |
|---|------|------|-----|------|---------------------------------------|-------------------------------------|------|
| Restraint type | > 2h | | ≤2h | | Statistical significance ^a | Total for duration >2h ^b | |
| Total respondents Government: n= 48 Private: n=128 Total: n=176 | n | % | n | % | χ ² analysis | n | % |
| Bed rails | | | | | | | |
| Government | 22 | 45.8 | 13 | 27.1 | χ ² =14.32, p<0.001 | 127 | 72.2 |
| Private | 105 | 82.0 | 16 | 12.5 | | | |
| Harnesses | | | | | | | |
| Government | 26 | 54.2 | 9 | 18.8 | χ ² =10.61, p<0.001 | 135 | 76.7 |
| Private | 109 | 85.2 | 15 | 11.7 | | | |
| Limb restraints | | | | | | | |
| Government | 0 | 0.0 | 0 | 0.0 | χ ² =3.33, p=NS | 13 | 6.3 |
| Private | 11 | 8.6 | 2 | 1.6 | | | |
| Furniture restraints | | | | | | | |
| Government | 16 | 33.3 | 6 | 12.5 | χ ² =2.46, p=NS | 56 | 31.2 |
| Private | 40 | 31.3 | 7 | 5.5 | | | |

No statistical correlation was identified between the percentage of respondents observing restraint use in excess of 2 hours and the older person/care provider ratios. Such correlations were tested across privately managed and government managed homes as well as the whole home cohort (Table 5.11).

Table 5.11: Percentage of respondents from each care home who observed durations of restraint in excess of 2 hours alongside the older person/care provider ratios. Government $n=5$, $\rho=0.30$, $p=NS$ (excluding G6); Private $n=7$, $\rho=-0.411$, $p=NS$; Overall $n=12$, $\rho=-0.116$, $p=NS$. OP: older person; CP: care provider.

| Care Home | OP/CP ratio | Respondents observing >2h restraint duration within 24h (%) |
|---------------------------|-------------|---|
| Government managed | | |
| G1 | 3.1 | 22.2 |
| G2 | 3.0 | 65.6 |
| G3 | 4.0 | 100.0 |
| G4 | 4.3 | 33.3 |
| G5 | 4.6 | 80.0 |
| Privately managed | | |
| P1 | 3.9 | 95.8 |
| P2 | 2.8 | 87.5 |
| P3 | 5.1 | 75.0 |
| P4 | 2.7 | 88.9 |
| P5 | 1.9 | 89.7 |
| P6 | 3.1 | 80.0 |
| P7 | 3.9 | 90.5 |

5.5.4 Duration of restraint use and attendance at CPD

Physical restraint use was also studied in relation to the attendance at CPD sessions. There was no association between attendance at CPD sessions related to physical restraint use and the reported duration of restraints ($\chi^2 = 0.037$, $df=1$, $p=NS$) (Table 5.12).

Table 5.12: Attendance at CPD sessions related to physical restraint use with the observed restraint duration. (CPD: Continuous Professional Development)

| Observed restraint duration | > 2h | | ≤2h | | Total | |
|-----------------------------|----------|------|----------|------|----------|-----|
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Attended CPD | 107 | 87.0 | 16 | 13.0 | 123 | 100 |
| Did not attend CPD | 30 | 88.2 | 4 | 11.8 | 34 | 100 |
| Total | 137 | 87.3 | 20 | 12.7 | 157 | 100 |

5.5.5 Analysis of factors which may influence the duration of restraint

I also analysed the following variables with the restraint duration, based on the 2 hour categories (Table 5.13), in order to try and identify any specific characteristics which might increase use of physical restraint. The factors investigated were,

1. Respondents' gender (PRU, A3)
2. Place of work (Government or Private Care Home) (PRU, A5)
3. Length of time working with older persons (PRU, A7)
4. Mean age of respondents (PRU, A2)
5. Opinions on necessity for restraint use (PRU, E2.4.1)
6. Opinions on restraint reduction (PRU, E2.4.2)
7. Opinions on whether restraining is an invasion of a basic right (PRU, E2.4.3)
8. Opinions that restraining should be eliminated at all costs (PRU, E2.4.4)

9. General staff members' concerns regarding physical restraint use (Overall scores for PRU, E2.4).

While gender did not have any influence on the observed duration of restraint use across a 2-hour threshold, Chi squared (χ^2) analysis showed the work environment (government vs privately managed care home) to influence restraint duration, with a higher level of >2h restraint being observed in privately managed care homes ($p<0.001$). Care workers who had spent less time working with older persons, tended to report higher observed restraint periods in excess of 2 hours, though this observation marginally escaped significance ($p=0.052$). Care workers who considered that the majority of physical restraints are necessary as well as those who believed that reducing restraint was worth it, both observed a higher frequency of restraint durations in excess of 2 hours ($p<0.01$, $p<0.05$ respectively), (Table 5.13).

Table 5.13: Analysis of factors that could potentially affect the duration of restraint use. Nominal variables (gender and home management) were analysed using χ^2 analysis, while quantitative variables were analysed using Mann-Whitney testing.

| | > 2h | | ≤2h | | Statistical significance |
|--|--------------------------------|-----------|-------------------------------|-----------|------------------------------|
| | n | % | n | % | χ ² analysis |
| Gender | | | | | |
| Male | 22 | 75.9 | 7 | 24.1 | χ ² =0.468, p=NS |
| Female | 118 | 81.4 | 27 | 18.6 | |
| Home management | | | | | |
| Government | 18 | 60.0 | 12 | 40.0 | χ ² =9.00, p<0.01 |
| Private | 126 | 84.0 | 24 | 16.0 | |
| | > 2h | | ≤2h | | Statistical significance |
| | Median (IQR) | Mean rank | Median (IQR) | Mean rank | Mann-Whitney |
| Age | 40.5 (26.0-48.0) (n=132) | 80.2 | 43.0 (34.0-49.0) (n=32) | 92.1 | U=1806.5, p=NS |
| Length of time with OPs | 4.5 (2.0-11.0) (n=128) | 78.3 | 7.0 (3.0-11.0) (n=35) | 95.7 | U=1759.5, p=0.052 |
| Necessity for restraint use (E2.4.1) | 4.0 (4.0-5.0) (n=135) | 87.5 | 4.0 (3.0-4.0) (n=30) | 62.7 | U=1417.0, p<0.01 |
| Restraint reduction (E2.4.2) | 4.0 (3.5-4.0) (n=134) | 86.1 | 4.0 (3.0-4.0) (n=30) | 66.5 | U=1530.5, p<0.05 |
| Whether restraining is an invasion of a basic human right (E2.4.3) | 4.0 (2.5-4.0) (n=135) | 83.5 | 4.0 (3.0-4.0) (n=31) | 83.7 | U=2086.5, p=NS |
| Whether restraining should be eliminated at all costs (E2.4.4) | 2.0 (2.0-3.0) (n=135) | 83.0 | 3.0 (2.0-3.0) (n=33) | 90.6 | U=2026.5, p=NS |
| Concerns on restraint use (E2.4 all) | 3.5 (3.1-4.0) (n=132) | 82.6 | 3.5 (3.3-3.5) (n=27) | 67.4 | U=1443.0, p=NS |

5.6 Modalities of restraint use

Procedures related to the use of restraining, that is (a) recommending, (b) explaining, (c) monitoring, (d) deciding and (e) documenting restraint use were investigated across the government and privately managed care homes, (Table 5.14). The nursing and medical/paramedical professions ranked high for all the observations except “Who decides.” The responses pertaining to *deciding to remove the restraining device* indicated *management* as one of the contributory factors to deciding on restraint removal. Interestingly, family members/substitute decision makers ranked third as the people who recommend initiating restraint use, and this observation was driven by responses originating from the privately managed home (government: $n=8$, 16.7%; private $n=49$, 39.3%, $p<0.01$) (Table 5.14).

Interestingly, a minor proportion of respondents reported restraint use following recommendations either by the older person herself/himself, by another older person or by no one. Additionally, monitoring of restraint use seemed to also occasionally be carried out by family members or other older persons, while the decision to remove the restraining device was occasionally taken by the older person herself/himself or a family member. Reported observations of recommendations and decisions to apply/remove restraint being taken by no one, remain to be explained.

With respect to the documentation of restraint use, 14.8% of respondents across both home categories indicated a lack of documentation in the older person’s medical file.

Comparisons of reported observations from government and privately managed care homes showed a consistent statistically higher involvement of management in all of the procedures related to physical restraint use except documentation within the private sector (Table 5.14). Additionally family members/SDM reveal a greater influence on recommending restraint use ($p<0.01$) and the decision to remove the restraining device ($p<0.01$) within privately managed care homes.

Nursing support staff offer a greater contribution to monitoring ($p<0.0001$) documentation ($p<0.05$) of restraint use in private than in government managed care homes, whilst nurses in government homes contribute more to monitoring restraint use than their professional counterparts within private homes ($p<0.05$).

Table 5.14: Procedures applied in the use of physical restraint devices. The table shows data from government and private care homes for each of sections C2 – C5 in the PRU. The 3 highest ranked replies are highlighted by a black left border. Statistically significant differences are highlighted in bold. df=1 for all comparisons. (PRU: Physical Restraint Use questionnaire).

| | | Government (n=48) | | Private (n=128) | | Total (n=176) | | Statistical significance |
|-------------------------------------|--------------------------|----------------------|------|--------------------|------|------------------|------|----------------------------------|
| Rank | Respondents' reply | N | % | n | % | n | % | χ^2 analysis |
| Who RECOMMENDS restraint use | | | | | | | | |
| 2 | Medical/Paramedical | 22 | 45.8 | 62 | 48.8 | 84 | 47.7 | $\chi^2=0.09$, p=NS |
| 1 | Nurses | 25 | 52.1 | 82 | 64.1 | 107 | 60.8 | $\chi^2=2.10$, p=NS |
| 4 | Nursing support staff | 11 | 22.9 | 45 | 35.2 | 56 | 31.8 | $\chi^2=2.41$, p=NS |
| 5 | Management | 5 | 10.4 | 41 | 32.0 | 46 | 26.1 | $\chi^2=8.45$, p<0.01 |
| 6 | Multidisciplinary Team | 5 | 10.4 | 14 | 10.9 | 19 | 10.8 | $\chi^2=0.01$, p=NS |
| 3 | Family members/SDM | 8 | 16.7 | 49 | 38.3 | 57 | 32.4 | $\chi^2=7.45$, p<0.01 |
| 8 | Another older person | 2 | 4.2 | 2 | 1.6 | 4 | 2.3 | $\chi^2=1.07$, p=NS |
| 7 | Older person her/himself | 4 | 8.3 | 6 | 4.7 | 10 | 5.7 | $\chi^2=0.87$, p=NS |
| 9 | No one | 1 | 2.1 | 2 | 1.6 | 3 | 1.7 | $\chi^2=0.06$, p=NS |
| Who EXPLAINS restraint use | | | | | | | | |
| 2 | Medical/Paramedical | 15 | 31.3 | 46 | 35.9 | 61 | 34.7 | $\chi^2=0.34$, p=NS |
| 1 | Nurses | 27 | 56.3 | 78 | 60.9 | 105 | 59.7 | $\chi^2=0.32$, p=NS |
| 3 | Nursing support staff | 9 | 18.8 | 37 | 28.9 | 46 | 26.1 | $\chi^2=1.87$, p=NS |
| 4 | Management | 5 | 10.4 | 30 | 23.4 | 35 | 19.9 | $\chi^2=3.72$, p=0.054 |
| 6 | Multidisciplinary Team | 3 | 6.3 | 6 | 4.7 | 9 | 5.1 | $\chi^2=0.18$, p=NS |
| 5 | Family member/SDM | 3 | 6.3 | 22 | 17.2 | 25 | 14.2 | $\chi^2=3.43$, p=NS |
| 7 | No one | 6 | 12.5 | 10 | 7.8 | 16 | 9.1 | $\chi^2=0.93$, p=NS |

| Who MONITORS restraint use | | | | | | | | |
|-------------------------------------|--------------------------|----|------|----|------|-----|------|-------------------------|
| 3 | Medical/Paramedical | 7 | 14.6 | 31 | 24.2 | 38 | 21.6 | $\chi^2=1.91, p=NS$ |
| 2 | Nurses | 36 | 75.0 | 70 | 54.7 | 106 | 60.2 | $\chi^2=6.01, p<0.05$ |
| 1 | Nursing support staff | 21 | 43.8 | 94 | 73.4 | 115 | 65.3 | $\chi^2=13.59, p<0.001$ |
| 4 | Management | 4 | 8.3 | 31 | 24.2 | 35 | 19.9 | $\chi^2=5.53, p<0.05$ |
| 6 | Multidisciplinary Team | 1 | 2.1 | 10 | 7.8 | 11 | 6.3 | $\chi^2=1.96, p=NS$ |
| 5 | Family member/SDM | 6 | 12.5 | 20 | 15.6 | 26 | 14.8 | $\chi^2=0.27, p=NS$ |
| 7 | Another older person | 2 | 4.2 | 3 | 2.3 | 5 | 2.8 | $\chi^2=0.42, p=NS$ |
| 8 | No one | 2 | 4.2 | 2 | 1.6 | 4 | 2.3 | $\chi^2=1.07, p=NS$ |
| Who DECIDES to remove the restraint | | | | | | | | |
| 2 | Medical/Paramedical | 17 | 35.4 | 48 | 37.5 | 65 | 36.9 | $\chi^2=0.07, p=NS$ |
| 1 | Nurses | 28 | 58.3 | 64 | 50.0 | 92 | 52.3 | $\chi^2=0.97, p=NS$ |
| 4 | Nursing support staff | 10 | 20.8 | 32 | 25.0 | 42 | 23.9 | $\chi^2=0.33, p=NS$ |
| 3 | Management | 8 | 16.7 | 43 | 33.6 | 51 | 29.0 | $\chi^2=4.86, p<0.05$ |
| 6 | Multidisciplinary Team | 3 | 6.3 | 9 | 7.0 | 12 | 6.8 | $\chi^2=0.03, p=NS$ |
| 5 | Family member/SDM | 1 | 2.1 | 28 | 21.9 | 29 | 16.5 | $\chi^2=9.94, p<0.01$ |
| 8 | Older person her/himself | 3 | 6.3 | 5 | 3.9 | 8 | 4.5 | $\chi^2=0.44, p=NS$ |
| 7 | No one | 3 | 6.3 | 8 | 6.3 | 11 | 6.3 | $\chi^2=0.00, p=NS$ |
| Who DOCUMENTS restraint use | | | | | | | | |
| 2 | Medical/Paramedical | 12 | 25.0 | 37 | 28.9 | 49 | 27.8 | $\chi^2=0.27, p=NS$ |
| 1 | Nurses | 27 | 56.3 | 88 | 68.8 | 115 | 65.3 | $\chi^2=2.41, p=NS$ |
| 3 | Nursing support staff | 2 | 4.2 | 22 | 17.2 | 24 | 13.6 | $\chi^2=5.02, p<0.05$ |
| 5 | Management | 2 | 4.2 | 18 | 14.1 | 20 | 11.4 | $\chi^2=3.39, p=NS$ |
| 4 | Not always documented | 7 | 14.6 | 19 | 14.8 | 26 | 14.8 | $\chi^2=0.00, p=NS$ |

5.7 Characteristics of restrained older persons

In view of the frequency of restraint use and the duration, I also analysed older person characteristics that could potentially contribute to increase likelihood to being restrained, (a) mobility, weight-bearing, balance and activities of daily living, (b) physical limitations, (c) communication/hearing/vision patterns, (d) continence, (e) orientation, comprehension, behaviour/mood, (f) activity participation, and (g) medication therapy.

5.7.1 Factors contributing to physical restraining

Figure 5.8 represents the analysis for the characteristics that participants considered as potentially advocating the use of restraints (Kruskal-Wallis $\chi^2=239.09$, $df=6$, $p<0.001$). All sections showed a wide spread of data. Respondents reported low agreement with communication, hearing and vision patterns (median: 2.0, IQR: 1.0-2.7), continence (median: 2.0, IQR: 1.0-2.3), activity participation (median: 2.0, IQR: 1.0-3.0) and medication therapy (median: 2.0, IQR: 2.0-4.0) as being potential restraint-conducting factors. Highest agreement was reported for mobility, weight bearing, balance and ADLs (median: 3.3, IQR: 2.6-4.0) and physical limitations (median: 3.2, IQR: 2.6-4.0). Mann-Whitney pairwise comparisons with *post-hoc* Dunn-Bonferroni correction showed both these variables to be similar to each other ($p=NS$) but significantly different from all of the others ($p<0.01$ in each case). When these data are considered on an agreement score basis, however, they suggest uncertainty in respondents' opinions, since they closely fluctuate around the "uncertain" score of 3 on the respective Likert scales.

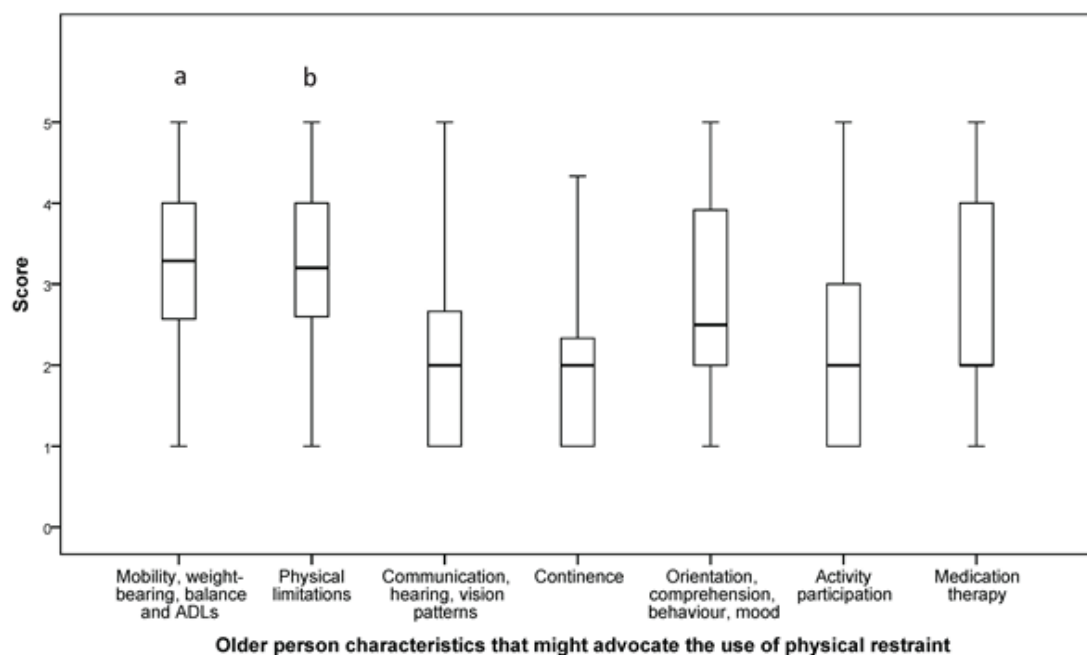


Figure 5.8: Procedures applied in the use of physical restraint devices. High scores imply agreement that these factors are conducive towards potential restraint use. Kruskal-Wallis analysis across all characteristics, $\chi^2=239.09$, $df=6$, $p<0.001$. ^a and ^b Mann-Whitney pairwise analysis with *post hoc* Dunn-Bonferroni correction showed these variables to be similar to each other, but statistically different from all others ($p<0.01$ in each case). The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively.

When this data was analysed across different professional categories (Table 5.15), Kruskal-Wallis analysis showed disagreement between professional categories with respect to *orientation, comprehension, behaviour and mood patterns* (PRU D1.5) ($\chi^2=9.08$, $df=2$, $p<0.05$) and *continence issues* (PRU D1.4) ($\chi^2=8.88$, $df=2$, $p<0.05$). Mann-Whitney pairwise analysis with *post hoc* Dunn-Bonferroni correction, showed the abovementioned differences to be due to statistically different scores between managers and nursing support staff for each case ($p<0.05$ in each case). There was also a tendency towards disagreement with respect to physical limitations ($\chi^2=5.97$, $df=2$, $p=0.051$).

Table 5.15: Scores for reported situations that make the older person more likely to be physically restrained, categorised by professional status. Higher medians depict stronger agreement that these factors may be potentially conducive to restraint. The mean rank values refer to Kruskal-Wallis comparisons across professional status, IQR: interquartile range. All Kruskal-Wallis analyses have df=2. Pairwise comparisons with *post hoc* Dunn-Bonferroni correction showed the observed statistical differences for *continence*, and *orientation*, *comprehension*, *behaviour/mood* to be due to statistically different scores between managers and nursing support staff in each case ($p<0.05$).

| | <i>n</i> | Median (IQR) | Mean rank | Statistical significance | |
|---|------------|--------------------------|-----------|--------------------------|-----------------|
| | | | | Kruskal-Wallis | <i>p</i> |
| <i>Mobility, weight-bearing, balance & activities of daily living (PRU D1.1)</i> | | | | | |
| Managers | 11 | 2.7 (2.3-2.9) | 58.3 | $\chi^2=3.09$ | NS |
| Nursing | 17 | 2.9 (2.6-4.4) | 85.1 | | |
| Nursing support | 136 | 3.4 (2.7-4.0) | 84.1 | | |
| Total | 164 | 3.3 (2.6-4.0) | - | - | - |
| <i>Physical limitations (PRU D1.2)</i> | | | | | |
| Managers | 11 | 2.6 (2.4-2.8) | 48.8 | $\chi^2=5.97$ | <i>p</i> =0.051 |
| Nursing | 18 | 3.2 (2.9-4.5) | 87.6 | | |
| Nursing support | 134 | 3.3 (2.6-4.0) | 84.0 | | |
| Total | 163 | 3.2 (2.6-4.0) | - | - | - |
| <i>Communication/hearing/vision patterns (PRU D1.3)</i> | | | | | |
| Managers | 11 | 1.3 (1.0-2.0) | 53.7 | $\chi^2=4.31$ | NS |
| Nursing | 17 | 2.0 (1.0-2.2) | 72.9 | | |
| Nursing support | 128 | 2.0 (1.2-2.7) | 81.4 | | |
| Total | 156 | 2.0 (1.0-2.7) | - | - | - |
| <i>Continence (PRU D1.4)</i> | | | | | |
| Managers | 11 | 1.0* (1.0-2.0) | 50.6 | $\chi^2=8.88$ | <i>p</i> <0.05 |
| Nursing | 17 | 1.0 (1.0-2.0) | 61.3 | | |
| Nursing support | 128 | 2.0* (1.0-3.0) | 83.2 | | |
| Total | 156 | 2.0 (1.0-2.3) | - | - | - |

| Orientation, comprehension, behaviour/mood (PRU D1.5) | | | | | |
|--|------------|--------------------------|------|---------------|----------|
| Managers | 11 | 2.0* (1.3-2.3) | 43.8 | $\chi^2=9.08$ | $p<0.05$ |
| Nursing | 17 | 2.3 (1.9-2.9) | 69.9 | | |
| Nursing support | 132 | 2.5* (2.0-3.8) | 84.9 | | |
| Total | 160 | 2.3 (2.0-3.8) | - | - | - |
| Activity participation (PRU D1.6) | | | | | |
| Managers | 11 | 1.5 (1.0-2.0) | 52.8 | $\chi^2=4.74$ | NS |
| Nursing | 17 | 2.0 (1.0-2.8) | 80.3 | | |
| Nursing support | 132 | 2.0 (1.0-3.0) | 82.8 | | |
| Total | 160 | 2.0 (1.0-3.0) | - | - | - |
| Medication therapy (PRU D1.7) | | | | | |
| Managers | 11 | 2.0 (1.5-3.0) | 63.5 | $\chi^2=2.21$ | NS |
| Nursing | 18 | 2.0 (1.5-3.0) | 74.6 | | |
| Nursing support | 131 | 2.0 (2.0-4.0) | 82.7 | | |
| Total | 160 | 2.0 (2.0-4.0) | - | - | - |

Tables 5.16 and Figures 5.9 represent characteristics that participants considered as potentially advocating the use of restraints.

When looking at all professional categories together, there was agreement in the way respondents within government and private care homes answered this questionnaire section. Mobility, weight-bearing, balance and activities of daily living as well as characteristics related to physical limitations ranked highest as potential restraint advocates in both government and privately managed care homes. Continence and activity participation ranked lowest in this regard (Table 5.16, Figure 5.9).

Mobility, weight-bearing, balance and activities of daily living as well as characteristics related to physical limitations retained the highest ranking for nursing staff and nursing support staff. Communication/hearing/vision patterns and continence characteristics ranked lowest for nursing staff. Nursing support staff ranked as lowest in activity participation, continence and communication/hearing/vision patterns.

In addition no correlation was identified between the older person/care provider ratios and any situation (PRU: D1.1: mobility, weight-bearing, balance & activities of daily living, D1.2: Physical limitations; D1.3: Communication/hearing/vision patterns; D1.4: Continence; D1.5: Orientation, comprehension, behaviour/mood; D1.6: Activity participation; D1.7: Medication therapy; D_{all}: Overall mean of D1.1 to D1.7), that could potentially increase the likelihood of the older person to be physically restrained.

Table 5.16: Scores for reported situations that make the older person more likely to be physically restrained categorised by government and privately managed care homes. Higher scores depict stronger agreement with justifications to restrain. The mean rank values refer to Mann-Whitney comparisons across home management, IQR: interquartile range.

| comparisons across home management, IQI, interquartile range. | | | | | |
|---|----------|------------------|-----------|--------------------------|----------|
| | <i>n</i> | Median (IQR) | Mean Rank | Statistical significance | |
| | | | | Mann-Whitney U | <i>p</i> |
| Mobility, weight-bearing, balance & activities of daily living | | | | | |
| Government | 48 | 3.0 (2.6-4.0) | 83.69 | 2841.0 | NS |
| Private | 127 | 3.3 (2.6-4.0) | 89.63 | | |
| Physical limitations | | | | | |
| Government | 46 | 3.0 (2.4-4.0) | 78.02 | 2508.0 | NS |
| Private | 128 | 3.4 (2.6-4.0) | 90.91 | | |
| Communication/hearing/vision patterns | | | | | |
| Government | 42 | 2.0 (1.0-2.3) | 80.57 | 2481.0 | NS |
| Private | 125 | 2.0 (1.0-2.7) | 85.15 | | |
| Continence | | | | | |
| Government | 42 | 2.0 (1.0-2.0) | 76.56 | 2312.0 | NS |
| Private | 125 | 2.0 (1.0-2.3) | 86.50 | | |
| Orientation, comprehension, behaviour/mood | | | | | |
| Government | 45 | 2.2 (2.0-3.8) | 80.29 | 2578.0 | NS |
| Private | 126 | 2.7 (2.0-3.8) | 88.04 | | |
| Activity participation | | | | | |
| Government | 45 | 2.0 (1.0-2.0) | 75.69 | 2371.0 | NS |
| Private | 126 | 2.0 (1.0-3.0) | 89.68 | | |
| Medication therapy | | | | | |
| Government | 45 | 3.0 (2.0-4.0) | 90.42 | 2636.0 | NS |
| Private | 126 | 2.0 (2.0-4.0) | 84.42 | | |

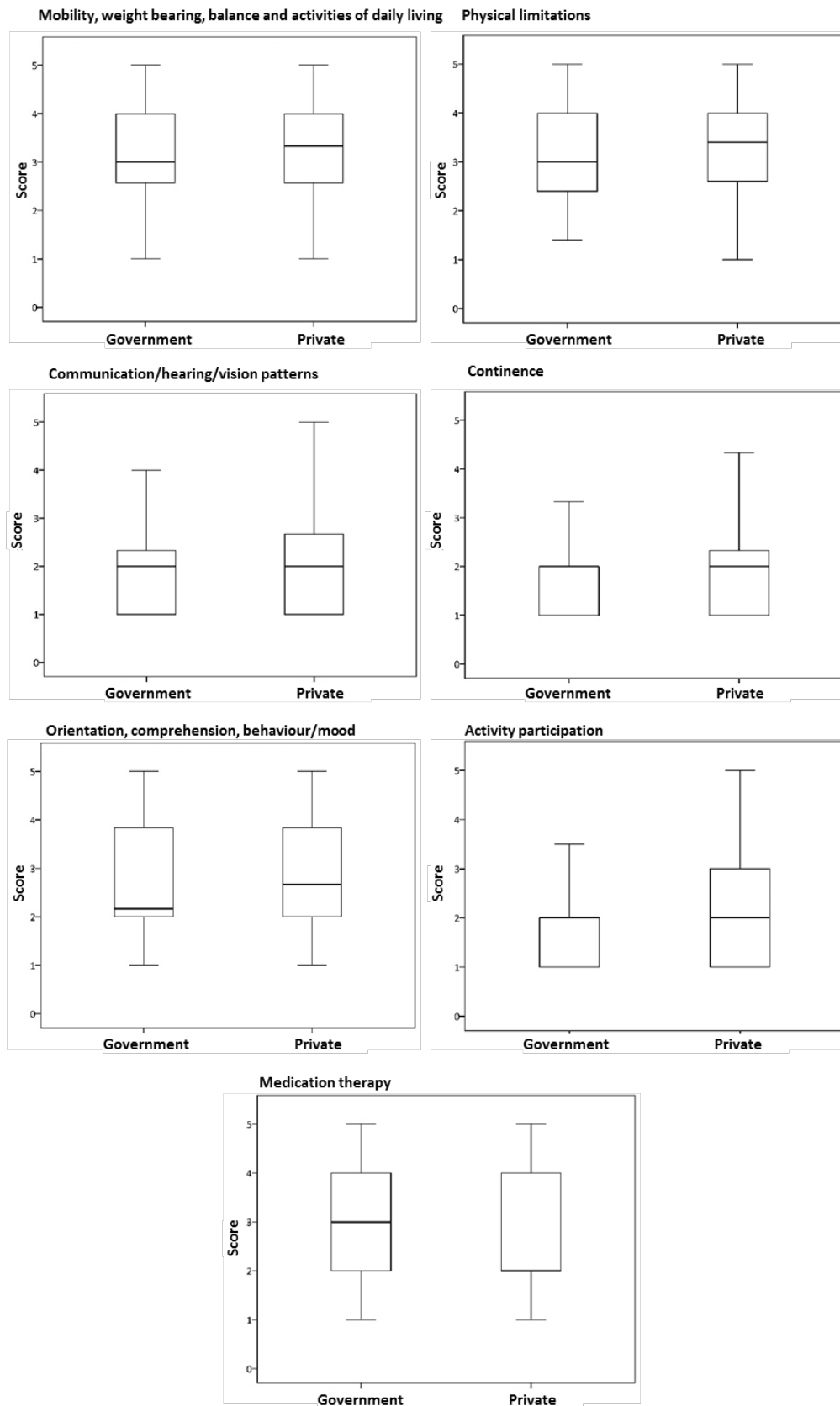


Figure 5.9: Characteristics that might advocate restraint use as reported by respondents from government and privately managed care homes. The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively.

5.8 Discussion

Before reviewing the results obtained, two overarching issues need to be mentioned. Firstly, data on the incidence of the actual numbers of restrained older persons was not available or obtainable in this project. As highlighted earlier the execution of the project mandated (1) absence of direct questions/statements which respondents could potentially deem as being accusatory, and (2) my physical absence or any other involvement from the care homes at all stages of the project. Consequently, no comparisons could be effected between care providers' observations of physical restraint use and the actual numbers of devices in use.

In my view, this study limitation should be addressed. More so, locally and within this particular context, we need to nurture a culture on these islands, *whereby research outputs are regarded as evaluators of service provision and delivery, opportunities to strengthen and improve what is and develop best strategies for the future.*

The second issue which is relevant to some of the analyses presented in this chapter is that the overall number of managers and nursing staff is relatively small so that significant differences may have been missed owing to low statistical power.

5.8.1 Restraint devices observed in use within government and private care homes

The most common individual types of devices observed in use throughout this local project (Table 5.1) included, (a) full bed rails (84.1%), belt harnesses (53.4%), lifter straps (48.3%), H and T harnesses (48.9% and 50.6% respectively), partial bed rails (43.0%), and wheel chair straps (35.2%). Observations of restraint devices by care

providers in government care homes tended to be less than those in the privately managed care home with statistical significance being registered for 5 devices (full bed rails, H-harness, belt harness, wheel chair straps and lap boards). Very similar observed types of devices were registered in use by the 3 professional categories of respondents (managers, nurses, nursing support staff), (Table 5.2, Figure 5.1). Interestingly, limb restraints were observed in use by 10.2% of respondents within the privately managed care homes, (Table 5.4), which are inconsistent with indications from Ljunggren *et al.*, (1997) suggesting that limb restraining was the least reported device in use in a comparative study within Denmark, France, Iceland, Italy, Japan, Spain, Sweden and USA. Limb restraining was reported to be the least restraining device in use within the government managed care homes.

Only devices which I was familiar with in my experience as a physiotherapist and which I had construed or observed to be limiting or restraining the older person were included in the questionnaire booklet for investigation.

It would have been expected that the training (Section 5.8.1.1), I had co-ordinated prior, during and after termination of the project within care homes, (Appendix X), might have resulted in a lower observance of restraint devices in use by care providers as compared to the data results revealed in this project. During the training *per se*, care providers had seemed more preoccupied with '*what they stood to lose should restraints be reduced and/or removed*' rather than the actual effects of the devices on the older persons or '*older person characteristics that could potentially lead the care provider to consider restraining.*'. Along similar lines, Hamers *et al.*, (2009), Hamers *et al.*, (2004), and Cheung and Yan, (2005), argued that neither older

person characteristics or organisational and environmental variables impacted on the decision to restrain but rather care providers' attitudes. Furthermore, possibly the arguments and counter arguments being proposed during the training, (Table 5.17) were being interpreted as accusatory and too time-consuming to consider let alone affect. Indeed a potential impasse in the training evolved in that whilst care providers indicated that they were against restraining, they nonetheless favoured the beneficial aspects of the restraining devices. A potentially rhetoric situation may arise as Vella (2010), claims that care givers within long term care settings are very much aware of the possible abusive nature associated with restraint use but fail '*to do something about it as they do not know what*'. This 'bottleneck' attitude is not unexpected, more so in the wake of partisan politics and trade unions' involvement within the government sector.

