Universidade do Minho
Escola de Psicologia

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Developing the Theoretical Understanding of Elder Abuse: A Social Exchange Approach

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Developing the Theoretical Understanding of Elder Abuse: A Social Exchange Approach

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Professor Doutor José Ferreira-Alves

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[1] Bolsa de doutoramento referência PD/BD/105965/2014

STATEMENT OF INTEGRITY

I hereby declare having conducted this academic work with integrity. I confirm that I have not used plagiarism or any form of undue use of information or falsification of results along the process leading to its elaboration.

I further declare that I have fully acknowledged the Code of Ethical Conduct of the University of Minho.

Desenvolvendo a compreensão teórica dos maus-tratos a pessoas idosas: uma abordagem da troca social

Os maus-tratos a pessoas idosas são um importante problema de saúde pública que afeta uma parte significativa da população. Apesar de existirem várias propostas teóricas para os maus-tratos, estas encontram-se pouco exploradas. A teoria das trocas sociais é uma teoria pouco desenvolvida e estudada no contexto dos maus-tratos a pessoas idosas, mas com um forte potencial integrativo. O principal objetivo desta tese é desenvolver, operacionalizar e testar uma formulação da teoria das trocas sociais aplicada aos maus-tratos a pessoas idosas.

Num primeiro estudo, uma revisão sistemática da literatura, procurou-se sumariar o apoio empírico de seis teorias explicativas dos maus-tratos. Verificamos que todas apresentam evidência favorável. A partir desta revisão concluiu-se que existe uma necessidade de explorar novas interpretações destes modelos teóricos. A partir da análise dos princípios básicos da teoria das trocas sociais, formulou-se e operacionalizou-se uma nova proposta teórica. Esta proposta centra-se na hipótese geral de que o risco de maus-tratos é determinado pela disponibilidade de recursos pessoais e pelo poder/dependência na relação. Num segundo estudo, procedeu-se à adaptação e validação de uma medida de competências sociais, que nos permite medir um indicador de poder na relação. O estudo de validação revelou que a medida apresenta características psicométricas adequadas. Num terceiro estudo testamos a proposta teórica explorando a associação entre alguns recursos cognitivos da pessoa idosa e os maus-tratos. Exploramos também o papel moderador da funcionalidade e das competências sociais. Os resultados indicaram que a memória episódica, fluência fonémica e velocidade perceptual são bons preditores dos maus-tratos. A relação entre cognição e maus-tratos foi moderada pela funcionalidade e pelas competências sociais assertividade, defesa de opiniões e expressão de afeto positivo. No quarto estudo seguimos o mesmo paradigma, mas desta vez para explorar o papel dos recursos "reconhecimento de emoções" e "intuições morais". Não foi encontrada relação entre o reconhecimento de emoções e os maus-tratos. Os resultados indicaram que a intuição moral dano/cuidado está associada a mais relatos de maus-tratos enquato a intuição autoridade/respeito se associa a menos. Tal como no terceiro estudo, estes efeitos foram moderados pela funcionalidade e competências sociais.

Esta tese apresenta evidência favorável a uma conceptualização dos maus-tratos como troca social. A teoria das trocas socias apresenta-se como uma ferramenta promissora para a teorização, intervenção e prevenção dos maus-tratos a pessoas idosas.

Palavras-chave: cognição, competências sociais, maus-tratos a pessoas idosas, moralidade, teoria das trocas sociais.

Developing the Theoretical Understanding of Elder Abuse: A Social Exchange Approach

Elder abuse is an important public health issue that affects a significant part of the population. Although there are several theoretical proposals for elder abuse, these are underexplored. Social exchange theory is an underdeveloped and poorly studied theory in the context of elder abuse, despite its strong integrative potential. The main objective of this thesis is to develop, operationalize and test a formulation of social exchange theory applied to elder abuse.

