Bachelor Thesis

Comparing associated factors of elder abuse between different health-care settings

Submitted by

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Eidesstattliche Erklärung

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April 2020 Lea Joanne Reiter, eh.

Abstract

Background: Due to the constant rise of the aging population, the number of victims of elder abuse is expected to increase. Furthermore, 64.7 % of employees in nursing facilities reported having abused one or more residents within a year. With increasing numbers of elders, the total number of elder abuse victims is on the rise. For this reason, it is important to be aware of the associated factors of elder abuse in order to facilitate prevention.

Aim: The aim of this literature review was to explore the associated factors of elder abuse when perpetrated by professional paid care-givers within different settings.

Method: A literature search was conducted in the databases PubMed and CINAHL as well as a hand-search in reference lists. Out of the seven included studies, five explored associated factors of elder abuse in nursing homes and two studies focused on abuse in long-term care settings in general (nursing homes, assisted living facilities and paid home care). All studies included in this literature review were critically assessed with the help of the Mixed Method Appraisal tool (MMAT) by Hong et al. (2018).

Results: It was shown that associated factors of elder abuse have different influences on various types of abuse. Size and location of a facility, dementia, age and sex of resident/patient; job satisfaction, burnout and physical and mental well-being of staff where significant for elder abuse. Moreover, all studies significantly associated behaviour problems with some type of elder abuse. Results showed that the increasing age of a resident or patient reduces the odds of abuse. Furthermore, data indicated that the probability for abuse increases up to 5 times when moving between health care settings.

Conclusion: This literature review shows that abuse in long-term care is influenced by facility/setting characteristics, staff characteristics and resident/patient characteristics. However, further research is needed to explore associated factors of elder abuse in acute-care settings.

Keywords: Elder abuse, associated factors, long-term care

Zusammenfassung

Aufgrund des konstanten Wachstums der alternden Bevölkerung, ist zu erwarten, dass die Anzahl der im Alter Missbrauchten ansteigen wird. Des weiteren haben 64,7% der Angestellten in Pflegeeinrichtungen angegeben einen oder mehrere Bewohner innerhalb eines Jahres missbraucht zu haben. Mit der ansteigenden Anzahl an alten Menschen, wächst die Summe an Missbrauchsfälle. Aus diesem Grund ist es notwendig um auf die assoziierten Faktoren von Missbrauch im Alter aufmerksam zu werden. Dadurch wir die Prävention erleichtert.

Ziel: Ziel dieser Literaturübersicht war es, die assoziierten Faktoren von Altersmissbrauch der von bezahlten Professionellen Pflegern ausgeführt wird innerhalb von verschiedenen Settings zu erforschen.

Methode: Es wurde in den Datenbanken PubMed und CINAHL eine Literaturrecherche, sowie eine Recherche von Hand in Referenzlisten durchgeführt. Von den sieben eingeschlossenen Studien, untersuchten fünf die damit verbundenen Faktoren in Bezug auf Missbrauch von älteren Menschen in Pflegeheimen und zwei Studien konzentrierten sich auf den Missbrauch in der Langzeitpflege (Pflegeheimen, Einrichtungen für betreutes Wohnen und bezahlte häusliche Pflege). Alle in dieser Literaturübersicht enthaltenen Studien wurden mit Hilfe des Mixed Method Appraisal Tool (MMAT) von Hong et al. (2018) kritisch bewertet.

Ergebnisse: Es wurde gezeigt, dass assoziierte Faktoren des Missbrauchs älterer Menschen verschiedene Einflüsse auf unterschiedliche Arten von Missbrauch haben. Größe und Lage einer Einrichtung, Demenz, Alter und Geschlecht von BewohnerInnen/PatientInnen; Arbeitszufriedenheit, Burnout und körperliches und geistiges Wohlbefinden des Personals waren bei dem Missbrauch älterer Menschen von Bedeutung. Darüber hinaus brachten alle Studien Verhaltensprobleme signifikant mit einer Art von Missbrauch von älteren Menschen in Verbindung. Die Ergebnisse zeigten, dass das zunehmende Alter eines Bewohners oder Patienten die Wahrscheinlichkeit eines Missbrauchs verringert. Darüber hinaus zeigten Daten, dass die Wahrscheinlichkeit eines Missbrauchs bis zu fünf Mal höher ist, wenn zwischen den Settings in der Langzeitpflege gewechselt wird.

Fazit:

Diese Literaturübersicht zeigt, dass Missbrauch in der Langzeitpflege durch Einrichtungs-/Einstellungsmerkmale, Personalmerkmale und Bewohner- / Patientenmerkmale beeinflusst wird. Es ist jedoch mehr Arbeit in der Forschung erforderlich, um die damit verbundenen Faktoren des Missbrauchs älterer Menschen in der Akutversorgung zu untersuchen.

Schlüsselwörter: Altersmissbrauch, assoziierte Faktoren, Langzeitpflege

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OR	Odds Ratio
WHO	World Health Organisation

1 Introduction

It is expected that by the year 2050 there will be a drastic rise in the ageing population. Today, humans aged 65 years and older account for 9% (1 in 11) of the global population. By 2050, the amount of elders will have risen to 16%, or 1 in 6 humans. In Europe and North-America rates will be even higher, the elderly making up 25% (1 in 4) of the population. (DESA, 2019)

As a consequence of increasing life expectancies, chronic illnesses are becoming more prevalent amongst elders. Subsequently, with elders being the most in need of health care services, society is experiencing a shortage in health care professions. Even though the number of newly graduated health care professionals in Europe increases annually, it is assumed that the amount of graduates still won't make up for the demand of workers in the field (Insight, 2012).

The following statement by the European commission depicts the extent of the shortage in health care professions across Europe:

"The European Commission estimates the gap in supply of human resources in health by 2020 to be approximately 1,000,000 health professionals, including physicians, dentists, pharmacists, physiotherapists and nurses. Ultimately, such a shortage would mean that almost 15% of demand for healthcare across the EU will not be covered by the available workforce (Insight, 2012, p. 12-13)."

Surveys showed that 35% of health care facilities in Austria state that they are experiencing a shortage in staff. The facilities that are predominantly affected are long-term care facilities as well as mobile-care services. (Insight, 2012)

Shortage in staff has a negative impact on the stress level of health care workers as the health care worker to patient ratio increases (Insight, 2012). Furthermore, the increased stress levels in the work environment can lead health care workers acting out in a negative,- or even abusive manner towards their patients (Koinis et al., 2015).

1.1 Elder Abuse

The multifaceted aspects of elder abuse make it challenging to agree upon one universal definition for elder abuse, as different definitions go into different details (De Donder et al., 2018). However, a frequently used definition is the one by the World Health Organization:

"Elder abuse is a single, or repeated act, or lack of appropriate action, occurring within any relationship where there is an expectation of trust which causes harm or distress to an older person" (WHO, 2017)

Based on a study from 2017, the WHO stated that an estimated 15.7 % of elders experienced abuse in 2017. 90 % of the time, elder abuse is committed by one or more family members. For this reason, literature exploring elder abuse perpetrated by paid caregivers is very limited. Furthermore, 64.7 % of employees in nursing facilities reported having abused one or more residents in the same year. As only one in 24 cases (4%) of elder abuse are reported, the actual number of victims is expected to be higher.(WHO, 2017) According to De Donder et al. (2018), the most common reasons for leaving a case of elder abuse unreported is that the topic of abuse is taboo or that victims have the perception that nobody would do anything against it. Moreover, even though family members are the primary verdicts, recent studies have shown that elder abuse is more common in the institutional setting than at home (see table 1) (WHO, 2017).

Table 1: The percentage of reported cases in respect to the different types of abuse according to the WHO (2017).

	Reported by older adults and their relatives	Reported by staff
Overall prevalence	Not enough data	64,2%
Psychological abuse	33,4%	32,5%
Physical abuse	14,1%	9,3%
Financial abuse	13,8%	Not enough data
Neglect	11,6%	12%
Sexual abuse	1,9%	0,7%

Even if abuse rates are to stay the same, it can be expected that the number of victims of elder abuse will still increase due to the aging population. It is projected that by the year 2050 that 320 million of 2 billion elders over 60 will be victims of elder abuse. (WHO, 2017)

1.1.1 Types of elder abuse

As mentioned before, different definitions of elder abuse go into different details and take different aspects into consideration. The same can be said for the types of elder abuse. The following types of elder abuse are based on the definition by the Center for Disease Control and Prevention (Center for Disease Control and Prevention, 2019).