Table 5.17: Arguments and counter-arguments proposed during training.

| Argument favouring physical restraint use | Counter argument to physical restraint use |
|---|--|
| Restraining keeps older persons from falling. | Restraints increase the danger for the older person. |
| No alternatives to restraint use. | Education is the key together with consultation on alternatives, (www.nccnhr.org ; www.lumetra.com ; www.ute.kentaloutreach.org ; www.fda.gov/cdrh/beds) |
| Restraints are used as a last resort. | Some restraints (eg bed rails) are used so often that they are no longer considered as forms of restraining. |
| There are not enough staff for restraint-free care. | a) It takes longer to care for restrained than unrestrained persons. b) Time needed for frequent releasing and retying, monitoring, toileting, exercise, is approximately 4h 35 min in a 24-hour period. (Evans & Strumpf, 1990). |
| The older person or family may ask for restraining. | Continual discussion and re-assurance. |
| Restraining decreases litigation. | It is more likely that an organisation is sued should there be a fall or other serious related injury. |
| Restraint free care is not possible without administrative support. | This is true. It has to be a team effort where administration has to support the team effort. |

Potentially, training might have been more beneficial had it tackled (through focus groups or discussion fora) more pertinent ethical issues, for example if restraint use elicited feelings of conflict and how care providers coped with these feelings when they used restraints. More so sessions encouraging care providers' evaluations and reflections on the restraining methods applied could have been more appropriate. The demands restraining inflicted on the older persons through reflective sessions for care providers could potentially have also been discussed.

5.8.1.1 Educational programme: Content and delivery

The educational programmes for care providers aimed towards restraint reduction within long term care were the first of their kind. The programmes were based on published reviews on physical restraining and on the clinical experience of professionals involved in care provision for the older person.

The educational programmes were administered over a period of one year and targeted ‘hands-on’ care providers within SVPR as well as care providers within the government and privately managed care homes. Care providers included (a) SVPR management and care home management, (b) medical officers, (c) allied health practitioners (occupational therapists, physiotherapists, podiatrists, speech language pathologists, radiographers, and social workers), and (d) nurses (nursing officers, deputy nursing officers, staff nurses, enrolled nurses and specialist nurses), nursing support staff (nursing aides, health assistants, care workers, social assistants, and assistant care workers).

To enhance accountability, management requested that attendees confirmed their attendances through signing at the event. Training was divided into 3 separate sessions,

(1) (a) An introduction to physical restraining, (b) defining physical restraining and devices in use, (c) arguments and counter arguments to/against restraint use, and (d) decision-making processes to restraint free care, (Appendix X).

(2) Excerpts from 6 videos of the Resident Care Library, on (a) the new resident, (b) up and about: minimising the risk of fall injuries, (c) working with residents who wander, (d) getting hit, grabbed, and threatened: what it means, what to do, (e) staying

restraint free evening, nights and week-ends, and (f) now that restraints are off, what to do we do? , were successively shown, (Independent Production Fund, and Toby Levine Communications, www.nccnhr.org; www.lumetra.com; www.ute.kentaloutreach.org; www.fda.gov/cdrh/beds).

(3) Focus groups intended for participants to brain storm and discuss ways forward to a restraint free environment.

The reported attendance to the sessions include care givers at SVPR and care homes with 100% attendance from the SVPR administration and care home management, 5%, medical officers, 95%, allied health practitioners, 85% nurses and 80% attendance recorded with nursing support staff.

5.8.2 Categorisation of restraint devices

Grouping of the types of devices into 4 major categories, (bed rails, harnesses, limb restraints and furniture restraints), (Table 5.3), the earlier lower observed use of the first three in government managed homes was statistically maintained (Table 5.4).

Respondents within the private care homes reported a higher observed incidence of physical restraint use than did respondents within government care homes (5.0:1 observations/care provider in private care homes vs. 3.4:1 observations/care provider in government care homes), though this did not attain statistical significance (Table 5.1). This implies that private care homes observed restraint use one and half times more than their government counterparts, (Table 5.1). Notwithstanding, when compared to the government care homes, the private sector saw a better older person/care provider ratio (overall older person/care provider ratio for government

care homes of 3.8:1 vs. an overall ratio for private care homes of 3.1:1), (Chapter 4, Table 4.8).

A statistically significant difference was seen in the reported observed use for 3 of the restraint categories, (bed rails, harnesses and limb restraints), (Table 5.4). There are several possible explanations for higher observed use of restraint categories involving bed rails and harnesses. Potentially and as Miles (2002) and Evans & Strumpf (1990) suggested very early on, bed rails are used so often that they are no longer considered as forms of restraining. A similar situation ensues with harness use. Possibly bed rails and harnesses have become unconditionally and unquestionably the accepted norm within care homes, (Hignett *et al.*, 2013, O’Keeffe 2013, Chiba *et al.*, 2012, Miles 2002 and Miles and Irvine, 1992). However, locally bed rail use was construed as being a restraining device, when compared to similar settings internationally, (Table 5.4). Evans *et al.*, 2002a, 2002b, 2002c, indicated that whilst bed rails are a commonly utilised intervention, they were often excluded from studies, or the data related to their use presented separately from that of other restraint devices. Potentially, the introduction in the questionnaire booklet indicating when bed side rail was a form of physical restraint and when not could have affected respondents’ observances of these devices.

To build on the aforementioned notion *that bed rails are a commonly utilised intervention, often excluded from studies* the study did not explore whether respondents experienced discomfort when applying a restraining device. Nor did the project investigate the opinions of care providers regarding degree of restrictiveness of the device. Investigations in these areas would have served to explore associations if

any on the high observed incidences of bed rail use within the government and private care home sectors, (Table 5.1), were potentially affected by the care providers' belief that the device was a non-restrictive measure.

Job security could also be an issue amongst care providers within the private sector. Private care homes most often employ care providers through a contractor. Staff turnover is high and care providers are aware that 'hire/fire' policy will be laid out should the employee not be seen fit for the particular caring role. Consequently, care providers possibly opt '*to take no chances.*' Care providers within the government care homes often regard their employment within the sector as more robust and secure. Such a position is often re-enforced through the distinct involvement of trade unions.

Fenech, 2015, 2001 and Cauchi Carter, 2008 described how older persons within long term care had associated abuse with (a) inappropriate relocation to long term care, (b) physical restraining, and (c) an increase in boredom, loneliness, and helplessness, the 3 plagues of long term care, (Melchiorre *et al.*, 2013; Shura *et al.*, 2011). Indeed, Cassar (2012) is correct when she asserts that the situation in Malta vis-à-vis the older person is more reactive rather than proactive. The older person, particularly older persons residing in long term care has limited support to voice her/his concerns, and affect change.

Baumann (2007), Bennett *et al.*, 1997, Peace *et al.*, 1997, McEwen 1994, Biggs *et al.*, 1995, internationally and Fenech (2001) and Fenech and Troisi (1994) locally, described the imposed derogatory stereotypes exhibited by older persons through assumptions that getting old and being old were the natural course of life events. Troisi (1994) had described at length this cultural, rooted idea. And previously, Jones (1976) aptly described these life events as

“We learn to be old ... we acquire the stereotype from literature, film and from the stage. Above all there comes a time when we are treated differently by the young. We learn the myths and we are taught what it is to be old. So effective is the learning and the role performance that we actually feel more comfortable in fitting the niche created for us: The stereotype of the older person is pernicious but very effective, because it permeates the self-image of the older person” (Jones 1976, p.9).

Given the centrality of these arguments, unless a sound cultural disposition to change is employed, training would be a colossal waste of time. It is indeed not surprising that government care homes reported observing restraint use less than their private counterparts, (3.40:1 vs 5.0:1) (Table 5.1). Potentially, restraint use within the government sector is regarded as a justifiable action by care providers, warranted by trade unions to safeguard the interests of the care provider.

Interestingly, respondents within the government care homes did not observe any use of limb restraints, bed harnesses and boxing gloves however, respondents in the private sector observed a 5.5% use for limb restraints and bed harnesses and a 7.0% reported use for boxing gloves, (Table 5.1). Indeed, the incidence of limb restraints

was almost non-existent within long term care settings with prevalence of use, between 0.1% to 2.3%, (Evans *et al.*, 2002b). Boxing gloves were not reported amongst the devices in use. Hamers *et al.*, 2009, reported unanimous agreement amongst Swiss and German nurses rating limb restraints as mostly restrictive when compared to other physical restraint devices. The authors did not identify the reason as to why the choice of limb restraints over other devices. Limb restraints were not identified in use within Dutch nursing homes in the same study.

Furthermore, at the time of the study, *partial bed rails had not been observed in use* within the care homes, nevertheless respondents within both sectors indicated a high percentage of their use, (43.8%, government care homes and 43.0%, private care homes). This suggests that respondents were not aware of the differences between what might seem to be similar restraint devices (full bed rails vs. partial bed rails), despite the previously indicated high rates of attendance to training on physical restraints and their use.

5.8.3 Multiple restraint devices

This study asked respondents to indicate the *type(s) of restraint/s being observed in use* and did not explore the specifics of observations related to more than one restraining device. It is worth noting is that 175 of the total respondents marked more than one restraining device, ranging from 1 to 16 marked physical restraint devices per respondent. It would have been interesting to understand whether respondents who ticked more than one type of physical restraint device, had had in mind particular *older persons restrained with more than one device*. Consequently, further research on the number of restraining devices applied to the older person at a given time is

warranted. Interestingly, only 3 reviewed studies reported on the use of multiple restraint devices, finding that was also reported by Karlsson *et al.*, (1996) and Tinetti *et al.*, (1991) who pointed that 18% and 29% (respectively) of restrained older persons had more than one restraining device. Whilst later, Huizing *et al.*, (2009), documented 17% of older persons with 2 different types of restraints, 10% with 3 and 2% with 4 different types of physical restraining devices within a 24-hour time frame.

5.8.4 Summary of physical restraint devices observed in use

The diverse reporting locally of observed physical restraint devices suggests that there is no common approach to this occurrence. Hence, this issue continues to be problematic in care homes, Wagner *et al.*, (2012). The reason/s for this diversity is not clear and further local research is indicated. However, care providers could have opted for one restraint rather than the other merely because it had ‘a better restraining effect’. Also, certain care homes, potentially adopted a diverse restraint culture or respondents were more familiar with the more obvious restraint type of devices such as bed rails and harnesses but less conversant with identifying less obvious devices such as limb restraint devices. Furthermore, if the latter is the case this may need to be addressed in future training programmes designed for managers and care providers. In view of the high claimed attendance to training sessions, and having spent between 6 and 9 years providing care to older persons, greater consistency in the reported observed restraint use was expected.

Interestingly, restraint devices observed in use and quoted in international fora, Evans *et al.*, (2002b), did not explore (a) sheets, (b) wheelchair straps, (c) lifter straps, (d) boxing gloves, (e) low/high armchairs and (f) tilted wheelchairs/ armchairs which devices were used in the local scenario. This is a significant discrepancy to the categorisation of physical restraint devices in this project. Such differences weigh on the necessity to promote physical restraints and its use high on the research agenda, in order to annihilate the ‘suits me best restraint device’ from long term care settings.

This project did not look at the day/night time use (e.g. sundown syndrome), Evans *et al.*, (2002b), of the particular restraint devices or whether the particular choice for the restraining device was associated with risks of falling/repeated falls. Nor did the study explore the association between the selected physical device and the older person experiencing severe physical/cognitive difficulties.

There is a case for further studies on this subject and I would argue periodic audits into the outcomes of training sessions are warranted. It does not seem that training is having the desired effects, more so in the wake of high attendances to these sessions by respondents within both care home sectors. Additionally the high incidences of observed bed rail and harness use could potentially be the result of ingrained practices. These practices, historically and unquestionably always called for the use of these two particular devices without necessary consideration to the necessity for the devices or whether alternatives could potentially be considered.

Indeed, when correlation was sought between older person/care provider ratios and observed restraint categories within government and privately managed care homes, the researcher only identified a negative correlation between the reported use of limb restraints and the older person/care provider ratios, (Table 5.5). Interestingly, one may have thought this to be the other way round, that is, fewer older persons to each care provider, the less the need for restraining.

5.8.5 Duration of restraint use

Agreement was seen between the government and private sectors regarding restraint use of 'more than 2 hours but less than 24 hours', (Table 5.6, Figure 5.4). Respondents within privately managed care homes were observed to restrain more than those in the government sector for time frames over 12h., Table 5.6). This applied both to restraint duration in excess of 2 hours for full bed rails, belt harnesses, H-harnesses and lapboards, (Figure 5.7), where privately managed care homes were reported to observe more restraint use, and use of boxing gloves (6.3%), limb restraints (4.7%) and bed harnesses (4.7%), (Table 5.9). No use of these restraints in excess of 2 hours was reported in the government care homes, (Table 5.9).

Managers recorded observing the highest restraint use within the $12h > x > 2h$ time frame, (Table 5.7). Managers are not immersed in the clinical field *per se* and potentially this might influence reporting as it could raise their sensitivity towards physical restraint related issues. Overall, there was a consistently high duration of observed restraint use (>2h) as reported by all care providers, which appeared to be unaffected by attendance at CPD training sessions, (Table 5.12).

Due to the way in which data were collected, I was not able to determine if the restraint use was during the day or night time or a mixture of both. Engberg *et al.*, (2008) put forward a plausible argument that potentially restraint use durations were shown to be on the low side merely because counts were often made during the day. Locally, observations of restraint use were observed mostly in the 12h > x > 2h followed by 24h > 12h time frames implying observations to be mostly at day time. If the argument put forward by Engberg *et al.*, 2008 is correct than the situation in Maltese care homes is worrying. More so within the context that the overall observed restraint duration in excess of 2 hours for all of the physical restraint devices (Table 5.9, Table 5.10) is not congruent and far from the high percentage of respondents reporting for training on physical restraints and their use, (Table 5.12). Moreover, respondents within privately managed care homes reported observing restraint duration of 14.1% for 24 hours (all day), (Table 5.6). (Evans *et al.*, 2003, and Evans *et al.*, 2002a, 2002b, 2002c) have suggested that multiple medical, cognitive and psycho-social problems are associated with restraint use in excess of 2 hours. This is an issue which could be explored in future studies.

Potentially, care providers although having been given the necessary knowledge on the use of restraining, feel ill-equipped with reducing or removing restraint use. Pellfolk (2010) and Suen (2006) argue that care providers' attitudes impinged directly on physical restraint use and therefore a sound knowledge base on the topic indirectly influenced care providers' attitudes. It follows that a comprehensive knowledge of restraint use would enable care providers to change their attitudes and ways towards restraint use. However, the change in attitude need not be only the onus of nurses and nursing support staff. Care home management should lead by example, in other words

‘front liners, setting clear goals whilst engaging in the plans all those involved in care. Management must ensure that trusting care providers is at the foremost of their agenda, respecting their talents and contributions, and also allowing a certain degree of independence and flexibility in care provision. Locally, nursing (and at times nursing support staff) seem to be also taking on board initiatives of handling issues related to the organisation and management of work. Indeed, analysis of restraint duration stratified by home management (Table 5.8) indicated that management was identified to influence the duration of restraint across a 2 hour threshold, with private homes indicating a higher frequency of observed restraint in excess of 2 hours.

Saarnio *et al.*, (2012), Saarnio & Isola (2010) and Saarnio *et al.*, (2008), repeatedly reiterated how working with older persons was rewarding. Nonetheless, they also put forward that care could at times be consuming. Hamers *et al.*, (2009), Hov *et al.*, (2009), Haggstrom & Kihlgren (2007), and Fenech (2001) reported how care providers felt the burden of responsibility in addition to too little formal power, feelings of vulnerability, not appreciated, and undervalued. VonDras *et al.*, (2009) and Cohen-Mansfield (1995) indicated that physical and mental strain, inadequacy at the job and a lack of time to dedicate the older person are strongly associated with insufficient resource (human/material). The authors recognised that care home stress could potentially originate from poor interactions between care providers themselves as well as with older persons and/or their families.

Locally, partisan politics/party political fixers and trade unions' involvement could also potentially impact on care providers' attitudes. Management and care providers could potentially feel drained wandering in the weeds of these factions whose main focus is other than care provision. These persons' involvement potentially implies that care home issues cannot be solved or handled in an eloquent way by the protagonists of the care home (i.e. older persons and care providers). Hidden agendas other than those associated with the care home *per se* could possibly foil professional and serious care delivery, as interference from these factions could probably render care providers and actual care provision impotent. Moreover, in such potential situations, older person autonomy is severely undermined.

5.8.6 Duration of restraint use: Older person/care provider ratios

A statistical difference was registered in the observed use of bed rails and harnesses between government and privately managed care homes, (bed rails and harnesses) (Table 5.10). Irrespective of the older person/care provider ratios, bed rails and harnesses were the most restraint observed in use, (Table 5.10) where 100% of respondents in 2 privately managed care homes recorded bed rail and harness use.

Older person/care provider ratios within the government care homes did not affect the observed duration of restraint in excess of 2 hours. Respondents observing restraint use in excess of 2 hours varied from 22% to 100% with the 5 studied care homes. The explanation for this difference in restraint usage despite care homes having similar high older person/care provider ratios is unclear, but low dependency rates of older persons did not necessarily result in less restraint usage. Similarly, care providers caring for highly dependent older persons and also dealing with care provider

shortages could potentially influence towards restraint use and hence the high observed restraint duration in same care homes, indicated in Table 5.11.

In the long term, demographic changes in the population and increasing dependency may further influence restraint usage. Investigation by Fenech, 2001, into the dependency and cognitive ratings of older persons within one Maltese long term care setting invariably suggested high levels of dependency when assessed through the Crichton Royal Behavioural Rating Scale (CRBRS). Highest dependency levels were registered in (a) bathing (59.8%), (b) dressing with 45.0%, (c) continence (47.7%), (d) short and long-term memory losses (22.9%), (e) orientation problems (21.0%) and (f) communication problems (13.2%). Statistics based on the 2011 Census indicated a steady rise in the older person populations within the Maltese Islands. It is probable that the current frailty and vulnerability of older persons as compared to those reported by Fenech in 2001 would have also increased exponentially 10 years later with mobility and cognitive difficulties also facing an upward surge.

In the current study, high or low older person/care provider ratios did not affect respondents' observance of restraint use in excess of 2 hours within the privately managed care homes. The percentage rate of respondents observing restraint use in excess of 2 hours was similar across the 7 studied care homes, that is, between 75.0% and 95.8%, (Table 5.11). Again the high dependency levels of older persons could have potentially favoured restraint use.

Nonetheless, the high attendance rates of respondents in both care home sectors, to training on restraints and their use would have anticipated less observed duration of restraint use. In fact, analysis revealed that the observed restraint duration in excess of 2 hours was not affected by attendance to training, (Table 5.12), for the 3 professional categories.

5.8.7 Modalities of physical restraint use

The nursing profession was unanimously identified by all of the respondents for all of the procedures, (Table 5.14). Potentially, as they provide round the clock care, they are perceived to be the best staff group to make decisions on restraint use. These notions were also mirrored in local studies published by Brincat (2008), Cassar (2002), Fenech (2001) and Fenech 1996. Medical/allied health professionals were also highly ranked by the respondents within the care homes. It is relevant to note that locally, the decision to restrain or otherwise was historically always affected by the allied health professional, mainly the Occupational Therapist. However, the reported high rates of attendance to training sessions from respondents within government and privately managed care homes would have been thought to promote a culture of interdisciplinary based decision-making moving away from the belief that restraint use and Occupational Therapists are synonymous.

Family members/SDM ranked higher when recommending restraint use, this observation driven by responses originating from the privately managed care homes. Care providers might potentially find it comfortable to relinquish their responsibilities on family members, safeguarding themselves from potential liability issues.

It is also striking to note that a statistical significance was elicited between government and privately managed care homes with respect to ranking for management. Management within the private sector appeared to be more involved in procedures related to recommending, explaining, and monitoring, restraint use as well as decisions to remove the device. Nursing support staff within private care homes offered a greater contribution to monitoring, and documenting, restraint use.

Interestingly, a major contributory argument by nursing and nursing support staff colleagues targeting the 'Intended Project' had cited fear that *restraint use was never documented within the older person's medical file*. Consequently, they had believed that revealing the 'non-documentation' would potentially have serious consequences and implications on their careers and/or future employment. Curiously, analysis throughout both care home sectors now revealed that a strong 85.0% of respondents *had ascertained documentation of restraint use* in the older persons' medical files. Indeed, Kirkevold & Engedal, 2004b reported on the overwhelming evidence 65% (1362 residents in 160 care homes) of a lack of documentation in the older person's care plans and records.

There is insufficient research to on the modalities associated with physical restraint use (recommending, explaining, monitoring, deciding to remove and documentation) to draw any firm conclusions on their mode of use.

5.8.8 Characteristics of restrained older persons

It has been suggested that some of the characteristics of older persons who are physically restrained may differ from those older persons not restrained, (Huizing *et al.*, 2007; Cheung & Yam, 2005; O’Keeffe, 2004; Sullivan-Marx *et al.*, 1999; Castle & Mor, 1998b; Ljunggren, *et al.*, 1997; Capezuti *et al.*, 1996; Karlsson *et al.*, 1996; Burnton *et al.*, 1992). These characteristics are potentially indicators for older persons who may be at a higher risk of being restrained within care homes.

However, Engbert *et al.*, (2008) and Ljunggren *et al.*, (1997), maintained that few studies were published with respect to the association between restraint initiation and older person characteristics, where results are often inconclusive and contradictory. The authors contended that the data variance when identifying older person characteristics potentially susceptible to being restrained within care homes is diverse. This makes it difficult to determine the most reliable data on these characteristics. Current research appears to validate this view in that a widespread variance of data on these characteristics was reported, (Figure 5.8).

Surprisingly, a single study found that older persons who participated at least once weekly in social activities were more likely to be restrained than those who did not, (Tinetti *et al.*, 1991).

Historically research studies have invariably associated physical restraint use to safeguard the older persons from falls because of decreased mobility function and to provide some form of control to a number of behavioural disturbances, (Hamers *et al.*, 2009; Hamers *et al.*, 2004; Cheung and Yan, 2005; Evans *et al.*, 2002a, 2002b, 2002c,

2003; Karlsson *et al.*, 2001). As indicated earlier, analysis within the sections for all characteristics that participants considered as potentially advocating the use of restraints showed a wide spread of data. Indeed when these data are considered on an agreement score basis, they suggest uncertainty in respondents' opinions, since they closely fluctuate around the "uncertain" score of 3 on the respective Likert scales. Such results could potentially ascertain care providers' misnomers of physically restraining to prevent falls and to control wandering behaviours, etc. Rather, care providers' attitudes towards restraint use might be the strongest advocates for using physical restraints within care homes, (Hamers *et al.*, 2009; Hamers *et al.*, 2004; Cheung and Yan; 2005).

5.9 Conclusion

Summarising, this chapter analysed and discussed the use of different restraint devices and attempted to identify major differences in the use of different types of restraint devices. The ways in which physical restraint were used across a 2-hour threshold were also explored. Modalities of physical restraint use that included (a) recommending, (b) explaining, (c) monitoring, (d) deciding and (e) documenting restraint use were also investigated. Finally, a number of older person characteristics that potentially increased the likelihood for the older person to be restrained, (a) mobility, weight-bearing, balance and activities of daily living, (b) physical limitations, (c) communication/hearing/vision patterns, (d) continence, (e) orientation, comprehension, behaviour/mood, (f) activity participation, and (g) medication therapy, were explored.

Chapter 6

Response to physical restraint use

6.0 Introduction

In the previous results chapters I have described the results of analyses examining the use of restraint within different care home settings and the approach of different staff groups to physical restraint. This chapter explores the care providers' concerns on the older persons' reactions to restraint use and the secondary effects of restraint use on the physical and cognitive well-being of the older person. This includes the reactions noted and the relationship to care providers' attendance at continuous professional development training sessions. These analyses were performed in order to elucidate whether exposure to physical restraint issues during training, increased the sensitivity of respondents to the observation of restraint events.

If physical restraint usage were to be reduced, carers and other staff are likely to be concerned about potential disadvantages. This chapter also explores some of the possible barriers which might exist which could prevent reduction in physical restraint use in Maltese care homes.

6.1 Reactions by older persons to physical restraint use

Table 6.1 summarises the observed older persons' reactions to restraint use stratified by government and privately managed care homes. The data are ranked in decreasing order of observed reactions. Observed reactions were similar within both care home categories except for 'constant attempts to untie/release self' which was more commonly observed in government care homes ($p<0.01$).

Table 6.1: Reactions by older persons to physical restraint as reported by respondents within government and privately managed care homes. PRU, E1. (PRU: Physical Restraint Use questionnaire); OP: older person; ADL: activities of daily living). Values are expressed as a percentage of respondents within each care home category. $**p<0.01$, $\chi^2=7.376$. All χ^2 analyses have $df=1$.

| | Government (n=48) | | Private (n=128) | | Total (n=176) | |
|--|----------------------|------|--------------------|------|------------------|------|
| OPs' reactions to restraint | n | % | n | % | n | % |
| Pleas for release | 36 | 75.0 | 89 | 69.5 | 125 | 71.0 |
| Constant attempts to untie/release self ** | 39 | 81.3 | 76 | 59.4 | 115 | 65.3 |
| Anger | 28 | 58.3 | 81 | 63.8 | 109 | 61.9 |
| Decline in mobility | 28 | 58.3 | 68 | 53.1 | 96 | 54.5 |
| Calls for help | 24 | 50.0 | 55 | 43.0 | 79 | 44.9 |
| Increase in dependence in ADL | 26 | 54.2 | 56 | 43.8 | 82 | 46.6 |
| Increased agitation | 24 | 50.0 | 45 | 35.2 | 69 | 39.2 |
| Increase in urine & faecal incontinence | 16 | 33.3 | 45 | 35.2 | 61 | 34.7 |
| Increase in pressure sores | 17 | 35.4 | 40 | 31.3 | 57 | 32.4 |
| Withdrawal | 9 | 18.8 | 34 | 26.6 | 43 | 24.4 |
| Decline in cognition | 6 | 12.5 | 27 | 21.1 | 33 | 18.8 |
| Passivity | 5 | 10.4 | 15 | 11.7 | 20 | 11.4 |
| Total observations | 258 | | 631 | | 889 | - |
| Respondents | 48 | - | 128 | | 176 | - |
| Observations/care provider | 5.38 | - | 4.9 | | 5.1 | - |
| Normalized ratio | 1 | - | 0.9 | | 0.9 | - |

Figure 6.1 give an outline of the different older person reactions to restraint use as observed by managers, nurses and nursing support staff. The data are ranked in decreasing order of observed reactions.

The top 4 (pleas for release, constant attempts to untie/release self, anger, decline in mobility), ranked reactions were each observed by 50.0% or more of respondents. The highest ranked reaction also showed a significantly higher observation by nursing support staff (74.3%, $p < 0.05$). Discrepancies were observed in the way different professional categories reported some reactions, (Figure 6.1). *Pleas for release* were mostly observed by nursing support staff ($\chi^2 = 8.84$, $df = 2$, $p < 0.05$) while *constant attempts to untie/release self* was equally observed across all 3 professional categories ($\chi^2 = 1.00$, $df = 2$, $p = \text{NS}$). Within the manager category this latter observation (72.7%) contrasted with the former (36.4%) reported observed reaction. *Passivity* was mostly observed by managers (45.5%) ($\chi^2 = 22.31$, $df = 2$, $p < 0.0001$). Chi-square analysis of the total observed reactions categorised by professional status showed no statistical difference in the number of reactions reported by different staff ($\chi^2 = 17.34$, $df = 2$, $p = \text{NS}$). Kruskal-Wallis analysis of the total observed reactions by professional status confirmed this same result.

However, it should also be observed that the small n -values in the above data, may have potentially contributed to spurious significances.

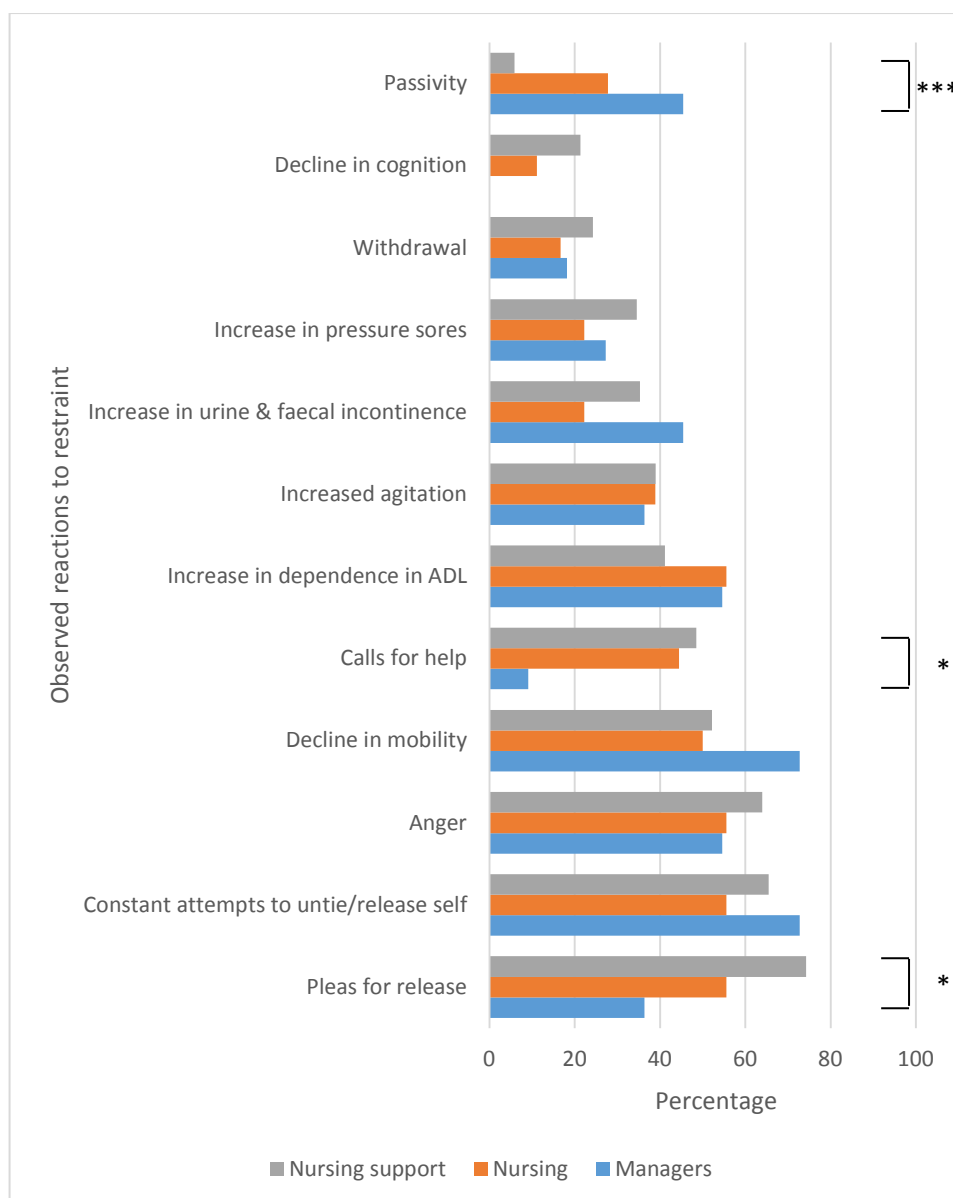


Figure 6.1: Graphical representation of reactions by older persons to physical restraint as reported by the three main professional categories of respondents. Values are expressed as a percentage of respondents who reported on each particular reaction. (OP: older person; ADL: activities of daily living). * $p < 0.05$, *** $p < 0.001$ (χ^2 analysis).

6.2 Categorisation of older persons' reactions to physical restraint use

Reactions to restraint use were categorised and analysed according to three main variables, as indicated in Table 6.2. Reactions that manifested by a general negative indifference to the restraint use from the older persons were categorised under the theme apathy, and included passivity and withdrawal. Reactions that elicited an element of aggression were grouped into restlessness; whilst physical or cognitive consequences of restraint categorised as physical or cognitive consequences. Each of the 3 categories was assigned a value of 1 if a respondent replied to one or more of the variables grouped by that category.

Table 6.2: Categorisation of older person reactions to physical restraint use. The numbers in the first column refer to the relevant options in PRU E1. PRU: Physical Restraint Use questionnaire

| Apathy | | Restlessness | | Physical or cognitive consequences | |
|--------|------------|--------------|---------------------------------|------------------------------------|---|
| 1.1 | Passivity | 1.2 | Anger | 1.8 | Decline in cognition |
| 1.4 | Withdrawal | 1.3 | Increased agitation | 1.9 | Decline in mobility |
| | | 1.5 | Pleas for release | 1.10 | Increase in the development of pressure sores |
| | | 1.6 | Calls for help | 1.11 | Increase in urine and faecal incontinence |
| | | 1.7 | Constant attempts to untie self | 1.12 | Increase in dependence in ADLs |

Restlessness was considered to be the most observed reaction of older persons to physical restraint, followed by physical and cognitive consequences and apathy, (Table 6.3, Figure 6.2). There was general agreement between the way this was viewed by the 3 professional categories except in the case for apathy, where managers reported higher observations than nursing and nursing support staff, ($p < 0.05$).

Table 6.3: Categories of reactions by older persons in physical restraint as reported by government and privately managed care homes. (OP: older person). Values are expressed as a percentage of respondents who reported on each particular category. All χ^2 analyses have df=1.

| OPs' reactions to restraint | Government managed (n=48) | | Privately managed (n=128) | | Statistical significance | Total (n=176) | |
|-------------------------------------|---------------------------|------|---------------------------|------|--------------------------|---------------|------|
| | n | % | n | % | | n | % |
| Apathy | 13 | 27.1 | 42 | 32.8 | $\chi^2=0.53, p=NS$ | 55 | 31.3 |
| Restlessness | 45 | 93.8 | 111 | 86.7 | $\chi^2=1.71, p=NS$ | 156 | 88.6 |
| Physical and cognitive consequences | 34 | 70.8 | 87 | 68.0 | $\chi^2=0.133, p=NS$ | 121 | 68.8 |

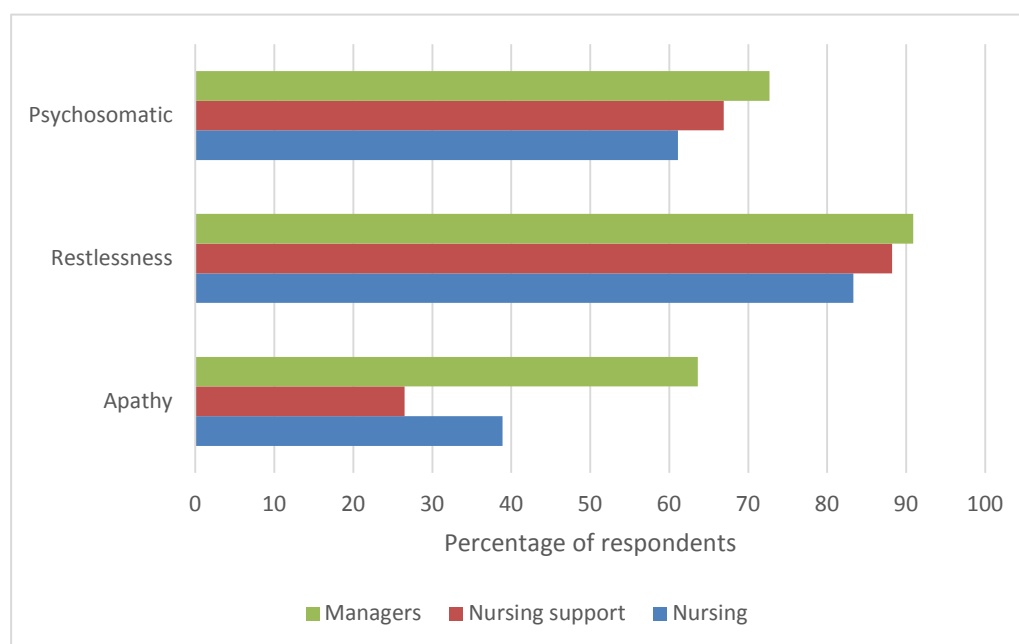


Figure 6.2: Graphical representation of the percentage of respondents observing the 3 major categories of reactions by older persons in physical restraint, stratified by professional category. * $p<0.05$ (χ^2 analysis for observations of apathy)

Mann-Whitney analysis of the observed older persons' reactions to restraint use, in relation to the different older person/care provider ratios prevalent in the homes studied, did not yield any significant relationship, i.e. restraint reactions were not associated with high or low older person/care provider ratios.