In the first study, a systematic review of the literature, we sought to summarize the empirical support of six theories of elder abuse. We found that all of them present favourable evidence. From this review, we concluded that there is a need to explore new interpretations of these theoretical models. A new theoretical proposal was formulated and operationalised from the analysis of the basic principles of the theory of social exchanges. This proposal focuses on the general hypothesis that the risk of elder abuse is determined by the availability of personal resources and the power/dependence in the relationship. In the second study, we adapted and validated a measure of social skills, which allows us to measure an indicator of power in the relationship. The validation study revealed that the measure has adequate psychometric characteristics. In the third study, we tested our theoretical proposal by exploring the association between some cognitive resources of the older adult and abuse. We also explored the moderating role of functionality and social skills. The results indicated that episodic memory, phonemic fluency and perceptual speed are good predictors of elder abuse. The relationship between cognition and elder abuse was moderated by functionality and the social skills assertiveness, defence of opinions and expression of positive affect. In the fourth study, we followed the same paradigm, exploring the role of "emotion recognition" and "moral intuitions" as resources. No relationship was found between emotion recognition and elder abuse. The results indicated that the moral intuition of harm/care is associated with more reports of elder abuse, while the intuition of authority/respect is associated with less. As in the third study, these effects were moderated by functionality and social skills.

This thesis presents favourable evidence for a conceptualization of elder abuse as a social exchange. Social exchange theory seems to be a promising tool for theorizing, intervening and preventing elder abuse.

Keywords: cognition, elder abuse, morality, social exchange theory, social skills.

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Chapter I

Conceptual introduction and theoretical background

Ageing is a complex process encompassing biological, behavioural, and social changes. Changes and transformations are inevitable, and we will all go through them if we live long enough. For good and worse, I have witnessed these changes firsthand in my close relatives. For several years I watched dementia take my grandfather from a fully active, independent person to a completely dependent person, and I did my part, helping my family assist him. I learned many things from that experience, but there is something I will never forget, and that is the constant doubt if both me and my family were giving my grandfather the best of care. I could not conceive a scenario where any of us would intentionally cause him any harm. This personal experience is probably why I got captivated by the field of elder abuse in the first place. It seemed to me that not providing the best care practices would be abusive, and that doubt that made me question if we could care better also made me question if we were in any way being abusive. I started to wonder that perhaps people who commit elder abuse sometimes simply do not know how to care better and probably had the same doubts I had. This personal and family experience urged me to try to understand what elder abuse is and mainly why it happens. Understanding why it happens is paramount to prevent it and help dissipate some caregivers' insecurities.

Following that quest is how I started to work on this thesis. And what a journey it has been. Throughout this document, I will share the more scientifically relevant parts of that journey. This introduction will start by summing up the more important concepts, changes and theories of ageing and development. Then, we will discuss the concept of elder abuse and its representations and then move to the theories of elder abuse. We will then examine in detail the theory that is the focus of this work, the social exchange theory, by analysing its core concepts and how it can be operationalized to explain elder abuse. This introduction will finish with a description of the thesis' objectives and hypotheses and how the conducted studies tackle those challenges.

Ageing as Development

Ageing is a process that begins at birth and continues throughout life, although most authors who study older adulthood focus on the ageing processes that take place from the point of maturity (adulthood) onwards into later years (Erber, 2013, p. 7). Lifespan development studies the processes of acquisition, maintenance, quantitative or qualitative transformation, and eventual decline of psychological structures and functions across our whole life (P. B. Baltes, 1997). Developmental psychologists usually focus on specific periods of life, such as infancy, adolescence, or adulthood. When we consider the ageing process in older adults, we specifically talk about development in old age. The term "ageing" is usually the target of a negative stereotype, being typically associated with decline (Levy, 1996). However, development in

older adulthood is a process of change, with gains and losses, like any other developmental period (P. B. Baltes, 1987; Brandtstädter, 2006; Labouvie-Vief, 1982). However, these changes occur in a social context, giving way for the gains and losses to be differently valued by older adults and the society they belong to. Consequentially, ageing is also a social construction (Coleman & O'Hanlon, 2017, p. 1). For example, western cultures emphasise the losses of the ageing process over the gains, while other cultures value more the gains (Coleman & O'Hanlon, 2017, p. 3). These differences will provide different ageing experiences. Nevertheless, well-achieved development in old age, or successful ageing, is associated with a maximization of gains and minimization of losses (M. M. Baltes & Carstensen, 1996).

To better understand the ageing process as part of development in old age, we need first to clarify what exactly is old age. Second, if development in old age is characterised by changes in terms of gains and losses, we need to understand what exactly changes as we go through old age.

What is Old Age?