Physical elder abuse is considered to be any act that is perpetrated on purpose and causes an elder physical harm. This can include hitting (with or without weapon), biting, slapping, pinching, kicking, burning. (Center for Disease Control and Prevention, 2019)

Emotional or psychological abuse is any behaviour that results in the person feeling distressed or scared. Actions that are described as such are humiliating, intimidating, ignoring, terrorizing or threatening an elder. Furthermore, controlling a person by taking away their freedom or prohibiting them from seeing family or friends is also considered to be emotional or psychological abuse.(Center for Disease Control and Prevention, 2019)

Neglect is defined as the caregiver not being able to meet the adequate needs of an elder which may put them in danger of being harmed. Elders could be neglected in the sense of nutrition, clothing, hygiene, medical care. (Center for Disease Control and Prevention, 2019)

Financial abuse and exploitation is taking advantage of an elder's resources (property, money, belongings etc). Holding back information, giving wrongfull information, or denying an elder access to their resources of any kind are also seen as fincial abuse or exploitation. Further actions that my be considered as such are

theft, forgery or misuse of resources. (Center for Disease Control and Prevention, 2019)

Sexual abuse or abusive sexual contact is any sexual act that was performed without the consent of the other party involved or when the elder is not able to decide for themselves. Trying to have contact or having contact with the genitals, anus or mouth is considered sexual abuse. Additionaly, penetrating an elder's anus or genital opening with a body part or an object; or touching the chest, genitals, anus or bottom are also categorised as sexual abuse. (Center for Disease Control and Prevention, 2019)

1.1.2 Consequences of elder abuse

It has been shown that elder abuse not only affects elders as an individual but also has an impact on the healthcare system (NCEA, 2018).

The different types of consequences are listed below.

Physical consequences

Apart from the most obvious consequences such as wounds, bruising, fractures and the pain resulting from these; elder abuse also impacts the immune system making an elder more prone to diseases and infections. Furthermore, medical problems that were prominent before the abuse may worsen due to the abuse. (NCEA, 2018)

Psychological consequences

Increased stress levels and depression are expected to be seen in elder that have fallen victim to abuse. Moreover, verbal abuse has a bigger impact on the psychological well-being in elderly women than when they are being physically abused. (NCEA, 2018)

Financial consequences

Financial abuse has a lasting effect especially on elders. The legal process of gaining back the stolen money often takes so long that the abuse victim has passed

away. As elders may not be capable to earn any money such as younger persons, they are left with no money during the legal process. (Teaster and Roberto, 2009)

Social consequences

Victims of elder abuse may isolate themselves or will be prohibited from contacting or seeing relatives and family by the perpetrator of abuse (NCEA, 2018).

Consequences on the healthcare systems

The probability of a hospitalisation is three times higher in elderly victims of abuse than elders that are not victims. Moreover, elder abuse victims are at higher risk of acquiring a disability in their life. In America, the yearly medical costs that originate from the results of elder abuse amount for 5,3 billion dollars. The harm of elder abuse that occurs in American nursing facilities makes up for 2,8 billion dollars of hospital costs each year. (NCEA, 2018)

1.2 Aim and research question

As elder abuse is not the result of one singular aspect but rather caused by many different influences (Corbi et al., 2015), it is crucial for health-care professionals working in close contact with elders to be aware of the risk factors in order to facilitate the identification and prevention of elder abuse (Simone et al., 2016). This thesis will investigate the associated factors that result in health care professionals of different settings to act out in an abusive manner towards their residents.

2 Method

In order to answer the research question of this thesis, a literature review was conducted. A literature review is made up of a summary of studies which are found by using a search strategy fitting to the topic. The main focus of a literature review is to display a summary of evidence. This is done by the author selecting relevant findings from chosen and critically appraised studies (Polit and Beck, 2017).

2.1 Literature research

The literature review was conducted between October 2019 and November 2019 by using the medical database Public Medical Literature OnLine (PubMed) and Cumulative Index to Nursing and Allied Health Literature (CINAHL). The keywords used in the search strategy were “elder abuse” and “associated factors”. Synonyms and available Medical Subheadings (MeSh Terms) or Major Subject Headings were included in the search strategy with the intention of narrowing the search to the main concepts of elder abuse and associated factors. As to be seen in Table 2, these terms were connected by the Boolean operators “AND” and “OR”. After entering the keywords and synonyms into the databases, the combination was used that resulted in the most relevant results. Due to the wide variety of studies on elder abuse, it was chosen to exclude studies from the databases that did not include the key word “associated factors” or a synonym thereof in the title of a study. Furthermore, it had to be clearly specified in the study that the care and abuse that a person was exposed to had to be perpetrated by a paid care giver. If this was not the case, the study was excluded. A limitation that was set during the literature research was that the studies should not be older than 10 years old. This measure was taken in order to include the most relevant literature. Moreover, the language had to be English or German.

Table 2: Search strategy

Database	Terms	Limits	Results
PubMed	(((((("elder abuse"[MeSH Terms]) OR "elder abuse") OR "elder mistreatment") OR "geriatric abuse")OR "elder neglect"))) AND ((((((risk factors[MeSH Terms]) OR "primary prevention*") OR "associated factor*") OR "risk factor*") OR "influential factor*") OR "influenc*" AND "last 10 years"[PDat])	10 years English and German	364
CINAHL	(MM "Elder Abuse/RF")	10 years English	109

The following flowchart (Figure 1) depicts the process of how the studies for this literature review were selected.

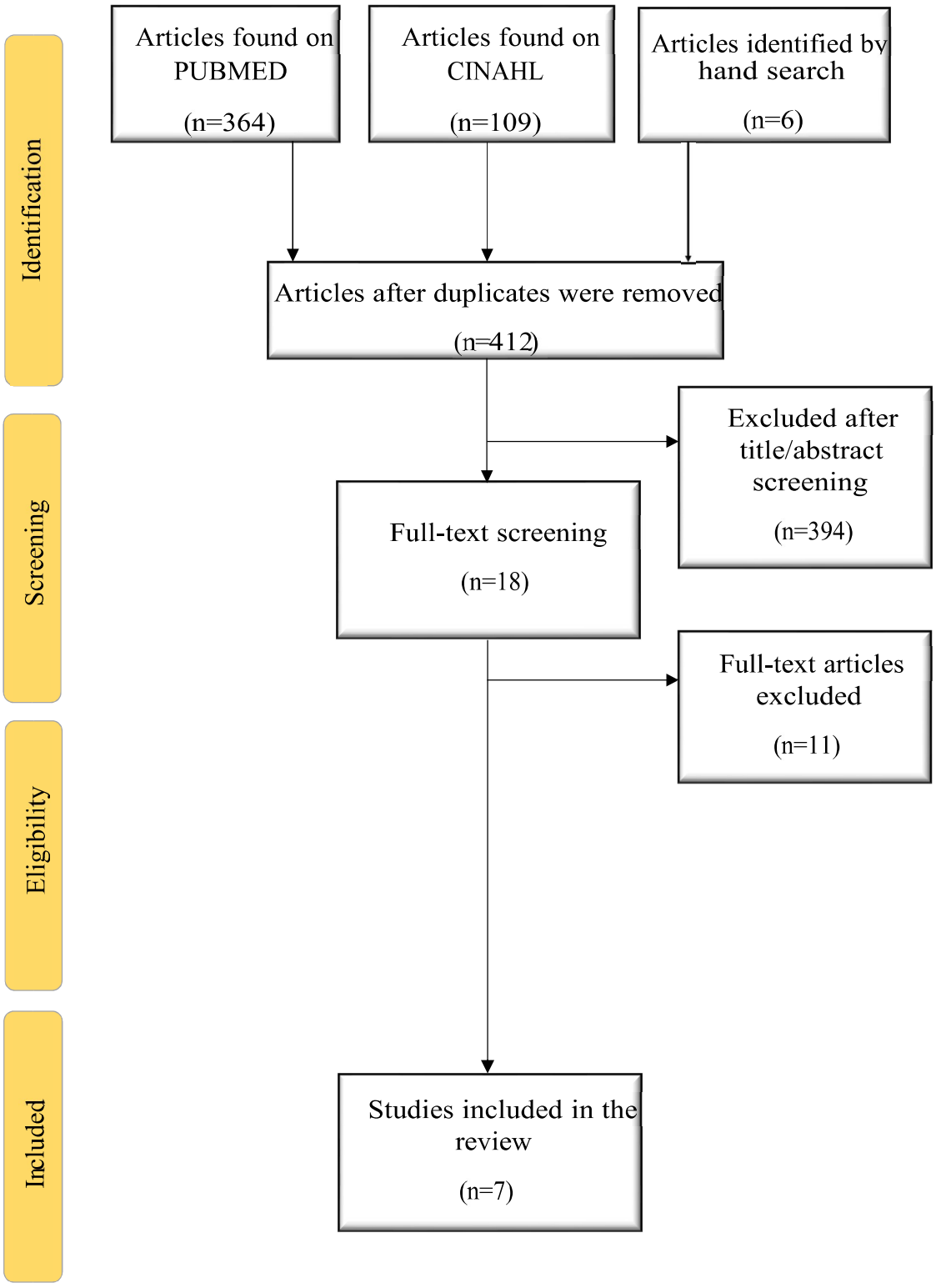

Figure 1 PRISMA FLOW CHART for study selection

Adapted from: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement

As to be seen in the flowchart above, seven studies were chosen to be included in this literature review. The following chapter describes how the quality of the studies was appraised.