No statistical difference was identified between observed reactions to physical restraint and observed restraint duration across a 2 hour threshold. Analysis showed similar negative reactions for short as well as long durations of restraint use.

I have previously described how CPD Sessions related to physical restraint use revealed a high attendance rate, ranging from 90.9% for managers to 77.8% for nurses, (Chapter 4, Table 4.6). Attendance at CPD sessions did not influence the observed number of restraints in any of the 3 categories. A lack of infrastructure to support care providers in reducing physical restraining could be a contributor to this observation.

6.3 Observed reactions and older person/care provider ratios

The observed older persons' reactions to restraint were studied with respect to the older person/care provider ratios prevalent in the respective care homes at the time of the study, (Table 6.4). G6 was omitted for reasons described earlier. The numbers of observations of apathy, restlessness and psychosomatic reactions were not correlated with the older person/care provider ratios in the privately managed care homes. However, a weak negative correlation ($p<0.05$), was identified between the number of observed physical and cognitive consequences of restraint and older person/care provider ratios within government managed care homes, implying that higher observed reactions were reported from government managed care homes having a low older person/care provider ratio. Additionally, there was a positive correlation ($p<0.01$) between the number of observed apathy and observed psychosomatic reactions to restraint, when the data from all homes were considered ($n=12$).

Table 6.4: Correlations between observed reactions and older person/care provider ratios for government and privately managed care homes. (OP: older person; CP: care provider; Px: privately managed care home; Gx: government managed care home). In addition, observed apathy reactions positively correlated with psychosomatic reactions when considering all care homes ($n=12$, $\rho=0.709$, $p<0.01$).

| Care home | OP/CP ratio | Apathy | | Restlessness | | Physical or cognitive consequences | |
|---|-------------|---------------------------|------|--------------------------|-------|------------------------------------|------|
| | | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Privately managed | | | | | | | |
| P1 | 3.9 | 8 | 33.3 | 20 | 83.3 | 20 | 83.3 |
| P2 | 2.8 | 5 | 31.3 | 15 | 93.8 | 8 | 50.0 |
| P3 | 5.1 | 3 | 75.0 | 3 | 75.0 | 3 | 75.0 |
| P4 | 2.7 | 2 | 22.2 | 9 | 100.0 | 4 | 44.4 |
| P5 | 1.9 | 11 | 37.9 | 23 | 79.3 | 24 | 82.8 |
| P6 | 3.1 | 5 | 33.3 | 15 | 100.0 | 10 | 66.7 |
| P7 | 3.9 | 4 | 19.0 | 20 | 95.2 | 10 | 47.6 |
| Spearman correlation with OP/CP ratio (<i>n</i> =7) | | rho = 0.216, <i>p</i> =NS | | rho=-0.324, <i>p</i> =NS | | rho=0.286, <i>p</i> =NS | |
| | | | | | | | |
| Government managed | | | | | | | |
| G1 | 3.1 | 2 | 22.2 | 9 | 100.0 | 6 | 66.7 |
| G2 | 3.0 | 9 | 28.1 | 28 | 87.5 | 24 | 75.0 |
| G3 | 4.0 | 2 | 33.3 | 6 | 100.0 | 4 | 66.7 |
| G4 | 4.3 | 1 | 33.3 | 2 | 66.7 | 2 | 66.7 |
| G5 | 4.6 | 1 | 20.0 | 3 | 60.0 | 3 | 60.0 |
| Spearman correlation with OP/CP ratio (<i>n</i> =5) | | rho=-0.154, <i>p</i> =NS | | rho=-0.667, <i>p</i> =NS | | rho=-0.894, <i>p</i> <0.05 | |
| | | | | | | | |
| All homes | | | | | | | |
| Spearman correlation with OP/CP ratio (<i>n</i> =12) | | rho=0.143, <i>p</i> =NS | | rho=-0.456, <i>p</i> =NS | | rho=0.114, <i>p</i> =NS | |

6.4 Concerns associated with physical restraint use

In the analyses presented in this chapter, unless otherwise detailed, higher scores for work, environmental and safety concerns and staff attitudes indicate agreement with statements that imply the necessity for additional action by the care provider should restraint reduction be considered. High scores therefore point to respondents being concerned about restraint reduction, in terms of implications on work, the environment and older person safety. With respect to Section 2.4, high scores imply a positive outlook towards restraint reduction, (refer to Section 3.4.1 for details on the scoring system adopted).

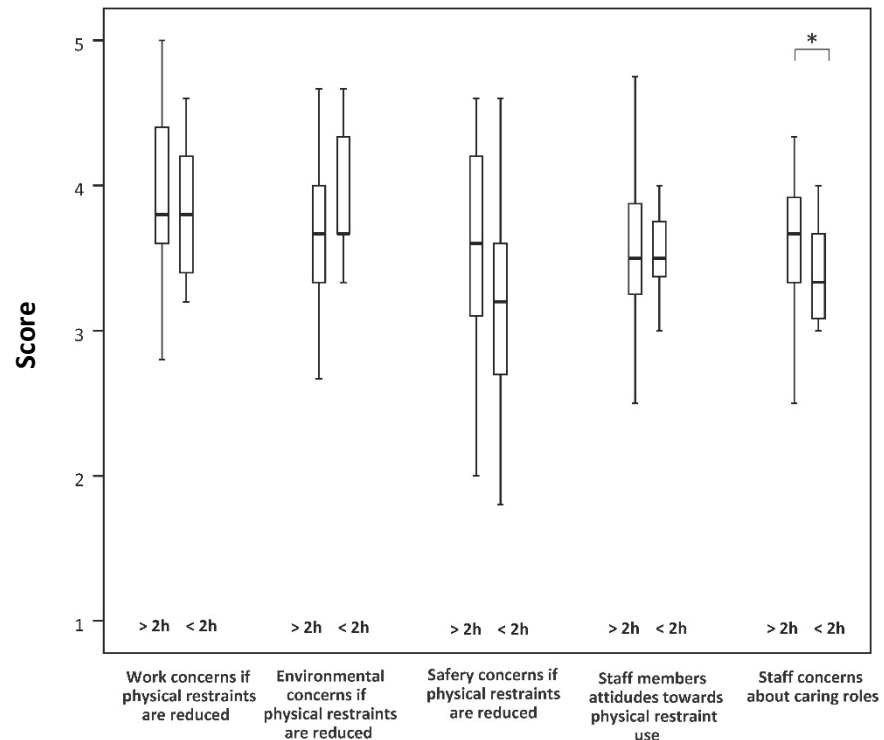
6.5 General analyses of concerns and attitudes regarding reduction in physical restraint use in care homes

Analysis of the *overall data relating to work, environmental and safety concerns and staff attitudes* (PRU, E2.1 – E2.4) showed that work, environmental safety and staff concerns together with the staff attitudes were similar for respondents from government and privately managed care homes. Work and environmental concerns were considered by the respondents to be the highest overall concerns, (Table 6.5). Respondents' scores for *all concerns* all generally exceeded the mid-point of 3 of the 5-point Likert scale with some values closely approximating 4, suggesting an overall high level of concern to various factors associated with restraint use reduction. Staff attitudes scores (PRU, E2.4) had the lowest median of 3.5, (Table 6.5).

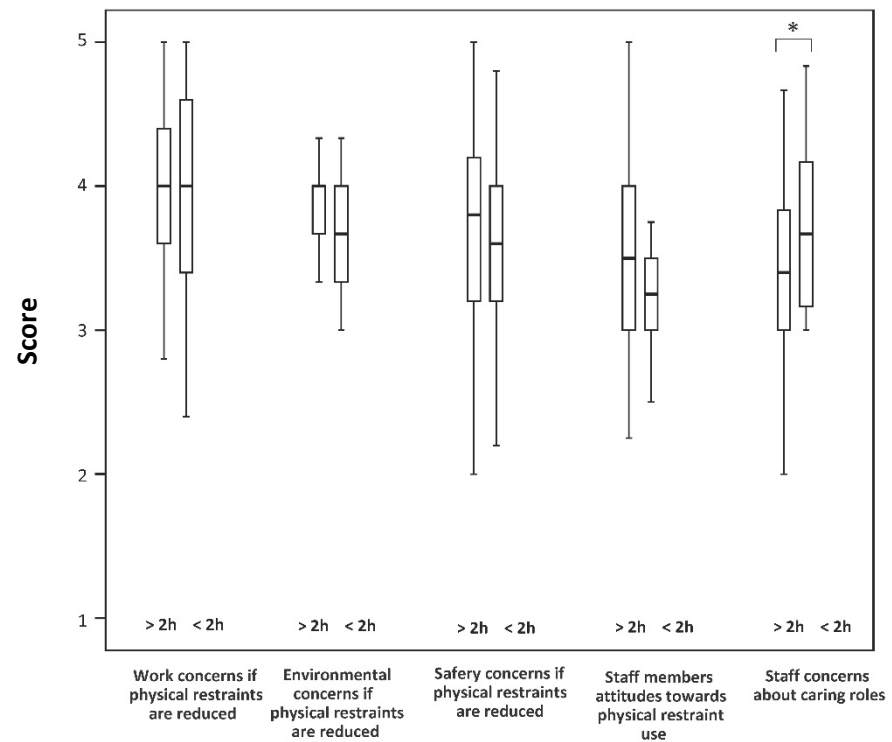
Table 6.5: Data related to work, environmental, safety and staff concerns regarding reduction in restraint usage within government and privately managed care homes. The mean rank values refer to Mann Whitney comparisons across government and privately managed homes. IQR: interquartile range PRU: Physical Restraint Use Questionnaire

| Characteristic | Government | | Private | | Statistical significance |
|-----------------------------------|----------------------------|-----------|-----------------------------|-----------|--------------------------|
| | Median (IQR) | Mean rank | Median (IQR) | Mean rank | Mann-Whitney |
| Work concerns (PRU E2.1) | 3.8 (3.6-4.4) (n=47) | 82.4 | 4.0 (3.6-4.4) (n=125) | 88.0 | U=2746.5, <i>p</i> =NS |
| Environmental concerns (PRU E2.2) | 3.7 (3.7-4.2) (n=48) | 83.5 | 4.0 (3.7-4.0) (n=124) | 87.7 | U=2832.0, <i>p</i> =NS |
| Safety concerns (PRU E2.3) | 3.6 (3.0-4.0) (n=47) | 81.0 | 3.6 (3.2-4.2) (n=123) | 87.2 | U=2680.5, <i>p</i> =NS |
| Staff attitudes (PRU E2.4) | 3.5 (3.3-3.8) (n=39) | 78.0 | 3.5 (3.0-4.0) (n=116) | 78.0 | U=2260.5, <i>p</i> =NS |

When I analysed concerns using a *2-hour threshold of restraint duration*, there were some differences in the expressed concerns depending on caring roles, both within government as well as within privately managed care homes (PRU, B, *p*<0.05 for both). Within the government managed care homes, higher scores were registered within this section for respondents who reported restraint durations of more than 2 hours. Interestingly, this difference took on an opposite trend within the privately managed care homes, (Figure 6.3). These implications need to be explored further.



Government managed care homes



Privately managed care homes

Figure 6.3: Concern scores regarding reduction in physical restraint use (PRU, E2.1, E2.2, E2.3, E2.4, B) reported by the respondents from government and privately managed care homes stratified by observed restraint duration across a 2-hour threshold. The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively. * $p < 0.05$ (Mann-Whitney analysis). PRU: Physical Restraint Use questionnaire.

I next examined if there were particular characteristics of care home residents which could be identified which might influence carer concerns about restraint reduction. When the various expressed concerns and attitudes were correlated with *reported resident's characteristics that potentially contributed to restraint use*, Spearman analysis identified a number of positive correlations (Table 6.6). The resident's communication, hearing, and vision patterns did not correlate with any concern whilst orientation, comprehension and behaviour/mood positively strongly correlated with concerns regarding caring roles ($p<0.05$), work concerns ($p<0.05$) and safety concerns ($p<0.05$). A correlation was also noted between activity participation and caring role concerns ($p<0.05$). Work concerns showed a tendency to positively correlate with activity participation, though this relationship marginally escaped significance ($p=0.051$). Unsurprisingly, characteristics associated with mobility, weight-bearing, balance and activities of daily living as well as physical limitations strongly positively correlated with safety concerns ($p<0.001$ for each).

Table 6.6: Correlations between “Concerns and attitudes related to reduction in physical restraint use” and “Characteristics potentially influencing restraint use.” (PRU: Physical Restraint Use questionnaire; ADL: activities of daily living).

| | Staff concerns about caring roles | Work concerns if physical restraints are reduced | Environmental concerns if physical restraints are reduced | Safety concerns if physical restraint are reduced | Staff attitudes to physical restraint use |
|---|--|--|---|---|---|
| Characteristics potentially influencing restraint use | (PRU B) | (PRU E2.1) | (PRU E2.2) | (PRU E2.3) | (PRU E2.4) |
| Mobility, weight-bearing, balance, ADLs (PRU D1.1) | $n=178$, $\rho=-0.021$ $p=NS$ | $n=175$, $\rho=-0.102$ $p=NS$ | $n=175$, $\rho=-0.044$ $p=NS$ | $n=173$, $\rho=0.287$ $p<0.001$ | $n=158$, $\rho=-0.046$ $p=NS$ |
| Physical limitation (PRU D1.2) | $n=177$, $\rho=-0.019$ $p=NS$ | $n=174$, $\rho=-0.045$ $p=NS$ | $n=174$, $\rho=-0.042$ $p=NS$ | $n=172$, $\rho=0.264$ $p<0.001$ | $n=157$, $\rho=-0.132$ $p=NS$ |
| Communication, hearing, vision, patterns (PRU D1.3) | $n=170$, $\rho=0.097$ $p=NS$ | $n=167$, $\rho=-0.068$ $p=NS$ | $n=168$, $\rho=-0.077$ $p=NS$ | $n=166$, $\rho=0.113$ $p=NS$ | $n=156$, $\rho=-0.074$ $p=NS$ |
| Continence (PRU D1.4) | $n=170$, $\rho=0.268$ $p<0.001$ | $n=168$, $\rho=0.132$ $p=NS$ | $n=168$, $\rho=0.059$ $p=NS$ | $n=166$, $\rho=0.066$ $p=NS$ | $n=155$, $\rho=0.120$ $p=NS$ |
| Orientation, comprehension, behaviour/mood (PRU D1.5) | $n=174$, $\rho=0.180$ $p<0.05$ | $n=171$, $\rho=0.172$ $p<0.05$ | $n=171$, $\rho=-0.060$ $p=NS$ | $n=169$, $\rho=0.187$ $p<0.05$ | $n=156$, $\rho=0.058$ $p=NS$ |
| Activity participation (PRU D1.6) | $n=174$, $\rho=0.156$ $p<0.05$ | $n=171$, $\rho=0.150$ $p=0.051$ | $n=171$, $\rho=0.71$ $p=NS$ | $n=169$, $\rho=0.165$ $p<0.05$ | $n=156$, $\rho=0.152$ $p=NS$ |
| Medication (PRU D1.7) | $n=174$, $\rho=0.133$ $p=NS$ | $n=172$, $\rho=0.263$ $p<0.001$ | $n=172$, $\rho=-0.010$ $p=NS$ | $n=170$, $\rho=0.217$ $p<0.01$ | $n=157$, $\rho=0.032$ $p=NS$ |

Reported characteristics that may influence restraint of older persons (PRU D1.1 to D1.7) correlated positively with *selected* concerns associated with the potential reduction of physical restraint use. These are shown in Table 6.7. Of particular interest are the strong positive associations between (a) the carer's perception that the older person tends to feel more secure if she/he is physically restrained (PRU E2.3.5), (b) mobility, weight-bearing, balance, ADLs (D1.1), and (c) physical limitations (D1.2) ($p < 0.001$ for each case). Respondents also expressed high concerns related to increased workload (E2.1.4), ($p < 0.01$) and increased resident wandering, (E2.3.3), ($p < 0.001$), should restraints be reduced.

Table 6.7: Correlations between elements of work/environment/safety concerns related to physical restraint use and characteristics potentially influencing restraint use.

| | If the use of physical restraints were reduced, I would be at greater risk for being held liable for neglect if the Older Person falls and is injured | Reducing the use of physical restraints, would increase my work load | The layout of the unit where I work is suitable for restraint-free Older Persons to walk and move around | The Older Person would fall more frequently if the use of physical restraint were reduced | The Older Person would be more likely to wander if the use of physical restraints were reduced | The Older Person tends to feel more secure if she/he is physically restrained |
|--|---|--|--|---|--|---|
| | (PRU E2.1.3) | (PRU E2.1.4) | (PRU E2.2.3) | (PRU E2.3.1) | (PRU E2.3.3) | (PRU E2.3.5) |
| Mobility, weight-bearing, balance, ADLs (PRU D1.1) | $n=174$, $\rho=0.043$ $p=NS$ | $n=174$, $\rho=-0.117$ $p=NS$ | $n=174$, $\rho=-0.043$ $p=NS$ | $n=171$, $\rho=0.097$ $p=NS$ | $n=172$, $\rho=0.076$ $p=NS$ | $n=170$, $\rho=0.268$ $p<0.001$ |
| Physical limitation (PRU D1.2) | $n=173$, $\rho=0.116$ $p=NS$ | $n=173$, $\rho=-0.049$ $p=NS$ | $n=173$, $\rho=0.045$ $p=NS$ | $n=170$, $\rho=0.094$ $p=NS$ | $n=171$, $\rho=0.047$ $p=NS$ | $n=169$, $\rho=0.284$ $p<0.001$ |
| Communication, hearing, vision, patterns (PRU D1.3) | $n=167$, $\rho=-0.119$ $p=NS$ | $n=166$, $\rho=-0.002$ $p=NS$ | $n=167$, $\rho=-0.142$ $p=NS$ | $n=166$, $\rho=-0.067$ $p=NS$ | $n=166$, $\rho=0.152$ $p=0.051$ | $n=166$, $\rho=0.035$ $p=NS$ |
| Continence (PRU D1.4) | $n=167$, $\rho=0.017$ $p=NS$ | $n=167$, $\rho=0.159$ $p<0.05$ | $n=167$, $\rho=-0.069$ $p=NS$ | $n=165$, $\rho=0.001$ $p=NS$ | $n=166$, $\rho=0.031$ $p=NS$ | $n=165$, $\rho=0.089$ $p=NS$ |
| Orientation, comprehension, behaviour/mood (PRU D1.5) | $n=170$, $\rho=0.050$ $p=NS$ | $n=170$, $\rho=0.205$ $p<0.01$ | $n=170$, $\rho=-0.209$ $p<0.01$ | $n=168$, $\rho=-0.074$ $p=NS$ | $n=169$, $\rho=0.244$ $p<0.001$ | $n=168$, $\rho=0.021$ $p=NS$ |
| Activity participation (PRU D1.6) | $n=170$, $\rho=0.018$ $p=NS$ | $n=170$, $\rho=0.129$ $p=NS$ | $n=170$, $\rho=-0.114$ $p=NS$ | $n=168$, $\rho=0.043$ $p=NS$ | $n=168$, $\rho=0.176$ $p<0.05$ | $n=166$, $\rho=0.050$ $p=NS$ |
| Medication (PRU D1.7) | $n=171$, $\rho=0.086$ $p=NS$ | $n=171$, $\rho=0.267$ $p<0.001$ | $n=171$, $\rho=-0.094$ $p=NS$ | $n=169$, $\rho=-0.007$ $p=NS$ | $n=169$, $\rho=0.327$ $p<0.001$ | $n=168$, $\rho=0.051$ $p=NS$ |

6.6 Work concerns

Work concerns should restraints be reduced, (E2.1.1-E2.1.5), were analysed with E2.1.5 (positive feelings favouring least restraint use) (Table 6.8). There was marginal significance ($p<0.05$) when comparing the views expressed by respondents within government and privately managed homes, with the latter being more comfortable with the idea of reducing physical restraining. But there was a more definite difference between the groups with regard to whether respondents would feel better about their jobs should restraints be reduced ($p<0.01$), in favour of respondents from government care homes having more positive feelings in such a circumstance.

Table 6.8: Data related to work concerns within government and privately managed care homes. PRU E2.1.1 to E2.1.4 consisted of 5-point Likert scales which were scored with 5 to 1, assigning the highest score to “Strongly Agree” and the lowest score to “Strongly Disagree.” PRU E2.1.5 consisted of a similar Likert scale, which was however assigned the highest score to “Strongly disagree” and the lowest to “Strongly agree.” This is in line with the scoring criteria described in Section 3.4.1. The mean rank values refer to Mann-Whitney comparisons across government and privately managed homes. IQR: interquartile range PRU: Physical Restraint Use Questionnaire

| | <i>n</i> | Median (IQR) | Mean rank | Mann Whitney U | Significance |
|--|----------|------------------|-----------|-------------------|-------------------------|
| Work concerns if physical restraining is reduced (Global PRU E2.1.1 – E2.1.4) | | | | | |
| Government | 47 | 3.8 (3.4-4.5) | 74.3 | 2363.50 | <i>p</i><0.05 |
| Private | 125 | 4.0 (3.8-4.8) | 91.1 | | |
| Positive feelings if restraining were reduced (PRU E2.1.5) | | | | | |
| Government | 43 | 4.0 (3.0-5.0) | 99.8 | 1985.00 | <i>p</i><0.01 |
| Private | 124 | 3.0 (2.5-4.0) | 78.5 | | |

Kruskal-Wallis analysis identified a difference in physical restraint reduction work concerns amongst the professional categories (Table 6.9), and *post hoc* Dunn-Bonferroni pairwise analysis, identified nursing support staff to be the profession to favour least restraint use ($p<0.05$). However, this was not reflected in positive job feelings should restraint be reduced.

Table 6.9: Data related to work concerns by the 3 professional categories. (df=2). PRU E2.1.1 to E2.1.4 consisted of 5-point Likert scales which were scored with 5 to 1, assigning the highest score to “Strongly Agree” and the lowest score to “Strongly Disagree.” PRU E2.1.5 consisted of a similar Likert scale, which was however assigned the highest score to “Strongly disagree” and the lowest to “Strongly agree.” This is in line with the scoring criteria described in Section 3.4.1. The mean rank values refer to Kruskal-Wallis comparisons across different professional status. IQR: interquartile range PRU: Physical Restraint Use Questionnaire.

| | <i>n</i> | Median (IQR) | Mean rank | Kruskal-Wallis | Significance |
|---|----------|------------------|-----------|----------------|-------------------------|
| Work concerns if physical restraining is reduced (E2.1.1 – E2.1.4) | | | | | |
| Managers | 11 | 3.5 (3.5-3.8) | 47.3 | $\chi^2=6.84$ | <i>p</i><0.05 |
| Nursing | 18 | 3.8 (3.0-4.3) | 75.7 | | |
| Nursing support | 132 | 4.0 (3.5-4.8) | 84.5 | | |
| Positive feelings if restraining were reduced (E2.1.5) | | | | | |
| Managers | 11 | 4.0 (3.5-5.0) | 95.4 | $\chi^2=1.92$ | NS |
| Nursing | 17 | 4.0 (3.0-4.0) | 80.9 | | |
| Nursing support | 128 | 4.0 (3.0-4.0) | 76.7 | | |

6.7 Care home environmental suitability

Scores for the environmental concern scores, PRU, E2.2 (E2.2.2-E2.2.3) were studied across different variables. Scores tended to be high, all exceeding the “uncertain” midpoint of the respective Likert scales (scored as 3), but no differences were observed across different home managements different professional categories or CPD attendance

Environmental concerns include (a) the unit’s suitability for restraint free care of older persons and (b) whether alternate methods and/or activities would be needed should restraint use be removed or decreased. No correlations with the length of time staff members had been working with older persons, were evident (Figure 6.4, Figure 6.5, Spearman rank correlation). These scatter of the values along the x-axis in these figures, also graphically depict the longer work experience of government managed home care providers, compared to privately managed home care providers, reported earlier

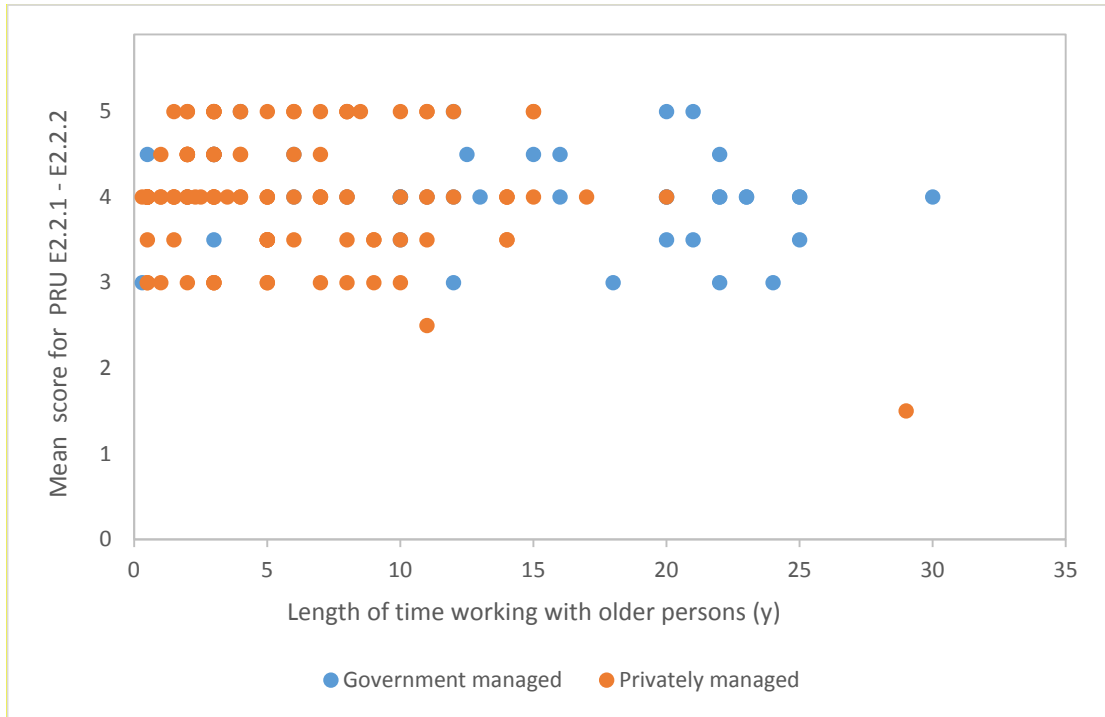


Figure 6.4: Scatter graph of the overall scores for E2.2.1 – E2.2.2 (Alternate methods and/or increased activities should restraints be removed). Government managed, $n=42$, $\rho=-0.210$, $p=NS$; privately managed, $n=115$, $\rho=-0.012$ $p=NS$.

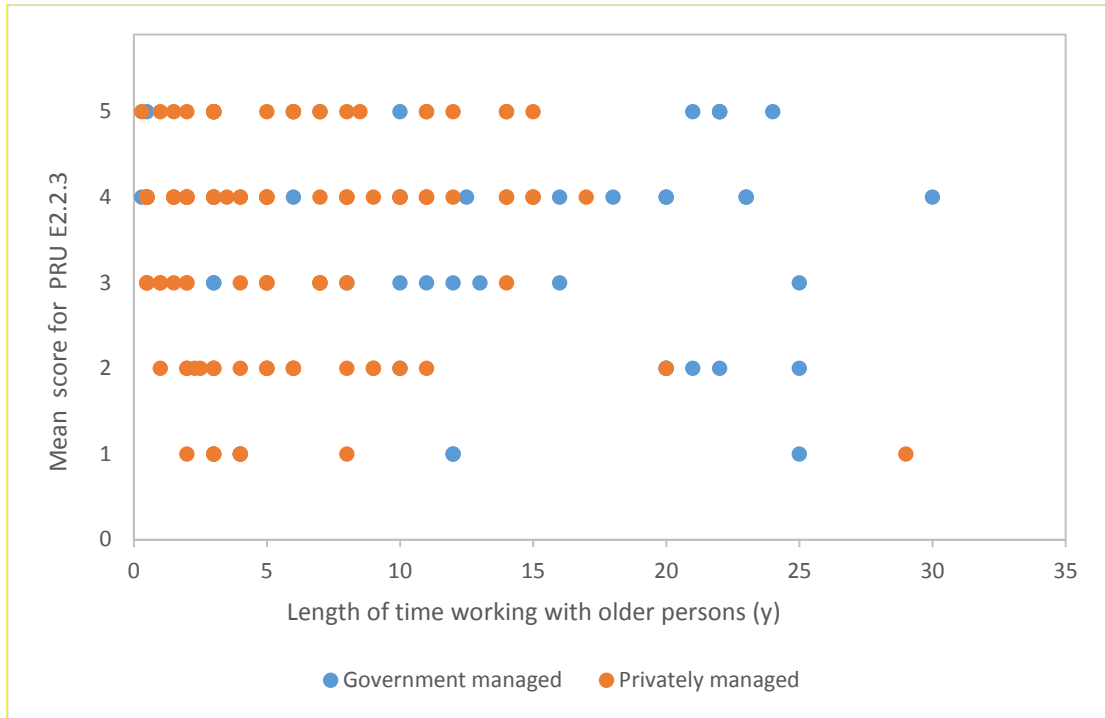


Figure 6.5: Scatter graph of the overall scores for E2.2.3 (Suitability of the unit). Government managed, $n=42$, $\rho=-0.012$, $p=NS$; privately managed, $n=115$, $\rho=0.044$ $p=NS$.

6.8 Safety concerns

Scores for safety concerns, PRU, E2.3, tended to be high, all exceeding the “uncertain” midpoint of the respective Likert scales (scored as 3), but no differences were observable across different home managements, different professional categories or CPD attendance. However, Mann Whitney analysis did show the difference in responses across the different professional categories, to closely escape significance ($p=0.073$). No correlations with the length of time, staff members had been working with older persons, were evident, (Figure 6.6, Figure 6.7).

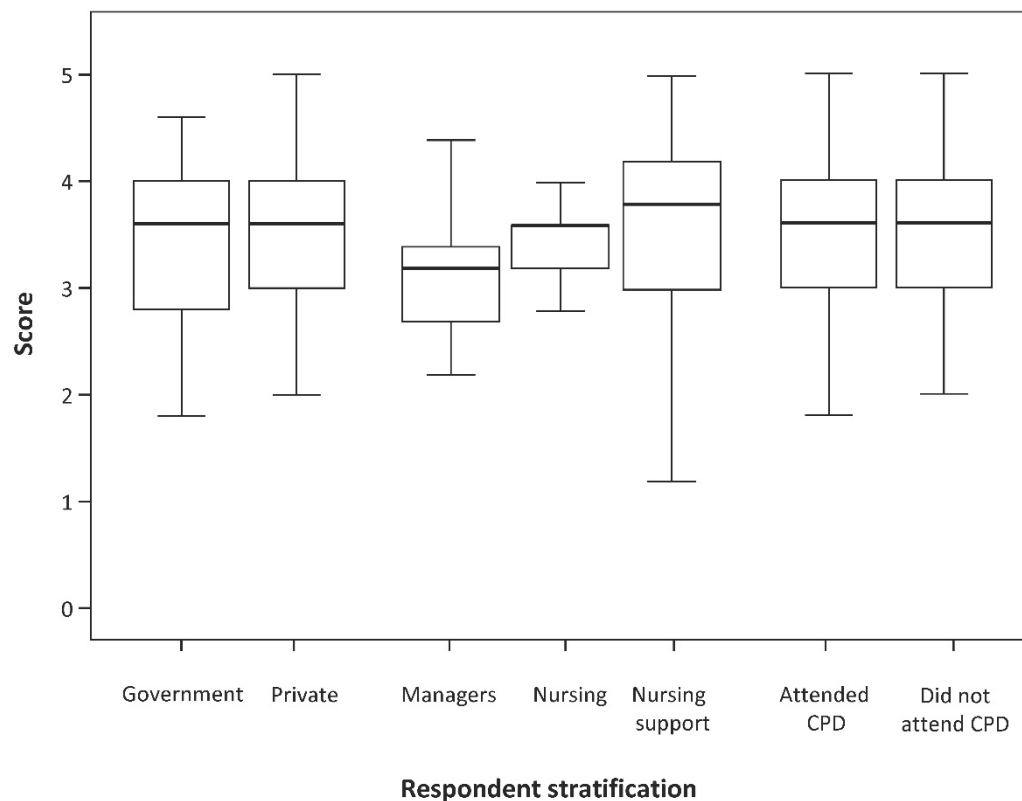


Figure 6.6: Scores for Safety Concerns (PRU E2.3) stratified by place of work, professional category and attendance to CPD sessions. The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively (PRU: Physical Restraint Use questionnaire).