When judging if someone has entered older adulthood, the criteria most frequently used is retirement age (OECD, 2019, p. 139), which is based on chronological age. Chronological age is given by the time elapsed since birth. However, many interpersonal variabilities in multiple areas make chronological age a not-so-good predictor of age-related changes, for example, in performance (Salthouse, 1986). In an attempt to account for individual variability in old age, many researchers adopted a three-tier categorization of chronological age for ages 65 and over (Erber, 2013). In this categorization, old age is divided into three groups: young-old (65 to 74), old-old (75 to 84) and oldest-old (85 and over). This categorization may be useful as it seems to be related to health variables, like emergency department admissions tend to be higher in the oldest-old group (Lee et al., 2018). However, it does not clearly account for all individual variability as other studies find that the oldest-old also have higher self-perceptions of health than their young-old counterparts (Zikic et al., 2009).

Therefore, it was necessary to develop other approaches to age. Besides chronological age, Erber (2013) presents four more conceptualisations of age. There is biological age, a measure derived from the number of years one is expected to live. This measure is both speculative and relative. There is no way to accurately predict the number of years of life that remains for any of us, so biological age is rooted in an estimate based on our physical appearance, organ function, and health in general. It is also a relative measure, for it is only useful to compare one person with his/her chronological-age peers. To account for functional variability, we can think about functional age, which refers to a person's competence in carrying on specific tasks. Again, this is also a relative way of measuring age and is very task-oriented. For example,

we can say that A is functionally younger than B in mobility tasks. As it is task-specific, within-subject variability is very frequent. For example, someone can be functionally young at math but not at go-karting. Then, psychological age refers to how well one uses cognitive, personal, and social skills to adapt to new and changing circumstances. The ability to remain flexible is associated with being psychologically young. Social age is related to conforming or not with societal expectations for the behaviour of members of a specific age group. For example, a 15-year-old is expected to be at school, a 30-year-old working a full-time job, and an 80-year-old retired. A person might be viewed differently depending on how he/she chooses to comply with society's expectations for his/her age.

All these age estimations contribute to the individual subjective feeling of how old one is. That is typically called subjective age, the age people think of themselves as being. Interestingly, adults usually think of themselves as younger than their chronological age (Rubin & Berntsen, 2006), a gap that widens in advanced age (Kotter-Gruhn et al., 2016). Although developmental psychology relies heavily on chronological age, it is often considered a poor system to measure age concerning developmental phenomena. Especially in old age, some authors suggest that perceived time left to live is a more important indicator than chronological age (Carstensen & Hershfield, 2021).

Nevertheless, chronological age is always dragged into the conversation when we talk about when old age begins. Typically, the number 65 is the threshold to becoming an older adult. According to data from OECD, this boundary has been adopted as it is one of the more frequently used thresholds for retirement (OECD, 2019, p. 139). Though increases in retirement age have been planned across the globe (OECD, 2019, p. 140), this age milestone stuck. Due to age's subjective nature, this threshold cannot be set in stone.

So, old age encompasses beliefs, expectations, and various biological, psychological, and social phenomena and variables. These facets entwine themselves with great complexity, giving rise to enormous individual variability in older adulthood, the last phase of the ageing process.

What Changes as we Approach Old Age?

As discussed, development through old age is a mixture of gains and losses in different systems. As ageing is influenced by context, it is no surprise that older adults are a very diverse group. Tracking the changes that occur in older adulthood can sometimes be challenging. It is, nevertheless, fundamental to understand what changes as we grow older to further understand any phenomena in old age. Age-related changes occur in all domains: biological, psychological, and social.

Biological changes are, perhaps, more visible as they include skin drying and wrinkles appearing while the hair gets thin and grey (Erber, 2013, p. 85). Biological changes occur in all major organ systems, with a general tendency to decrease the efficiency of bodily functions. It is important to note that these changes do not happen all at once but gradually over time. These changes are not pathological but natural and tend to affect the quality of life slightly. Some health conditions tend to be more prevalent in advanced age, but they are instead the exception than the rule. Also, health conditions that significantly decrease quality of life usually appear only in the last years of life (Schilling et al., 2018).