2.2 Appraisal of Studies

The critical appraisal of the included studies of this literature review was conducted by using the Mixed Method Appraisal Tool (MMAT). The version used for this review was revised in 2018. The MMAT is used to evaluate the quality of a study, in order for authors to decide whether it is qualified for their paper. It can be used for qualitative, quantitative as well as mixed method studies. The MMAT can be applied to five different designs: qualitative research, randomized controlled trials, non-randomized studies, quantitative descriptive studies, and mixed methods studies. In order to be able to appraise a study, two screening questions have to be answered. If either one or both of these are answered with “No”, the paper is not an empirical study. (Hong et al., 2018)

When using the MMAT for the appraisal, it is necessary to identify the correct design of the study. If unsure about the design, an algorithm that comes with the tool enables and facilitates the identification. (Hong et al., 2018)

Following this, the individual criteria for the design is answered with either “Yes”, “No” or “Can’t” tell. In addition, the tool includes a description to what key aspects should be searched for. The more questions are answered with “No” or “Can’t tell”, the poorer the quality of the study is (Hong et al., 2018)

3 Results

This literature review included seven studies. The following table lists the studies in alphabetical order showing the author, country the study was written in, setting, title, design and associated factors of each study.

3.1 Characteristics of the studies

Table 3: Characteristics of the studies

Author, Country and Setting	Title	Design	Associated factors of elder abuse
Buzgova and Ivanova (2009), Czech Republic Setting: Nursing homes	Elder Abuse and Mistreatment in Residential Settings	Qualitative phenomenological	Facility characteristics: staff shortage, poor organisation of work and lack of time. Resident characteristics: Dementia, resident aggression, hostility, restlessness and few visitors. Staff characteristics: Burnout, personal problems, sex (female), being a parent to a young child, inadequate education

Drennan et al. (2012), Ireland, Setting: Nursing homes	Older People in Residential Care Settings	Cross-sectional	Facility characteristics: size (number of beds), frequently occurring facility-related stressful events (i.e. not having enough staff on duty; being in charge of too many residents) Resident characteristics: Frequently occurring resident-related stressful events (i.e. patients with incontinence, or aggressiveness) Staff characteristics: sex (male), job satisfaction, commitment to the job, burnout, psychological well-being, physical health, view towards elders (positive vs. negative), nationality (other European), length of time working with elders, main type of shift worked (night shift).
Malmedal et al. (2014), Norway, Setting: Nursing Homes	The dark side of Norwegian nursing homes: factors influencing inadequate care	Cross-Sectional	Facility characteristics: location (rural vs. urban), size of facility (number of beds). Resident characteristics: conflicts (non-care and care related) and resident aggression. Staff characteristics: job satisfaction, education level, age. Other characteristics: type of conflict (non-care-related or care-related)
Natan et al. (2010), Israel Setting: Nursing homes	Psycho-social factors affecting elders' maltreatment in long-term care facilities	Correlational Study	Facility characteristics: number of beds, nurses and nursing aides; staff turnover, staff ratio. Resident characteristics: sex (female), cognitive conditions, dementia. Staff characteristics: Burnout, profession (nurses and other staff members)

Page et al. (2009) USA, Setting: Assisted Living Facilities, Nursing Homes and Paid Home Care	The Effect of Care Setting on Elder Abuse: Results from a Michigan Survey	Secondary data analysis of a cross-sectional study	Facility characteristics: Care setting is only significant for caretaking abuse and neglect ($p<0.001$). Resident characteristics: physical mobility, physical function, vision or hearing, dementia, cardiovascular or cerebrovascular problems Other characteristics: moving from assisted living facilities to a nursing home as well as from paid home care to a nursing home.
Post et al. (2010), USA Setting: Nursing homes, assisted living facilities, adult foster care, paid home care and hospice.	Elder Abuse in Long-Term Care: Types, Patterns, and Risk Factors	Secondary data analysis of a Cross-Sectional Study	Resident characteristics: behaviour problems, physical functioning problems, age, number of activities able to be performed (ADL and IADL)
Simone et al. (2016), Switzerland Setting: Nursing homes, participants' homes	Types of abuse and risk factors associated with elder abuse	Cross-sectional retrospective analysis	Elders have a lower risk of being abused but a higher risk of being neglected in nursing homes than at home.

3.2 Methods, Settings and Sample of included Studies

The qualitative phenomenological study by Buzgova and Ivanova (2009) explored the views of employees and facility residents. The sample consisted of 26 staff members (13 nurses, 6 care assistants, 4 mangers, 11 social workers and 2 physiotherapist) and 20 facility residents that were selected via snowball sampling from 4 resident facilities in the Czech Republic. The results of the study present the different types and subtypes of abuse that were prominent in the facilities and gives insight on how the abuse was experienced. Furthermore, the different causes of elder abuse were depicted with the help of segments taken from interviews. (Buzgova and Ivanova, 2009)

The descriptive study by Drennan et al. (2012) used answers from 1300 questionnaires that were distributed to staff members from 64 nursing homes in Ireland in order to study . The nursing homes were sampled by choosing 4 homes from 16 different regions across Ireland. Researchers included 19 public nursing facilities, 44 private facilities and 1 voluntary nursing facility. Survey participants were mainly female (92,7%) and Irish (79%). 7% of participants considered their nationality to be “European” and 14% reported being “Non-European”. The study aimed to explore the percentage of employees of resident facilities that were exposed to conflicts and abuse caused by residents. Moreover, the abuse and neglect rates perpetrated by staff members were measured. Institutional characteristics and staff characteristics such as size of the resident facility, staff demographics, the staff’s mental and physical health, job satisfaction, burnout and stressful events were part of survey questions in order to measure their correlation to neglect, physical abuse and emotional abuse. (Drennan et al., 2012)

Malmedal et al. (2014) used the results from 616 cross-sectional surveys that were distributed among 16 nursing facilities within a county in Norway. The nursing facilities were selected via random sampling. All staff members that worked within the 10-day period of when the surveys were distributed, were asked to take part. The sample consisted 97% of which a fifth worked full time. The study explored the associations between staff characteristics and facility characteristics in relation to physical and emotional abuse as well as neglect. (Malmedal et al., 2014)

The cross-sectional study by Natan et al. (2010) used a correlational quantitative method to measure the significance of elder abuse in nursing facilities compared to gender, health status (healthy/unhealthy), cognitive status and how social a resident is (active/isolated). The nursing facilities were chosen by dividing the country into 24 different regions and selecting one facility for each region. 10 staff members were chosen from randomly selected wards of a facility. Out of the 600 staff members that were asked to participate in the survey, 510 responded making up for a response rate of 85%. The majority of the sample were female (81,6%) and working full-time (70,9%). This was done by analysing questionnaires that were filled out by 510 staff members and 24 directors from 22 nursing homes in Israel. (Natan et al., 2010)

This literature review includes two secondary data analyses by Page et al. (2009) and Post et al. (2010). The data that was used in each of the two studies stems from a survey that was conducted in 2005 in Michigan. The survey was taken by 1,002 respondents that had a family member receiving some type of long-term care. The secondary data analysis from Page et al. (2009) investigated the relationship between the settings of paid home care, assisted living facilities and nursing homes in regard to the demographic variables age, sex, education, marital status and race of the participants. Furthermore, the associations between types of abuse (caretaking, material, emotional, neglect, physical and verbal), the different settings, as well as the following health conditions were explored: physical mobility problems (e.g. Parkinson's); vision and hearing dysfunction; Alzheimer's; other dementias (in association to a stroke); cardiovascular problems or stroke; memory or communication problems; physical functioning problems (i.e. incontinence); behaviour problems (physically and/or verbally abusive, resisting care). As the secondary data analysis by Post et al. (2010) is based on the same data-set as the study by Page et al. (2009), the same types of abuse and demographic variables are included. Different to Page et al. (2009), Post et al. (2010) focuses on the amount of activities of daily living and instrumental activities of daily living (ADL and IADL) a recipient of long-term care can perform. Moreover, association between cognitive problems (i.e. difficulties with memory, concentration or communicating, labelled thinking; confusion), physical functioning problems (i.e. incontinence,

personal hygiene), behaviour problems (physically and/or verbally abusive, resisting care) and the different types of abuse were explored. (Post et al., 2010)

The study by Simone et al. (2016) also explored associated characteristics of elder abuse victims by using information from the database of the Independent Complaints Authority of Old Age within the timespan of January 2008 and November 2012. However, the used data of abuse cases consisted of 43% cases that affected residents in nursing homes and 57% that affected elders living in their own home. The explored variables were divided into victim characteristics (positive history of violence, aggression, mental illness, addiction, psychological illness, social isolation) and perpetrator characteristics (living with the victims, being dependant on the victim, dementia, psychological illness). Concrete results that can only be associated with elders being abused by paid care givers were not given. (Simone et al., 2016).

3.3 Setting characteristics

The following chapter depicts the characteristics of a care setting that may lead to elder abuse. The included literature of this thesis shows that each care setting of long-term care has different rates and types of abuse that are more prominent. This chapter also covers the changing probability of elder abuse when moving between different care settings of long-term care. Furthermore, this thesis will go more in depth on the influence of location (rural vs. urban), facility size, staff ratio and the number of beds on elder abuse within nursing homes.