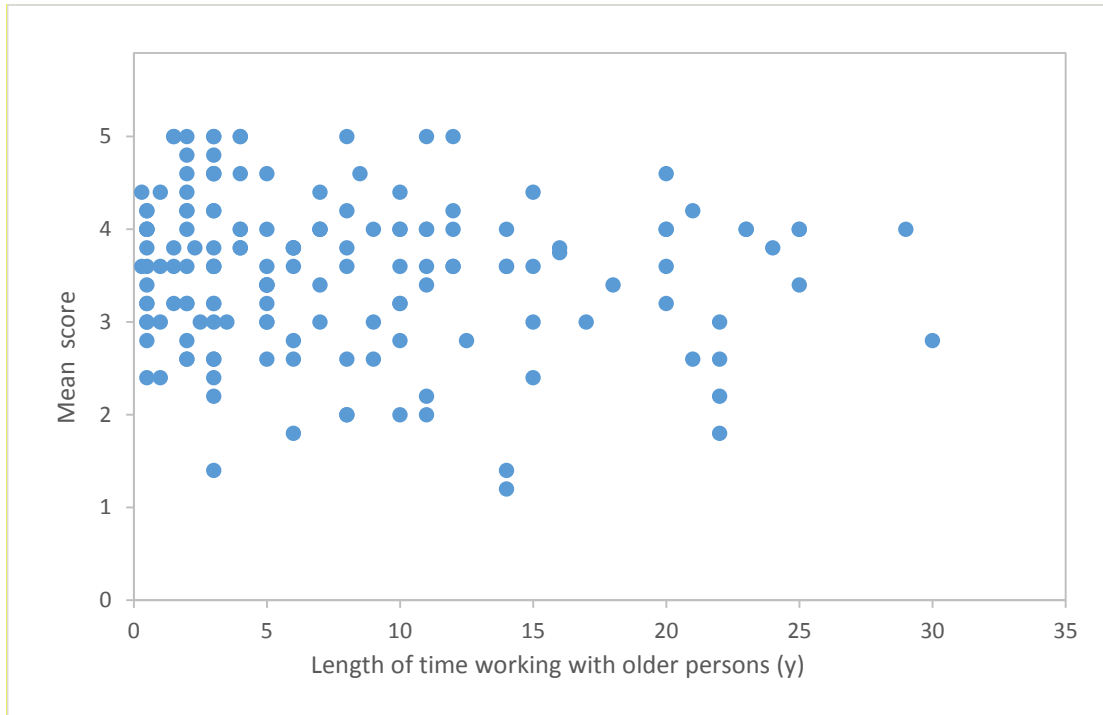


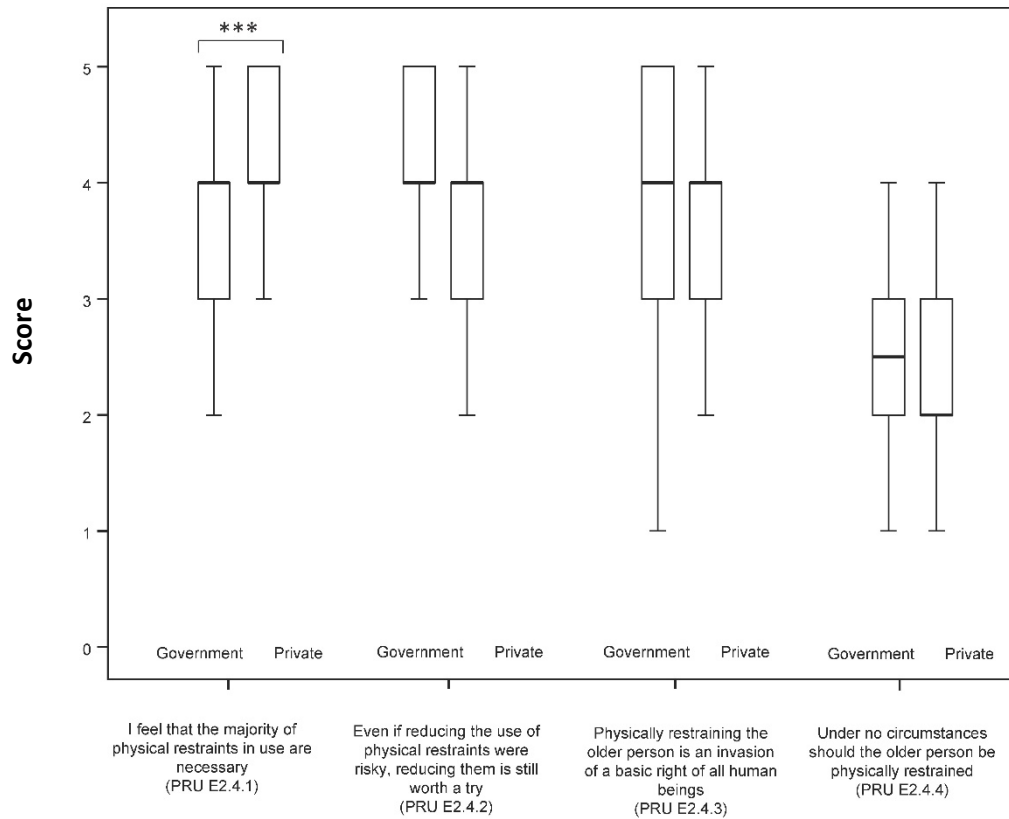
Figure 6.7: Scatter graph for the overall scores of “Safety Concerns if physical restraints were reduced” (PRU E2.3) with the length of time working with older persons. ($n=157$, $\rho=-0.100$, $p=NS$)

6.9 Staffs’ attitudes

Staff members’ concerns (PRU, E2.4.1-E2.4.4) across the 3 professional categories were analysed by the observed duration of restraint use across a 2 hour threshold and attendance or otherwise at CPD sessions. No statistical difference was reported in the answers provided by the 3 professional categories. Attendance at CPD was also not found to influence these observations.

6.9.1 Staffs' attitudes to physical restraint use

Details regarding staff members' concerns about physical restraint use and if these were influenced by whether the care home was government or privately funded were analysed. Data were stratified by government and privately care homes as well as by professional status of the respondents, (Figures 6.8 and 6.9). Analysis revealed that both care home sectors tended to favour least restraint use (PRU E2.4.1-E2.4.3) but were reluctant to abolish least restraint use completely (PRU E2.4.4). A similar trend was observed when the data were stratified across the 3 professional categories studied. Private care home respondents disagreed more than government care home respondents with the statement that the majority of physical restraints in use are necessary ($p<0.001$) (Figure 6.8) while nursing and nursing support staff showed a higher agreement with physical restraining being an invasion of a human right than did managers ($p<0.05$), (Figure 6.9).



Concerns towards physical restraint use

Figure 6.8: Scores for factors contributing to staff members' concerns towards physical restraint use within the government and privately managed care homes. High scores for E2.4.1 imply disagreement to the statement. High scores for E2.4.2 – E2.4.4 imply agreement to the statement. High scores therefore always imply reluctance towards restraint use. *** $p < 0.001$. (Mann-Whitney analysis). The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively. PRU: Physical Restraint Use questionnaire.

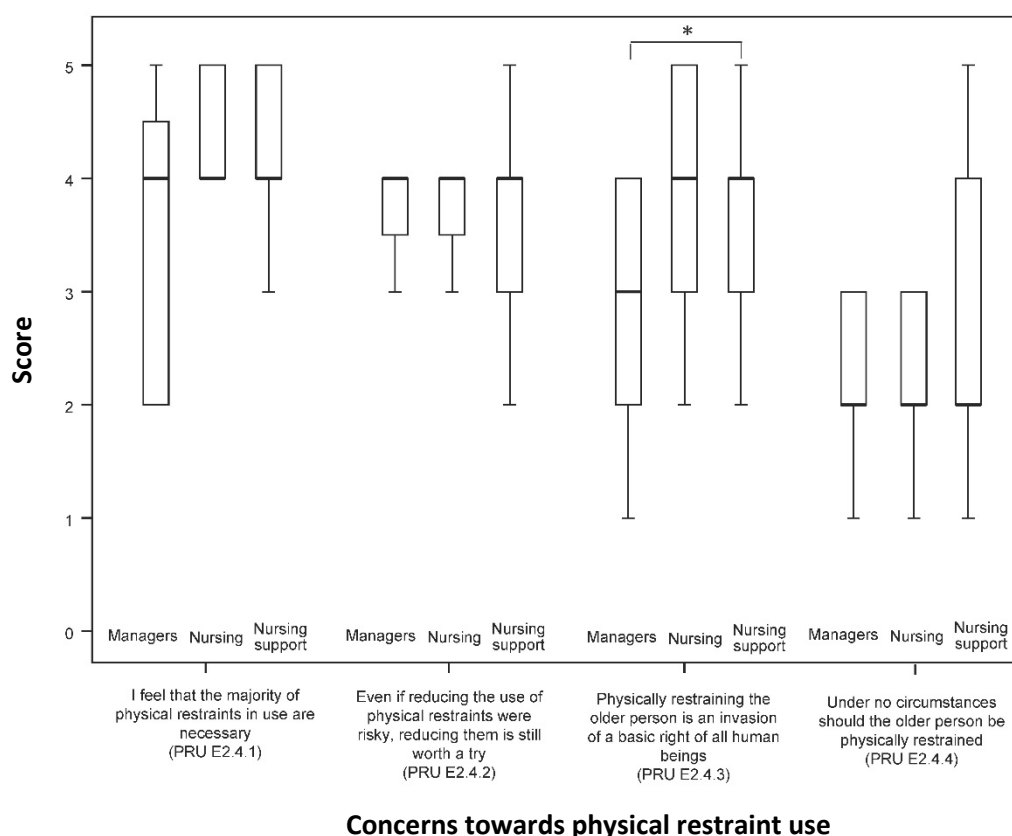


Figure 6.9: Scores for factors contributing to staff members' concerns towards physical restraint use across the 3 main professional categories. High scores for E2.4.1 imply disagreement to the statement. High scores for E2.4.2 – E2.4.4 imply agreement to the statement. High scores therefore always imply reluctance towards restraint use. $*p<0.05$. (Kruskal-Wallis analysis). The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively. PRU: Physical Restraint Use questionnaire.

6.10 Concerns related to work, environmental and staff beliefs

Analysis of Likert scores for characteristics related to, (a) *if the use of physical restraints were reduced, I would feel better about my job*, (E2.1.5), (b) *the layout of the unit where I work is suitable for restraint-free older persons to walk and move around*, (E2.2.3), (c) *I feel the majority of physical restraints in use are necessary*, (E2.4.1), (d) *Physical restraining the older person is an invasion of a basic right of all human beings*, (E2.4.3), indicated differences in the responses provided when analyses by the different professional categories ($p<0.05$, Table 6.10 and Figure 6.10). When this score was tested across pairs of professional categories, statistical significance

was only retained between managers and nurses (Mann Whitney $p<0.05$), suggesting managers to be the professional category that differed most in response to this question, with more tending to disagree. No significance difference in responses was registered between nursing and nursing support staff.

Table 6.10 Scores stratified by professional category, for pertinent concerns related to work, environmental and general staff concerns. Mann-Whitney analysis of pairs of professional categories, showed a statistical significance between managers and nurses ($p<0.05$). All Kruskal-Wallis tests had $df=2$. The mean rank values refer to Kruskal-Wallis comparisons across different professional status. IQR: interquartile range, PRU: Physical Restraint Use Questionnaire.

| Characteristic | Managers | | Nurses | | Nursing Support | | Kruskal-Wallis |
|---|----------------------------------|-----------|----------------------------------|-----------|-----------------------------------|-----------|------------------------------|
| | Median (IQR) <i>n</i> | Mean rank | Median (IQR) <i>n</i> | Mean rank | Median (IQR) <i>n</i> | Mean rank | |
| If the use of PR were reduced, I would feel better about my job (PRU E2.1.5) | 4.0 (3.5-5.0) <i>n</i> =11 | 95.5 | 4.0 (3.0-4.0) <i>n</i> =17 | 80.9 | 4.0 (3.0-4.0) <i>n</i> =128 | 76.7 | $\chi^2=1.919$, $p=NS$ |
| The layout of the unit where I work is suitable for restraint-free older persons to walk and move around (PRU E2.2.3) | 4.0 (3.0-4.5) <i>n</i> =11 | 89.1 | 3.0 (2.0-4.0) <i>n</i> =18 | 64.3 | 4.0 (3.0-4.0) <i>n</i> =131 | 82.0 | $\chi^2=2.947$, $p=NS$ |
| I feel the majority of physical restraints in use are necessary (PRU E2.4.1) | 4.0 (2.0-4.5) <i>n</i> =11 | 58.4 | 4.0 (4.0-5.0) <i>n</i> =18 | 73.9 | 4.0 (4.0-5.0) <i>n</i> =121 | 77.3 | $\chi^2=2.305$, $p=NS$ |
| Physically restraining the older person is an invasion of a basic right of all human beings (PRU E2.4.3) | 3.0 (2.0-4.0) <i>n</i> =11 | 46.5 | 4.0 (3.0-5.0) <i>n</i> =17 | 82.9 | 4.0 (3.0-4.0) <i>n</i> =123 | 77.7 | $\chi^2=6.151$, $p<0.05$ |

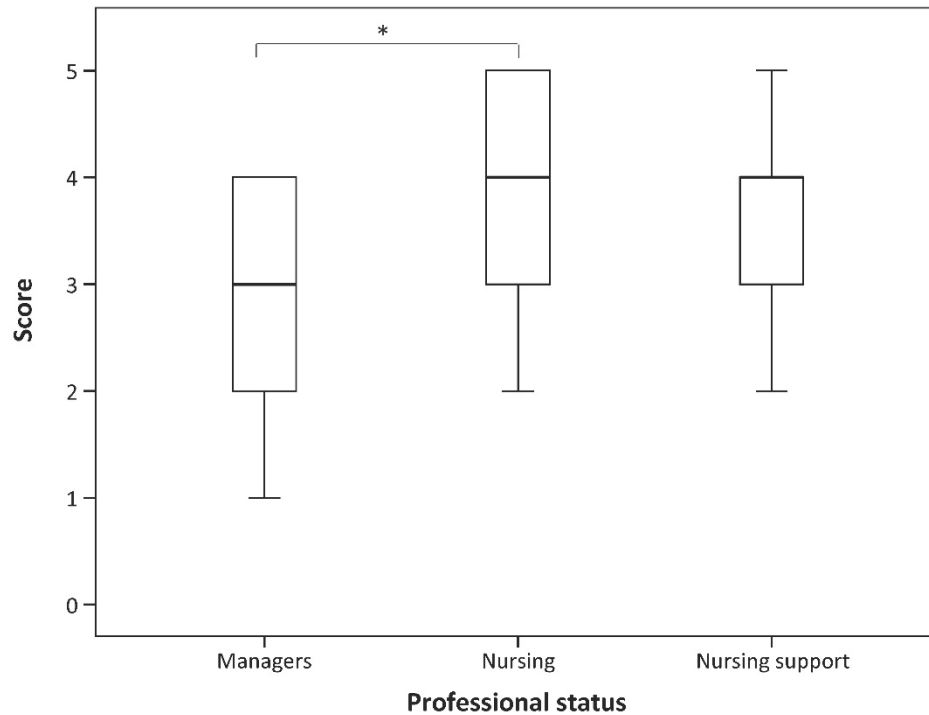


Figure 6.10: Comparison of scores of responses provided to the statement “Physically restraining the older person is an invasion of a basic right of all human beings” (PRU E2.4.3) by managers, nursing and nursing support staff. High scores imply agreement to the statement. Kruskal-Wallis, $df=2$, $p<0.05$. Mann-Whitney pairwise comparison of professional categories’ scores with Dunn-Bonferroni *post hoc* analysis, showed a statistical significance between scores reported by managers and nurses ($*p<0.05$). The middle line, box and whiskers of each variable, indicate the median, interquartile range and data range respectively. PRU: Physical Restraint Use questionnaire.

6.11 Discussion

When I originally set out to undertake this research, I had hoped to explore older persons’ reactions and perceptions when physically restrained. However, due to circumstances outside of my control this part of the project had to be discontinued. Therefore, the amount of data I was able to collect examining this topic was limited. None the less, I wanted to ensure that the experiences of the older persons were indirectly represented in the project.

Consequently, such reactions, if any, had to be indicated by the respondents themselves through the questionnaire. I therefore decided to include all reactions I had previously encountered or observed during the time I had spent ‘hands-on’ within St Vincent de Paul Residence (SVPR) and care homes. None of the reactions

indicated in the questionnaire were refuted by the respondents. This signals an acknowledgement that physical restraining does indeed elicit (a) passivity, (b) anger, (c) increased agitation, (d) withdrawal, (e) pleas for release, (f) calls for help, (g) constant attempts to untie/release self, (h) decline in cognition, (i) decline in mobility, (j) increase in the development of pressure sores, (k) increase in urine and faecal incontinence and (l) an increase in dependence in activities of daily living. In contrast to these findings, however, no evidence of adverse outcomes associated with physical restraint use were reported or discussed in any of the studies within the Cochrane review. The review evaluated the effectiveness of interventions to prevent and reduce the use of physical restraints in older persons requiring long term care, (Mohler *et al.*, 2011).

Arguably, whilst published data (Luo *et al.*, 2011; Engberg *et al.*, 2008; Castle & Engberg, 2009; and Castle, 2006) invariably associated the onset of pressure sores, continence issues and decline in cognition to physical restraint use, respondents within the local context did not corroborate these views. Indeed, overall respondents reported observations of 34.7%, 32.4% and 18.8% for continence, pressure sores, and decline in cognition respectively, (Table 6.1), with the majority of respondents more likely to report overall observations of pleas for release (71.0%), constant attempts to untie/release self (65.3%) and anger (61.9%), (Table 6.1). It may be the case that, the ‘more dramatic and resounding’ reactions from the older persons provided respondents with more tangible evidence of adverse reactions to restraint use, neglecting the equally important effects of the onset of pressure sores, continence issues and a decline in cognition.

6.11.1 The experience of being restrained

I did not include in the questionnaire booklet these positive experiences which were mentioned by Hardin *et al.*, (1993) and Strumpf & Evans, (1988). They reported on instances where the older persons indicated that the physical restraint (a) “*keeps me warm and safe*”, (b) “*keeps me from falling*”, (c) “*... they only do it for your protection*”, and (d) “*If I hadn’t been tied down, I might have gotten off the bed and I might have fallen down.*” And therefore, this does merit further exploration.

Despite this, it was clear from the information provided in this project, that physical restraint imposed considerable restrictions on the older persons. However, (1) these results could not easily be compared with published studies as these data were very subjective, and (2) no data was available with respect to passivity, anger, increased agitation, withdrawal, pleas for release, calls for help, constant attempts to untie/release self, in the published literature.

The observations for these reactions per care provider were marginally higher for government care homes when compared to their private counterparts, (Table 6.1). An important issue emerging from these findings is that notwithstanding the subjectivity of the results, the identified statements probably reflected older person’s negative experiences when physically restrained. Indeed, categorisation of reactions by older persons physical restraint reported by government and privately managed care homes identified restlessness and physical and cognitive consequences as the mostly negative observed reactions (88.6% and 68.8% respectively), (Table 6.3). Similarly, Cook (2010, 2008, and 2007), Schirm and Hill (1996), Schirm *et al.*, (1993) and MacLean *et al.*, 1982, recognised that adverse psychological and emotional consequences to the

older person independence, dignity and comfort were unfortunate outcomes of physical restraint use. A lack of infrastructure to support care providers in reducing physical restraining could be a contributor to this observation.

Evans *et al.*, (2002b) pooled their findings from individual studies through themes of restriction and discomfort elicited by the older persons themselves. They indicated instances of,

- (a) *“I couldn’t move at all to do what I wanted or needed. I couldn’t even bring my hands together.”* (Restriction of movement)
- (b) *“after a while ... I gave up, I became a mouse.”* (Passivity)
- (c) *“I can’t give orders now, only take them ...”* (Loss of control)
- (d) *“Just like being harnessed up like a mule.”*
- (e) *“I feel it across my chest and I feel pain.”* (Discomfort)
- (f) *“... too tight.”* (Discomfort)

An important potentially worrying issue emerging from these findings is that higher observed reactions were reported for government managed care homes having a low older person/care provider ratio, (Table 6.4). One might expect the reported observed reactions would be lower in homes with high ratios, if one accepts care providers’ arguments that sufficient numbers of care providers should reduce the need for physical restraints. Adequate numbers of care providers within the government care homes (as the ratios are implying) should (a) improve the safety of the older person, and (b) prevent the older person from wandering, thus reducing the need for physical restraint use. Moreover, attendance to CPD sessions did not influence the observed number of reactions suggesting training has little or no influence on this issue.

6.12 Attitudes and concerns associated with physical restraint use

Many reasons are cited in the literature regarding why older persons are physically restrained in residential care facilities. Generally, care providers, were reluctant to forfeit or avoid restraint use within the care homes. This, they contended was appropriate, maintaining that restraining actually elicited no feelings of discomfort, as its purpose was perceived as a safeguard for the older person, rather than as a ‘controlling measure’, (Mohler and Meyer, 2014; Tolson & Morley, 2012; Hamers *et al.*, 2009; Neufeld *et al.*, 1999). Rather, care providers were reported to use coping strategies when deciding in favour of physically restraining.

In their systematic review, Evans *et al.*, (2000b) reported on findings from major studies that identified reasons for physical restraint use, as being more beneficial to the care provider or the care home rather than the residents. The most common reasons related to reducing legal liability of the care provider and to compensate for understaffing. However physical restraint was also used to enable work schedules to be completed, Retsas & Crabbe, 1997; Retsas, 1997a; Retsas, 1997b; Retsas, 1998a; Retsas). Evans *et al.*, (2000b) also reported on social group issues as potential reasons in 30% of studies. Reasons included preventing interference with other residents and maintaining the peace and harmony of the living and work environments, (Retsas, 1997b; Retsas, 1998a). Successively, Evans *et al.*, (2000b) and Maggee *et al.*, (1993) also cited reasons relating to the prevention of treatment interference or the protection of medical devices. Factors associated with the care of the older person were the most commonly cited reasons for using physical restraining. Evans *et al.*, (2000b) grouped these reasons into safety, agitation, behaviour control, wandering and support. Karlsson *et al.*, (2001, 2000, 1998) cited reasons primarily related to the prevention of

falls and injury, unsteadiness, and merely for the protection and safety of the older persons. Koch *et al.*, 2006 and also in 1993 reported that physical restraining was used to manage agitation and disruptive behaviours, and restraining older persons to protect other care providers and older persons. Hantikainen, (2001), Hantikainen & Kappelli (2000), Karlsson *et al.*, (1998), Hantikainen (1998), Maggee *et al.*, (1993) and Tinetti *et al.*, (1991) also cited reasons for restraining older persons related to confusion and dementia, the promotion of the older person's well-being and behavioural control, and to prevent wandering.

The results presented in this chapter indicate that in the Maltese care homes studied, there are also a number of perceived barriers which would potentially prevent reduction in physical restraint use. Care providers' concerns as well as staff attitudes revealed an overall high level of concern towards restraining older persons, however show reluctance to restraint-reduction. Nonetheless, the greater the tendency for participants to express concerns related to their caring roles, the more did these same respondents agree with not restraining older persons, (Table 6.10).

6.12.1 Safety and work concerns

When care providers registered *safety concerns* as a reason for not reducing restraint use, this was correlated with the presence of mobility, weight-bearing, balance factors or problems associated with ADLs (PRU, D1.1). There were also concerns relating to orientation, comprehension, behaviour and mood, (Table 6.6). Care providers registering high *work concerns* also tended to favour restraint use when the older person had cognitive problems, (PRU, D1.5) (Table 6.6).

One issue of potential concern is that when care providers registered *safety concerns*, their reported support for physical restraint use in older persons when they were unable to actively participate in social activities (PRU, D1.6) increased. If the older person can participate in social activities, albeit with assistance, one questions whether perceived safety issues take precedence given that social participation is synonymous with freedom of movement, (Table 6.6). Indeed authors have suggested that such a situation may be conducive to abuse, (Mohler *et al.*, 2012; Lane and Harrington, 2011; Evans *et al.*, 2005). Potentially, this lends towards indications by Meyer *et al.*, (2009) and Hamers and Huizing (2005) that believed that the ‘philosophy’ or ‘culture’ of care (that is, attitudes and beliefs of care providers) had a strong impact on the use of physical restraining. This argument potentially pushes in favour that physical restraining *per se* is a decision more likely to be influenced by the care providers’ attitudes rather than forms of educational programmes, (Mohler *et al.*, 2012; Mohler *et al.*, 2011). Staff attitudes scores (PRU, E2.4), revealed the lowest median of 3.5, supporting the claim that respondents’ disposition towards restraint reduction was of an uncertain outlook, displaying huge disagreements, (Table 6.5).

Analysis across government and privately managed care homes, showed the latter to express slightly higher work concerns ($p<0.05$) and lower positive feelings ($p<0.01$) than the former if restraining were to be reduced (Table 6.8). The differences seen were relatively small, but if confirmed in other studies this is an area which would need to be addressed.

Unsurprisingly, nursing support staff were the care provider category who expressed the higher work concerns should restraint reduction be considered, (Table 6.9), possibly because of longer contact hours with the older persons.

6.12.2 Reported characteristics that may influence restraint of the older person

The salient parameters that I considered to be of relevance in the daily routines of the care homes included, (a) reducing the use of physical restraints might increase the care provider's workload, (b) the layout of the unit might not be suitable for restraint-free older persons to walk and move around, (c) the older person might feel more secure if physically restrained and (d) the older person might be more likely to wander if the use of physical restraints were reduced. The results obtained show indeed that these factors could act to prevent reduction in physical restraint use, especially in those residents who were perceived to be at higher risk, for example due to mobility issues (Table 6.7) There could be concern over liability issues or the need to increase supervision should restraints be reduced, (Schirm *et al.*, 1993).

6.13 Conclusion

This chapter partially explored the care providers' observations of the older persons' reactions to restraint use and the secondary effects of restraint use on the physical and cognitive well-being of the older person. There are very few published data examining this issue, possibly because it is potentially a politically sensitive area. The data provided in this chapter is an indicative that additional work is required to explore this subject further.

This chapter also analysed work, environmental, safety concerns and staff attitudes to reduction in physical restraint use within the context of Maltese care homes. Care providers' concerns as well as staff attitudes, revealed an overall high level of concern towards restraining older persons, but show reluctance to restraint-reduction. Clearly, any attempts to reduce the use of physical restraint in Maltese care homes will need to bear these concerns in mind. It is particularly interesting in this respect that attendance at training did not seem to be an influence on carer attitudes, suggesting alternative ways of reducing concern may be needed.

Chapter 7

Discussion and conclusion

7.0 Introduction

Restraining older persons in residential care is an important issue as it has implications for safety, resource usage and observation of basic human rights. The subject is a sensitive one, and when subject to public scrutiny can have political implications. This chapter is a summary of the main findings of this research that saw an investigation of physical restraints and their use within government and privately managed care homes within Malta. It is a synthesis of the more pertinent data emerging from chapters 4 to 6.

The study I undertook set out to explore physical restraint use within Maltese care homes through analysis of care providers' observations and perceptions. I obtained a clearer profile of the types of restraint devices which were in use, their modalities and frequency of use. The project analysed the observations of care providers regarding older person characteristics which might influence use of physical restraint as well their perceived reactions to the use of physical restraining. Finally, care providers responses provided a perspective of the effects of physical restraining as perceived by this group of workers on the older person's basic individual rights.

In addition to providing a summary in the context of what is known from other countries, I have put forward suggestions and implications for future research. Ultimately I hope this could lead to the setting in motion of sound guidelines, and standard operating procedures with respect to the use of physical restraining within care homes in Malta. This may have implications for future training. The strengths and weaknesses of the project are also discussed in this chapter.

The project contributed to the body of knowledge on the use of physical restraints in general as well as specifically in Malta. In particular, major conclusions from my work included,

- (a) A high observed incidence of physical restraint devices particularly bed rails and harnesses, leading towards recognising bed rail as a restraining device,
- (b) The use of 16 different types of devices, pointing to potential use of multiple restraining,
- (c) Observed total duration of physical restraint use in excess of 2 hours which raised questions as to the use of continual application of the devices,
- (d) Definition of the processes which led to the use of physical restraint use, that is, person recommending, explaining, and monitoring the device in use and deciding to remove and documenting use of the device,
- (e) Defining that care providers' attitudes towards restraint use were the strongest advocates for using physical restraints within care homes, rather than mobility and physical limitations, cognitive problems, continence issues, problems with communication/hearing/vision and activity participation and pharmacological treatment therapies,

- (f) A lack of certainty amongst respondents as to the possible consequences relating to patterns of work, infrastructure changes, safety and care provision, should restraint be reduced,
- (g) A surprising observation that training did not appear to impact on the use of restraining within the care homes,
- (h) Some lack of recognition that physical restraining could impinge on an older person's fundamental human rights.

7.1 The original project and reasons for its abandonment

My initial intention was for a healthy exchange of ideas on the use of physical restraining between the major stakeholders (older persons, their family members and care providers), to focus and highlight the importance of careful consideration and exhaustion of alternatives prior to actually restraining. The interview 'Physical Restraint Interview' (PRI) scheduled for use to collate the data was primarily the result of major contributions from the care providers themselves, salient indicators on the issue of restraining which they themselves had considered to be essential for a more comprehensive picture on the topic. The PRI was successively enhanced by highlights from the systematic review of Evans *et al.*, (2002b), which comprised over 100 published studies.

However, the initial project, which was to have been based in a large care facility, had to be abandoned because the relevant care providers found it unacceptable. This also led to the involvement of trade unions to enforce forfeiture and accentuates the potential difficulties of working in this subject area. This highlights the sensitivity surrounding the topic of physically restraining older persons and underscores the

importance that more research is necessary to understand the paradigms of care homes within the context of physical restraint use.

The 'hands-on' approach taken with care providers was not enough to curtail any concerns they might have had which at a later stage were partially fuelled by trade unions' involvement. After discussion, the trade unions and care providers indicated their belief that a more detached approach was required if the project on the use of physical restraining was to be taken to completion. Therefore, I decided to explore the topic through observations and reports of care providers. This approach also circumvented the potential ethical issue: at the time the project commenced there was no formal mechanism to obtain ethical approval for a study of this nature involving care home residents, and because the revised approach did not require direct contact with residents or access to their medical records, potential ethical objections to the study could be avoided. However, the lack of input from residents themselves has to be acknowledged as a limitation, in that the main stakeholders' (older persons) opinions, perceptions and experience on the use of physical restraining were not directly voiced. More so, trade unions also requested that the original proposed setting for the project be changed. These requests were known to the care providers and even though the location for the second project was changed, potential respondents may still have been adversely influenced.

The completed study comprised the design and development of the Physical Restraint Questionnaire (PRU). The questionnaire booklet, also included open ended questions within 2 sections (PRU 2.5 and 2.6, Appendix VI and VII), inviting care providers to discuss their (a) perceptions on physical restraint use in association with their work environments, and (b) opinions should a ‘Least Restraint Use’ policy be introduced in the care homes. None of the respondents filled in these sections, possibly suggestive of the influence and impact trade unions’ involvement had had on the project.

7.2 Training and physical restraint use

Higher/lower care provider/older person ratios and a high attendance to training within government and privately managed care homes, (76.1% and 77.4% respectively), did not impact care providers’ approaches to physical restraint use within the care homes. Given that a high incidence of observed physical restraint use was registered, this tends to refute the assumption that training impacts on restraint use reduction. These are important findings which do not completely mirror international evidence indicating the necessity of training as a measure to combat restraint use. Abraham *et al.*, (2015) have recently reported that through appropriate training sessions they were expecting a significant clinical reduction in the proportion of residents with physical restraints. The believed that a *‘guideline-based multicomponent intervention programme’* and training outcomes would enrich the knowledge on the *‘facilitators and barriers for the implementation of the multicomponent intervention programme’* aimed at reducing use of physical restraining.

Indeed, of major significance is that whilst within the international context, (Goethals *et al.*, 2012; Ludwick *et al.*, 2012; Mohler *et al.*, 2012 and Amin *et al.*, 2010), researchers have generally sought to promote and call for measures that put on the front line the older persons' perspectives pertaining to physical restraint use, the local scenario ensured measures that eliminated the older persons' involvement in the study. International fora, (Hughes, 2008a; Hughes, 2008b, Hughes, 2008c, Hughes, 2008d, and Hughes 2008e), also promoted support for care givers thoughtful and appropriate decisions to restraint use, recognising their expertise and capabilities towards implementing least restraining measures. However, there is a very weak evidence base to demonstrate the effect of education: indeed, the most recent Cochrane Database Systemic Review found no evidence that education programmes were an effective intervention, although there were very few studies of a high enough quality to be included (Mohler *et al.*, 2015).

For the re-designed study I listed and investigated all devices I had observed in use during my years of clinical practice. I found relatively high levels of use within the care homes. Of significance is that this high incidence of observed use by government and privately managed care homes could also be attributed to multiple use of restraining. Both the high observed incidence of restraint use as well as the questionable use of multiple restraints could not be corroborated with past and current international works, as locally, data was only available through care providers' observations. Nonetheless, the reported observations are indicative of a high incidence of physical restraint use, (particularly within privately managed care homes) notwithstanding that no comparisons could be effected between care providers' observations of physical restraint use and the actual numbers of devices in use. There

are surprisingly few studies from other countries which have set out to determine the rates of use of physical restraint within care home settings. Probably the best study is from Switzerland. In this study, rates of physical restraint use varied markedly between homes (ranging from 2.6% to 61%, with an average of 26.8% of residents having been restrained, (Hoffman *et al.*, 2015). Future research should concentrate and consider the incidence of the actual numbers, in order to determine the proportion of restrained older persons within the local scenario.

Of note is the array of devices in use although reported observed use varied between homes. Considering that the local numbers of care homes and subsequent older person residents are small when compared to those internationally described, the range of devices (16 devices) is of importance. Interestingly, international reviews, (Meyer *et al.*, 2008, Hamers, 2004, Kirkevold & Engedal, 2004a, Kirkevold, *et al.*, 2003, Karlsson *et al.*, 2001, Hantikainen, 1998; Ljunggren *et al.*, 1997, Karlsson *et al.*, 1996, Lever *et al.*, 1994, Tinetti *et al.*, 199), made no reference to (a) sheets, (b) wheelchair straps, (c) lifter straps, (d) boxing gloves, (e) low/high armchairs and (f) tilted wheelchairs/ armchairs, used within the local care homes.

Significantly, bed rail use was the device recorded by respondents to be the most prevalent in use. A higher reported use was registered in the privately managed care homes as compared to that government managed. It may be that some care workers do not recognise the use of bed rails as a physical restraint. These indications are similar to what proposed by Hignett *et al.*, (2013), O’Keeffe, (2013), Chiba *et al.*, (2012), Chaves *et al.*, (2007) Laurin *et al.*, (2004), Parker and Miles (1997), Kirby and Ackroyd-Stolarz (1995), Rubinstein *et al.*, (1983) and Creighton (1982), that bed rails

have potentially become the accepted norm within long term care environments. Further research is advocated.

Another important finding is the reported high observed use of partial bed rail observations by managers (81.8%), which was higher than for nurses (50.0%) and nursing support staff (38.97%). Both government and privately managed care homes at the time of the study did not avail themselves of partial bed rails. These conflicting results raise pertinent questions as to (a) management and care providers ‘under the same roof’ may not share the same views on the use of a particular device, (b) again, the effectiveness and impact of training. One obvious issue is the ability of different staff categories to ‘recall’ depending upon the amount of contact time they have with residents.

As discussed above, there is little evidence that training influences restraint use at present, but it seems highly likely that training could be important. Possibly it fails currently to focus on reflective practices, recognising that feelings of conflict could be endorsed by care providers when considering restraining or otherwise. Potentially, training was presented as a ‘state of the art’ with few alternatives that care providers could relate to or implement. Indeed, training has to strike a balance between the current practices where knowledge on physical restraint use is acquired through ‘tenacity’ and that acquired through a balanced combination of education, expert clinical consultation with older persons, family members, and care providers resulting in the implementation of evidence-based guidelines.