The more frequent example of cognitive changes associated with the ageing process is what is known as the "classic intellectual ageing pattern" (Botwinick, 1977), that is, the stability of the verbal IQ (often compared with crystallized intelligence) and the decline in the performance IQ (compared to fluid intelligence). Other cognitive changes occur in perception, with a decrease in reaction times (Hultsch et al., 2002), particularly in complex tasks (Tun & Lachman, 2008). Memory impairments are one of the most frequent concerns of older adults regarding ageing and their cognitive abilities (Dark-Freudeman et al., 2006). There are age-related differences in memory functioning, but these differences are specific to some mnesic structures. Older adults seem to have a smaller working memory capacity than younger adults, but the main age-related change seems to be in the speed necessary to perform complex manipulations (Salthouse, 1994). The ability to resist distractions also diminishes and impacts the use of working memory (McNab et al., 2015). Episodic memory, which accounts for events and experiences located in time, seems to decrease (Larrabee, 2019). Though some of these changes are expected with old age, it is worth mentioning that older adults with higher education, a more active lifestyle and better physical and mental health tend to have better memory functioning and faster reaction times (Erber, 2013, León et al., 2015). Training can improve older adults' performance (Carretti et al., 2007; Light et al., 1996). There are also some changes regarding emotions throughout the lifespan. Research has shown that older adults present more positive affect and less negative affect than younger adults (Mroczek & Kolarz, 1998). Plus, positive affect seems to increase while negative affect decreases across the lifespan, but the relation is not linear and influenced by other variables such as gender (Mroczek & Kolarz, 1998).

Ageing has been associated with significant improvements in social functioning (Luong et al., 2011). Older adults have typically smaller social networks (English & Carstensen, 2014). Social networks can be composed of friends, family members, neighbours or other peripheral contacts. The number of close partners remains stable across the lifespan. However, peripheral contacts diminish (English & Carstensen, 2014), showing a general preference for relationships with family members, close friends

and long-term partners. This preference puts the quality of relations before the number of relations (Bruine de Bruin et al., 2020). Close relationships are also related to more positive emotional experiences, which is frequently pointed to as the reason for investing in these relationships (English & Carstensen, 2014). Favouring close relationships is also associated with higher reports of well-being (Bruine de Bruin et al., 2020).

Although the described changes, particularly the biological and cognitive changes, are more related to decline, they do not need to be impairing or lead to maladaptation. Lawton and Nahemow's Press-Competence Model (Lawton, 1986; Nahemow, 2000) proposed individual competence and environmental pressure interact in a dynamic process to determine the individual's level of adaptation. Both individual competencies and environmental pressures change with ageing. If environmental pressures greatly surpass individual competence, the individual can no longer maintain an acceptable degree of functioning, falling to maladaptive behaviour and negative affect. In opposition, if the environment offers no challenge, the individual falls into a state of passivity and helplessness, also leading to maladaptive behaviour and negative affect (Satariano, 2006). Finding a balance could mean keeping adaptive behaviours and positive affect, which can be done by keeping environmental pressure slightly below competence in the "zone of maximum comfort". Alternatively, it could mean keeping environmental pressure slightly above competence and encouraging active behaviour in the "zone of maximum performance potential" (Satariano, 2006). The press-competence model shows a way in which age-related changes, including decline, do not lead to stagnation but, if balance is found, leave room for further development in old age.

Theoretical Approaches to Development in Late Adulthood

So far, we have discussed the more striking changes humans face as they approach old age. However, simply describing these changes lacks something if not coupled with an explanation about what we do with these changes and what directions they lead. Describing ageing as a process of gains and losses has been done quite a few times in this text. It is an idea that developmental psychologists like to point out with an astonishing frequency. In the previous sections, we described some of the losses and some of the gains associated with ageing. We would like to put these changes into context and briefly explore what we do with them. Is there something or some things that we aim to gain during our development into old age? Is there something we can afford to lose? How do we deal with these changes? Questions like these are at the heart of some theories of development in old age. In the following paragraphs, we will describe some theoretical perspectives on ageing and the adaptation to ageing,

namely Erikson's theory of psychosocial development, socio-emotional selectivity theory and the selective optimization with compensation theory. As we will discuss later, these perspectives can be connected to the theory we choose to explore, putting social exchange theory into a developmental lens.

Erikson's Stages of Psychosocial Development. Talking about development without mentioning Erik Erikson is like playing football without a ball. Erikson's conception of psychosocial development has been a frame of reference for so many development psychologists that it simply cannot be ignored.