According to the study by Page et al. (2009), care settings in long-term care (paid home care, assisted living facilities and nursing homes) have an influence on the type of abuse perpetrated by paid caregivers. Verbal (11,5%) and emotional abuse (10,9%) are most frequent types of abuse in paid home care. Assisted living facilities are affected the most by emotional abuse (10,0%) and neglect (9,8%). From all three settings that were included in the study, nursing homes had the highest abuse rates for all types of abuse (physical, caretaking, verbal, emotional, material and neglect) although only neglect (21,3%) and caretaking abuse (17,4%) were

statistically significant with p-values smaller than 0.001. Physical abuse had the lowest rate for all settings. (Page et al., 2009)

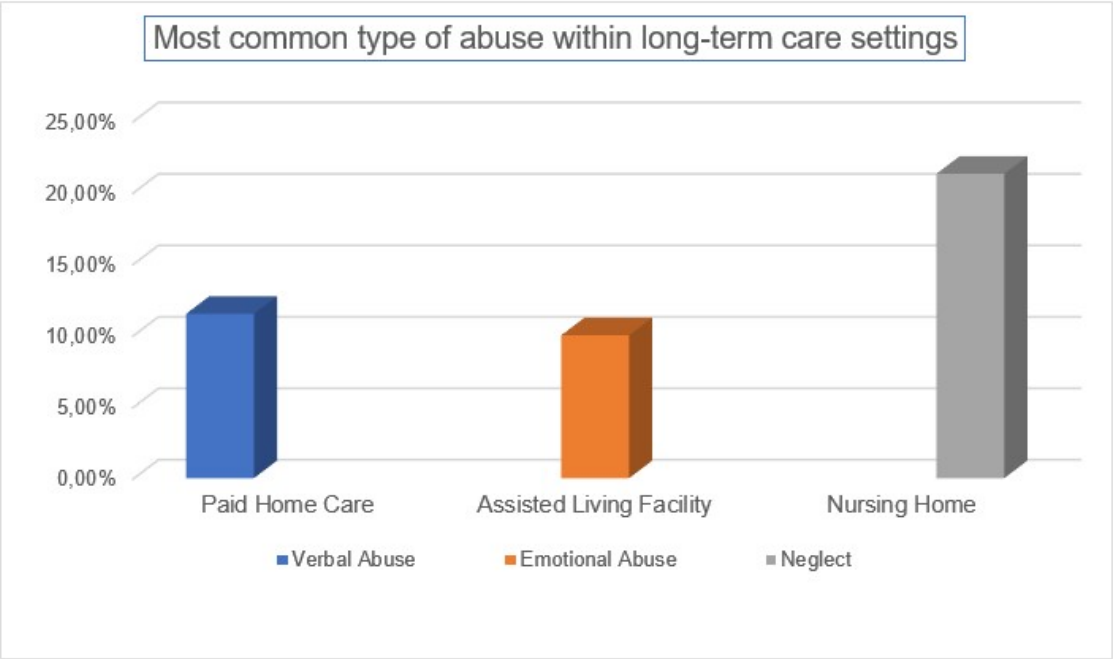

Figure 2: Most common types of abuse in long-term care according to Page et al. (2009).

3.3.1 Moving between settings

Page et al. (2009) reported that moving between settings of long-term care influences the odds of an elder becoming a victim of neglect and/or caretaking abuse. As to be seen in Figure 2, when moving from an assisted living facility to a nursing home, the probability of caretaking abuse multiplies by nearly five (p=0.032). The association between neglect and moving from an assisted living facility to a nursing home was insignificant. Moving from an assisted living facility to paid home care also showed insignificant results for both types of abuse. However, neglect and caretaking abuse were both significant with p values smaller than 0.003 when moving from paid home care to a nursing facility. The odds for caretaking abuse and neglect increased approximately threefold. (Page et al., 2009) Similar results were shown in the study by Simone et al. (2016), that stated that residents of nursing facilities had lower odds of being abused (physically, psychologically, financially.

However, they were more prone to neglect than when living at home (Simone et al, 2016).

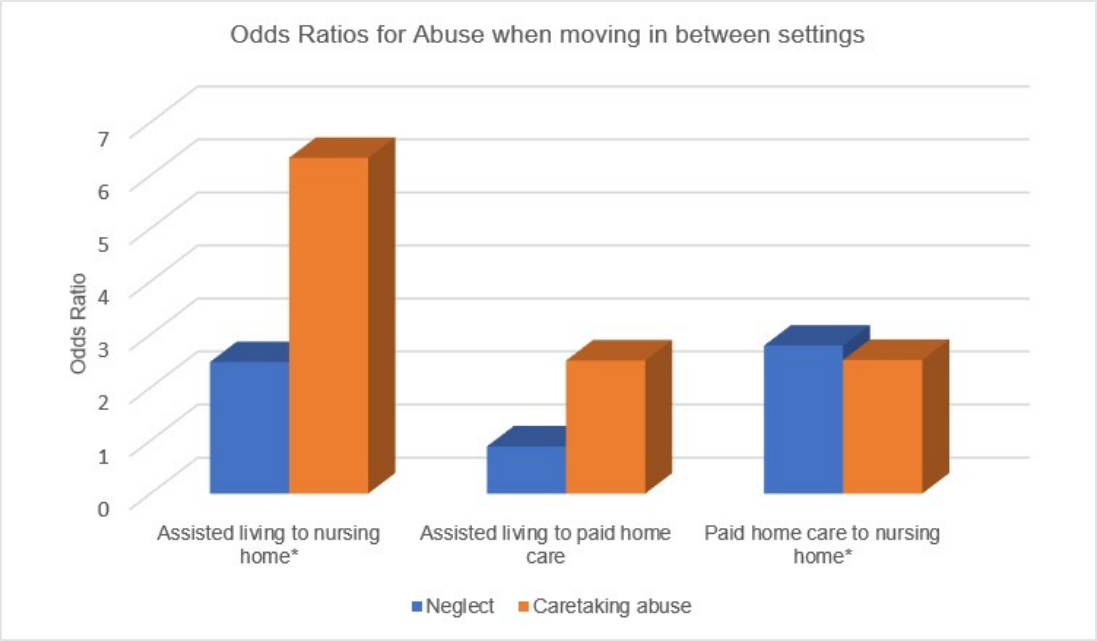

Figure 3: Odds ratios for Abuse when moving in between settings according to Page et al. (2009).

3.3.2 Associated factors of elder abuse in nursing homes

According to the studies by Natan et al. (2010), Malmedal et al. (2014) and Drennan et al. (2012), location (rural vs. urban), facility size, staff ratio, number of beds and staff turnover are significant factors associated with elder abuse in nursing homes.

The descriptive study by Drennan et al. (2012) and the correlational study by Natan et al. (2010) both revealed that the type of nursing home (public vs. private) had no significant influence on the type of abuse perpetrated (Natan et al., 2010, Drennan et al., 2012). However, location of a nursing facility did play a significant role (Malmedal et al., 2014). It was shown that urban facilities experienced more neglect, whereas rural areas are more prone to have cases of physical and emotional abuse (Malmedal et al., 2014). Another facility characteristic that was found to influence elder abuse is the size of nursing homes. Of the 3 types of abuse that were explored by Drennan et al. (2012) (neglect, physical, and psychological abuse), only physical abuse showed significant association with size ($p=0.002$). 5.6% of staff working in

nursing homes with 50 beds or less reported physical abuse, whereas 2,5% of staff from medium sized nursing homes (50-100 beds) and 1.4% of staff from large nursing homes (>100 beds) reported physical abuse. This means the smaller the nursing home the higher the odds of physical abuse. (Drennan et al., 2012) This association was also reported in the study by Malmedal et al. (2014). The Norwegian study showed that the probability of physical abuse more than doubles for nursing facilities with less than 30 beds (p=0.006). A further association that was found by Malmedal et al. (2014) was that staff ratio is significant for neglect (p=0.013). (Malmedal et al., 2014) This statement is also supported by Natan et al. (2010), who reported that high staff ratio is significantly related to physical neglect as well as an increase of the total number of incidents of abuse. Moreover, the number of beds, nurses, nursing aides and staff turnover were reported to be significantly related to mental and physical neglect as well as the total number of abuses. To rephrase it, the bigger the nursing home, the higher the number of residents. This is followed by the fact that more staff is necessary which leads to higher staff turnover -which is related to physical and mental neglect as well as the total number of abuses. (Natan et al., 2010) Concerning resident to staff ratio, Drennan et al. (2012) found that there is no significant association neither for neglect nor for physical or psychological abuse.

Drennan et al. (2012) also focused on the impact of facility related events that are considered stressful. This was measured by asking the participants -1,316 staff members from 64 nursing facilities- to rate the occurrence (“occurs” vs. “does not occur”), the frequency (“never” to “very often”) and the level of stressfulness (“not stressful” to “very stressful”) of facility related events. The results showed that the most frequent stressful facility-related events were being “in charge of too many residents” and “not getting enough help and support from colleagues”. The facility-related events that caused the most stress were “having too many things to do at once” and “not having enough staff on duty”. This information is necessary, as frequently occurring facility-related stressors (as the ones mentioned before) are significantly related to neglect and psychological abuse (p=0.001). (Drennan et al., 2012)

Similar results such to the ones presented in the study by Drennan et al. (2012) can be seen in the qualitative phenomenological study by Buzgova and Ivanova (2009). This study included 26 staff members of four different nursing homes in the Czech

Republic. When asked about the cause of elder abuse, all employees claimed poor organization of work, staff shortage and a lack of time as being the origin of abuse. (Buzgova and Ivanova, 2009)

The following table (Table 3) shows an overview of the measured staff characteristics in this literature review.