7.3 Modalities of use

This study adds to the body of knowledge around processes underlying restraint use namely the person (a) recommending, (b) explaining, and (c) monitoring/removing restraint use. Published literature was devoid of investigations into these modalities and their associations to physical restraint use.

The private sector when compared to the government care homes, registered a better older person/care provider ratio (overall older person/care provider ratio for government care homes of 3.8:1 vs. an overall ratio for private care homes of 3.1:1), (Chapter 4, Table 4.8). Further in-depth analysis into why despite registering better staff complement, private care homes reported observed restraint use one and a half fold more than their government counterparts is required. It was expected that fewer older persons to each care provider would imply a less need for restraining.

Further to this issue is the restraint duration over a 24 hour time frame. More respondents within privately managed care homes reported restraint durations in excess of 12 hours, than did those in their government-managed counterparts. Both government and privately managed care homes reported exceeding a 2 hour threshold. Although the continual application of a device was not directly investigated in this study, however, data pertaining to the private care homes points to potential *continual* application of restraint devices. Indeed this prolonged physical restraint use (older persons restrained during day, evening shift and potentially at night) corroborates data from published studies, (Evans *et al.*, 2003, 2002b).

A major contributory argument by nursing and nursing support staff colleagues targeting the original project and forcing its forfeiture had cited fear that *restraint use was never documented within the older person's medical file*. Curiously however, analysis throughout both care home sectors now revealed that a strong 85.0% of respondents *had ascertained documentation of restraint use* in the older persons' medical files or 14.8% of respondents across both home categories indicated *a lack of documentation* in the older person's medical file, (Table 5.14).

In general, comparisons of processes surrounding of physical restraint use (person recommending, explaining, monitoring and deciding, and documentation), showed a consistent (statistically significant) higher involvement of management in all of the procedures related to physical restraint use except documentation within the private sector. Additionally family members/SDM had a greater influence on recommending restraint use and the decision to remove the restraining device within privately managed care homes. Nursing support staff offered a greater contribution to monitoring, documenting restraint use in private than in government managed care homes, whilst nurses in government homes contribute more to monitoring restraint use than their professional counterparts within private homes. Within the international context, physical restraint modalities require further inquiry.

7.4 Characteristics and older persons' reactions to restraint use

Another important finding emerging in this study is that care providers' attitudes towards restraint use might be the strongest advocates for using physical restraints within care homes. This differed from indications in published literature where references to mobility and physical limitations, cognitive problems, continence issues, problems with communication/hearing/vision and activity participation and pharmacological treatment therapies were associated with increased tendencies to restrain the older person, (Huizing *et al.*, 2007; Cheung & Yam, 2005; O'Keeffe, 2004; Sullivan-Marx *et al.*, 1999; Castle & Mor, 1998; Ljunggren *et al.*, 1997; Capezuti *et al.*, 1996; Karlsson *et al.*, 1996; Burnton *et al.*, 1992). Further investigation is warranted as to how characteristics of restrained older persons differ from characteristics of older persons who were not restrained.

The need to partially re-design the project meant that the experiences of physically restrained older persons could not be directly assessed. A major limitation in the project is therefore that these experiences could only be explored through care providers' perceptions. Subsequently I attempted to bridge this gap using observations of older persons' negative reactions or associated health decline which I had encountered during my clinical years in the field. An important issue emerging from these observations is that notwithstanding the subjectivity of the results, the identified statements probably reflected older person's negative experiences when physically restrained. The reported observed reactions were in accordance to published literature. Further research should concentrate on potential positive experiences associated with physical restraint use.

An important potentially worrying issue emerging from these findings is that higher observed reactions were reported for government managed care homes having a low older person/care provider ratio. One might have expected that the reported observed reactions would be lower in homes with high ratios, if one accepts care providers' arguments that sufficient numbers of care providers should reduce the need for physical restraints.

7.5 Concerns and attitudes and restraint reduction

Care providers' concerns as well as staff attitudes revealed an overall high level of concern towards restraining older persons; however showed reluctance to restraint-reduction. Nonetheless, the greater the tendency for participants to express concerns related to their caring roles, the more did these same respondents agree with not restraining older persons. Current findings, subscribe to what is being reported in the literature, (Hamers *et al.*, 2009; Landers and McCarthy, 2007 and Neufeld *et al.*, 1999). Of particular concern is that managers as opposed to nurses and nursing support staff seemed uncertain as to restraining being an invasion of a human right. Further research should concentrate on the administrative/managerial contexts within the issue of physical restraint use as this was found to be lacking in the published literature, which mostly focused on nurses and nursing supports staff.

Significantly, when care providers registered *safety concerns*, their tendencies to physically restrain older persons should they be unable to actively participate in social activities increased. Indeed, one questions the relevance of restraining when the older person is unable to participate in social activities. If the older person can participate in social activities, albeit with assistance, one questions the safety issues moreover when social participation is synonymous with freedom of movement.

Government and privately managed care homes, showed the latter to express higher work concerns and lower positive feelings than the former if restraining were to be reduced. This creates a situation which needs to be addressed. Indeed, nursing support staff was the care provider category who expressed the higher work concerns should restraint reduction be considered. In general and in agreement with international fora, care providers were particularly concerned of an increase in liability issues and increase in supervision should restraints be reduced.

7.6 Further strengths, weaknesses and future research

Despite the difficult circumstances which forced the redesign of this research project I was able to take this project to completion. This is the strongest asset of the study in that the outcome of this thesis significantly added to the body of knowledge surrounding the use of physical restraining both internationally and more importantly locally in Malta.

Similarly, the design of this study was unique. The project *per se* merited the direct involvement of the older persons. Exploring an issue of particular concern to the older persons through the observations of other stakeholders was a major limitation, as the

human and humane elements of the older person associated with restraint use was not captured. To me, it is obvious then that respect for the older person's individual autonomy is a far cry from what policy makers, administrators, management, trade unions and care providers profess.

My initial intention was to study and explore how physical restraining affected the older persons. Re-designing the project meant that the effects and reactions of restraint use and consequently how its use impinged on the older person's rights, autonomy and integrity, could only be investigated through care providers' perceptions. Indeed, the process this project was obliged to go through, from initiation, to completion is a huge contribution towards the questionable respect for the older person's autonomy and choice. "*When one flower blooms, it is spring everywhere*", (O'Donohue, 1977, cited in McCormack, 2005). Indeed, this research is a confirmation of how policy makers, administrators, management, trade unions and care providers' actions and behaviours, actually mirrors respect for the older person. As aptly underscored by O'Donohue, 1977, "*to age well is to keep something beautiful in your heart.*" Consequently, the necessity for 'honest' investigation of the impact of physical restraint use on the personhood and mental well-being of the older person is none other than essential. Action, other than words are a must.

7.7 Potential statistical weaknesses

For some of the analyses presented, the small numbers of respondents might have compromised statistical power which could have led to missing associations which could have been seen in a larger sample. Furthermore, since initial Shapiro-Wilke testing determined variables to be non-normally distributed, it was imperative to use a non-parametric approach to analysis. Such approaches are known to be less powerful than parametric approaches, and are more likely to be prone to false negatives than the latter. The non-normality of data, could therefore also have contributed to loss of statistical power.

The study generated many different analyses from the general questionnaire dataset. This obviously means that multiple testing could have led to false positive associations being found. I tried to deal with this by using multiple pairwise comparisons of categorised sub-groups: these were carried out using *post hoc* Dunn-Bonferroni corrections in order to minimize false positive statistical outcomes. However, the multiple combinations of analysed data could still have generated spurious false positive associations.

In order to enhance statistical power, an ideal dataset should ideally,

- (a) Be as large as possible in terms of respondent numbers,
- (b) Be normally distributed, or approach normality as closely as possible, in order to justify parametric analysis,
- (c) Be condensed into specific domains for analytical purposes.

However with respect to these suggestions, (a) the study address *all* care homes that fell within the selection criteria, rather than a sample, so samples size could not have been increased by the researcher, (b) the data distribution pattern was not within the control of the researcher, and (c) data condensation was carried out for large sections (e.g. comparisons involving PRU C2 to C7), however analysis of individual questions was also carried out where this was considered to provide a necessary data outcome.

7.8 Conclusion

Care and service provision within care homes is a team approach with the older person at the centre. I believe that older persons, management and care providers are all leaders within the care home, should room be made available for the development of a top-bottom/bottom-top approach. This should not be interpreted as providing for anarchy or rather an idealistic observation and mentality. As expected, 'true' leadership entails the discreet visionary of a manager or management who directly/indirectly inspires and empowers care providers and others within the care home to turn this vision into reality and action, no matter the frailty and vulnerability of the older persons who require care provision.

It is obvious that sensitivity towards physical restraint use is high. There is a gap between the training that is delivered, its interpretation and implementation. The subtle demands posed by partisan politics, partisan influenced administrations and trade unions/trade union officials alike potentially threaten the harmony within the respective care homes. Forfeiture of the original project could possibly be but one such example.

These conclusions are significant and must be carefully considered, more so when care homes are unable to engage proactively older persons, family members and care providers to value care provision and relationships and embody the core values of all individuals within the care homes.

The major aim of this project was to develop an understanding of how physical restraint use impinges on the older person. The original motivation behind the project came for a professional and personal interest towards developing a better understanding of the experience when physically restrained. The personal experience of physical restraint use is underexplored both within the local context and also internationally. Subsequently, more research reflecting and exploring this diversity from other cultural backgrounds is essential, whilst specifically targeting older persons with cognitive difficulties.

Frail and vulnerable older persons must be involved in decisions about their own care but this involvement must not be over-ridden because of their fluctuating ill-health and disability, understanding and expectations or because of the possible involvement of 'third parties'. It must not be overcome by the structure and organisation of the

services within the care home that includes the attitudes of care providers. It is not unreasonable to expect older persons to be involved in their care to the same extent all the time. This highlights the complexities and challenges faced in building and enabling partnerships within the environments of the care homes. Such competing demands have strong implications for policy development and need the careful consideration of policy makers and care providers alike. Only then can the effective and efficient services be delivered to the older persons within the care homes.

When I embarked on this project, I had no idea of the roller coaster ride and the journey of discovery that would follow. During my clinical years I had the opportunity to experience the effects of physical restraint use. I had the privilege of relating to this through older persons within long term care, who in the most difficult and taxing circumstances managed to ‘hang on’ to *who they really were* rather than to *who they were perceived to be*. This work must not stop here. An enabling comprehensive approach to working with older persons in later life is the focus for their care.

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Appendix I

The Barthel ADL Index

Modified Barthel Index

(Notes in parenthesis are to facilitate application)

Personal Hygiene

1. The patient is unable to attend to personal hygiene and is dependent in all aspects.

[Patient is totally dependent on assistance to brush teeth/denture, comb hair, wash hands, wash face, shave and/or apply make-up.]

2. Assistance is required in all steps of personal hygiene.

[Patient may complete one or two of the above activities. Generally requires assistant to provide more effort than self for each of the activities, loosen dentures, shave etc.]

3. Some assistance is required in one or more steps of personal hygiene.

[Assistance is required in applying make-up, help to wash one hand, help to apply pressure to brush teeth, shave under chin, comb back of hair, help to dry one hand. Needs constant cueing or coaxing to complete tasks.]

4. Patient is able to conduct his/her own personal hygiene but requires minimal assistance before and/or after the operation.

[There may be concerns about safety such as plugging in plug, fixing a razor blade, hot water or some assistance may be required with set up and/or tidy up or smoothing smudged make-up.]

5. The patient can wash his/her hands and face, comb hair, clean teeth and shave. A male patient may use any kind of razor but must insert the blade, or plug in the razor without help, as well as retrieve it from the drawer or cabinet. A female patient must apply own make-up, if used, but need not braid or style her hair.

[Patient can perform all personal hygiene tasks independently and safely.]

Bathing Self

1. Total dependence in bathing self.

[Patient is totally dependent in bathing self, or bathing is not performed or drying all parts of the body is not performed.]

2. Assistance is required in all aspects of bathing.

[Patient requires assistance and direction in all aspects of bathing. Maybe able to wash chest and both arms.]

3. Assistance is required with either transfer to shower/bath or with washing and drying; including inability to complete a task because of condition or disease, etc.

[Assistance is required with either transfer to shower/bath or washing/drying. Help with bathmat, soap, towel, wash cloth, upper and/or lower limbs may be required. Patient may need cueing, coaxing and supervision.]

4. Supervision is required for safety in adjusting the water temperature, or in the transfer.

[Bathing may take more than three times the normal time. Assistance may be required to set up bathing equipment, the water, washing material, etc. Some prompting or supervision with transfers may be required.]

5. The patient may use a bath tub, shower, or take a complete sponge bath. The patient must be able to do all the steps of whichever method is employed without another person being present.

[Patient may use specialised equipment, long-handled sponge to wash legs and feet. Patient is able to complete all steps independently, and may take up to twice the normal time to complete the tasks.]

Feeding

1. Dependent in all aspects and needs to feed.

[Patient only chews and swallows food while an assistant scoops and brings it to mouth. Maximum help with tube feeding such as pouring, connecting, purging, regulating the rate is required.]

2. Can manipulate an eating device, usually a spoon, but someone must provide active assistance during the meal.

[Patient can bring food to mouth but an assistant scoops all food onto the utensil.]

3. Able to feed self with supervision. Assistance is required with associated tasks such as putting milk and sugar into tea, adding salt and pepper, spreading butter, turning a plate or other "set up" activities.

[Patient scoops food, brings it to mouth, and eats. May need assistance with pouring, drinking, opening containers and/or cutting meat, with application of cuff, orthosis, prosthesis. Assistance with set up is required. Standing by cueing, coaxing and supervision throughout meal may be required for possible choking and eating in a hurry.]

4. Independence in feeding with prepared tray except assistance may be required to cut meat, open milk carton, jar lid etc. Presence of another person is not required.

[Longer than usual time is taken to eat. There may be some concern for safety due to quality of swallowing or may require modified food for consistency, but no further help from assistant is required.]

5. The patient can feed self from tray or table when someone puts the food within reach. The client must put on an assistive device if needed, cut the food, and, if desired, use salt and pepper, spread butter etc.

[The patient is able to use spoon, fork, cup, glass, long straw, adapted devices, cuff, opens containers, pours liquid, and cuts meat with no risk. No help required.]

Toilet

1. Fully dependent in toileting.

[Patient is dependent in all aspects of toileting.]

2. Assistance required in all aspects of toileting.

[Patient requires maximal assistance with transfers, clothing adjustment, use of toilet paper and perineal hygiene.]

3. Assistance may be required with management of clothing, transferring, or washing hands.

[Supervision and assistance with transfer/balance while washing hands, adjusting clothing, with zipping/unzipping fly/skirt, may be required.]

4. Supervision may be required for safety with normal toilet. A commode may be used at night but assistance is required for emptying and cleaning.

[Supervision for safety, initial preparation such as handing the patient the toilet tissue may be required. May use commode at night. Prompting and cueing to locate toilet may be required.]

5. The patient is able to get on and off the toilet, fasten and unfasten clothes, prevent soiling of clothes and use of toilet paper without help. If necessary, the client may use a bedpan or commode, or urinal at night, but must be able to empty it and clean it.

[Patient adjusts clothing prior to using the toilet, wipes front or back, approaches, gets on and off the toilet, adjusts clothing after using the toilet, and fastens clothing. Can use required equipment such as tongs, dressing stick, zipper-pull, or grab bars. Maintains balance and is safe.]

Stair Climbing

1. The patient is unable to climb stairs.

[The stairs imply a flight of stairs.]

2. Assistance is required in all aspects of stair climbing, including assistance with walking aids.

3. The patient is able to ascend/descend but is unable to carry walking aids, and needs supervision and assistance.

4. Generally, no assistance is required. At times, supervision is required for safety due to morning stiffness, shortness of breath, etc.

5. The patient is able to go up and down a flight of stairs safely without help or supervision. The patient is able to use hand rails, cane or crutches when needed and is able to carry these devices as he/she ascends or descends.

[Patient adjusts clothing prior to using the toilet, wipes front or back, approaches, gets on and off the toilet, adjusts clothing after using the toilet, and fastens clothing. Can use required equipment such as tongs, dressing stick, zipper-pull, or grab bars. Maintains balance and is safe.]

Dressing

1. The patient is dependent in all aspects of dressing and is unable to participate in the activity.

[Patient may lean forwards, backwards, may be able to use bed side rails, may thread a sleeve or bring a garment together, but the assistant dresses client totally. If patient wears a gown, the score is 0.]

2. The patient is able to participate to some degree, but is dependent in all aspects of dressing.

[Patient requires maximal assistance in set up dressing. Patient may wear a sweat shirt on his upper body and thread the sleeves, but assistant brings it over the head. Patient can thread bra straps but the assistant fits and fastens the

bra hook. Patient may assist pulling the pant legs but the assistant completes the lower limb dressing.]

3. Assistance is needed in putting on and/or removing any clothing.

[Assistance is needed in obtaining clothing, applying devices, and initiating and completing upper and lower extremity dressing and undressing.]

4. Only minimal assistance is required with fastening clothing, such as buttons, zips, bra, shoes, etc.

[Patient may require start up assistance but patient dresses and undresses. Assistant may obtain clothing from closet, may assist in application of orthosis or prosthesis, and may assist with fastening clothing, buttons, zips, bra etc. Coaxing, prompting and/or cueing on sequencing may be required and dressing may take up to three times the normal time.]

5. The patient is able to put on, remove and fasten clothing, tie shoe laces, or put on, fasten and remove corse or brace as prescribed.

[Patient is able to obtain clothes, put on, remove and fasten clothing and shoe laces, or put on, fasten and remove corset, brace or prosthesis as prescribed. Patient manages underpants slacks, skirt, belt, stockings and shoe laces. Patient manages bra, turtle necks, zippers, buttons and snaps, and can use special adaptive closure such as velcro and zipper pull, and dressing stick, reacher, sock aid, and completes task in reasonable time.]

Bowel Control

1. The patient is bowel incontinent.

[The patient needs to wear diapers, or absorbent pads.]

2. The patient needs help to assume appropriate position, and with bowel movement facilitatory techniques.

[Despite assistance, patient may be soiled frequently and necessitates wearing absorbent pads.]

3. The patient can assume appropriate position, but cannot use facilitatory techniques, or clean self without assistance, and has frequent accidents. Assistance is required with incontinence aids, such as pads etc.

[Patient can assume position, but has occasional accidents, needs assistance to clean self and/or to apply incontinence aids.]

4. The patient may require supervision with the use of suppository or enema, and has occasional accidents.

[Patient requires supervision with the use of suppository, enema, or an external device. Bowel accidents are rare, and prompting, cueing and adherence to the routine to maintain continence may be required.]

5. The patient can control bowels completely and has no accidents. Can use suppository, or take an enema when necessary.

[Patient can control bowels completely and intentionally and has no accidents, can use digital stimulation or stool softeners, suppositories, laxative use, or enemas on a regular basis. If patient has colostomy he/she maintains it.]

Bladder Control

1. The patient is dependent in bladder management, is incontinent, or has indwelling catheter.

[Patient may be catheterised, is incontinent of urine day and night, wet on daily basis. External catheter, drainage bag, night bag, all require to be cared for by assistant.]

2. The patient is incontinent but is able to assist with the application of an internal or external device.

[Patient requires to be positioned but can hold bedpan or urinal in place. External urinary drainage devices, tubing drainage bag, all require to be cared for. Patient is incontinent but able to assist with application of devices.]

3. The patient is generally dry by day, but not at night, and needs assistance with devices.

[Patient voids but needs help in positioning self, equipment, pads, and other devices. Can place penis in the urinal, hold legs apart, insert catheter, and is occasional incontinent. Coaxing, cueing and supervision may be required.]

4. The patient is generally dry by day and night but may have an occasional accident, or need minimal assistance with internal or external devices.

[If unable to find toilet or of not quick enough, patient may have an accident. May require minimal assistance with set-up and/or devices, may need medication to maintain voiding pattern. Prompting, cueing and adherence to the routine to maintain continence may be required.]

5. The patient is able to control bladder day and night and/or is independent with internal or external devices.

[Patient is independent, is continent, and independent in the use of equipment required and use of medication. Is able to change pads, diapers, before soiling.]

Ambulation

1. Dependent in ambulation.

[Patient does not ambulate. To attempt to ambulate requires two assistants.]

2. Constant presence of one or more assistants is required during ambulation.

[Patient requires maximal assistance to ambulate.]

3. Assistance is required with reaching aids and/or their manipulation. One person is required to offer assistance.

[Patient requires assistant to reach for walking aids and to provide a steadying effect around corners, over thresholds, and over rougher terrains, but is able to ambulate.]

4. The patient is independent in ambulation but unable to walk 50m without help. or supervision is needed for confidence or safety in hazardous situations.

[Patient may require cueing and prompting, and more than reasonable time to complete distances.]

5. The patient must be able to wear braces if required, lock and unlock these braces, assume standing position sit down and place the necessary aids in position for use. The patient must be able to use crutches, canes, or walkerette and walk 50m/yds without help or supervision.

[Patient walks length of corridor back and forth. There is no concern for safety, falling or wandering. Patient is independent with walker, cane, prosthesis, orthosis, special shoe etc.] Do not score ambulation if patient is unable to ambulate and is trained in wheelchair management.

Or Wheelchair

1. Dependent in wheelchair ambulation.

2. The patient can propel self short distances on flat surface but assistance is required for all other steps of wheelchair management.

[Assistant needs to push wheelchair for the majority of the time, is especially required to apply brakes, adjust armrests, cushion, manoeuvre around furniture, over ledges, loose rugs, and rougher terrains.]

3. Presence of one person is necessary and constant assistance is required to manipulate chair to table, bed, etc.

[Patient can propel wheelchair, but needs assistance with manoeuvring in and around furniture and in limited spaces.]

4. The patient can propel self for a reasonable duration over regularly encountered terrain. Minimal assistance may be required in tight corners.

[Occasional verbal prompting and assistance with manoeuvring in limited spaces may be required.]

5. To propel wheelchair independently the patient must be able to go around corners, turn around, manoeuvre the chair to a table, bed, toilet, etc. The patient must be able to push the chair at least 50 m/yards. Not applicable if patient is able to ambulate.

Chair/bed transfers

1. Unable to participate in transfer. Two attendants are required to transfer the patient with or without a mechanical device.

2. Able to participate, but maximum assistance of one other person is required in all aspects of the transfer.

3. The transfer requires assistance of one other person. Assistance may be required in any aspect of the transfer.

4. The presence of another person is required, either as a confidence measure, or to provide supervision for safety.

[Can position sliding board or move footrest or set-up, position chair, and lock brakes. Minimal help is required.]

5. The patient can safely approach the bed in a wheelchair, lock the brakes, lift the footrests, move safely to bed, lie down, come to a sitting position on the side of the bed, change the position of the wheelchair, transfer back into it safely. The patient must be independent in all phases of the activity.

[Patient can come to a standing position if walking is the mode of locomotion. If walking, client approaches, sits down, and gets to a standing position from a regular chair, transfers from bed to chair, performs tasks safely. Can approach, enter, and leave a tub or shower stall. Patient may use a sliding board, a lift, grab bars, or special seat. Patient may take more than the usual time, but less than three times the usual time to perform tasks.]

The following Table sets out the way in which the Modified Barthel Index is scored

| Item | Unable to perform task | Substantial help required | Moderate help provided | Minimal help required | Fully independent |
|------------------|------------------------|---------------------------|------------------------|-----------------------|-------------------|
| Personal hygiene | 0 | 1 | 3 | 4 | 5 |
| Bathing self | 0 | 1 | 3 | 4 | 5 |
| Feeding | 0 | 2 | 5 | 8 | 10 |
| Toilet | 0 | 2 | 5 | 8 | 10 |
| Stair climbing | 0 | 2 | 5 | 8 | 10 |
| Dressing | 0 | 2 | 5 | 8 | 10 |

| | | | | | |
|--------------------|---|---|---|----|----|
| Bowel control | 0 | 2 | 5 | 8 | 10 |
| Bladder control | 0 | 2 | 5 | 8 | 10 |
| Ambulation | 0 | 3 | 8 | 12 | 15 |
| or Wheelchair* | 0 | 1 | 3 | 4 | 5 |
| Chair/Bed transfer | 0 | 3 | 8 | 12 | 15 |

*Score only if patient is unable to ambulate and is trained in wheelchair management

The following Table sets out the dependency needs

| Categories | MBI Total Scores | Dependency Level |
|------------|------------------|------------------|
| 1 | 0 - 24 | Total |
| 2 | 25 - 49 | Severe |
| 3 | 50-74 | Moderate |
| 4 | 75 - 90 | Mild |
| 5 | 91 - 99 | Minimal |

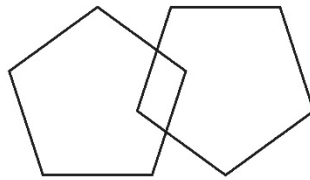
Appendix II

Mini-Mental State Exam

The Mini-Mental State Exam

Patient _____ Examiner _____ Date _____

| Maximum | Score | |
|---------|-------|---|
| | | Orientation |
| 5 | () | What is the (year) (season) (date) (day) (month)? |
| 5 | () | Where are we (state) (country) (town) (hospital) (floor)? |
| | | Registration |
| 3 | () | Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat them until he/she learns all 3. Count trials and record. Trials _____ |
| | | Attention and Calculation |
| 5 | () | Serial 7's. 1 point for each correct answer. Stop after 5 answers. Alternatively spell "world" backward. |
| | | Recall |
| 3 | () | Ask for the 3 objects repeated above. Give 1 point for each correct answer. |
| | | Language |
| 2 | () | Name a pencil and watch. |
| 1 | () | Repeat the following "No ifs, ands, or buts" |
| 3 | () | Follow a 3-stage command: "Take a paper in your hand, fold it in half, and put it on the floor." |
| 1 | () | Read and obey the following: CLOSE YOUR EYES |
| 1 | () | Write a sentence. |
| 1 | () | Copy the design shown. |



_____ Total Score
ASSESS level of consciousness along a continuum _____
Alert Drowsy Stupor Coma

Appendix III

Physical Restraint Interview (PRI)

**PHYSICAL RESTRAINT USE WITHIN
ST VINCENT DE PAUL RESIDENCE
(SVPR)**

(Interview Tool for Care Providers)

Questionnaire reference:

Date (DD/MM/YY):

| | | |
|----------------------|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
|----------------------|----------------------|----------------------|

Time (HH:MM):

| | |
|----------------------|----------------------|
| <input type="text"/> | <input type="text"/> |
|----------------------|----------------------|

For the purpose of this questionnaire, physical restraint is defined as:

“.... any device, material or equipment, attached to, or near a person’s body, and which cannot be controlled or easily removed by the person, and which deliberately prevents or is deliberately intended to prevent a person’s free body movement to a position of choice and/or a person’s normal access to their body.” (Retsas,1998).

DEMOGRAPHICS

Name of ward:

Number of older persons in ward:

Number of older persons in visible physical restraint:

Age (of each of the restrained older persons):

| | | |
|--|--|--|
| | | |
|--|--|--|

Gender (M/F):

☐ Male
Female

☐

Length of stay at SVPR (of each of the restrained older persons):

Medical diagnosis of cognitive impairment (Y/N of each of the restrained older persons):

☐ Yes

☐ No

Name of ward:

What do you understand by physical restraining?:

A CHARACTERISTICS OF RESTRAINED OLDER PERSONS

The aim of this section is to determine the characteristics of older persons subject to physical restraint use within your ward. These characteristics will provide a means to predict which older persons are at greatest risk of being restrained at admission.

| Characteristics | Yes | No | Don't know |
|---|--------------------------|--------------------------|--------------------------|
| Able to eat and dress without assistance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Incontinent of urine | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Incontinent of faeces | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Dually incontinent | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Visual impairment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Hearing impairment | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Speech impairment: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Independently mobile with/without the use of a mobility aid | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Currently on anti-depressant medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Social activity participation at least once per week | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

B GENERAL INFORMATION REGARDING PHYSICAL RESTRAINT USE

| General information | Yes | No | Don't know |
|--|--------------------------|--------------------------|--------------------------|
| Has a pre-restraint assessment been carried out? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is a care plan available? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were alternative means tried before restraint was used? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has restraint use been recorded in the resident's medical file? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has written consent been obtained from the resident/family member/substitute decision maker? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was restraint used as a punishment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was an appropriate room assigned during restraining? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Are staff levels according to SVPR-established criteria? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Mark all that apply in the following sub-section:

| | MO | Nurse | Carer | PT | OT | ST | Relative/SDM | OP | Other |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|
| Who orders use of the restraint? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Who recommends the type of restraint? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Who monitors the older person in restraint? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> * | <input type="checkbox"/> |
| Who decides to remove the restraint? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Key: MO: Medical Officer, PT: Physiotherapist, OT: Occupational Therapist, ST: Speech Therapist, SDM: Substitute Decision Maker, OP: Older person himself/herself, *OP: Other older person.

If you replied "other" to any of the questions above, specify who the "other" is below.

| | |
|--|----------------------|
| Who ordered use of the restraint? | <input type="text"/> |
| Who recommended the type of restraint? | <input type="text"/> |
| Who monitored the older person in restraint? | <input type="text"/> |
| Who decided to remove the restraint? | <input type="text"/> |

C USE OF PHYSICAL RESTRAINT

The aim of this section is to determine how physical restraints are used within the ward setting in SVPR. To achieve this, you will be asked about:

- a) How often older persons are restrained.
- b) The duration of the restraint.
- c) The types of devices being used.

For each device, indicate for how long (years/months/days) the older person has been in restraint and the total duration the device is kept on during a 24-hour period.

Mark all that apply.

| Restraint device | Length of time restraint has been used (Y/M/D) | Duration of restraint use in 24h (H) |
|--|--|--------------------------------------|
| <input type="checkbox"/> Bed-side rails | | |
| <input type="checkbox"/> Non-manufactured devices (H-harness, T-harness, belt harness) | | |
| <input type="checkbox"/> Manufactured Y-harness | | |
| <input type="checkbox"/> Mittens | | |
| <input type="checkbox"/> Splints | | |
| <input type="checkbox"/> Sheets | | |
| <input type="checkbox"/> Inappropriate use of wheelchair straps | | |
| <input type="checkbox"/> Inappropriate use of lapboards | | |
| <input type="checkbox"/> Inappropriate use of height-adjustable tables | | |
| <input type="checkbox"/> Too low or too high armchairs | | |
| <input type="checkbox"/> Reclining wheelchairs/geriatric armchairs (when used to immobilise) | | |
| <input type="checkbox"/> Locked rooms | | |
| <input type="checkbox"/> Other (please specify) | | |

D REASONS FOR INITIATING PHYSICAL RESTRAINT

The aim of this section is to identify the most commonly used reasons to justify the use of physical restraints within your ward setting.

Mark all that apply.

Staff and organisation oriented reasons

- ☐ To reduce legal liability for health care professionals and carers
 - ☐ To compensate for understaffing
 - ☐ To enable work schedules to be completed
 - ☐ Others (please specify)
-

Social group oriented reasons

- ☐ To prevent interference with other older persons, staff, relatives, substitute decision makers, visitors
 - ☐ To maintain the peace and harmony of the living and work environment
 - ☐ Others (please specify)
-

Treatment oriented reasons

- ☐ To prevent treatment interference and to protect medical devices
 - ☐ Others (please specify)
-

Older person oriented reasons

Safety

- ☐ To prevent falls
 - ☐ To prevent injury
 - ☐ To prevent unsteadiness
 - ☐ For the safety and protection of the older person
-

Behavioural control

- ☐ To manage confusion and dementia
 - ☐ To promote the older person's well being
 - ☐ To control behaviour
-

Agitation

-
- ☐ To manage disruptive behaviour
 - ☐ To prevent harm to self or others
 - ☐ To prevent agitation
 - ☐ To prevent the physical abuse of others
 - ☐ To protect staff and others from injury
-

Wandering

-
- ☐ To prevent wandering
-

Support

-
- ☐ To assist the maintenance of the older person's position while sitting in a chair
 - ☐ To assist in postural support
 - ☐ To enhance balance
 - ☐ To enable the older person to perform activities of daily living such as eating
-

E PHYSICAL RESTRAINT-RELATED INJURY

In the context of this section, two categories of injury will be considered.

- a) Direct injury or an injury caused as a direct result of the external pressure from a restraint device, and includes such things as lacerations, bruising or strangulation.
- b) Indirect injury or an injury related to injury as a consequence of the enforced immobility of an older person and includes such things as increased mortality rate, development of pressure sores and falls.

This section will seek to evaluate these risks in terms of:

- i) The prevalence of injury
- ii) Type of injuries
- iii) What injuries specific devices cause

Mark all that apply.

| Direct injury | Yes | No | Don't know |
|---|--------------------------|--------------------------|--------------------------|
| Has any type of nerve injury been reported during restraint use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has any type of ischaemic injury been reported during restraint use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Has sudden death been reported following restraint use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <i>Asphyxiation and/or near asphyxiation</i> | | | |
| Did health care professionals and/or carers read the detailed product information? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did health care professionals and/or carers have in-service training regarding the use of physical restraint devices? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Is there awareness regarding the risks associated with the use of physical restraint devices? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Were there any episodes, recorded or otherwise, of strangulation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person confused, struggling, unmanageable or mentally incompetent | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person left unattended for a long period of time | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the device altered with tape or installed backward to improve on the restraining effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there a language barrier between the older person and staff | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Others (please specify) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | |
|--|--------------------------|--------------------------|--------------------------|
| Death | | | |
| Did death occur while the older person was on a chair? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| At what time did death occur? (Please indicate the time) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| What type of restraint device was in use at the time of the incidence? (Please name the restraint device) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person found suspended from a bed or chair? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person found wedged between bed rails? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did the older person smoke? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did the older person use matches or a cigarette lighter to burn off the restraint device? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did the older person have deformities that precluded the proper application of the restraint device? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person in a supine position? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person in a prone position? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person restrained in a room not under continuous observation by staff? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Others (please specify) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| Indirect injury | Yes | No | Don't know |
|---|--------------------------|--------------------------|--------------------------|
| Does the older person have an increased incidence of falling? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did the older person have any serious falls-related injury (without fractures)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did the older person have any falls-related fractures? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did the older person exhibit social withdrawal? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there a decline in cognition? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there a decline in mobility? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there an increase in disorientation and agitation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there an increase in the development of pressure sores? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there an increase in bladder or bowel incontinence? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Did agitated behaviours increase after the application of the restraining device? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there an increase in dependence in activities of daily living? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there an increase in dependence during walking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was the older person intermittently or continuously restrained? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Was there an increase in disorientation of the older person | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

F PRACTICES TO MINIMIZE PHYSICAL RESTRAINT

Suggest forms of practice that could contribute to a minimization of restraint use in this resident.