Erikson conceptualises development from a life-span perspective. We pass through different stages, from infancy to old age, each one with a defining developmental task. Each person faces their developmental challenges inserted in an environment with other persons who are also facing their own challenges (Erikson, 1963). Erikson's theory describes eight stages of psychosocial development, each associated with a specific period in the lifespan (Erikson, 1963; Erikson & Erikson, 1998). In infancy, the primary challenge is to develop trust over mistrust. During childhood, the stages' focus is on autonomy, initiative and industry. Adolescence is characterised by the development of identity over identity confusion, and in young adulthood, the focus is on the search for intimacy over isolation. In middle adulthood, the central developmental theme is generativity. Erikson created the term to designate the interest to set up and guide the next generation. Latent to this concept is the idea of family growth and of contributing to one's society. The opposite of generativity would be stagnation, focusing on oneself and not others. But, for Erikson, the central developmental challenge of old age is ego integrity.

Attaining integrity is the "acceptance of one's one and only life cycle as something that had to be and that, by necessity, permitted of no substitutions" (Erikson, 1963, p. 268). At the opposite end of integrity is despair, a feeling of failure in life paired with a lack of time to attempt alternative ways to reach integrity. The stages in Erikson's theory are conceived as hierarchical, meaning that facing each developmental task implies resolving the preceding stage (Erikson, 1963; Erikson & Erikson, 1998). Each developmental task is associated with the acquisition of specific psychological strengths (Erikson & Erikson, 1998). Moving from stage to stage across the life cycle will summate the acquired psychological strengths. So, in a sense, as the last stage, ego integrity reflects the balance and summation of the psychological strengths developed throughout the life cycle, coming together as a whole (Coleman & O'Hanlon, 2017, p. 13). Ego integrity is not only based on reflecting upon one's life, but it also implies accepting the society that will continue after death, a society that might surpass the values that have guided one's life. The capacity to accept death in light of what has passed and what might come to be after departing is central to Erikson's concept of ego integrity (Erikson, 1963, p. 269). However, the

physical and mental decline in the years closest to death may challenge the maintenance of ego integrity. In light of this, a ninth stage was proposed as an addition to Erikson's theory, where the dystonic outcome is given more salience than the tonic developmental outcome (Erikson & Erikson, 1998). Erikson's model remains as influential as it has ever been. The proposal of generativity and integrity as the central developmental challenges of middle and old adulthood are still focal points in adult development and have become the basis for various other theories of development and ageing (Coleman & O'Hanlon, 2017).

Socio-emotional Selectivity Theory. Carstensen's Socio-emotional selectivity theory (Carstensen, 1991, 2006; Carstensen et al., 1999) is one of the most influential theories of adult development. It shares a premise with disengagement theory, which gained influence in the '60s and postulated that as adults grow into old age, they choose to distance themselves from their roles in society as society ceases to depend on them to perform those roles (Coleman & O'Hanlon, 2017). Socio-emotional selectivity theory also claims a reduction in social interactions in old age but gives a different explanation. Socio-emotional selectivity theory postulates that the relative importance attributed to relationships and goals changes as we approach death (Carstensen, 1991). As we grow into old age, we come to value more relationships that promote well-being and contentment over relationships that may be useful. We grow to prioritize emotional goals over cognitive goals and well-being over knowledge acquisition (Carstensen et al., 1999). So, according to the social-emotional selectivity theory, disengagement in older adulthood has to do with different life goals, sprung from the perception that death draws closer (Carstensen, 1991). One of the main points extracted from this theoretical perspective is common with the Eriksonian view on development: goals change as we advance through the lifespan (Coleman & O'Hanlon, 2017). These changes are reflected in some aspects of the older adults' social networks. Although younger adults' and older adults' social networks have similar structures, older adults tend to have fewer contacts and prioritize contact with close relatives. New relationships encompass a certain degree of uncertainty and are avoided. Relationships with close relatives with a history of past emotional investment have a greater probability of resulting in emotionally positive interactions. Choosing known and invested social partners shows a tendency to optimize relationships in favour of emotionally positive outcomes (Coleman & O'Hanlon, 2017).

Selective Optimization with Compensation. Selective optimization with compensation is the most prominent theory of adaptation to old age. This theory, developed by Paul and Margaret Baltes (P. B. Baltes, 1987, 1997; P. B. Baltes & Baltes, 1990), defends a prototypical mechanism to achieve successful ageing by adapting to constraints posed by losses and optimizing favourable developmental

outcomes. According to this theory, successfully adapting to old age implies the use of three strategies (P. B. Baltes, 1997). The strategy “selection” refers to focusing efforts on tasks and goals for which skills remain high and, therefore, are very likely to have a positive outcome. The selection process is prompted by the anticipation of change or functional restriction and implies a continuous analysis and narrowing of behavioural options and goals to activities with high efficiency and enjoyability. The strategy “optimization” consists in focusing on behaviours that maximize quantity and quality of life. It involves an effort to acquire or improve performance in specific and more valued areas. This process can be reactive when used to adjust to new limitations or proactive when used to save resources from one task to a more valued task. "Compensation” is the adoption of new strategies to adjust to losses. This strategy is used to cope with losses or with the anticipation of losses. This strategy reflects the recognition of limitations or challenges and a need to keep performance at the desired level.