Table 4: Summary of Facility Characteristics

	Natan et al. (2010)	Malmedal et al. (2014)	Buzgova and Ivanova (2009)	Drennan et al. (2012)
Staff Ratio	s	s	-	ns
Staff Turnover	s	-	-	-
Number of Beds	s	s	-	s
Location	-	s	-	-
Nursing Home (private or public)	-	-	-	ns
Staff shortage	-	-	s	-
Poor Organisation	-	-	s	-

Note: "s" for significant association measured, "ns" for no significant association measured, "-" for not measured in study

3.4 Patient/Resident characteristic

The following chapter will lay out the patient/resident characteristics that influence elder abuse. It will be shown that different health conditions have different effects on elder abuse. Moreover, it is to be seen that the prevalence of abuse fluctuates when comparing health conditions to different settings of long-term care. The influence of behaviour problems on elder abuse will be presented in a subchapter. All studies that were included in this thesis explored patient/resident characteristics.

Dementia was associated to elder abuse in the study by Buzgova and Ivanova (2009), stating that alongside hostility, dementia is a main cause for abuse perpetrated by facility staff. Further studies that showed a significant association

between dementia and elder abuse were the studies by Natan et al. (2010) and Page et al. (2009). From all resident characteristics that were measured in the study by Natan et al. (2010), only gender and cognitive problems showed significant associations with elder abuse. The p-values for women were significant for physical violence, mental neglect and total number of incidents. In regard to cognitive problems, i.e. dementia, residents suffering from such were at risk of mental neglect ($p=0.02$). This shows that demented elderly women have the highest probability of being mentally neglected. (Natan et al., 2010)

Like Natan et al. (2010), Page et al. (2009) also associated neglect with dementia ($p<0.05$) (see Table 3). When comparing rates of neglect to the different care settings of long-term care, results showed that dementia was the variable that was only significantly associated to neglect in all three settings (assisted living, paid home care and nursing homes). In contrast, as to be seen in Table 3, the health conditions physical mobility, physical function and cerebrovascular problems were significantly associated with caretaking abuse and neglect in all three settings. Persons with vision and hearing problems and cardiovascular conditions were significantly associated to all three settings for caretaking abuse. The percentage of abuse in respect to a health condition varied when compared to the different settings and when compared to the different types of abuse. Nursing facilities had the highest amount of neglect and caretaking abuse in relation to all health conditions (Page et al., 2009).

Table 5: Health Conditions significantly associated to abuse according to Page et al. (2009)

	Neglect	Caretaking abuse
Physical mobility	+	+
Physical function	+	+
Other Dementia	+	
*Cardiovascular HP**		+
*Cerebrovascular HP**	+	+
Behaviour Problem		
Thinking, Memory, Concentration Problems	+	+
Vision and Hearing Problems		+

*Notes: „HP" stands for Health Problems

When exploring the impact of health-related problems to different types of abuse, Post et al. (2010) found that persons with physical dysfunctions show significant association with caretaking, emotional, material abuse as well as neglect. Furthermore, physical functioning problems were shown to multiply the odds of verbal abuse by three. The odds for emotional abuse more than doubles as well as neglect which nearly doubles. Physical functioning problems were also significantly associated with the multiple abuse variable ($p<0.01$) which puts elders at risk of becoming a victim of multiple types of abuse. Cognitive problems showed no significant relation to any types of abuse that were measured. Another variable that was explored by Post et al. (2010) was the ADLsum which consisted of all the activities that a person was able to perform from the ADL and IADL scale. The ADLsum was significantly associated with emotional, physical, caretaking abuse and neglect while verbal abuse was the type of abuse that was only significantly associated to physical dysfunction and not to the ADLsum as well. This means that with every further activity that can be added to the ADLsum, the possibility for caretaking, physical abuse and neglect as well as the odds for multiple abuse goes down by 10%. (Post et al., 2010)

According to the secondary data analyses by Post et al. (2010) and Page et al. (2009), age of a resident has significant influence on elder abuse. The results by Page et al. (2009) mention age as being significant for caretaking abuse with the p value of 0.03. However, even though the study by Post et al. (2010) is based on the same survey results as Page et al. (2009), Post et al. (2010) shows that age is significantly related to all types of abuse (physical, caretaking, verbal, emotional abuse and neglect) except material. Moreover, the odds ratios that were measured are all below 1.0, which indicates that increasing age decreases the possibility for abuse (Post et al.,2009).

3.4.1 Conflicts and resident aggression

Apart from facility-related events, Drennan et al. (2012) also focused on the impact of resident-related events that were considered as stressful. Like with facility-related events, resident-related events were measured by asking the participants to rate the occurrence, the frequency and the level of stressfulness of resident-related events. The most frequent stressful resident-related events were “caring for residents with limited mobility”, “caring for residents who tend to be forgetful” and “caring for residents who experience incontinence”. The events resident-related events which were considered the most stressful were caring for people with communication problems and resident aggression. In this study, neglect was the only type of abuse (from neglect, physical and psychological) that was significantly associated with frequently occurring resident-related stressful events. A significant association could also be seen between neglect and staff experiencing mistreatment (psychological, physical and/or sexual) from residents. The staff members that were being mistreated (19,6%), had a significantly higher number of incidents of neglect than those who weren’t mistreated (6,8%). Incidentally, staff members that had been psychologically (20,1%) or sexually mistreated (28,2%) by patients had a significantly higher change of self-reporting perpetrated neglect than those who weren’t mistreated by residents (6,6%; 14,0%). (Drennan et al., 2012)

The study by Malmedal et al. (2014) also focused on resident aggression as well as care-related conflicts (refusing to wash, bathe, eat, dress or go to the toilet) and non-

care related conflicts (requiring too much attention, conflicts with other residents, the desire to leave, claiming to have been robbed). Contrary to the study by Drennan et al. (2012), Malmedal et al. (2014) displays that resident aggression and conflicts are significant for neglect as well as physical and emotional abuse. Furthermore, it is stated that the type of conflict has a significant influence on the type of abuse perpetrated. Care-related conflicts are associated with neglect (OR=1.67) and physical abuse (OR=1.40). Non-care-related conflicts are associated with neglect (OR=1.93) and emotional abuse (OR=1.5). Results indicated that all 3 types of abuse that were explored (emotional, physical, and neglect) are significantly associated to resident aggression with the odds ratio being 1.96 for neglect, 2.15 for emotional abuse and 3.66 for physical abuse. (Malmedal et al., 2014)

The secondary data analyses by Page et al. (2009) and Post et al. (2010) presented similar results respectively to behaviour problems. Behaviour problems were characterized as residents being physically or verbally abusive or actively resisting care by both studies. With the exception of material and physical abuse, according to Page et al. (2009) and Post et al. (2010), people in long-term care settings (assisted living facilities, nursing homes, paid home care) that suffer from behavioural problems have the most dramatic increase in all types of abuse that were explored (physical, caretaking, verbal, emotional, neglect and material). Respectively, odds for elder abuse multiply by 1.7 times for the affected types (Post et al., 2010). Not only are behaviour problems the most influential factor of long-term care but they also are significant for the multiple abuse variable ($p<0.01$), making elders nearly twice as prone to being affected by multiple abuse types (Post et al., 2010). Comparatively, Buzgova and Ivanova (2009) state that employees of nursing homes are frequently confronted with mistreatment from residents. The 13 direct care employees (seven nurses and six nursing assistants) from the qualitative study, expressed in interviews that alongside dementia, hostile patients were the main reason for abuse (Buzgova and Ivanova, 2009).

The following table shows an overview of the measured patient/resident characteristics in this literature review.

Table 6: Summary of Patient/Resident Characteristics

	Natan et al. (2010)	Malmedal et al. (2014)	Post et al. (2010)	Page et al. (2009)	Buzgova and Ivanova (2009)	Drennan et al. (2012)
Age	ns	-	s	s	-	-
Gender	s	-	ns	ns	s	-
Race	-	-	ns	ns	-	-
Maritial status	-	-	ns	ns	-	-
Cognitive problems	s	-	ns	-	-	-
Behaviour problems	-	-	s	ns	-	-
Resident agression	-	s	-	-	s	-
Non-care related conflict	-	s	-	-	-	-
Care-related conflict	-	s	-	-	-	-
Dementia	s	-	-	s	s	ns
Physical functioning	-	-	s	s	-	-
ADLsum	-	-	s	-	-	-
Physical mobility	-	-	-	s	-	-
*Cardiovascular HP**	-	-	-	s	-	-
*Cerebrovascular HP**	-	-	-	s	-	-
Social Isolation	s	-	-	-	s	-
*Vision and Hearing HP**	-	-	-	s	-	-
Thinking, Memory, Concentration	-	-	-	s	-	-

Notes: "*" for health problems, "s" for significant association measured, "ns" for no significant association measured, "-" for not measured in study

3.5 Staff characteristics

This chapter will go into detail on staff characteristics that are associated to elder abuse. The cross-sectional study by Drennan et al. (2012) explored the most variables in regard to staff characteristics. However, the studies by Natan et al. (2010), Buzgova and Ivanova (2009) and Malmedal et al. (2014) also provided relevant information for this chapter. Page et al. (2009) and Post et al. (2010) did not include staff characteristics to their studies and are therefor not mentioned in the following chapter.