Appendix IV

Interview questions

Older person and her/his experience to physical restraining

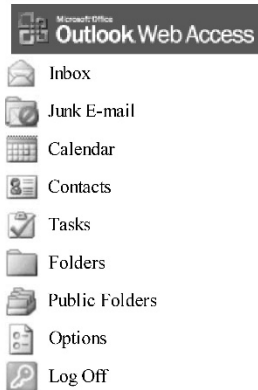
- 1) How do you feel when 'restricted' in this way?
- 2) Do you recall having the device applied?
- 3) Did someone tell you why the device was being applied? If YES, what did they tell you? Do you accept being restrained?
- 4) What ideas do you have about other ways you might have been helped with rather than the use of the device?
- 5) What did the device prevent you from doing that you wanted or needed to do?
- 6) How long is the device left on?
- 7) Do you recall ever having the device removed and if the device is removed what explanation was forthcoming?
- 8) Have you had any immediate effects from this device, eg discomfort? If yes, describe.
- 9) Comments ...

Relative's experience of physical restraining

- 1) Did you know your 'relative' was to be restrained?
- 2) Did you consent? How do you feel about this? Should 'your' older relative have been involved? Who recommends, explains, monitors, decides to remove and documents restraint use?
- 3) What are your thoughts?

Appendix V

Consent letters



Reply Reply to all Forward Close Help

Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

From: Maria Fenech [mcxmaf@nottingham.ac.uk] Sent: Sun 30/01/2011 20:02

To: Xuereb Stephanie at MHEC

Cc: Bezzina Emanuel at MHEC; Pavia George at MHEC

Subject: re: PhD fieldwork

Attachments: Govt Homes.doc(48KB)

[View As Web Page](#)

Dear Dr Xuereb

Following our telephone conversation, I am attaching a letter requesting consent from your part to carry out field work related to my PhD studies within the Government Residential Homes.

Following your approval, I will initiate communication with the Home Managers.

Thanking you for your attention,

Best regards

Maria This message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this message in error, please send it back to me, and immediately delete it. Please do not use, copy or disclose the information contained in this message or in any attachment. Any views or opinions expressed by the author of this email do not necessarily reflect the views of the University of Nottingham.

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<<Govt Homes.doc>>

Dr Stephanie Xuereb
Director Elderly Care
Centru Hidma Socjali
469, Triq il-Kbira San Guzepp
Santa Venera

24th January 2011

Re: Request to carry out fieldwork within The Government Residential Homes

Dear Dr Xuereb

I am reading for a PhD Rehabilitation and Ageing within the Division of Rehabilitation and Ageing, Queen's Medical Centre, University of Nottingham. The area of study will mainly focus into physical restraint and its use within long-term care. The project is being supervised by Professor C D Ward and Dr Jeanette Lilley from within The Royal Derby City Hospital and Queen's Medical Centre respectively. Locally, this task is under the direction of Dr Anthony Fiorini and Dr Ronald Fiorentino.

The tool to attain the project's objectives is an *anonymous* questionnaire I have devised and which is targeted to the Managers, Health Care Professionals and Nursing Support Staff. Its format will explore the following objectives pertaining to physical restraint and its use,

1. Managers, Health care professionals' and Nursing Support Staff's concerns about their caring roles.
2. Physical restraint and its use within the Home. More specifically:
 - a) The types of devices being used,
 - b) The person recommending that the Older Person is physically restrained,
 - c) The explanation given regarding physical restraint use to the Older Person and/or family member and/or substitute decision maker,
 - d) The person who monitors the physically restrained Older Person,
 - e) The person who decides to remove the physical restraint, the documentation in the Older Person's file regarding the use of physical restraint,
 - f) The total duration time that the Older Person is typically physically restrained within a 24-hour period.
3. Situations that could render the Older Person a candidate to be physically restrained.
4. The reaction of the Older Persons, Managers, Health Care Professionals' and Nursing Support staff to physical restraint and its use. It will also explore staff members' concerns related to their work, the working environment, safety issues and attitudes.

I intend with your kind permission, to carry out the research within:

- Floriana Home
- Gzira Home
- Mosta Home
- Msida Home
- Mtarfa Home

Therefore I am requesting consent to be able to carry out this project amongst Managers, Health Care Professionals and Nursing Support Staff within the aforementioned Homes. Should approval be obtained, I would need to liaise with the respective Home Managers in order to explain in further detail the project proceedings. Data gathered will remain *confidential* and will only be accessed by myself. Any material that may be used in the compiling of the PhD project and any publications that could ensue will remain strictly *confidential* and *anonymous* and in adherence to the Data Protection Act 2001 and the Guidelines of the Health Ethics Committee of the Ministry for Health, the Elderly and Community Care.

I will be available to the Managers, Health Care Professionals and Nursing Support Staff should they wish to contact me regarding any queries or concerns they might have regarding the questionnaire. My contact e-mail address is mcxmaf@nottingham.ac.uk or my mobile number 99405629.

We have over the years endeavoured towards maintaining and improving the quality of life of the Older Person within the Homes. Persons and systems have been in place to continually promote and further develop this routine. This project has been developed towards further enhancing this concept with the intent of gaining insight into the current practice of physical restraining and its use within the Homes. It is hoped that the project outcomes would be able to elicit a sense of ownership and engagement regarding physical restraint and its use for the benefit of the Older Person and the Manager, Health Care Professional and Nursing Support Staff.

Thank you for your assistance and consideration in the matter.

Best regards

Maria A Fenech

Principal Physiotherapist

Home Address: 45/2 'Mir'
Gazzija Street
Birkirkara BKR 2080

Work Address: Physiotherapy Department
St Vincent de Paul Residence
l/o Luqa

Cc: Mr Gino Pavia
Assistant Director

Mr Emmanuel Bezzina
Manager Nursing Services

Microsoft Office Outlook Web Access Type here to search This Folder Address Book Options Log Off

Mail Calendar Contacts Deleted Items Drafts [1] Inbox Junk E-mail Sent Items

Click to view all folders Manage Folders...

Reply Reply to All Forward Move Delete Close

RE: PhD fieldwork
 Xuereb Stephanie at MHEC [stephanie.xuereb@gov.mt]

Sent: 21 February 2011 07:58
To: Maria Fenech [mcfenech@nottingham.ac.uk]
Cc: Bezzina Emanuel at MHEC [emanuel.bezzina@gov.mt]; Pavia George at MHEC [george.pavia@gov.mt]

Dear Ms. Fenech,

There is no objection to your conducting the fieldwork as indicated in your submission. Kindly abide by Data Protection Regulations at all times.

Wishing you good luck in your research,

Regards,
 S. Xuereb

Dr. Stephanie Xuereb MD, MSc (Public Health), MBA, DCE (Lead)
 Director Elderly Care
 Contru Nidra Soċjal
 St. Venera
 Tel: (036)2149499/5

-----Original Message-----
From: Maria Fenech [mailto:mcfenech@nottingham.ac.uk]
Sent: 30 January 2011 20:02
To: Xuereb Stephanie at MHEC
Cc: Bezzina Emanuel at MHEC; Pavia George at MHEC
Subject: re: PhD fieldwork

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Following your approval, I will initiate communication with the Home Managers.

Thanking you for your attention,

Best regards


Maria

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 Attachments can contain viruses that may harm your computer. Attachments may not display correctly.

From: Maria Fenech [mcxmaf@nottingham.ac.uk]

Sent: Sun 30/01/2011 20:20

To: nschembri@caremalta.com

Cc:

Subject: re: PhD studies

Attachments:  CareMalta.doc(45KB)

[View As Web Page](#)

Dear Neville

Following our telephone conversation, I am attaching a letter requesting consent from your part to carry out field work related to my PhD studies within Care Malta Homes.

I would be grateful for your approval so that I may make the necessary arrangements to initiate the study.

Best regards

Maria

This message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this message in error, please send it back to me, and immediately delete it. Please do not use, copy or disclose the information contained in this message or in any attachment. Any views or opinions expressed by the author of this email do not necessarily reflect the views of the University of Nottingham.

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<<CareMalta.doc>>

Mr Neville Schembri
Group Care Manager
Care Malta

24th January 2011

Re: Request to carry out fieldwork within Care Malta Homes

Dear Mr Schembri

I am reading for a PhD Rehabilitation and Ageing within the Division of Rehabilitation and Ageing, Queen's Medical Centre, University of Nottingham. The area of study will mainly focus into physical restraint and its use within long-term care. The project is being supervised by Professor C D Ward and Dr Jeanette Lilley from within The Royal Derby City Hospital and Queen's Medical Centre respectively. Locally, this task is under the direction of Dr Anthony Fiorini and Dr Ronald Fiorentino.

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I intend with your kind permission, to carry out the research within:

- Bormla Home
- Casa Arkati
- Roseville
- Villa Messina
- Zejtun Home

Therefore I am requesting consent to be able to carry out this project amongst Managers, Health Care Professionals and Nursing Support Staff within the aforementioned Homes. Should approval be obtained, I would need to liaise with the respective Home Managers in order to explain in further detail the project proceedings. Data gathered will remain *confidential* and will only be accessed by myself. Any material that may be used in the compiling of the PhD project and any publications that could ensue will remain strictly *confidential* and *anonymous* and in adherence to the Data Protection Act 2001 and the Guidelines of the Health Ethics Committee of the Ministry for Health, the Elderly and Community Care.

I will be available to the Managers, Health Care Professionals and Nursing Support Staff should they wish to contact me regarding any queries or concerns they might have regarding the questionnaire. My contact e-mail address is mcxmaf@nottingham.ac.uk or my mobile number 99405629.

We have over the years endeavoured towards maintaining and improving the quality of life of the Older Person within the Homes. Persons and systems have been in place to continually promote and further develop this routine. This project has been developed towards further enhancing this concept with the intent of gaining insight into the current practice of physical restraining and its use within the Homes. It is hoped that the project outcomes would be able to elicit a sense of ownership and engagement regarding physical restraint and its use for the benefit of the Older Person and the Manager, Health Care Professional and Nursing Support Staff.

Thank you for your assistance and consideration in the matter.

Best regards

Maria A Fenech

Principal Physiotherapist

Home Address: 45/2 'Mir'

Gazzija Street

Birkirkara BKR 2080

Work Address: Physiotherapy Department

St Vincent de Paul Residence

l/o Luqa

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RE: PhD studies
Neville Schembri [nschembri@caremalta.com]

Sent: 31 January 2011 12:15
To: 'Maria Fenech' [mcfmaf@nottingham.ac.uk]

Maria

Consent to carry out the below mentioned project at CareMalta operated facilities granted as long as data gathered will remain confidential and will only be accessed by for the mentioned research purposes.
I wish you luck for your PhD studies and please remain free to contact me in case you require further assistance.

Regards

Neville Schembri
Group Care Manager
CareMalta Group
The Three Arches
Valletta Road
Mosta MST 9016
MALTA
Tel. (+356) 2258 4200
Fax (+356) 2258 4230
nschembri@caremalta.com

-----Original Message-----
From: Maria Fenech [mailto:mcfmaf@nottingham.ac.uk]
Sent: 30 January 2011 20:21
To: nschembri@caremalta.com
Subject: re: PhD studies

Dear Neville

Following our telephone conversation, I am attaching a letter requesting consent from your part to carry out field work related to my PhD studies within Care Malta Homes.

I would be grateful for your approval so that I may make the necessary arrangements to initiate the study.

Best regards

Maria

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RE: PhD fieldwork
Robert Grech [rgrech@caremalta.com]

Sent: 03 February 2011 17:36

To: 'Maria Fenech' [moxmaf@nottingham.ac.uk]; nborg@caremalta.com; esghendo@caremalta.com; jsilvio@caremalta.com; lxuereb@caremalta.com

Cc: nschembri@caremalta.com

Dear Maria,
I will give you my support and that of my staff at Villa Messina. Feel free to contact me to decide on our meeting.
Regards
Robert

-----Original Message-----
From: Maria Fenech [mailto:mcxfaf@nottingham.ac.uk]
Sent: 02 February 2011 23:01
To: nborg@caremalta.com; rgrach@caremalta.com; esghendo@caremalta.com; jsilvio@caremalta.com; lxmehb@caremalta.com
Cc: nschembri@caremalta.com
Subject: re: PhD fieldwork

2nd February 2011

Re: Request to carry out fieldwork within Care Malta Homes

Dear Colleagues

I am reading for a PhD Rehabilitation and Ageing within the Division of Rehabilitation and Ageing, Queen's Medical Centre, University of Nottingham. The area of study will mainly focus into physical restraint and its use within long-term care. The project is being supervised by Professor C D Ward and Dr Jeanette Lilley from within The Royal Derby City Hospital and Queen's Medical Centre respectively. Locally, this task is under the direction of Dr Anthony Fiorini and Dr Ronald Fiorentino.

The tool to attain the project's objectives is an anonymous questionnaire I have devised and which is targeted to the Managers, Health Care Professionals and Nursing Support Staff. Its format will explore the following objectives pertaining to physical restraint and its use,

1. Managers, Health care professionals' and Nursing Support Staff's concerns about their caring roles.
2. Physical restraint and its use within the Home. More specifically:
 - a) The types of devices being used,
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 - c) The explanation given regarding physical restraint use to the Older Person and/or family member and/or substitute decision maker,
 - d) The person who monitors the physically restrained Older Person,
 - e) The person who decides to remove the physical restraint,
 - f) The documentation in the Older Person's file regarding the use of physical restraint,
 - g) The total duration time that the Older Person is typically physically restrained within a 24-hour period.
3. Situations that could render the Older Person a candidate to be physically restrained.
4. The reaction of the Older Persons, Managers, Health Care Professionals' and Nursing Support staff to physical restraint and its use. It will also explore staff members' concerns related to their work, the working environment, safety issues and attitudes.

I intend with your kind permission, to carry out the research within:
 . Bormla Home
 . Casa Arkati
 . Roseville
 . Villa Messina
 . Zejtun Home

I have been in communication with Mr Neville Schembri, regarding the matter and he has granted his approval for the Care Malta Homes to be included in the project.

Data gathered will remain confidential and will only be accessed by myself. Any material that may be used in the compiling of the PhD project and any publications that could ensue will remain strictly confidential and anonymous and in adherence to the Data Protection Act 2001 and the Guidelines of the Health Ethics Committee of the Ministry for Health, the Elderly and Community Care.

I will be contacting you shortly in order to arrange an appointment so that we may discuss practical logistics. My contact e-mail address is mcxfaf@nottingham.ac.uk and my mobile number 99405629.

We have over the years endeavoured towards maintaining and improving the quality of life of the Older Person within the Homes. Persons and systems have been in place to continuously promote and further develop this routine. This project has been developed towards further enhancing this concept with the intent of gaining insight into the current practice of physical restraining and its use within the Homes. It is hoped that the project outcomes would be able to elicit a sense of ownership and engagement regarding physical restraint and its use for the benefit of the Older Person and the Manager, Health Care Professional and Nursing Support Staff.

Thank you for your assistance and consideration in the matter.

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RE: PhD fieldwork
Elke Sghendo [esghendo@caremalta.com]

Sent: 04 February 2011 08:55

To: 'Maria Fenech' [mcfmaf@nottingham.ac.uk]; nborg@caremalta.com; rgrech@caremalta.com; jsilvio@caremalta.com; lxuereb@caremalta.com

Cc: nschembri@caremalta.com

Dear Maria,

Surely, it is an honour to our company in contributing for your fieldwork. Kindly advise when you would to meet.

My mob is 79383883. Today I'm on Sick however hopefully I will be on at work from next Monday.

Regards

Elke Sghendo
Facility Manager
St. Anthony's street
Attard ATD 1284
MALTA
Tel. (+356) 2256 0000
esghendo@caremalta.com

-----Original Message-----

From: Maria Fenech [<mailto:mcxnafe@nottingham.ac.uk>]
Sent: 02 February 2011 23:01
To: nborg@caremalta.com; rgrech@caremalta.com; esghendo@caremalta.com; jsilvio@caremalta.com; lxuereb@caremalta.com
Cc: nschembri@caremalta.com
Subject: re: PhD fieldwork

2nd February 2011

Re: Request to carry out fieldwork within Care Malta Homes

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RE: PhD fieldwork
Noel Borg [nborg@caremalta.com]

Sent: 04 February 2011 06:33

To: 'Maria Fenech' [mcfmaf@nottingham.ac.uk]; rgrech@caremalta.com; esghendo@caremalta.com; jsilvio@caremalta.com; lxuereb@caremalta.com

Cc: nschembri@caremalta.com

Dear Ms. Fenech,

I will be a pleasure to contribute to this study. You can contact me at Casa Arkati to make an appointment.

Sincerely,

Noel Borg
Facility Manager

Casa Arkati
Constitution Street,
Mosta, MST 9053,
Malta

Tel: +356 2143 4342
Fax: +356 2143 1817

E-mail: nborg@caremalta.com
Website: www.caremalta.com

-----Original Message-----

From: Maria Fenech [mailto:mcxmaf@nottingham.ac.uk]
Sent: 02 February 2011 23:01
To: nborg@caremalta.com; rgrech@caremalta.com; esghendo@caremalta.com; jsilvio@caremalta.com; lxnereb@caremalta.com
Cc: nschembri@caremalta.com
Subject: re: PhD fieldwork

2nd February 2011

Re: Request to carry out fieldwork within Care Malta Homes

Dear Colleagues

I am reading for a PhD Rehabilitation and Ageing within the Division of Rehabilitation and Ageing, Queen's Medical Centre, University of Nottingham. The area of study will mainly focus into physical restraint and its use within long-term care. The project is being supervised by Professor C D Ward and Dr Jeanette Lilley from within The Royal Derby City Hospital and Queen's Medical Centre respectively. Locally, this task is under the direction of Dr Anthony Fiorini and Dr Ronald Fiorentino.

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 - g) The total duration time that the Older Person is typically physically restrained within a 24-hour period.
3. Situations that could render the Older Person a candidate to be physically restrained.
4. The reaction of the Older Persons, Managers, Health Care Professionals' and Nursing Support staff to physical restraint and its use. It will also explore staff members' concerns related to their work, the working environment, safety issues and attitudes.

I intend with your kind permission, to carry out the research within:

- . Bornla Home
- . Casa Arkati
- . Roseville
- . Villa Messina
- . Zajtun Home

I have been in communication with Mr Neville Schembri, regarding the matter and he has granted his approval for the Care Malta Homes to be included in the project.

Data gathered will remain confidential and will only be accessed by myself. Any material that may be used in the compiling of the PhD project and any publications that could ensue will remain strictly confidential and anonymous and in adherence to the Data Protection Act 2001 and the Guidelines of the Health Ethics Committee of the Ministry for Health. The

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RE: PhD fieldwork
Janet Silvio [jsilvio@caremalta.com]

Sent: 04 February 2011 13:28

To: 'Elke Sghendo' [esghendo@caremalta.com]; 'Maria Fenech' [mcxmaf@nottingham.ac.uk]; nborg@caremalta.com; rgrech@caremalta.com; lxuereb@caremalta.com

Cc: nschembri@caremalta.com

Dear Maria,

Please feel free to contact me any time you wish to set a date for your visit. Next week I will be only available Monday and Tuesday, but the week after I should be at the Home on all day.

Regards

Janet Silvio
Facility Manager
Cospicua Home for the Elderly



Piazza Santa Margherita
Cospicua

Tel: (+356) 21823234
Mob: (+356) 99269404
Fax: (+356) 21823240

www.caremalta.com

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-----Original Message-----

From: Elke Sghendo [mailto:esghendo@caremalta.com]
Sent: Friday, February 04, 2011 9:55 AM
To: 'Maria Fenech'; nborg@caremalta.com; rgrech@caremalta.com; jsilvio@caremalta.com; lxuereb@caremalta.com
Cc: nschembri@caremalta.com
Subject: RE: PhD fieldwork

Dear Maria,

Surely, it is an honour to our company in contributing for your fieldwork.
Kindly advise when you would to meet.

My mob is 79383883. Today I'm on Sick however hopefully I will be on at work from next Monday.

Regards


Elke Sghendo
Facility Manager
St. Anthony's street
Attard ATD 1284
MALTA
Tel. (+356) 2256 0000
esghendo@caremalta.com

-----Original Message-----

From: Maria Fenech [mailto:mcxmaf@nottingham.ac.uk]
Sent: 02 February 2011 23:01
To: nborg@caremalta.com; rgrech@caremalta.com; esghendo@caremalta.com; jsilvio@caremalta.com; lxuereb@caremalta.com
Cc: nschembri@caremalta.com
Subject: re: PhD fieldwork

2nd February 2011

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From: Maria Fenech [mcxmaf@nottingham.ac.uk]

Sent: Sun 30/01/2011 20:15

To: info@casaserenamalta.com; joshgrech@gmail.com

Cc:

Subject: Attn Mr Grech (re: PhD studies)

Attachments:  Casa Serena.doc(45KB)

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Dear Mr Grech

Following our telephone conversation, I am attaching a letter requesting consent from your part to carry out field work related to my PhD studies within Casa Serena.

I would be grateful for your approval so that I may make the necessary arrangements to initiate the study.

Best regards

MariaThis message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this message in error, please send it back to me, and immediately delete it. Please do not use, copy or disclose the information contained in this message or in any attachment. Any views or opinions expressed by the author of this email do not necessarily reflect the views of the University of Nottingham.

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<<Casa Serena.doc>>

Mr Joshua Grech
Manager Casa Serena Home
Sir Luigi Preziosi Square
Bugibba SPB 02

24th January 2011

Re: Request to carry out fieldwork within Casa Serena Home

Dear Mr Grech

I am reading for a PhD Rehabilitation and Ageing within the Division of Rehabilitation and Ageing, Queen's Medical Centre, University of Nottingham. The area of study will mainly focus into physical restraint and its use within long-term care. The project is being supervised by Professor C D Ward and Dr Jeanette Lilley from within The Royal Derby City Hospital and Queen's Medical Centre respectively. Locally, this task is under the direction of Dr Anthony Fiorini and Dr Ronald Fiorentino.

The tool to attain the project's objectives is an *anonymous* questionnaire I have devised and which is targeted to the Manager, Health Care Professionals and Nursing Support Staff. Its format will explore the following objectives pertaining to physical restraint and its use,

1. The Manager's, Health care professionals' and Nursing Support Staff's concerns about their caring roles.
2. Physical restraint and its use within the Home. More specifically:
 - a) The types of devices being used,
 - b) The person recommending that the Older Person is physically restrained,
 - c) The explanation given regarding physical restraint use to the Older Person and/or family member and/or substitute decision maker,
 - d) The person who monitors the physically restrained Older Person,
 - e) The person who decides to remove the physical restraint,
 - f) The documentation in the Older Person's file regarding the use of physical restraint,
 - g) The total duration time that the Older Person is typically physically restrained within a 24-hour period.
3. Situations that could render the Older Person a candidate to be physically restrained.
4. The reaction of the Older Persons, Managerial Staff, Health Care Professionals' and Nursing Support staff to physical restraint and its use. It will also explore staff members' concerns related to their work, the working environment, safety issues and attitudes.

With your kind permission, I intend to carry out the research within your Home. Therefore I am requesting consent to be able to carry out this project amongst the Managerial Staff, Health Care Professionals and Nursing Support Staff within the aforementioned Home. Should approval be obtained, I would liaise with you in order to explain in further detail the project proceedings. Data gathered will remain *confidential* and will only be accessed by myself. Any material that may be used in the compiling of the PhD project and any publications that could ensue will remain strictly *confidential* and *anonymous* and in adherence to the Data Protection Act 2001 and the Guidelines of the Health Ethics Committee of the Ministry for Health, the Elderly and Community Care.

I will be available to you the Manager, Health Care Professionals and Nursing Support Staff should they wish to contact me regarding any queries or concerns they might have regarding the questionnaire. My contact e-mail address is mcxmaf@nottingham.ac.uk or my mobile number 99405629.

We have over the years endeavoured towards maintaining and improving the quality of life of the Older Person within the Homes. Persons and systems have been in place to continually promote and further develop this routine. This project has been developed towards further enhancing this concept with the intent of gaining insight into the current practice of physical restraining and its use within the Homes. It is hoped that the project outcomes would be able to elicit a sense of ownership and engagement regarding physical restraint and its use for the benefit of the Older Person and the Manager, Health Care Professional and Nursing Support Staff.

Thank you for your assistance and consideration in the matter.

Best regards

Maria A Fenech

Principal Physiotherapist

Home Address: 45/2 'Mir'

Gazzija Street

Birkirkara BKR 2080

Work Address: Physiotherapy Department

St Vincent de Paul Residence

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RE: Attn Mr Grech (re: PhD studies)
Casa Serena [info@casaserenamalta.com]

Sent: 31 January 2011 10:45
To: 'Maria Fenech' [moxmaf@nottingham.ac.uk]

Dear Maria Fenech,

I am willing to accept your request to be of a little help carry out field work for your PhD studies.

Regards

Josiah Grech
General Manager
Casa Serena
Home for the Elderly.

Tel: 21583243. info@casaserenamalta.com
WWW.casaserenamalta.com

-----Original Message-----
From: Maria Fenech [mailto:moxmaf@nottingham.ac.uk]
Sent: 11-Hadd, 30 ta' Jannar 2011 8:16 PM
To: info@casaserenamalta.com; joshgrech@gmail.com
Subject: Attn Mr Grech (re: PhD studies)

Dear Mr Grech

Following our telephone conversation, I am attaching a letter requesting consent from your part to carry out field work related to my PhD studies within Casa Serena.

I would be grateful for your approval so that I may make the necessary arrangements to initiate the study.


Best regards

MariaThis message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this message in error, please send it back to me, and immediately delete it. Please do not use, copy or disclose the information contained in this message or in any attachment. Any views or opinions expressed by the author of this email do not necessarily reflect the views of the University of Nottingham.

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From: Maria Fenech [mcxnafe@nottingham.ac.uk]

Sent: Mon 31/01/2011 09:38

To: agecon@maltanet.net

Cc:

Subject: re: PhD studies

Attachments:  [Central Home.doc\(43KB\)](#)

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Dear Ms Vella

Following our telephone conversation, I am attaching a letter requesting consent from your part to carry out field work related to my PhD studies within Central Home.

I would be grateful for your approval so that I may make the necessary arrangements to initiate the study.

Best regards

MariaThis message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this message in error, please send it back to me, and immediately delete it. Please do not use, copy or disclose the information contained in this message or in any attachment. Any views or opinions expressed by the author of this email do not necessarily reflect the views of the University of Nottingham.

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<<Central Home.doc>>

Ms Doris Vella
Home Manager
Central Home,
Vjal L-Indipendenza
sta

24th January 2011

Re: Request to carry out fieldwork within Cenral Home

Dear Ms Vella

I am reading for a PhD Rehabilitation and Ageing within the Division of Rehabilitation and Ageing, Queen's Medical Centre, University of Nottingham. The area of study will mainly focus into physical restraint and its use within long-term care. The project is being supervised by Professor C D Ward and Dr Jeanette Lilley from within The Royal Derby City Hospital and Queen's Medical Centre respectively. Locally, this task is under the direction of Dr Anthony Fiorini and Dr Ronald Fiorentino.

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Thank you for your assistance and consideration in the matter.

Best regards

Maria A Fenech

Principal Physiotherapist

Home Address: 45/2 'Mir'

Gazzija Street

Birkirkara BKR 2080

Work Address: Physiotherapy Department

St Vincent de Paul Residence

I/o Luqa

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Re: PhD studies
Age Concern - Central Home [agecon@maltanet.net]

Sent: 04 February 2011 07:23
To: Maria Fenech [mcxmaf@nottingham.ac.uk]

dear Maria,
I give you my consent to carry out field work at Central Home with regards to your PhD studies.
best regards
Mrs doris vella

----- Original Message -----
From: "Maria Fenech" <mcxmaf@nottingham.ac.uk>
To: <agecon@maltanet.net>
Sent: Monday, January 31, 2011 9:38 AM
Subject: re: PhD studies

Dear Ms Vella

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MariaThis message and any attachment are intended solely for the addressee and may contain confidential information. If you have received this message in error, please send it back to me, and immediately delete it. Please do not use, copy or disclose the information contained in this message or in any attachment. Any views or opinions expressed by the author of this email do not necessarily reflect the views of the University of Nottingham.

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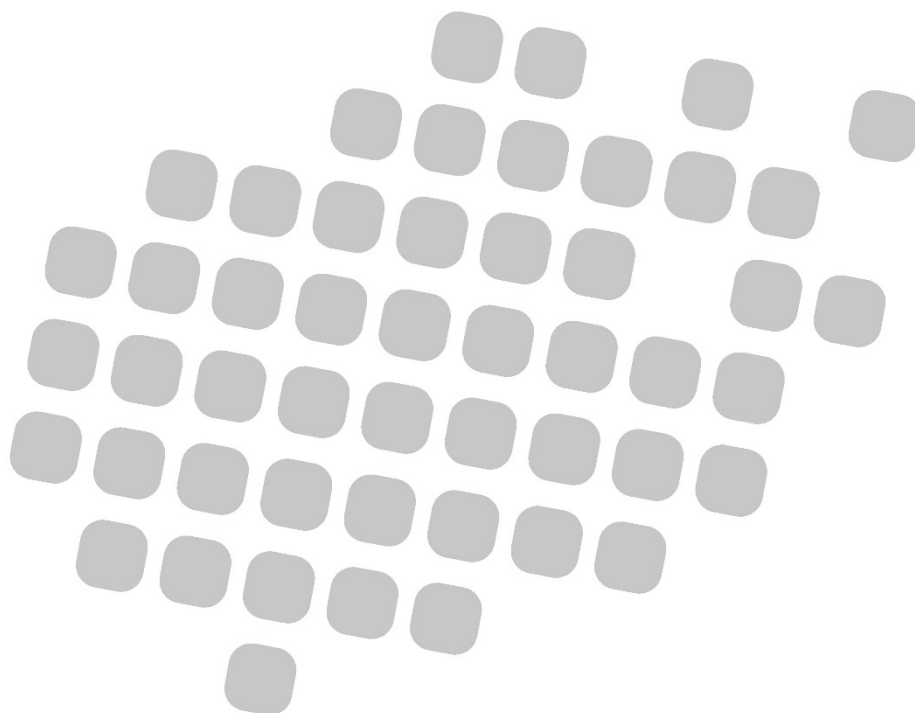
Connected to Microsoft Exchange

Appendix VI

L-UŻU TAL-IRBIT
Kwestjonarju għall-Istaff

Għal użu uffiċjali biss

Kwestjonarju Numru



L-UŻU TAL-IRBIT

Kwestjonarju għall-Istaff

Maria A Fenech

Division of Rehabilitation & Ageing, Queen's Medical Centre, University of Nottingham

Għezież kollegi

Aħna l-professjonisti u staff li jassisti l-infermiera kburi bl-effiċjenza u l-mod għaqli ta' kif nagħtu l-attenzjoni lill-Persuni Anzjani. Kull Persuna Anzjana hija unika, bil-bżonnijiet u sfidi individwali tagħha. Il-qofol jibqa' l-mod ta' kif aħna lkoll bil-mod individwali tagħna, nagħtu l-attenzjoni meħtieġa lill-Persuni Anzjani bid-dedikazzjoni kollha.

Madanakollu, kultant niġu wiċċ imb'wiċċ ma' sitwazzjonijiet meta aħna u/jew it-tijm ikun jeħtieġu jikkonsidra li jorbot Persuna Anzjana. Dan il-proġett ser iservi bħala mezz ta' konsultazzjoni mal-professjonisti u staff li jassisti l-infermiera, sabiex nevalwaw l-użu tal-irbit bil-għan li noħolqu miri prattiċi fix-xogħol tagħna fejn jidhru l-użu tal-irbit.

Il-qofol tal-proġett ma jiddependix fuq jekk hemmx irbit jew kif l-irbit qed jintuża, iżda jiddependi fuq kemm kull wieħed u waħda minna:

1. Ninkoraġġixxu u nfittxu idejat u metodi godda fejn jidhru l-użu tal-irbit,
2. Nimmotivaw lil xulxin sabiex inħarsu b'mod kritiku lejn l-użu tal-irbit,
3. Inkunu aktar ċari dwar ir-responsabilità tagħna fuq id-deċiżjonijiet li għandhom x'jaqsmu ma' l-użu tal-irbit,
4. Inkomplu nipplanaw u nsaħħu l-iżvilupp ta' din l-inizjattiva dwar l-użu tal-irbit, għall-ġid tal-anzjan kif ukoll għall-ġid tal-professionist u tal-istaff li jassisti.

Huwa importanti, illi dan il-proġett iservi ta' qafas għalina l-professjonisti u l-istaff li jassisti l-infermiera, sabiex napprezzaw u naħdmu flimkien, f'dan il-qasam b'aspettativa ġdida.

Grazzi tal-partecipazzjoni tiegħek f'dan il-proġett.

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Introduzzjoni għall-użu tal-irbit

Persuna Anzjana tkun ikkunsidrata marbuta, meta l-professjonisti u/jew l-istaff li jassisti l-infermiera, b'mod ippjanat jew le, b'mod konxju jew le, jipprevenu l-Persuna Anzjana milli tagħmel dak li tixtieq u bil-konsegwenza li tiġi mnaqqsa l-libertà tagħha.

1a. Metodi ta' irbit jistgħu jinkludu:

Metodu manwali, fiżiku jew mekkaniku, materjal jew attrezzatura mwaħħla ma' jew hdejn il-ġisem tal-Persuna Anzjana, sabiex jillimita l-moviment (jiġifieri l-Persuna Anzjana ma tkunx tista' tneħhi l-apparat faċilment u jkun qed jillimita l-libertà fil-movimenti).

1b. Dawn is-sitwazzjonijiet li ġejjin mhumliex kunsidrati bħala *forom ta' rbit*:

- i. Immobilizzar ta' parti mill-ġisem bħala parti minn trattament, per eżempju appoġġi (*splints*) u kastijiet (*casts*).
- ii. Immobilizzar temporanju ta' parti mill-ġisem meta jkun qed isir trattament.
- iii. Immobilizzar temporanju waqt trasport tal-anzjan/a, bħal per eżempju sigġijiet fl-ambulanza/karrozza, ċintorini tas-sigġijiet tal-karrozzi u ċintorini fuq sigġijiet tar-roti/streċer.
- iv. Apparat bl-iskop li jzomm il-qagħda tajba tal-Persuna Anzjana li tkun issofri minn paralizi, bħal ċintorini mqabbdin mas-sigġijiet tar-roti, u ħżiem jew *harness* tal-ispalla li jkunu magħmulin fuq il-qies tal-Persuna Anzjana.

2a. Il-*għnub tas-sodda huma forma ta' rbit meta*:

- i. Jwaqqfu l-Persuna Anzjana milli tiċċaqtaq bil-mod kif trid (bħal meta jzommuha milli toħroġ mis-sodda meta trid).
- ii. Jservu ta' aktar minn skop wieħed, (bħal meta jiffaċilitaw ċaqliq fis-sodda waqt li fl-istess ħin jzommu lill-Persuna Anzjana milli toħroġ mis-sodda meta tkun trid).