Adopting these strategies aims ultimately to achieve successful ageing and allow the older adult to conduct his or her developmental tasks more efficiently (M. M. Baltes & Carstensen, 1996). This theory provides an important framework for conceptualizing behavioural change in old age.

What is Elder Abuse?

Defining Abuse Across Time

As ageing is inevitable, stories of older adults being subject to abuse have been around for quite some time. One good example is given to us by the “Bard” himself. In William Shakespeare's "King Lear", old age and abuse are central themes, as the king, losing his mental acuity, is cast out by his daughters who were supposed to house him and care for him. As he accounted for it in this play, mistreatment of the elderly was probably a social issue in Shakespeare's time and probably even before. This story was allegedly inspired by a monarch in the mid-XII century, portrayed *Historia regum Britanniae* by Geoffrey of Monmouth (1100?-1154), a compendium of stories from legendary kings of Britain. Though the historical value of this source is questionable, it is beyond doubt that the theme introduced itself into the folklore of the region (Brain, 2019).

To the scientific community, it took longer to start looking into this phenomenon. The first references in the scientific literature to mistreatment against older adults appeared in 1975 in a letter exchange in a medical journal. From their professional experience, two physicians realised that there were situations where older adults, particularly women, were physically abused and that this abuse was the result of improper care, for example, overmedication (Baker, 1975; Burston, 1975). These physicians saw this phenomenon as a poor reflection of their services that left people in need unattended and

advocated the dissemination of this phenomenon through various healthcare professionals. This phenomenon was named "granny battering", a parallel to "baby battering", the term used at that time to denominate child abuse. The term granny battering and its definition of abuse against the elderly were very specific; abuse was considered a form of physical aggression in a caregiving relationship, typically perpetrated by an exhausted or uninformed daughter toward a physically disabled or confused mother in care (Mysyuk et al., 2013). Soon after, the term "battered elder syndrome" appeared, narrowing the scope to include the physical, psychological, and economic forms of abuse (Block & Sinnott, 1979). However, this nomenclature was also criticised, first for including the word "battered", which had a physical abuse connotation; and second for the word "syndrome", which implied that abuse was a disease and older adults who were targeted with abuse were powerless and ill and in need of treatment (Mysyuk et al., 2013). A major step forward in defining abuse was later given by Eastman (1984), who proposed the term "old age abuse". This term is used to characterise systematic physical, emotional or financial maltreatment of an older adult perpetrated by a family caregiver, widening the definition to include all older adults, not only "grannies", but also restricting it to a family context. This definition also restricts abuse to cases where it happens repeatedly. But now, abuse is still restricted to violence that happens in a family context and more than once. These issues were addressed by Comijs and collaborators (1998), that stated that abuse could be perpetrated by someone who has a personal or professional relationship with the older adult, and the repetition of abusive actions was no longer a requirement, including single acts of violence as abuse. However, this definition also had its share of criticism because, for the first time, a chronological window was added, considering that abuse happened to adults 65 years old or more. This chronological frame was criticised for being only adequate for the Netherlands and other developed countries but not for other cultural realities, such as the African countries (Mysyuk et al., 2013). Comijs and collaborators (1998) work paved the way for the most famous definition of elder abuse. This definition was put forth first in the Action on Elder Abuse Bulletin (Action on Elder Abuse, 1995) and later adopted and expanded by the World Health Organization and the International Network for the Prevention of Elder Abuse (World Health Organization, 2002). In this definition, 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"* (World Health Organization, 2002). Major changes are adopted in this definition: first, the widening of possible perpetrators, including non-caregivers, but still highlighting a specific type of relationship between perpetrator and older adult with the expression "expectation of trust"; and second, the widening of the possible victims, that are no longer barred by age. This definition achieved great dissemination but is by no means consensual. The use of terms such as