Drennan et al. (2012) showed that a decrease in job satisfaction significantly increases the probability of physical ($p=0.001$), psychological abuse and neglect ($p=0.001$). The association between job satisfaction and neglect could also be seen in the study by Malmedal et al. (2014) ($p=0.048$). However, the p values for emotional abuse and physical abuse were insignificant. The studies by Natan et al. (2010), Drennan et al. (2012) and Buzgova and Ivanova (2009) explored the impact of burnout on elder abuse.

Buzgova and Ivanova (2009) claimed that burnout is the most common reason for elder abuse. Natan et al. (2010) and Drennan et al. (2012) subcategorized burnout into depersonalisation, emotional fatigue and personal ambition/accomplishment. In regards to the study by Natan et al. (2010), emotional fatigue showed significant association with p values < 0.05, for physical violence, mental abuse, total number of incidents as well as physical and mental neglect (see Table 5). Depersonalisation was significant for physical violence, mental abuse and total number of incidents, whereas personal ambitiousness was only significant for the total number of incidents (see Table 5). (Natan et al., 2010) As to be seen in Table 6, Drennan et al. (2014) showed a significant association ($p<0.05$) between neglect and physical abuse in all 3 subcategories of burnout. Only depersonalisation was significant for psychological abuse (Drennan et al., 2012). It was also measured that when staff suffers from burnout, they are more likely to self-report acts of physical abuse. This is was significant for all 3 subtypes of burnout with $p<0.05$ (Drennan et al., 2012).

Table 7: Association of Burnout Sub-Categories according to Drennan et al. (2014) and Natan et al. (2010)

	Depersonalisation		Emotional Fatigue		Personal Ambition	
	Natan et al. (2010)	Drennan et al. (2012)	Natan et al. (2010)	Drennan et al. (2012)	Natan et al. (2010)	Drennan et al. (2012)
Psychological Abuse	+	+	+			
Physical Abuse	+	+	+	+		+
Neglect		+	+	+		+
Total number of incidents	+				+	

Notes: Total number of incidents was only measured by Natan et al. (2010)

Staff with a negative view towards their patients were significantly more prone to neglect their residents (p=0.002). This association could not be made with physical and psychological abuse (Drennan et al., 2012). In contrast to Drennan et al. (2012), Natan et al. (2010) found that the attitude towards residents does not impact elder abuse in any way.

Natan et. al (2010), Malmedal et al. (2014) and Drennan et al. (2012) explored the influence of the staff's level of education on elder abuse. The study by Malmedal et al. (2014) was the only study that found a significant association with regards to this independent variable. It was stated that in comparison to staff with no health education, the odds for perpetrating emotional abuse approximately doubles for staff with high school education (p=0.006) and staff with university education (p=0.044). University education also approximately doubles the odds for physical abuse (p=0.041). There was no association between high school education and physical abuse. The qualitative study by Buzgova and Ivanova (2009) stated that according to the interviewed employees, a lack of education was a cause for abuse of residents.

Job satisfaction was another variable that was researched by Malmedal et al. (2014), showing an association only with neglect (p=0.048) (Malmedal et al., 2014). In line with Malmedal et al. (2014), Drennan et al. (2012) identified an association with neglect as well physical, psychological abuse as with p-levels smaller than 0.05.

Furthermore, staff that reported that they had low commitment to their workplace and were planning on leaving their job had perpetrated more acts of physical, psychological abuse and neglect than people with higher levels of commitment (p=0.001 for all abuse types) (Drennan et al., 2012).

In the study by Malmedal (2014), an association is found between age and physical abuse, stating that staff over 50 years of age are nearly twice as likely to perpetrate abuse than younger staff (p=0.037). Even though Drennan et al. (2012) studied the same variable, results were insignificant. However, it was shown that nationality and gender impact the odds of elder abuse. Male staff members were associated with perpetrating acts of neglect (p=0.04) and staff which stated that their nationality was "Non-European" are significantly more likely to physically abuse (p=0.04) (Drennan et al., 2012). According to the study by Buzgova and Ivanova (2009), direct care employees stated that women with small children are the most common perpetrators of elder abuse.

The amount of experience a staff member has, was significantly associated with psychological abuse (p=0.011). Staff that had between 11 and 20 years of experience with elders had the highest amount of psychological abuse rates (7.5%), followed by staff with up to ten years of experience (4,2%) and staff with more than 20 years of experience (2%). Comparing staff working more day shifts to those working night shifts, it was seen that significantly more cases of psychological abuse were perpetrated by staff working more night shifts (8,3%) than those workingday shifts (3,9%) (p=0.003). (Drennan et al., 2012)

Drennan et al. (2012) showed that a staff member's physical and psychological health has an impact on elder abuse. Staff that reportedly were suffering from high levels of psychological stress were significantly more likely to perpetrate psychological, physical abuse as well as neglect (p=0.001 for all types of abuse). Staff that ranked their physical health as poor, were significantly associated to perpetrating neglect (p=0.027) and psychological abuse (p=0.001). A further variable that was explored in the study was a staff member's view towards elders. Staff members with a negative view towards residents were more likely to neglect them than staff with positive views (p=0.022). (Drennan et al., 2012) However, Malmedal et al. (2014) found no association between a negative view and abuse.

Nurses and nursing aides are significantly more likely to mentally abuse a patient than other employees (p=0.022) (Drennan et al., 2012). Simone et al. (2016) reported that 80% of perpetrators in nursing facilities are professional caregivers.

The following table depicts an overview of the measured staff characteristics in this literature review. As the studies by Page et al. (2009) and Post et al. (2010) did not measure any staff characteristics, they are not presented in the table.

Table 8: Summary of Staff Characteristics

	Natan et al. (2010)	Malmedal et al. (2014)	Buzgova and Ivanova (2009)	Drennan et al. (2012)
Gender	-	-	-	s
Age	-	s	s	ns
Nationality	-	-	-	s
Marital Status	-	-	-	ns
Education Level	ns	s	s	ns
Burnout	s	-	s	s
Job Satisfaction	-	s	-	s
Job Commitment	-	-	-	s
Job experience	ns	-	-	s
Type of Duty	-	-	-	s
Mistreatment by residents	-	-	-	s
Psychological distress	-	-	-	s
Physical health	-	-	-	s
View on elders	ns	-	-	s

Note: "s" for significant association measured, "ns" for no significant association measured, "-" for not measured in study

4 Discussion

This thesis aimed to depict associated factors of elder abuse between different settings. The results have shown that associated factors of elder abuse have different influences on various types of abuse. Furthermore, it was shown that the influence of a variable fluctuates when compared to different settings in long term care. When performing research on this topic, no studies concerning acute-care settings were found. For this reason, this literature review only explores abuse in long-term care settings (nursing homes, paid home care, assisted living facilities). With no included studies concerning acute medical care setting, there was no possibility to further explore the similarities and/or differences when compared to different settings. Therefore, associated factors of elder abuse could only be compared within long term care settings.

An unexpected finding in this literature review was the way age influenced elder abuse in long-term care. The studies by Page et al. (2009) and Post et al. (2010) both measured a significant association. Despite both studies being based on the same survey results from 2005, Page et al. (2009) found age being significant for caretaking abuse whereas Post et al. (2010) associated elder abuse with all measured types of abuse (physical, caretaking, verbal, emotional abuse and neglect). What is interesting about this finding is that the odds ratios that where measured for age in the study by Post et al. (2010), were all bellow 1.0. This indicates that increasing age lowers the probability for abuse. However, there is no further exploration on why this finding is valid. This shows that it is important to measure odds ratios in order to evaluate whether an explored variable such as age, has a positive or a negative impact on elder abuse. Other studies have found similar results, stating that age has a positive impact on elder abuse. A study by Conner et al. (2011) that found that increasing age lowers the susceptibility to abuse ($p<0.01$), suspects that the reason for this is that abuse on elders is more frowned upon by society than abuse against younger persons (Conner et al., 2011). Schiamberg et al.(2012) that studied the impact of age in relation to physical abuse also found evidence that instead of staff abuse increasing with age, it is the probability of resident-to-resident abuse that increases (Schiamberg et al., 2012). Similar results have been found amongst community-dwelling elders. The National Elder

Mistreatment study, conducted in 2010, measured a one-year prevalence of abuse by analysing the data of 5777 community-dwelling elders that was obtained through interviews conducted via telephone. Results showed that elders under the age of 70 were more likely to be abused than elders over 70 years of age. Interestingly, the study assumed that the association was a result of the exclusion of elders that were institutionalized.(Acierno et al., 2010) From this it can be concluded that the association between the increased probability of elder abuse and younger age is not dependant on whether the elder is institutionalised or is still living in their own home.

Furthermore, this thesis found a significant association between a decrease in the number of activities that can be performed from the ADL and IADL scale, and increased probability for caretaking, physical abuse and neglect. For every activity that the elder was not able to perform, the possibility of becoming a victim of multiple abuse instead of single abuse increased by 10%. (Post et al., 2010) These findings are similar to the study by Schiamberg et al. (2012), who reported an association with physical abuse. In addition, “needing help moving” was the only ADL that Schiamberg et al. (2012) significantly associated with elder abuse. These findings propose that studies such as from Post et al. (2010), have further possibilities to elaborately investigate their results. A mentionable finding from a study conducted in 2014 showed that the risk of financial abuse in community-dwelling elders increases with decreasing ability to perform IADLs ($p=0.02$) and ADLs ($p=0.006$) . Financial and sexual abuse are not included in this study as there was not enough data to show significant results. When searching for an association between financial abuse and a decreased ADLsum for elders in long-term care settings, no literature was to be found.