2b. Il-*għnub tas-sodda mhumliex forma ta' rbit meta*:

- i. Jwaqqfu Persuna Anzjana li kapaċi tiċċaqtaq ftit biss jew xejn, milli taqa' mis-sodda. (Din mhiex forma ta' rbit għaliex il-Persuna Anzjana mhiex qed tipprova toħroġ mis-sodda).
- ii. Itejbu il-mobilità tal-Persuna Anzjana meta toħroġ jew tidhol fis-sodda, b'hekk jgħinu biex il-Persuna Anzjana tkun tista' tiċċaqtaq kif trid aħjar.

Tixtieq tgħaddi xi kummenti? _____

Taqsim A

Demografija

A1 Data tal-lum _____ **A2 Età (snin)** _____

A3 Sess

- ☐ Mara
☐ Raġel

A4 Professjoni

- ☐ Professjoni Medika/Professjoni Paramedika (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
☐ Professjoni tal-Infermier/Infermiera (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
☐ Staff li jassisti l-Infermier/a (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)

A5 Fejn taħdem

- ☐ Dar tal-Care Malta
☐ Dar tal-Gvern
☐ Dar Privata

A6 Fejn taħdem (reġjun)

- ☐ *Southern Harbour Region* (Żabbar, Xagħajra, Valletta, Tarxien, Santa Luċija, Paola, Marsa, Luqa, Kalkara, Senglea, Floriana, Fgura, Cospicua, Vittoriosa)
☐ *Northern Harbour Region* (Ta' Xbiex, Swieqi, Sliema, Santa Venera, San Gwann, St Julians, Qormi, Pietà, Pembroke, Msida, Hamrun, Gżira, Birkirkara)
☐ *South Eastern Region* (Żurrieq, Żejtun, Safi, Qrendi, Mqabba, Marsaxlokk, Marsaskala, Kirkop, Gudja, Għaxaq, Birżebbuġa)
☐ *Western Region* (Żebbuġ, Siġġiewi, Rabat, Mtarfa, Mdina, Lija, Iklin, Dingli, Balzan, Attard)
☐ *Northern Region* (St Paul's Bay, Naxxar, Mosta, Mgarr, Mellieħa, Għargħur)

A7 Kemm ilek taħdem mal-Persuni Anzjani? (snin)

A8 Attendejt xi taħriġ fejn l-irbit u l-użu tagħhom ġie msemmi jew diskuss?

- ☐ Iva
☐ Le

Taqsimha B

Thassib li jista' jkollhom il-professjonisti/staff li jassisti l-infermiera rigward tar-rwol tagħhom fil-kura

(Għal kull kategorija mmarka dik il-kaxxa li l-aktar tirrifletti l-opinjoni tiegħek)

| | Naqbel Hafna | Naqbel | Incert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| B1 Għandi responsabbiltà diretta li niehu hsieb u ngħin lill-Persuna Anzjana | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B2 Għandi responsabbiltà diretta li ninkoraġixxi lill-Persuna Anzjana sabiex kemm jista' jkun tkun indipendenti | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B3 Għandi r-responsabbiltà illi nikkontrolla l-aġir tal-Persuna Anzjana, għall-benefiċċju t'Anzjani oħra u tal-kollegi tax-xogħol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B4 Ma naf xejn dwar xi wħud mill-Persuni Anzjani li naħdem magħhom | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B5 Spiss nsibha diffiċli biex nilhaq bilanċ bejn l-interessi u l-bżonnijiet tal-Persuni Anzjani li naħdem magħhom u l-bżonnijiet tal-kollegi tax-xogħol | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B6 Spiss nsibha diffiċli biex nilhaq bilanċ bejn l-interessi u l-bżonnijiet tal-Persuna Anzjana li nkun qed naħdem magħha u l-bżonnijiet t'Anzjani oħra | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tixtieq tgħaddi xi kummenti? _____

Taqsimat Ċ

L-użu tal-irbit

Din it-taqsimat hija dwar kif jintuża l-irbit ġewwa d-Dar tal-Anzjani fejn taħdem. Għalhekk, id-domandi li ġejjin huma dwar:

- i. It-tipi ta' rbit li jintuża.
- ii. Min jirrakkomanda li Persuna Anzjana tkun marbuta.
- iii. L-ispejgazzjoni li tingħata lill-Persuna Anzjana u/jew membri tal-familja u/jew is-sostituti tal-membri tal-familja, f'każ ta' rbit.
- iv. Il-monitaraġġ u t-tneħħija tal-irbit.
- v. Id-dokumentazzjoni fuq l-użu tal-irbit fil-*file* personali tal-Persuna Anzjana.
- vi. In-numru ta' siegħat kuljum li Persuna Anzjana jinżamm/tinżamm marbut/marbuta.

Ċ1 X'irbit qed jintuża fid-Dar tal-Anzjani fejn taħdem?

(Immarka dawk kollha li japplikaw)

- | | |
|---|--|
| 1.1 <input type="checkbox"/> Il-ġnub tas-sodda | 1.10 <input type="checkbox"/> Irbit tal-idejn u/jew saqajn |
| 1.2 <input type="checkbox"/> Parti biss mill-ġnub tas-sodda | 1.11 <input type="checkbox"/> <i>Lapboards</i> |
| 1.3 <input type="checkbox"/> <i>H-harness</i> | 1.12 <input type="checkbox"/> Pultruni baxxi ħafna jew għoljin ħafna |
| 1.4 <input type="checkbox"/> <i>T-harness</i> | 1.13 <input type="checkbox"/> Pultruna jew sigġu tar-roti mqiegħed b'mod immejje |
| 1.5 <input type="checkbox"/> Ċinturin | 1.14 <input type="checkbox"/> <i>Bed harness</i> |
| 1.6 <input type="checkbox"/> <i>Manufactured Y-harness</i> | 1.15 <input type="checkbox"/> <i>Boxing gloves</i> |
| 1.7 <input type="checkbox"/> Lożor | 1.16 <input type="checkbox"/> Imwejjed li tista' tbaxxihom jew tgħollihom kif trid |
| 1.8 <input type="checkbox"/> Irbit mas-sigġu tar-roti | 1.17 <input type="checkbox"/> Oħrajn (jekk jogħġbok speċifika) |
| 1.9 <input type="checkbox"/> <i>Lifter straps</i> | |

Ċ2 Min jirrakomanda li l-Persuna Anzjana tkun marbuta fid-Dar tal-Anzjani fejn taħdem? (immarka dawk kollha li japplikaw)

- 2.1 ☐ Professjoni Medika/Paramedika (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 2.2 ☐ Professjoni tal-Infermier/Infermiera (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 2.3 ☐ Staff li jassisti l-Infermier/a (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 2.4 ☐ Management
- 2.5 ☐ Tijm Multidixxiplinarju
- 2.6 ☐ Membru tal-Familja/Sostitut tal-Membru tal-Familja
- 2.7 ☐ Persuna Anzjana oħra
- 2.8 ☐ Persuna Anzjana nfisha
- 2.9 ☐ Hadd

Tixtieq tgħaddi xi kummenti? _____

Ċ3 Min jispjega l-użu tal-irbit lill-Persuna Anzjana fid-Dar tal-Anzjani fejn taħdem? (immarka dawk kollha li japplikaw)

- 3.1 ☐ Professjoni Medika/Paramedika (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 3.2 ☐ Professjoni tal-Infermier/Infermiera (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 3.3 ☐ Staff li jassisti l-Infermier/a (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 3.4 ☐ Management
- 3.5 ☐ Tijm Multidixxiplinarju
- 3.6 ☐ Membru tal-Familja/Sostitut tal-Membru tal-Familja
- 3.7 ☐ Hadd

Tixtieq tgħaddi xi kummenti? _____

Ċ4 Min isegwi l-Persuna Anzjana waqt li tkun marbuta fid-Dar tal-Anzjani fejn taħdem? (immarka dawk kollha li japplikaw)

- 4.1 ☐ Professjoni Medika/Paramedika (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 4.2 ☐ Professjoni tal-Infermier/Infermiera (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 4.3 ☐ Staff li jassisti l-Infermier/a (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 4.4 ☐ Management
- 4.5 ☐ Tijm Multidixxiplinarju
- 4.6 ☐ Membru tal-Familja/Sostitut tal-Membru tal-Familja
- 4.7 ☐ Persuna Anzjana oħra
- 4.8 ☐ Hadd

Tixtieq tgħaddi xi kummenti? _____

Ċ5 Min jiddeċidi li jneħhi l-irbit ġewwa d-Dar tal-Anzjani fejn taħdem? (immarka dawk kollha li japplikaw)

- 5.1 ☐ Professjoni Medika/Paramedika (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 5.2 ☐ Professjoni tal-Infermier/Infermiera (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 5.3 ☐ Staff li jassisti l-Infermier/a (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 5.4 ☐ Management
- 5.5 ☐ Tijm Multidixxiplinarju
- 5.6 ☐ Membru tal-Familja/Sostitut tal-Membru tal-Familja
- 5.7 ☐ L-Persuna Anzjana nnifsu/nnifisha
- 5.8 ☐ Hadd

Tixtieq tgħaddi xi kummenti? _____

Ċ6 Min inizzel l-informazzjoni dwar l-użu tal-irbit fil-file personali tal-Persuna Anzjana fid-Dar tal-Anzjani fejn taħdem?

(immarka dawk kollha li japplikaw)

- 6.1 ☐ Professjoni Medika/Paramedika (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 6.2 ☐ Professjoni tal-Infermier/Infermiera (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 6.3 ☐ Staff li jassisti l-Infermier/a (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 6.4 ☐ *Management*
- 6.5 ☐ L-użu tal-irbit mhux dejjem ikun dokumentat

Tixtieq tgħaddi xi kummenti? _____

Ċ7 Matul 24 siegħa, għal kemm żmien, bejn wieħed u ieħor, Persuna Anzjana tinżamm marbuta fid-Dar tal-Anzjani fejn taħdem?

- 7.1 ☐ Il-ġurnata kollha
- 7.2 ☐ Aktar minn nofs ta' nhar imma mhux il-ġurnata kollha
- 7.3 ☐ Aktar minn sagħtejn (2) imma mhux aktar minn nofs ta' nhar
- 7.4 ☐ Mhux aktar minn sagħtejn (2)

Tixtieq tgħaddi xi kummenti? _____

Taqsim D

Sitwazzjonijiet li jżidu l-probabbiltà li Persuna Anzjana tkun marbuta

Din it-taqsim hija dwar daww fatturi li jistgħu jwasslu għal użu tal-irbit.

Immarka daww is-sitwazzjonijiet li jżidu l-probabbiltà li Persuna Anzjana tista' tkun marbuta. Għal kull kategorija mmarka dik il-kaxxa li l-aktar tirrifletti l-opinjoni tiegħek.

D1.1 Mixi, tiegħu l-piż fuq saqajha, bilanċ u attivitajiet tal-ħajja ta' kuljum

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.1.1 ... ma tistax toħroġ mis-sodda, jew hija dipendenti fuq sigġu normali jew sigġu tar-roti | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.2 ...tuża s-sigġu tar-roti bl-għajnuna | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.3 ...timxi bl-għajnuna | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.4 ...ma żżommx il-piż fuq saqajha | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.5 ...żżomm parti biss mill-piż fuq saqajha | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.6 ...għandha problemi ta' bilanċ (eż tmiel fuq iż-żewġ naħat, 'il quddiem, lura, jew tiżżerżaq) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.7 ...għandha bżonn tal-għajnuna fl-attivitajiet tal-ħajja ta' kuljum | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.2 Limitazzjonijiet fiżiċi

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.2.1 ...tbat i minn <i>contractures</i> jew paralizi | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.2 ...għandha id jew sieq maqtuha jew tilbes prosteżi | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.3 ...tiegħu ikel minn tubu/għandha labra fil-vina/ <i>Foley</i> /qed tuża maskra tal-ossigenu l-ħin kollu | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.4 ...tbat i minn sturdamenti, pressjoni baxxa jew epilessija | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.5 ...għieli waqgħat fil-passat | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.3 Kommunikazzjoni/smiegħ/vista

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.3.1 ...jbati/tbati biex jitkellem/titkellem | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3.2 ...hemm nuqqas ta' smiegħ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3.3 ...hemm nuqqas ta' vista | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.4 Kontinenza

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Ħafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.4.1 ...hemm problema biex tikkontrolla l-urina | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4.2 ...hemm problema biex tikkontrolla l-ippurgar | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4.3 ...hemm problema biex tikkontrolla kemm l-urina kif ukoll l-ippurgar | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.5 Orjentazzjoni, fehma ta' x'inhom jgħri, aġir, burdata

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Ħafna | Naqbel | Inċert | Ma naqbilx | Ma naqbel xejn |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.5.1 ...tkun diżorjentata | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.2 ...tinsa malajr | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.3 ...mhiex kapaċi ssegwi struzzjonijiet sempliċi | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.4 ...għandha bżonn li struzzjonijiet ikunu ripetuti ta' spiss | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.5 ...tkun aġitata ħafna | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.6 ...qiegħda turi sinjali ta' biżżeż jew ansjetà | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.6 Sehem fl-attivitajiet

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.6.1 ...mhiex kapaċi tiegħu sehem f'attivitajiet soċjali (ta' kwalunkwe tip) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.6.2 ...tipparteċipa f'attivitajiet soċjali (ta' kwalunkwe tip) bl-għajjnuna | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.7 L-Użu ta' mediċini

It-tendenza li l-Persuna Anzjana tkun marbuta tiżdied jekk:

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.7.1 ...tiegħu kalmanti jew mediċini oħra li jaħdmu fuq il-moħħ jew mediċini oħra b'effetti simili | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tixtieq tgħaddi xi kummenti? _____

Taqsimat E

Il-fehma dwar l-użu tal-irbit

L-għan ta' din it-taqsimat huwa sabiex:

1. Tagħti farsa dwar kif il-Persuna Anzjana tirrijaġixxi għall-irbit.
2. Thares lejn x'taħseb *int*, bħala professjonist/a u staff li jassisti l-infermiera, dwar l-użu tal-irbit fir-rigward ta':
 - i. Xogħol
 - ii. Ambjent
 - iii. Sigurtà
 - iv. Attitudnijiet

E1 Kif jirrijaġixxi Persuna Anzjana għall-irbit?

(immarka dawk kollha li japplikaw)

- | | |
|---|--|
| 1.2 <input type="checkbox"/> Rabja | 1.9 <input type="checkbox"/> Tonqsilha l-mobilità |
| 1.3 <input type="checkbox"/> Aġitazzjoni kbira | 1.10 <input type="checkbox"/> Jiżdiedu l-feriti |
| 1.4 <input type="checkbox"/> Tingħalaq fiha nfisha | 1.11 <input type="checkbox"/> Żieda fil-problemi t'inkontinenza fl-urina u fl-ippurgar |
| 1.5 <input type="checkbox"/> Tittallab biex tinħall | 1.12 <input type="checkbox"/> Żieda fid-dipendenza fl-attivitajiet tal-ħajja ta' kulljum |
| 1.6 <input type="checkbox"/> Tgħajjat għall-għajnuna | 1.13 <input type="checkbox"/> Oħrajn (jekk jogħġbok speċifika) |
| 1.7 <input type="checkbox"/> Tipprova tinħall il-ħin kollu | |
| 1.8 <input type="checkbox"/> Tonqsilha l-kapaċità li tifhem | |

E2.1 Diffikultajiet li taħseb li jistgħu jinqalgħu fuq il-post tax-xogħol jekk l-użu tal-irbit jonqos
(Għal kull kategorija mmarka dik il-kaxxa li l-aktar tirrifletti l-opinjoni tiegħek)

| | Naqbel Hafna | Naqbel | Incirt | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.1.1 Il-Persuna Anzjana tirrikjedi superviżżjoni aktar stretta jekk l-użu tal-irbit jonqos | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.2 Jekk l-użu tal-irbit jonqos, ikun hemm bżonn t'aktar professjonisti u staff li jgħinu l-infermier/a | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.3 Jekk l-użu tal-irbit jonqos, jiżdied ir-riskju li nkun akkużat/a b'negligenza, jekk l-Persuna Anzjana taqa' u twegġa' | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.4 Ix-xogħol tiegħi jiżdied jekk l-użu tal-irbit jonqos | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.5 Inħossni sodisfatt/a bix xogħol tiegħi jekk l-użu tal-irbit jonqos | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tixtieq tgħaddi xi kummenti? _____

E2.2 Diffikultajiet li tahseb li jistgħu jinqalgħu fl-ambjent fejn taħdem, jekk l-użu tal-irbit jonqos:

(Għal kull kategorija mmarka dik il-kaxxa li l-aktar tirrifletti l-opinjoni tiegħek)

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.2.1 Jekk l-użu tal-irbit jonqos, ikun neċessarju li jinstabu sistemi oħrajn minnflok | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2.2 Jkun hemm bżonn t'aktar attivitajiet għall-Persuna Anzjana jekk l-użu tal-irbit jonqos | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2.3 Il-post fejn naħdem huwa addattat sabiex Persuna Anzjana tkun tista' timxi u tiċċaqilaq mingħajr rbit | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tixtieq tgħaddi xi kummenti? _____

E2.3 Problemi ta' sigurtà li taħseb li jistgħu jinqalgħu jekk l-użu tal-irbit jonqos

(Għal kull kategorija mmarka dik il-kaxxa li l-aktar tirrifletti l-opinjoni tiegħek)

| | Naqbel Hafna | Naqbel | Incert | Ma Naqbilx | Ma Naqbel Xejn |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.3.1 Jekk l-użu tal-irbit jonqos, il-Persuna Anzjana taqa' aktar ta' spiss | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.2 Jekk l-użu tal-irbit jonqos, is-sigurtà tal-Persuna Anzjana tista' tkun mxejkla | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.3 Hemm aktar ċans li l-Persuna Anzjana tispiċċa tigris mas-sala jew barra mis-sala jekk l-użu tal-irbit jonqos | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.4 Jekk l-użu tal-irbit jonqos, il-professjonisti u staff li jgħinu l-infermier/a jkun aktar fil-periklu li jistgħu jweggħu | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.5 Jista' jkun li l-Persuna Anzjana tħossha aktar sigura jekk tkun marbuta | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tixtieq tgħaddi xi kummenti? _____

**E2.4 Thassib mill-professjonisti u staff li jassisti l-infermier/a
dwar l-użu tal-irbit**

(Għal kull kategorija mmarka dik il-kaxxa li l-aktar tirrifletti l-opinjoni tiegħek)

| | Naqbel Hafna | Naqbel | Inċert | Ma Naqbilx | Ma Naqbel Xejn |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.4.1 Inħoss li l-parti l-kbira tal-irbit illi qed jintuża huwa neċessarju | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4.2 Għalkemm jista' jkun li jiżdied ċertu riskju jekk jonqos l-użu tal-irbit, xorta nemmen li wieħed għandu jipprova | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4.3 Li torbot persuna huwa aġir li jmur kontra d-drittijiet fundamentali ta' kull persuna | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4.4 Taħt l-ebda ċirkustanza Persuna Anzjana m'għandha tkun marbuta | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Tixtieq tgħaddi xi kummenti? _____

E2.5 F'din it-taqsimha qed tiġi mistieden/mistiedna biex tagħti l-kummenti tiegħek dwar l-użu tal-irbit, waqt li żżomm f'moħħok l-użu tagħhom fl-ambjent fejn taħdem.

2.5.1 Kif tħossok meta torbot lil xi hadd jew meta tara lil xi hadd marbut?

2.5.2 Kif taħseb li tħossha Persuna Anzjana marbuta?

2.5.3 X'inhu l-effett fuq il-professjonisti/staff li jassisti l-infermiera jekk l-użu tal-irbit jonqos/jiġi eliminat?

2.5.4 X'inhu l-effett fuq il-Persuna Anzjana jekk l-użu tal-irbit jonqos/jiġi eliminat?

2.5.5 X'inhuma t-tħassib jew diffikultajiet tiegħek dwar jekk l-irbit jonqos jew jiġi eliminat?

E2.6 Jekk tiġi ntrodotta *Least Physical Restraint Use Policy*

2.6.1 Xi gwadan tara għall-professionist, staff li jassisti l-infermier/a u l-Persuna Anzjana bl-introduzzjoni ta' *Least Physical Restraint Use Policy*?

2.6.2 X'diffikultajiet tara għall-professionist, staff li jassisti l-infermier/a u l-Persuna Anzjana bl-introduzzjoni ta' *Least Physical Restraint Use Policy*?

2.6.3 Inti tappoġġja *Least Physical Restraint Use Policy* ġewwa d-Dar tal-Anzjani fejn taħdem?

- ☐ Iva
- ☐ Le
- ☐ Mhux ċert

Għaliex?

- ☐ Imlejt dan il-kwestjonarju waħdi
- ☐ Imlejt dan il-kwestjonarju bl-għajnuna ta' xi ħadd

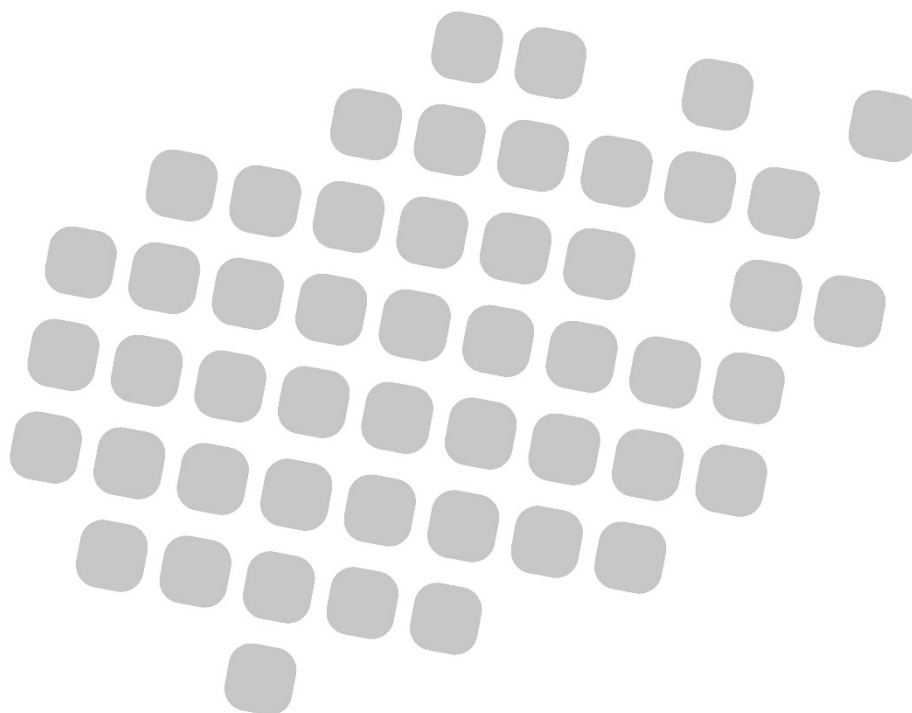
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Appendix VII

PHYSICAL RESTRAINT USE Questionnaire for care providers

For official use only

Questionnaire No.



PHYSICAL RESTRAINT USE

Questionnaire for Staff Members

Maria A Fenech

Division of Rehabilitation & Ageing, Queen's Medical Centre, University of Nottingham

Dear colleagues

We, the health care professionals and nursing support staff pride ourselves with the efficiency and effectiveness of our approach towards the Older Person in our care. Each and every Older Person is unique with her/his different needs and challenges. The humanistic approach of how we provide care to the Older Person remains the focus of each one of us individually.

Nonetheless, we are sometimes faced with situations when we and/or the team feel compelled to consider physically restraining the Older Person. This project is a means of consulting with the health care professional and nursing support staff for us to critically appraise and set targets in the current practices pertaining to physical restraint use.

The importance of this project does not depend on whether physical restraints are applied or reduced or removed; rather it lies with each and every one of us to:

1. Encourage and explore innovative ideas and new methods regarding physical restraint use
2. Motivate each other to critically evaluate current practices pertaining to physical restraint use
3. Enhance accountability which will reflect our responsibility and expectations to decisions pertaining to physical restraint use
4. Support the planning process as stakeholders and as co-owners of the initiative towards evaluating physical restraint use for the benefit of the Older Person as well as for the health care professional and nursing support staff

Most importantly, it is hoped that this project will serve as a basis for us, the health care professionals and nursing support staff, to appreciate and approach together, this issue in a new way.

Thank you for your participation in this project.

Maria A Fenech

Principal Physiotherapist

Mobile: 9940 5629

Email: mcxmaf@nottingham.ac.uk

Introduction to physical restraint use

In its broadest sense, the Older Person is taken to be physically restrained through the planned or unplanned, conscious or unconscious actions of health care professionals and/or nursing support staff, preventing the Older Person from doing what he/she wishes to do and as a result places limits on his/her freedom.

1a. Physical restraining amounts to:

Any manual method, or physical or mechanical device, material or equipment attached or adjacent to the Older Person's body so as to limit movement (ie the Older Person cannot remove the device easily and there is restriction of freedom of movement).

1b. The following situations are *not* forms of physical restraining:

- i. Immobilisation of a part of the body as required for medical treatment, such as splints and casts.
- ii. Temporary immobilisation of a part of the body when a nursing procedure is being performed.
- iii. Temporary immobilisation during transportation, such as ambulance/car seats, car seat belts and belts on wheelchairs/stretchers,
- iv. Devices that are used to maintain the desired body position for the Older Person with paralysis, such as belts for wheelchairs, and straps or shoulder harnesses that may be part of customised seating.

2a. Bed side rail use is a form of physical restraint when its purpose is to:

- i. Impede the Older Person's desired movement or activity (such as getting out of bed when the Older Person wants to get out of bed).
- ii. Serve multiple purposes (that is, facilitating in-bed mobility but also keeping the Older Person from getting out of bed when the Older Person wants to get out of bed).

2b. Bed side rail use is not a form of physical restraint when its purpose is to:

- i. Prevent a completely or nearly completely immobile Older Person from falling out of bed. (This is not considered a form of physical restraint because the Older Person is not trying to leave the bed).
- ii. Enhance the Older Person's mobility in and out of bed, thus facilitating the person's choice.

Would you like to include further comments? _____

Section A

Demographics

A1 Today's date _____ **A2 Age (years)** _____

A3 Gender

- ☐ Female
☐ Male

A4 Professional status

- ☐ Medical/Paramedical Profession (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
☐ Nursing Profession (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
☐ Nursing Support Staff (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)

A5 Place of work

- ☐ Care Malta Home
☐ Government Residential Home
☐ Private Home

A6 Place of work? (region)

- ☐ Southern Harbour Region (*Żabbar, Xagħajra, Valletta, Tarxien, Santa Luċija, Paola, Marsa, Luqa, Kalkara, Senglea, Floriana, Fgura, Cospicua, Vittoriosa*)
☐ Northern Harbour Region (*Ta' Xbiex, Swieqi, Sliema, Santa Venera, San Ġwann, St Julians, Qormi, Pietà, Pembroke, Msida, Hamrun, Gżira, Birkirkara*)
☐ South Eastern Region (*Żurrieq, Żejtun, Safi, Qrendi, Mqabba, Marsaxlokk, Marsaskala, Kirkop, Gudja, Għaxaq, Birżebbuġa*)
☐ Western Region (*Żebbuġ, Siġġiewi, Rabat, Mtarfa, Mdina, Lija, Iklin, Dingli, Balzan, Attard*)
☐ Northern Region (*St Paul's Bay, Naxxar, Mosta, Mgarr, Mellieħa, Għargħur*)

A7 How long have you been working with older persons? (years)

A8 Have you attended continuing education or in-service training programs where physical restraints and their use were mentioned and/or discussed?

- ☐ Yes
☐ No

Section B

Health care professional/nursing support staff concerns about caring roles

(For each statement, tick the ONE box that most closely reflects your opinion)

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| B1 Taking care of and helping the Older Person is the only responsibility I have | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B2 My role consists of very largely or totally in encouraging the Older Person to do as much as possible for herself/himself | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B3 I have a responsibility to control the Older Person's behaviour, for the benefit of other Older Persons or health care professionals/nursing support staff | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B4 Some of the Older Persons I work with are unknown to me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B5 I often find it difficult to compromise between the interests and needs of the Older Person I am working with and the needs of health care professionals/nursing support staff | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| B6 I often find it difficult to compromise between the interests and needs of the Older Person I am working with and the needs of other Older Persons | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Would you like to include further comments? _____

Section C

The use of physical restraint

The aim of this section is to determine how physical restraint devices are used within your Residential Home. To achieve this, you will be asked about:

- i. The types of devices being used
- ii. The person recommending that the Older Person is physically restrained
- iii. The explanation regarding physical restraint use to the Older Person and/or family member and/or substitute decision maker
- iv. The monitoring and eventual removal of the physical restraint
- v. The documentation in the Older Person's file regarding the use of physical restraint
- vi. The approximate total duration of physical restraint use for the Older Person within a 24-hour period

C1 What type(s) of restraint is/are being used within your Residential Home? (Mark all that apply)

- | | |
|---|---|
| 1.1 <input type="checkbox"/> Full bed rails | 1.10 <input type="checkbox"/> Limb restraint |
| 1.2 <input type="checkbox"/> Any combination of partial bed rails | 1.11 <input type="checkbox"/> Lapboards |
| 1.3 <input type="checkbox"/> H-harness | 1.12 <input type="checkbox"/> Too low or too high armchairs |
| 1.4 <input type="checkbox"/> T-harness | 1.13 <input type="checkbox"/> Tilted wheelchair/armchair |
| 1.5 <input type="checkbox"/> Belt harness | 1.14 <input type="checkbox"/> Bed harness |
| 1.6 <input type="checkbox"/> Manufactured Y-harness | 1.15 <input type="checkbox"/> Boxing gloves |
| 1.7 <input type="checkbox"/> Sheets | 1.16 <input type="checkbox"/> Height adjustable tables |
| 1.8 <input type="checkbox"/> Wheelchair straps | 1.17 <input type="checkbox"/> Other/s (please specify) |
| 1.9 <input type="checkbox"/> Lifter straps | |

C2 Who recommends that the Older Person is physically restrained within your Residential Home? (Mark all that apply)

- 2.1 ☐ Medical/Paramedical Profession (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 2.2 ☐ Nursing Profession (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 2.3 ☐ Nursing Support Staff (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 2.4 ☐ Management
- 2.5 ☐ The Multidisciplinary Team
- 2.6 ☐ Family Member/Substitute Decision Maker
- 2.7 ☐ Another Older Person
- 2.8 ☐ Older Person herself/himself
- 2.9 ☐ No one

Would you like to include further comments? _____

C3 Who explains physical restraint use to the Older Person within your Residential Home? (Mark all that apply)

- 3.1 ☐ Medical/Paramedical Profession (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 3.2 ☐ Nursing Profession (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 3.3 ☐ Nursing Support Staff (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 3.4 ☐ Management
- 3.5 ☐ The Multidisciplinary Team
- 3.6 ☐ Family Member/Substitute Decision Maker
- 3.7 ☐ No one

Would you like to include further comments? _____

C4 Who monitors the Older Person in physical restraint within your Residential Home? (Mark all that apply)

- 4.1 ☐ Medical/Paramedical Profession (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 4.2 ☐ Nursing Profession (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 4.3 ☐ Nursing Support Staff (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 4.4 ☐ Management
- 4.5 ☐ The Multidisciplinary Team
- 4.6 ☐ Family Member/Substitute Decision Maker
- 4.7 ☐ Another Older Person
- 4.8 ☐ No one

Would you like to include further comments? _____

C5 Who decides to remove the physical restraint within your Residential Home? (Mark all that apply)

- 5.1 ☐ Medical/Paramedical Profession (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 5.2 ☐ Nursing Profession (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 5.3 ☐ Nursing Support Staff (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 5.4 ☐ Management
- 5.5 ☐ The Multidisciplinary Team
- 5.6 ☐ Family Member/Substitute Decision Maker
- 5.7 ☐ Older Person herself/himself
- 5.8 ☐ No one

Would you like to include further comments? _____

C6 Who documents physical restraint use in the Older Person's file within your Residential Home? (Mark all that apply)

- 6.1 ☐ Medical/Paramedical Profession (*Medical Officer, Occupational Therapist, Physiotherapist, Podiatrist, Speech Language Pathologist, Radiographer, Social Worker*)
- 6.2 ☐ Nursing Profession (*Nursing Officer, Deputy Nursing Officer, Staff Nurse, Enrolled Nurse, Specialist Nurse*)
- 6.3 ☐ Nursing Support Staff (*Nursing Aide, Health Assistant, Care worker, Social Assistant, Assistant Care Worker*)
- 6.4 ☐ Management
- 6.5 ☐ Physical restraint use is not always documented

Would you like to include further comments? _____

C7 What is the typical total duration of physical restraint use (without release) for the Older Person within a 24-hour period within your Residential Home?

- 7.1 ☐ All Day
- 7.2 ☐ More than half a day but not all day
- 7.3 ☐ More than 2 hours but not more than half a day
- 7.4 ☐ Up to 2 hours

Would you like to include further comments? _____

Section D

Situations that make the Older Person more likely to be physically restrained

The section looks at those characteristics that might advocate the use of physical restraints.

For each statement tick the ONE box that most closely reflects your opinion.