The studies by Drennan et al. (2012) and Malmedal et al. (2014) found significant associations between job satisfaction and elder abuse. While Malmedal et al. (2014) linked decreased job satisfaction to neglect and Drennan et al. (2012) found associations with physical, psychological abuse as well as neglect, is can be said that job satisfaction correlates with elder abuse. A study conducted in 2019 that performed research on the influence of job satisfaction in nursing homes, found that positive job satisfaction is correlated to a higher quality of care that is performed as well as an increase in the quality of life in the residents (Rajamohan et al., 2019).

This leads us to the conclusion that decreased job satisfaction leads to abuse which therefore reduces the quality of life in residents.

The study by Page et al. (2009) showed that the odds for neglect and caretaking abuse significantly increase when moving from assisted living facilities or paid home care to a nursing home. As nursing homes had the highest abuse rates for all types of abuse when compared to different settings, an increase in the probability of abuse when moving to a nursing home was to be expected (Page et al., 2009). When comparing the probability of elder abuse between nursing home residents and community-dwelling elders, it was found that the probability of abuse is lower in nursing homes although neglect is higher. This finding implicates that moving to a nursing home when professional care is needed (i.e. severe dementia), lowers the probability for elder abuse. The increasing risk of neglect can be linked to the results by Buzgova and Ivanaova (2009) that showed that shortage of staff leads to neglect.

Dementia is the only health condition that was linked to neglect in all settings discussed in this topic. Buzgova and Ivanova (2009), Natan et al. (2010) and Page et al. (2009) showed an association between dementia and abuse. It seems that especially neglect is strongly correlated to this health condition. It was shown by Natan et al. (2010) that elderly women suffering from dementia have the highest risk of being mentally neglected. Furthermore, a significant association between neglect and dementia could be seen for all long-term care settings in the study by Page et al (2009). The link between neglect and dementia can be explained with help of the study by Drennan et al. (2014). The study showed that “caring for residents who tend to be forgetful”, “caring for residents with communication problems” and “resident aggression” were seen as the most stressful and most frequent occurring events and resident traits. Moreover, staff that was being mistreated by one or more residents was significantly associated to perpetrate acts of neglect. As the resident traits and events which were mentioned before correlate with people suffering from dementia, the correlation between dementia and neglect can be highlighted.

Even though Post et al. (2010) found no association between cognitive conditions, it is difficult to compare studies with each other for many reasons. The most prominent reason is that not every study focused on the same types of abuse or even subcategorized them. This may be the reason for the studies presenting

different results when compared to each other. An example of this was to be seen by Malmedal et al. (2009), where care-related, non-care related conflicts and resident aggression were measured. Care-related conflicts were defined as residents that were refusing care. Together with resident-aggression, these definitions overlap with the description of behaviour problems by Post et al. (2010), where behaviour problems were described as a resident being physically or verbally abusive or resisting care. On one hand a sub-categorisation enables scientists to go more in depth on their research when performing a study, on the other hand it makes the comparison between studies difficult.

Furthermore, the different research methods and samples also had an impact on the outcome of a study. A study by Malmedal et al. (2009) showed that the staff's age, amount of experience and education influences the amount and type of observed abuse (Malmedal et al., 2009). However, the studies that consisted of staff members had homogenous means for age and job experience. This rules out that the disparities amongst the studies with staff as a sample stems from the staff's demographic and professional data.

5 Strengths and Limitations

One of the strengths of this study is the appraisal of the included studies with the MMAT (Mixed Method Appraisal Tool) by Hong et al. (2018). For all of the appraised studies, the screening questions were able to be answered. This indicated that the studies qualified for this literature review. A further strength of this review is that the studies were published in different parts of the world. This may have contributed to the heterogenous results when the studies were compared to each other.

Due to the vast variety of studies on elder abuse, all studies that did not include the words “associated factors” or an abbreviation thereof were excluded from this thesis. This means that there may be additional studies that could be relevant for this research question. Further limitations that may have excluded further studies from this literature review are that the literature research was only performed on PubMed and Cinahl and the included languages are German and English.

6 Research and Practice Implications

Throughout this literature review it could be seen that many independent variables were significantly associated with elder abuse. However, the reason for the association could not be explained for every variable that was significantly linked to elder abuse. Only by exploring the reason for why an association was made can it be prevented in the future. For example, even though increasing age was associated with lowering the susceptibility of elder abuse (Post et al., 2010, Conner et al., 2011), the association has not yet been fully justified and requires further research. Similarly, the inability to find literature on the reason for why the location of a nursing facility impacts the type of elder abuse also shows that there is a research gap concerning this topic.

The variables, definitions and types of abuse that were explored in every study were not homogenous. This made it very difficult to compare the results and assess their validity. Furthermore, the definitions of some of variables overlapped with the definition of others as they had been subcategorized (i.e. care-related conflicts and behaviour problems). A subcategorization of a variable makes it possible for research to go into as far a detail as possible. However, it is necessary that explored variables and the types of elder abuse are defined in a standardised manner and used on a universal level. This would not only facilitate the comparison of results of studies in general but there would also be an opportunity for researchers to illustrate the differences of elder abuse when the results are compared to studies from other countries.

For future studies it is recommendable to always calculate the odds ratios for significantly associated variables of elder abuse. This enables to measure whether the variable increases or decreases the risk of elder abuse and by how much.

As job satisfaction and burnout were shown to be influential in regard to elder abuse, a serious and drastic change is needed within the organisation and management of nursing facilities and nursing services. Such changes should aim to improve working conditions for paid-health care workers. Consequently, a reduction of elder abuse cases can be expected due to increased job satisfaction.

7 Conclusion

The aim of this thesis was to depict the associated factors of elder abuse and compare these within different settings. Due to a lack of literature on associated factors of elder abuse within the acute-care setting, this thesis focused on long-term care settings (nursing homes, assisted living facilities, paid home care). Nevertheless, a wide variety of variables were able to be explored which were categorized into facility, victim and resident characteristics.

The included studies of this literature review each explored different variables and types of elder abuse. This gave opportunity to depict the multifaceted aspects of elder abuse as each explored variable had a different influence when compared to different types of abuse or settings.

Furthermore, it was to be seen that moving between settings influences the odds of elder abuse. However, research shows that depending on health conditions that an elder may suffer from, the percentage of abuse varies within settings.

In conclusion it can be said that there are many factors associated to elder abuse. However due to the fact that the definition and categorisation of elder abuse was not homogenous throughout the included studies, the comparison of results was difficult. This implies that for future research a standardised universal definition for elder abuse and for its respected types of abuse is needed.

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POLIT, D. F. & BECK, C. T. 2017. *Nursing research: generating and assessing evidence for nursing practice,* Philadelphia, Wolters Kluwer Health/Lippincott Williams & Wilkins.

POST, L., PAGE, C., CONNER, T., PROKHOROV, A., FANG, Y. & BIROSCAK, B. J. 2010. Elder abuse in long-term care: types, patterns, and risk factors. *Research on Aging,* 32**,** 323-348.

RAJAMOHAN, S., POROCK, D. & CHANG, Y. P. 2019. Understanding the Relationship Between Staff and Job Satisfaction, Stress, Turnover, and Staff Outcomes in the Person-Centered Care Nursing Home Arena. *J Nurs Scholarsh,* 51**,** 560-568.

SCHIAMBERG, L. B., OEHMKE, J., ZHANG, Z., BARBOZA, G. E., GRIFFORE, R. J., VON HEYDRICH, L., POST, L. A., WEATHERILL, R. P. & MASTIN, T. 2012. Physical abuse of older adults in nursing homes: a random sample survey of adults with an elderly family member in a nursing home. *J Elder Abuse Negl,* 24**,** 65-83.

SIMONE, L., WETTSTEIN, A., SENN, O., ROSEMANN, T. & HASLER, S. 2016. Types of abuse and risk factors associated with elder abuse. *Swiss Med Wkly,* 146**,** w14273.

TEASTER, P. & ROBERTO, K. 2009. Broken trust: Elders, family, and finances. A Study on Elder Financial Abuse Prevention. MetLife Mature Market Institute

WHO. 2017. *Abuse of older people on the rise – 1 in 6 affected* [Online]. Geneva: World Health Organisation. Available: https://www.who.int/en/news-room/detail/14-06-2017-abuse-of-older-people-on-the-rise-1-in-6-affected [Accessed 20.3 2020].

9 Appendix

The following chapter includes the appraisal of the 7 included studies of this literature review. The appraisal was performed with the help of the Mixed Method Appraisal Tool (MMAT) by Hong et al. (2018).

9.1 Appraisal Tool by Hong et al. (2018)

The appraisal tool by Hong et al. (2018) enables to appraise the quality of 5 different study designs: qualitative, quantitative randomized controlled trial, quantitative non-randomized, quantitative descriptive and mixed methods. The questions about the methodological quality criteria are to be answered with either “Yes”, “No” or “Can’t tell”. Furthermore, there is the possibility to justify the answer with a comment.

Following are the questions for each study design.

Screening Questions (for all types)

S1. Are there clear research questions?

S2. Do the collected data allow to address the researched questions?

1. Qualitative

1.1. Is the qualitative approach appropriate to answer the research question?

1.2. Are the qualitative data collection methods adequate to address the research question?

1.3. Are the findings adequately derived from the data?

1.4. Is the interpretation of results sufficiently substantiated by data?

1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?

2. Quantitative non-randomized

2.1. Is randomization appropriately performed?

2.2. Are the groups comparable at baseline?

2.3. Are there complete outcome data?

2.4. Are outcome assessors blinded to the intervention provided?

2.5 Did the participants adhere to the assigned intervention?

3. Quantitative nonrandomized

3.1. Are the participants representative of the target population?

3.2. Are measurements appropriate regarding both the outcome and intervention (or exposure)?

3.3. Are there complete outcome data? 3.4. Are the confounders accounted for in the design and analysis? 3.5. During the study period, is the intervention administered (or exposure occurred) as intended? **4. Quantitative descriptive** 4.1. Is the sampling strategy relevant to address the research question? 4.2. Is the sample representative of the target population? 4.3. Are the measurements appropriate? 4.4. Is the risk of nonresponse bias low? 4.5. Is the statistical analysis appropriate to answer the research question? **5. Mixed methods** 5.1. Is there an adequate rationale for using a mixed methods design to address the research question? 5.2. Are the different components of the study effectively integrated to answer the research question? 5.3. Are the outputs of the integration of qualitative and quantitative components adequately interpreted? 5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed? 5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?

9.2 Appraisal of the included studies

The following chapter presents the appraisal of the included studies in this literature review.

BUZGOVA, R. & IVANOVA, K. 2009. Elder abuse and mistreatment in residential settings. Nurs Ethics, 16, 110-26.

Screening Questions (for all types)
S1. Are there clear research questions? Yes, two research questions are defined. S2. Do the collected data allow to address the researched questions? Yes

1. Qualitative **1.1. Is the qualitative approach appropriate to answer the research question?**
Yes, in order to gain insight on the “live experiences” the qualitative design is appropriate.
1.2. Are the qualitative data collection methods adequate to address the research question?
Yes, unstructured interviews were performed however initial questions were asked.
1.3. Are the findings adequately derived from the data?
Yes
1.4. Is the interpretation of results sufficiently substantiated by data?
Yes
1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?
Yes, there is coherence. The studies findings and interpretation are comprehensible with collection, analysis and sources.

DRENNAN, J., LAFFERTY, A., TREACY, M. P., PHELAN, A., FEALY, G., LYONS, I. & HALL, P. 2012. Older people in Residential Care Settings: Results of a National Survey of Staff-Resident Interactions and Conflicts.

Screening Questions (for all types)
S1. Are there clear research questions? No, however, the aims of the study are clearly specified. S2. Do the collected data allow to address the researched questions? Yes, the data allowed to answer all 5 aims.
4. Quantitative descriptive **4.1. Is the sampling strategy relevant to address the research question?**
Yes, it is as the aims involved staff in residential settings
4.2. Is the sample representative of the target population?
Yes, the as research was focused on staff and staff members were the sample.
4.3. Are the measurements appropriate?

Yes, they are comprehensible and p-values are given.
4.4. Is the risk of nonresponse bias low?
No. The response rate is 43%. 3000 surveys were distributed and 1300 were answered
4.5. Is the statistical analysis appropriate to answer the research question?
Yes, Pearson's chi-square test was performed as well as logistic regression to determine p-levels.

MALMEDAL, W., HAMMERVOLD, R. & SAVEMAN, B.-I. 2014. The dark side of Norwegian nursing homes: factors influencing inadequate care. Journal of Adult Protection, 16, 133-151.

Screening Questions (for all types)
S1. Are there clear research questions? No, however the aim is clearly stated. S2. Do the collected data allow to address the research questions? Yes, it is possible to answer the research question.
4. Quantitative descriptive **4.1. Is the sampling strategy relevant to address the research question?**
Yes, random sampling was performed so that the size and location of nursing home varies.
4.2. Is the sample representative of the target population?
Yes. The sample is clearly described in the study.
4.3. Are the measurements appropriate?
Yes, they are comprehensible and adequate.
4.4. Is the risk of nonresponse bias low?
Yes, the response rate of the 16 facilities ranges between 61-98% which makes up for a mean of 79%
4.5. Is the statistical analysis appropriate to answer the research question?
Yes. Non-parametric statistics were used to measure the differences between nursing facility sizes. Logistic regression was used to measure differences

between staff that abused and staff that did not. Furthermore the t-test was used as well as odds ratios were measured.

NATAN, M. B., LOWENSTEIN, A. & EISIKOVITS, Z. 2010. Psycho-social factors affecting elders' maltreatment in long-term care facilities. Int Nurs Rev, 57, 113-20.

Screening questions (for all types)
S1. Are there clear research questions? Yes. There was no research question formulated however the aim was clearly stated. S2. Do the collected data allow to address the research questions? Yes.
4. Quantitative descriptive **4.1. Is the sampling strategy relevant to address the research question?**
Yes. Random sampling was used in order to explore elder abuse on different departments at different times of day.
4.2. Is the sample representative of the target population?
No. The aims of the study were focused on staff and patient characteristics that influenced elder abuse however only staff members were questioned.
4.3. Are the measurements appropriate?
Yes, the measurements are valid and justified although patient were not included in the sample. This indicates that the results concerning patient characteristics are subjective and may be conceived differently by patients themselves.
4.4. Is the risk of nonresponse bias low?
Yes. The response rate from facility surveys were 85% and from directors of facilities 91,6%
4.5. Is the statistical analysis appropriate to answer the research question?
Yes, the data analysis is clearly described. Mann-Whitney test was conducted and correlations were tested though the Spearman coefficient.

PAGE, C., CONNER, T., PROKHOROV, A., FANG, Y. & POST, L. 2009. The effect of care setting on elder abuse: results from a Michigan survey. Journal of Elder Abuse & Neglect, 21, 239-252.

Screening questions (for all types)
S1. Are there clear research questions? No however the aim is clearly stated. S2. Do the collected data allow to address the research questions? Yes, the percentages of abuse in three long term-care settings can be compared.
4. Quantitative descriptive **4.1. Is the sampling strategy relevant to address the research question?**
Yes. Random-digit dial survey was conducted.
4.2. Is the sample representative of the target population?
No. The target population was elders receiving some form of long-term care however relatives were asked to answer the survey. The authors of the study
4.3. Are the measurements appropriate?
Yes, they are. Variables were clearly defined and the research question is able to be answered however it cannot be justified why only caretaking abuse and neglect are significant.
4.4. Is the risk of nonresponse bias low?
Can't tell. There were 1002 respondents of which 718 had relatives that received long-term care.
4.5. Is the statistical analysis appropriate to answer the research question?
Yes. The Chi-square test was performed to measure if results were significant. Odds ratios were measured and two logistic models were set up.

POST, L., PAGE, C., CONNER, T., PROKHOROV, A., FANG, Y. & BIROSCAK, B. J. 2010. Elder abuse in long-term care: types, patterns, and risk factors. Research on Aging, 32, 323-348.

Screening questions (for all types)
S1. Are there clear research questions?

No but the aims are clearly defined. S2. Do the collected data allow to address the research questions? Yes. The aim of the study was achieved.
4.1. Is the sampling strategy relevant to address the research question?
Yes. Random-digit-dial surveys were conducted in order find families that had an elder receiving long-term care service.
4.2. Is the sample representative of the target population?
No. The aim of the study focuses on elders receiving long-term care however relatives were used as proxies.
4.3. Are the measurements appropriate?
No, it can not be concluded how education is associated with education. k
4.4. Is the risk of nonresponse bias low?
Can't tell. There were 1002 respondents of which 718 had relatives that received long-term care.
4.5. Is the statistical analysis appropriate to answer the research question?
No. Chi Square tests and sample t tests were performed in order to measure the relationship between health variables and abuse. However it would have been necessary to measure odds ratio so that is can be seen if the variable had a positive or a negative effect on elder abuse.

SIMONE, L., WETTSTEIN, A., SENN, O., ROSEMANN, T. & HASLER, S. 2016. Types of abuse and risk factors associated with elder abuse. Swiss Med Wkly, 146, w14273.

Screening questions (for all types)
S1. Are there clear research questions? No however the aims are clearly specified. S2. Do the collected data allow to address the research questions? Yes. It was able to measure the frequency of elder abuse and explore risk factors.
4.1. Is the sampling strategy relevant to address the research question?
Yes.

4.2. Is the sample representative of the target population?
Yes. 903 dossiers of complaints from elder that were abused were used to explore risk factors of elder abuse.
4.3. Are the measurements appropriate?
Yes, measurements are appropriate
4.4. Is the risk of nonresponse bias low?
Yes, as a retrospective analysis was the design of the study
4.5. Is the statistical analysis appropriate to answer the research question?
Yes, the results of the study were measured using the Pearson's chi-squared test and multiple logistic regression analysis.