D1.1 Mobility, weight-bearing, balance & activities of daily living

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.1.1 ...she/he cannot get out of bed or is chair dependent or is wheel chair dependent | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.2 ...she/he is wheel chair mobile with assistance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.3 ...she/he mobilises with assistance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.4 ...she/he does not bear weight | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.5 ...she/he partially weight bears | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.6 ...she/he has balance problems (eg leans to either side, forward, backward, slides down) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.1.7 ...she/he requires assistance for activities of daily living | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.2 Physical limitations

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.2.1 ...she/he suffers from contractures/paralysis | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.2 ...she/he had an amputation or has a prosthesis <i>in situ</i> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.3 ...she/he has a feeding tube/ IV/Foley/continuous oxygen | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.4 ...she/he has a history of vertigo, hypotension, and seizures | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.2.5 ...she/he has a history of falls | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.3 Communication/hearing/vision patterns

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.3.1 ...she/he is speech impaired | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3.2 ...she/he is hearing impaired | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.3.3 ...she/he visually impaired | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.4 Contenance

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.4.1 ...she/he is incontinent of urine | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4.2 ...she/he is incontinent of faeces | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.4.3 ...she/he is dually incontinent | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.5 Orientation, comprehension, behaviour/mood

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.5.1 ...she/he is disorientated | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.2 ...she/he is forgetful/short attention span | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.3 ...she/he unable to follow simple directions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.4 ...she/he has to have directions frequently repeated | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.5 ...she/he is severely agitated | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.5.6 ...she/he exhibits/expresses fears or anxieties | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.6 Activity participation

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.6.1 ...she/he is unable to actively participate in social activities (of any kind) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 1.6.2 ...she/he participates in social activities (of any kind) with assistance | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

D1.7 Medication therapy

There is an increased tendency for the Older Person to be physically restrained if:

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1.7.1 ...she/he is currently on antipsychotics/antidepressants/antianxiety medication | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Would you like to include further comments? _____

Section E

Perceptions regarding physical restraint and its use

The aim of this section is two-fold:

1. It will look at the Older Person's response to the physical restraint
2. It will consider how *you*, the health care professional or nursing support staff member, perceive physical restraint and its use, in relation to:
 - i. Work concerns
 - ii. Environmental concerns
 - iii. Safety concerns
 - iv. Attitudes

E1 What reactions (from the Older Person) to physical restraint do you most often typically observe? (Mark all that apply)

- | | |
|--|--|
| 1.1 <input type="checkbox"/> Passivity | 1.8 <input type="checkbox"/> Decline in cognition |
| 1.2 <input type="checkbox"/> Anger | 1.9 <input type="checkbox"/> Decline in mobility |
| 1.3 <input type="checkbox"/> Increased agitation | 1.10 <input type="checkbox"/> Increase in the development of pressure sores |
| 1.4 <input type="checkbox"/> Withdrawal | 1.11 <input type="checkbox"/> Increase in urine and faecal incontinence |
| 1.5 <input type="checkbox"/> Pleas for release | 1.12 <input type="checkbox"/> Increase in dependence in activities of daily living |
| 1.6 <input type="checkbox"/> Calls for help | 1.13 <input type="checkbox"/> Other (please specify) |
| 1.7 <input type="checkbox"/> Constant attempts to untie/release self | |
| | _____ |
| | _____ |

E2.1 Work concerns if physical restraints are reduced

(For each statement, tick the ONE box that most closely reflects your opinion)

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.1.1 The Older Person would require closer supervision if the use of physical restraints were reduced | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.2 If the use of physical restraints were reduced at, more health care professionals and nursing support staff would be needed | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.3 If the use of physical restraints were reduced, I would be at greater risk for being held liable for neglect if the Older Person falls and is injured | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.4 Reducing the use of physical restraints, would increase my work load | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.1.5 If the use of physical restraints were reduced, I would feel better about my job | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Would you like to include further comments? _____

E2.2 Environmental concerns if physical restraints are reduced:

(For each statement, tick the ONE box that most closely reflects your opinion)

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.2.1 If the use of physical restraints were reduced, alternate methods would be needed | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2.2 More activities for the Older Person would be needed if the use of physical restraints were reduced | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.2.3 The layout of the unit where I work is suitable for restraint-free Older Persons to walk and move around | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Would you like to include further comments? _____

E2.3 Safety concerns if physical restraints were reduced

(For each statement, tick the ONE box that most closely reflects your opinion)

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.3.1 The Older Person would fall more frequently if the use of physical restraint were reduced | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.2 The safety of the Older Person would be jeopardized if the use of physical restraints were reduced | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.3 The Older Person would be more likely to wander if the use of physical restraints were reduced | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.4 The health care professional and nursing support staff could be more easily harmed by the Older Person if the use of physical restraints were reduced | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.3.5 The Older Person tends to feel more secure (safer) if she/he is physically restrained | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Would you like to include further comments? _____

E2.4 Staff members' concerns toward physical restraint use

(For each statement, tick the ONE box that most closely reflects your opinion)

| | Strongly Agree | Agree | Uncertain | Disagree | Strongly Disagree |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2.4.1 I feel the majority of physical restraints in use are necessary | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4.2 Even if reducing the use of physical restraints were risky, reducing them is still worth a try | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4.3 Physically restraining the Older Person is an invasion of a basic right of all human beings | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.4.4 Under no circumstances should the Older Person be physically restrained | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Would you like to include further comments? _____

E2.5 In this section you are being invited to give your perceptions regarding physical restraint use, whilst relating this use with the environment you work in.

2.5.1 How do you feel when you physically restrain someone or when you see someone physically restrained?

2.5.2 How do you think the Older Person feels when physically restrained?

2.5.3 In what ways do you feel that reducing/eliminating physical restraints will affect the health care professional/nursing support staff's life on a day to day basis?

2.5.4 In what ways do you feel that reducing/eliminating physical restraints will affect the Older Person's life on a day to day basis?

2.5.5 What are your feelings and concerns regarding the reduction/elimination of physical restraints?

E2.6 In the event that a Least Physical Restraint Use Policy is introduced

2.6.1 What do you see as advantages to a Least Physical Restraint Use Policy for the health care professional, nursing support staff and the Older Person?

2.6.2 What do you see as disadvantages to a Least Physical Restraint Use Policy for the health care professional, nursing support staff and the Older Person?

2.6.3 Would you support a Least Physical Restraint Use Policy within your Residential Home?

- ☐ Yes
☐ No
☐ Unsure

Why?

- ☐ I filled this questionnaire on my own
☐ I filled this questionnaire with help

THANK YOU

Appendix VIII

- (1) Communication from Prof Michello
- (2) Physical Restraint Use in Long-Term Care (PRLTC)

Subject: re:PRLTC

From: "Janet Michello" <jmichell@Jagcc.cuny.edu>

Date: Tue, 23 Oct 2007 15:05:56 -0400

To: <maria.fenech@gmail.com>

Dear Maria,

I scanned the questionnaire and attached it to this email. If this doesn't work, send me your address and I will mail it to you. Good luck with your research. Let me know Janet more about it when you have the time. Also, if you need anything else feel free to ask.

Regards,

Janet

Dear Prof Michello

Hello!

I am Maria from Malta. Europe.

I am a PhD student with the University of Nottingham researching the correlates of autonomy and physical restraint use in long-term care.

I was very interested reading the paper 'Nursing Personnel's Perceptions of Physical Restraint Use in Long-Term Care', Schirm et al Clinical Nursing Research 1993, whereby they cited the questionnaire format (PRLTC) developed by you in 1990 (Nursing staff's attitudes regarding the use of physical restraints in a long-term nursing care facility).

I was wondering whether you could help me locate the PRLTC 40-item questionnaire, as well as it's scoring system. It would be greatly beneficial to my current work.

Best regards

Maria A Fenech

This message has been scanned for viruses and dangerous content by NextWeb, and is believed to be clean.

Physical Restraint Use in Long-Term Care questionnaire (PRLTC)

Please DO NOT put your name on this questionnaire. Answer all questions as completely as possible. Thank you.

Physical restraints refer to any device that is used to restrict movement. Bed rails are not considered to be a type of physical restraint.

For the following questions circle only ONE response. The response categories are as follows: (1) strongly agree, (2) agree, (3) uncertain, (4) disagree, and (5) strongly disagree.

| | | Strongly agree | Agree | Uncertain | Disagree | Strongly disagree |
|-----|--|----------------|-------|-----------|----------|-------------------|
| 1. | Reducing the use of physical restraints at this facility would increase my work load. | | | | | |
| 2. | If the use of physical restraints were reduced, I would be at greater risk for being held liable for neglect if a resident falls and is injured. | | | | | |
| 3. | The layout of the unit where I work is suitable for restraint-free residents to walk and move around. | | | | | |
| 4. | If physical restraints were reduced at this facility more staff would be needed. | | | | | |
| 5. | The safety of the residents would be jeopardised if the use of physical restraints were reduced. | | | | | |
| 6. | Residents would fall more frequently if the use of physical restraints were reduced. | | | | | |
| 7. | Staff could be more easily harmed by residents if the use of physical restraints were reduced. | | | | | |
| 8. | Physically restraining a resident is an invasion of a basic right of all human beings. | | | | | |
| 9. | Even if reducing the use of physical restraints at this facility were risky, reducing them is still worth a try. | | | | | |
| 10. | I feel the majority of physical restraints in use at this facility are necessary. | | | | | |

| | | | | | | |
|-----|---|--|--|--|--|--|
| 11. | I feel I am very aware of the needs of residents I work with. | | | | | |
| 12. | Residents would be more likely to wander if the use of physical restraints were reduced. | | | | | |
| 13. | Residents are more likely to be agitated if they are not physically restrained. | | | | | |
| 14. | Reducing the use of physical restraints would interfere with the medical treatment of residents. | | | | | |
| 15. | I see my job as primarily of taking care of and helping residents. | | | | | |
| 16. | Residents tend to feel more secure (safer) if they are physically restrained. | | | | | |
| 17. | Residents tend to become angry when they are physically restrained. | | | | | |
| 18. | Residents tend to become more fearful when they are physically restrained. | | | | | |
| 19. | Residents tend to become more dependent when they are physically restrained. | | | | | |
| 20. | Residents tend to feel humiliated when they are physically restrained. | | | | | |
| 21. | Residents tend to show signs of discomfort when they are physically restrained. | | | | | |
| 22. | Residents tend to feel helpless when they are physically restrained. | | | | | |
| 23. | Residents are calmer when they are restraint-free. | | | | | |
| 24. | I see my job primarily as encouraging residents to do as much as possible for themselves. | | | | | |
| 25. | If the use of physical restraints was reduced at this facility, I would feel better about my job. | | | | | |
| 26. | Residents tend to feel trapped when they are physically restrained. | | | | | |

| | | | | | | |
|--|--|--|--|--|--|--|
| 27. | If the use of physical restraints were reduced at this facility, more alarm devices (e.g. bed alarms) and adaptive devices (e.g. customised chairs) would be needed. | | | | | |
| 28. | Residents would require closer supervision if the use of physical restraints were reduced. | | | | | |
| 29. | A resident who is taking psychotropic medication is more likely to be physically restrained. | | | | | |
| 30. | More activities for residents would be needed if the use of physical restraints were reduced. | | | | | |
| 31. | Under no circumstances should residents at this facility be physically restrained. | | | | | |
| 32. | Residents would be given more psychotropic medication if the use of physical restraints were reduced. | | | | | |
| 33. | Residents develop more debilitating conditions (e.g. contractures, incontinence) when they are physically restrained. | | | | | |
| | | | | | | |
| I would recommend the use of physical restraints for: | | | | | | |
| 34. | A resident who is confused. | | | | | |
| 35. | A resident who physically hurts herself/himself or others. | | | | | |
| 36. | A resident who pulls out an IV or NG tube. | | | | | |
| 37. | A resident who is left unattended in the toilet. | | | | | |
| 38. | A resident who gets out of bed by herself/himself. | | | | | |
| 39. | A resident who slides out of her/his chair. | | | | | |
| 40. | A resident who falls frequently. | | | | | |

Appendix IX

Tests for normality of data distribution

Summary of normality tests carried out on all Physical Restraint Questionnaire (PRU) variables. Kolmogorov-Smirnov and Shapiro-Wilk testing showed all variables to have non-normal distributions. Therefore non-parametric tests were used for analysis. OP: older persons, SDM: substitute decision maker, ADL: activities of daily living, IV: intravenous, CNS: central nervous system.

| PRU Section | Tests of normality | | | | |
|-------------|------------------------------------|--------------------|--------------|--------------|--------------|
| | Variable | Kolmogorov-Smirnov | | Shapiro-Wilk | |
| | | Statistic | Significance | Statistic | Significance |
| A2 | Age | .124 | $p<0.01$ | .933 | $p<0.01$ |
| A3 | Gender | .491 | $p<0.01$ | .487 | $p<0.01$ |
| A4 | Professional status | .407 | $p<0.01$ | .596 | $p<0.01$ |
| A5 | Place of work (government/private) | .392 | $p<0.01$ | .672 | $p<0.01$ |
| A6 | Place of work (region) | .277 | $p<0.01$ | .765 | $p<0.01$ |
| A7 | Years working with OPs | .214 | $p<0.01$ | .825 | $p<0.01$ |
| A8 | Attended CPD | .486 | $p<0.01$ | .500 | $p<0.01$ |
| B1 | Taking care of ... | .393 | $p<0.01$ | .598 | $p<0.01$ |
| B2 | My role consists of ... | .428 | $p<0.01$ | .590 | $p<0.01$ |
| B3 | I have a responsibility ... | .275 | $p<0.01$ | .762 | $p<0.01$ |
| B4 | Some of the older ... | .292 | $p<0.01$ | .810 | $p<0.01$ |
| B5 | I often find it difficult ... | .226 | $p<0.01$ | .884 | $p<0.01$ |
| B6 | I often find it difficult to ... | .259 | $p<0.01$ | .865 | $p<0.01$ |
| C1.1 | Full bed rails | .535 | $p<0.01$ | .304 | $p<0.01$ |
| C1.2 | Partial bed rails | .388 | $p<0.01$ | .624 | $p<0.01$ |
| C1.3 | H-harness | .370 | $p<0.01$ | .631 | $p<0.01$ |
| C1.4 | T-harness | .340 | $p<0.01$ | .636 | $p<0.01$ |
| C1.5 | Belt harness | .418 | $p<0.01$ | .602 | $p<0.01$ |
| C1.6 | Y-harness | .520 | $p<0.01$ | .392 | $p<0.01$ |
| C1.7 | Sheets | .459 | $p<0.01$ | .553 | $p<0.01$ |
| C1.8 | Wheelchair straps | .376 | $p<0.01$ | .629 | $p<0.01$ |
| C1.9 | Lifter straps | .364 | $p<0.01$ | .633 | $p<0.01$ |
| C1.10 | Limb restraint | .540 | $p<0.01$ | .215 | $p<0.01$ |
| C1.11 | Lapboards | .491 | $p<0.01$ | .487 | $p<0.01$ |
| C1.12 | Low or high armchairs | .535 | $p<0.01$ | .304 | $p<0.01$ |
| C1.13 | Tilted chair | .532 | $p<0.01$ | .329 | $p<0.01$ |
| C1.14 | Bed harness | .540 | $p<0.01$ | .215 | $p<0.01$ |
| C1.15 | Boxing gloves | .540 | $p<0.01$ | .179 | $p<0.01$ |
| C1.16 | Height adjustable tables | .481 | $p<0.01$ | .512 | $p<0.01$ |

| | | | | | |
|------------------------------|------------------------|------|----------|------|----------|
| Grouped restraint categories | Bed rails | .538 | $p<0.01$ | .277 | $p<0.01$ |
| | Harnesses | .538 | $p<0.01$ | .137 | $p<0.01$ |
| | Limb restraints | .535 | $p<0.01$ | .304 | $p<0.01$ |
| | Furniture restraints | .358 | $p<0.01$ | .635 | $p<0.01$ |
| C2.1 | Medical/paramedical | .352 | $p<0.01$ | .636 | $p<0.01$ |
| C2.2 | Nursing | .470 | $p<0.01$ | .533 | $p<0.01$ |
| C2.3 | Nursing support | .424 | $p<0.01$ | .597 | $p<0.01$ |
| C2.4 | Management | .453 | $p<0.01$ | .561 | $p<0.01$ |
| C2.5 | Multidisciplinary team | .532 | $p<0.01$ | .329 | $p<0.01$ |
| C2.6 | Family member/SDM | .406 | $p<0.01$ | .612 | $p<0.01$ |
| C2.7 | Another OP | .540 | $p<0.01$ | .179 | $p<0.01$ |
| C2.8 | OP him/herself | .538 | $p<0.01$ | .277 | $p<0.01$ |
| C2.9 | No one | .516 | $p<0.01$ | .321 | $p<0.01$ |
| C3.1 | Medical/paramedical | .400 | $p<0.01$ | .616 | $p<0.01$ |
| C3.2 | Nursing | .418 | $p<0.01$ | .602 | $p<0.01$ |
| C3.3 | Nursing support | .447 | $p<0.01$ | .569 | $p<0.01$ |
| C3.4 | Management | .475 | $p<0.01$ | .523 | $p<0.01$ |
| C3.5 | Multidisciplinary team | .538 | $p<0.01$ | .137 | $p<0.01$ |
| C3.6 | Family member/SDM | .520 | $p<0.01$ | .392 | $p<0.01$ |
| C3.7 | No one | .538 | $p<0.01$ | .277 | $p<0.01$ |
| C4.1 | Medical/paramedical | .502 | $p<0.01$ | .459 | $p<0.01$ |
| C4.2 | Nursing | .400 | $p<0.01$ | .616 | $p<0.01$ |
| C4.3 | Nursing support | .481 | $p<0.01$ | .512 | $p<0.01$ |
| C4.4 | Management | .486 | $p<0.01$ | .500 | $p<0.01$ |
| C4.5 | Multidisciplinary team | .539 | $p<0.01$ | .248 | $p<0.01$ |
| C4.6 | Family member/SDM | .511 | $p<0.01$ | .428 | $p<0.01$ |
| C4.7 | Another OP | .538 | $p<0.01$ | .137 | $p<0.01$ |
| C4.8 | No one | .531 | $p<0.01$ | .084 | $p<0.01$ |
| C5.1 | Medical/paramedical | .441 | $p<0.01$ | .577 | $p<0.01$ |
| C5.2 | Nursing | .400 | $p<0.01$ | .616 | $p<0.01$ |
| C5.3 | Nursing support | .453 | $p<0.01$ | .561 | $p<0.01$ |
| C5.4 | Management | .447 | $p<0.01$ | .569 | $p<0.01$ |
| C5.5 | Multidisciplinary team | .540 | $p<0.01$ | .215 | $p<0.01$ |
| C5.6 | Family member/SDM | .520 | $p<0.01$ | .392 | $p<0.01$ |
| C5.7 | OP him/herself | .540 | $p<0.01$ | .215 | $p<0.01$ |
| C5.8 | No one | .538 | $p<0.01$ | .277 | $p<0.01$ |
| C6.1 | Medical/paramedical | .435 | $p<0.01$ | .584 | $p<0.01$ |
| C6.2 | Nursing | .441 | $p<0.01$ | .577 | $p<0.01$ |

| | | | | | |
|--------|--|------|----------|------|----------|
| C6.3 | Nursing support | .511 | $p<0.01$ | .428 | $p<0.01$ |
| C6.4 | Management | .532 | $p<0.01$ | .329 | $p<0.01$ |
| C6.5 | Not always documented | .516 | $p<0.01$ | .411 | $p<0.01$ |
| C7.1 | All day | .535 | $p<0.01$ | .304 | $p<0.01$ |
| C7.2 | More than half day | .394 | $p<0.01$ | .620 | $p<0.01$ |
| C7.3 | More than 2h | .406 | $p<0.01$ | .612 | $p<0.01$ |
| C7.4 | Up to 2h | .511 | $p<0.01$ | .428 | $p<0.01$ |
| D1.1.1 | Dependent | .239 | $p<0.01$ | .877 | $p<0.01$ |
| D1.1.2 | Wheel chair mobile with assistance | .215 | $p<0.01$ | .891 | $p<0.01$ |
| D1.1.3 | Mobile with assistance | .236 | $p<0.01$ | .880 | $p<0.01$ |
| D1.1.4 | Non weight-bearing | .241 | $p<0.01$ | .884 | $p<0.01$ |
| D1.1.5 | Partially weight-bearing | .200 | $p<0.01$ | .906 | $p<0.01$ |
| D1.1.6 | Balance problems | .292 | $p<0.01$ | .792 | $p<0.01$ |
| D1.1.7 | Requires assistance for ADLs | .217 | $p<0.01$ | .889 | $p<0.01$ |
| D1.2.1 | Contractures/paralysis | .282 | $p<0.01$ | .849 | $p<0.01$ |
| D1.2.2 | Amputation/prosthesis | .287 | $p<0.01$ | .847 | $p<0.01$ |
| D1.2.3 | Feeding tube / IV / Foley catheter / continuous O ₂ | .241 | $p<0.01$ | .872 | $p<0.01$ |
| D1.2.4 | History of vertigo, hypotension, seizures | .275 | $p<0.01$ | .866 | $p<0.01$ |
| D1.2.5 | History of falls | .271 | $p<0.01$ | .868 | $p<0.01$ |
| D1.3.1 | Speech impaired | .300 | $p<0.01$ | .789 | $p<0.01$ |
| D1.3.2 | Hearing impaired | .294 | $p<0.01$ | .782 | $p<0.01$ |
| D1.3.3 | Visually impaired | .247 | $p<0.01$ | .859 | $p<0.01$ |
| D1.4.1 | Urine incontinence | .281 | $p<0.01$ | .848 | $p<0.01$ |
| D1.4.2 | Faecal incontinence | .291 | $p<0.01$ | .827 | $p<0.01$ |
| D1.4.3 | Dual incontinence | .275 | $p<0.01$ | .833 | $p<0.01$ |
| D1.5.1 | Disorientated | .259 | $p<0.01$ | .876 | $p<0.01$ |
| D1.5.2 | Forgetful/short attention span | .305 | $p<0.01$ | .849 | $p<0.01$ |
| D1.5.3 | Unable to follow simple directions | .281 | $p<0.01$ | .865 | $p<0.01$ |
| D1.5.4 | Directions have to be frequently repeated | .291 | $p<0.01$ | .856 | $p<0.01$ |
| D1.5.5 | Severely agitated | .249 | $p<0.01$ | .884 | $p<0.01$ |
| D1.5.6 | Exhibits fears/anxiety | .264 | $p<0.01$ | .870 | $p<0.01$ |

| | | | | | |
|-----------------------------|---|------|----------|------|----------|
| D1.6.1 | Unable to participate in social activities | .332 | $p<0.01$ | .813 | $p<0.01$ |
| D1.6.2 | Participates in social activities with assistance | .332 | $p<0.01$ | .814 | $p<0.01$ |
| D1.7.1 | On CNS medication | .166 | $p<0.01$ | .910 | $p<0.01$ |
| E1.1 | Passivity | .516 | $p<0.01$ | .411 | $p<0.01$ |
| E1.2 | Anger | .453 | $p<0.01$ | .561 | $p<0.01$ |
| E1.3 | Increased agitation | .370 | $p<0.01$ | .631 | $p<0.01$ |
| E1.4 | Withdrawal | .441 | $p<0.01$ | .577 | $p<0.01$ |
| E1.5 | Pleas for release | .470 | $p<0.01$ | .533 | $p<0.01$ |
| E1.6 | Calls for help | .352 | $p<0.01$ | .636 | $p<0.01$ |
| E1.7 | Attempts to release self | .435 | $p<0.01$ | .584 | $p<0.01$ |
| E1.8 | Decline in cognition | .481 | $p<0.01$ | .512 | $p<0.01$ |
| E1.9 | Decline in mobility | .430 | $p<0.01$ | .591 | $p<0.01$ |
| E1.10 | Increased pressure sores | .394 | $p<0.01$ | .620 | $p<0.01$ |
| E1.11 | Increase in urine and faecal incontinence | .394 | $p<0.01$ | .620 | $p<0.01$ |
| E1.12 | Increased dependence in ADLs | .346 | $p<0.01$ | .636 | $p<0.01$ |
| E1.13 | Other | .531 | $p<0.01$ | .084 | $p<0.01$ |
| Grouped reaction categories | Apathy | .394 | $p<0.01$ | .620 | $p<0.01$ |
| | Restlessness | .528 | $p<0.01$ | .352 | $p<0.01$ |
| | Physical or cognitive consequences | .486 | $p<0.01$ | .500 | $p<0.01$ |
| E2.1.1 | Require close supervision | .319 | $p<0.01$ | .666 | $p<0.01$ |
| E2.1.2 | More care providers would be needed | .294 | $p<0.01$ | .739 | $p<0.01$ |
| E2.1.3 | Greater liability | .248 | $p<0.01$ | .792 | $p<0.01$ |
| E2.1.4 | Increased workload | .235 | $p<0.01$ | .853 | $p<0.01$ |
| E2.1.5 | Feel better about job | .242 | $p<0.01$ | .885 | $p<0.01$ |
| E2.2.1 | Alternate methods | .270 | $p<0.01$ | .770 | $p<0.01$ |
| E2.2.2 | More activities | .324 | $p<0.01$ | .811 | $p<0.01$ |
| E2.2.3 | Suitable layout | .258 | $p<0.01$ | .876 | $p<0.01$ |
| E2.3.1 | More frequent falls | .260 | $p<0.01$ | .806 | $p<0.01$ |
| E2.3.2 | Jeopardized safety | .292 | $p<0.01$ | .842 | $p<0.01$ |
| E2.3.3 | More likely to wander | .261 | $p<0.01$ | .873 | $p<0.01$ |
| E2.3.4 | More easily harmed CP | .197 | $p<0.01$ | .903 | $p<0.01$ |
| E2.3.5 | More secure OP | .236 | $p<0.01$ | .895 | $p<0.01$ |

| | | | | | |
|--------|----------------------------------|------|----------|------|----------|
| E2.4.1 | Majority of restraints necessary | .301 | $p<0.01$ | .767 | $p<0.01$ |
| E2.4.2 | Reduction is worth a try | .340 | $p<0.01$ | .802 | $p<0.01$ |
| E2.4.3 | Invasion of basic right | .270 | $p<0.01$ | .869 | $p<0.01$ |
| E2.4.4 | No restraint at all costs | .284 | $p<0.01$ | .858 | $p<0.01$ |

Appendix X

Presentation for training sessions

Use of restraints in preventing falls

Safety or abuse?

Maria Aurora Fenech
Manager Allied Health Services
Department of the Elderly & Community Care

Why?

- Restraints are harmful
- Restraints do not keep a person safe or free from falling
- Restraints do not reduce harm from a fall
- Family members do not have the right to compel health care workers to restrain loved ones
- Family members are essential to planning restraint-free care

Defining restraint

- The use or threat of force to help perform an act which the person resists
- The restriction of a person's liberty of movement, whether by his/her consent or not

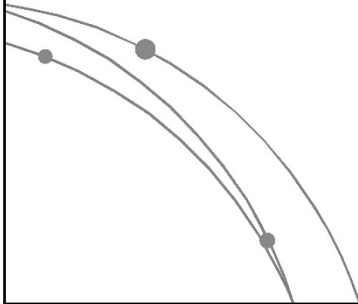
(Commission for Social Care Inspection, 2008)

Types of restraint

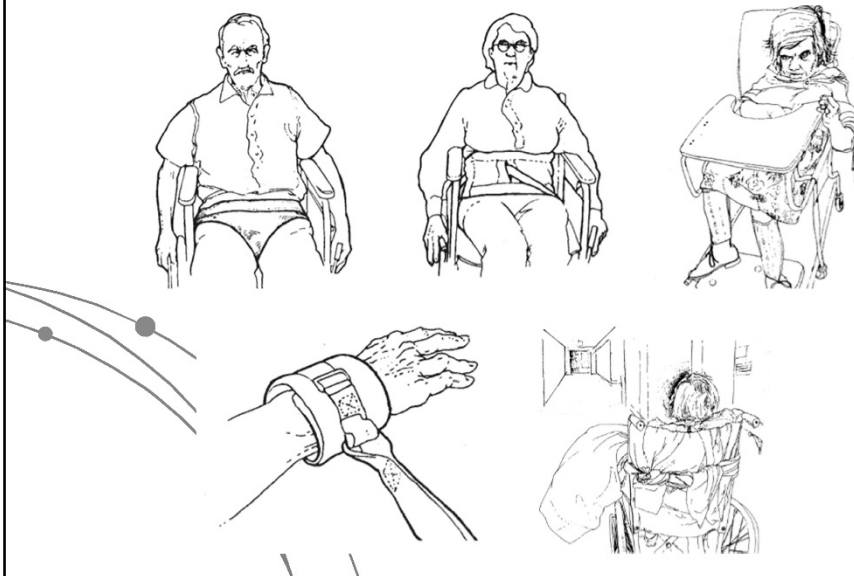
- Physical intervention
- Environmental restraint
- Chemical restraint
- Forced care
- Threatening or verbal intimidation
- Cultural restraint
- Medical restraint
- Physical restraint

Physical restraining

- Anything near or on the person's body which limits movement or the ability to access part of your body
- Not easily removed

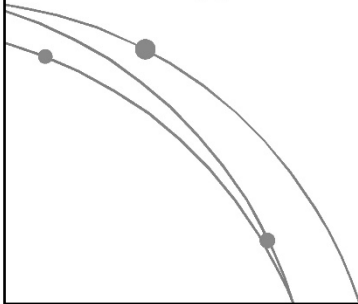


Physical restraining



Who is most often physically restrained?

- Older persons who are very old, frail and unsteady on feet
- Older persons suffering from dementia
- Persons exhibiting distressed behaviour and who appear to be frightening others

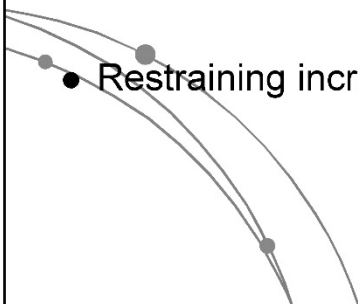


Argument (1)

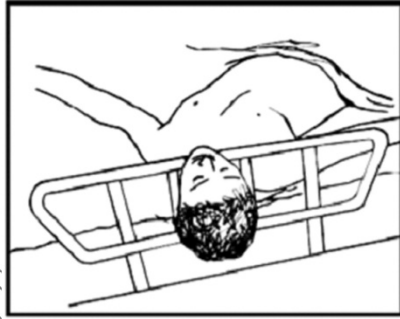
- Restraints keep persons safe from falling

Counter argument (1)

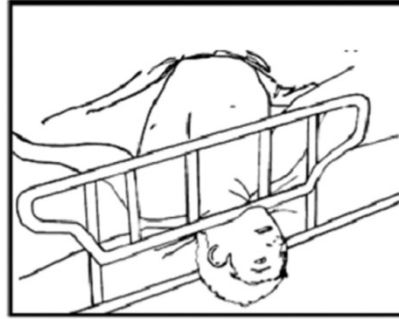
- Restraining increases the danger to the person



Restraint-related injuries (1)

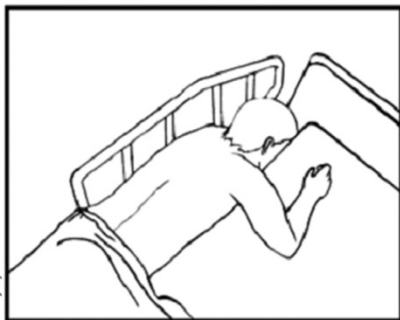


Entrapment within rail



Entrapment between top of compressed mattress to bottom of rail, between rail and supports

Restraint-related injuries (2)

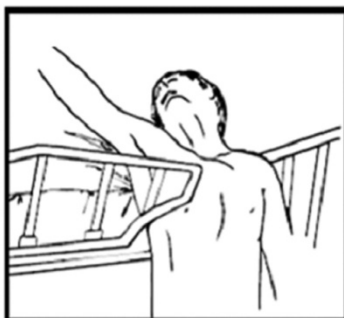


Entrapment in horizontal space between rail and mattress



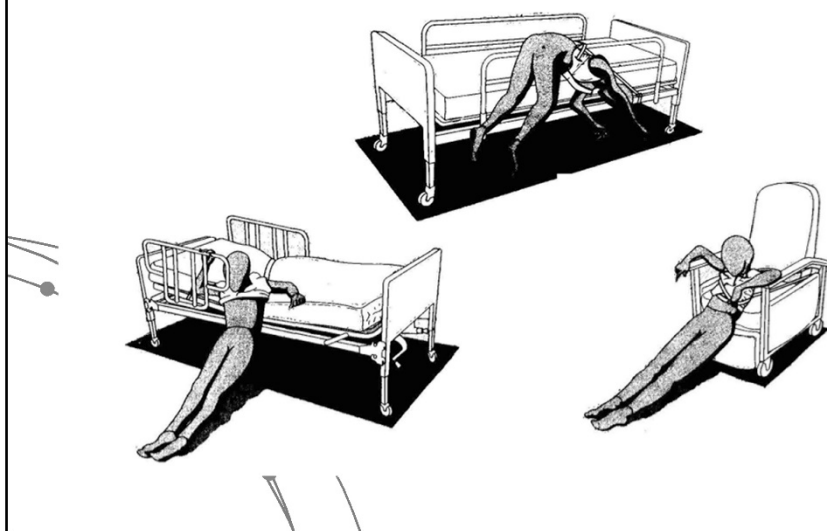
Entrapment between top of compressed mattress and bottom of rail at end of rail

Restraint-related injuries (3)



Entrapment between split rails

Restraint-related injuries (4)



Argument (2)

- No alternatives to restraint use

Counter argument (2)

- Education is the key
 - Websites
 - www.nccnhr.org
 - www.lumetra.com
 - www.ute.kentaloutreach.org
 - www.fda.gov/cdrh/beds/
- Consultation on alternatives

Argument (3)

- Restraints are used as a last resort

Counter argument (3)

- Some restraints (e.g. bedrails) are used so often that they no longer are considered as forms of restraining

Argument (4)

- There aren't enough staff for restraint-free care

Counter argument (4)

- It takes longer to care for restrained than unrestrained persons
- Time needed for frequent releasing and retying, monitoring, toileting, exercise, is approximately 4h 35 min in a 24 hour period

(Evans et al. Myths about Elder Restraints. Image. 1990;(22-23):124-8)

Argument (5)

- The person or family may ask for restraining

Counter argument (5)

- Continual discussion and re-assurance

Argument (6)

- Restraining decreases litigation

Counter argument (6)

- It is more likely that an organisation is sued should there be a fall or other serious related injury

Argument (7)

- Restraint free care is not possible without administrative support

Correct

- Has to be a team effort
- Administration has to support the team effort

Imagine what it would be like to be restrained to a chair

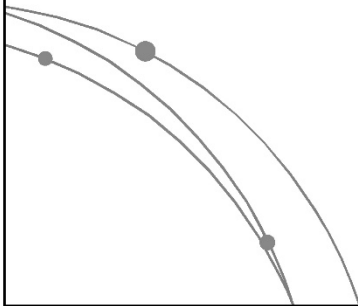
- You would be unable to
- Move the chair yourself
- Get a drink of water
- Lie down when you want
- Sit in a soft, comfortable chair
- Go to the bathroom
- Talk to someone at the other end of the hall
- Stand up when you want

What can happen to restrained persons?

- Withdraw and become depressed & embarrassed
- Malnutrition
- Dehydration
- Breathing problems
- Pressure sores
- Cuts, bruises, lacerations
- Disturbed sleeping patterns
- ↑ incontinence and ↑ UTI
- Circulatory problems
- ↑ contractures and shortening of muscles due to disuse

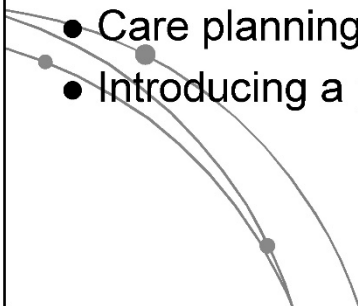
Restraints

The **EXCEPTION**
not the **RULE**



How to go about restraint-free care

- Education to all partners
- Ongoing assessment by the interdisciplinary team
- Awareness of the alternatives
- Care planning
- Introducing a policy



Decision making

- Answering YES to ALL of these questions, signifies that a person is restrained
 - Is the device attached or adjacent to the person's body?
 - Is the person unable, physically or mentally, to easily remove it?
 - Does it restrict movement or the ability to access parts of the body?

(Greene Burger S. Restraints: the exception not the rule. NCCNHR. June, 2009)



Thank
you