"trust" and "harm" is considered vague and in need of further definition (Mysyuk et al., 2013). Plus, there is the issue of the perpetrator. Other institutions such as the US Department of Justice and Department of Health and Human Services (Colello, 2015) proposed later a definition of their own, this time designed to include violent acts perpetrated by strangers, such as fraud schemes. This inclusion is, however, still debatable. There is an interesting note to take on this evolution of the definition of elder abuse. The first definitions were more strict and proposed by practitioners. Then, they turned to the scientific domain, where there is some widening of the definition but still some restrictions (e.g., the age limit). Finally, the more recent definitions are proposed by governmental or policy institutions, where we find the more widened definitions, but also the more divulged ones. Despite their limitations, definitions such as the WHO definition are being used in research, and authors that study the definition of elder abuse find them appropriate for research proposes (Mysyuk et al., 2013).

Though there are several points of disagreement regarding a general definition of abuse, some of them we have discussed thus far, there is also some harmony between definitions. First and most important of all, all definitions acknowledge that elder abuse exists—a rather obvious observation, but central, nonetheless. Without acknowledgement of the problem, we would not be discussing it. However, agreeing that elder abuse exists and agreeing on how much exists is another discussion altogether. A central epidemiological work, such as Pillemer and Finkelhor's (1988) study, found that 3.2% of the inquired older adults have experienced abuse, while Comijs and collaborators (1998) found a prevalence rate of 5.6%. In the Portuguese case, abuse may vary considerably depending on the study. Prevalence rates reported include 12.3% (Gil et al., 2015), 39.4% (Ferreira-Alves & Santos, 2011) and 27.6% (Fraga et al., 2014). Considering data from 52 studies, a more recent meta-analysis estimates a general prevalence of abuse of 15.7% (Yon et al., 2017). The lack of consistency in these numbers is worrisome. The lack of conceptual agreement allied to a vast number of data collection methodologies contributes to this huge variance in prevalence rates, which leaves policymakers in the dark and can even cost some credibility to scientists in this field.

Second, there is an agreement that abuse against the elderly can take many forms. Even without considering the practical implications of this (that should never be disregarded), strictly from the conceptual point of view, the multiplicity of forms of abuse poses an obstacle in many ways. For starters, a considerably varied phenomenon is more difficult to define accurately. Also, the more ways abuse has to express itself, the more difficult it is to explain, for there are probably many underlying processes to consider. So, to proceed in our quest to explain elder abuse, defining the issue is not enough; we also need to discuss its multiple forms. Therefore, in the next section, we will discuss the "shape" of abuse,

meaning what behaviours and associated consequences are typically considered abusive, and discuss several typologies of abuse.

Types and Forms of Abuse

Defining elder abuse comes hand-in-hand with understanding what forms it takes. From the very first studies in this area, specialists have tried categorising which behaviours directed against an older person are considered abusive. Pillemer and Finkelhor (1988), in their very influential epidemiological study, highlighted the lack of consensus from specialists regarding what behaviours are abusive. Their study opted to consider the three more consensual types of abuse: physical abuse, emotional/psychological abuse, and neglect. Physical abuse was the most explicit form of abuse for specialists as it consisted of any form of physical violence. Emotional or psychological abuse, on the other hand, was more controversial. First, there was not even an agreement on whether it should be considered emotional or psychological abuse. Plus, what was considered abusive behaviour varied from study to study. Pillemer and Finkelhor (1988) used verbally aggressive behaviours as their indicators of emotional abuse. Interestingly, while on physical abuse, one event in the preceding year was enough to be considered abusive; in emotional abuse, it took ten events to categorise the participant as emotionally abused.

Currently, typologies of abuse include more abusive behaviours, though they are not universally accepted yet. For example, the WHO's and INPEA's definition consider that elder abuse can have five forms. In the Toronto Declaration (World Health Organization, 2002), a second part was added to the definition stating that *"It [elder abuse] can be of various forms: physical, psychological/emotional, sexual, financial or simply reflect intentional or unintentional neglect.".* These five forms of abuse have been adopted in many research studies and by several other key institutions like APA (American Psychological Association, 2012).

The five forms of abuse referred to above carry their own definitions. Physical abuse is defined as the use of physical force against an older adult that can lead to consequences such as injuries, physical pain, or impairments. This form of abuse includes behaviours directed at the older adult, such as hitting, striking, and slapping, among others, including the inappropriate use of drugs and medication (National Center on Elder Abuse, 2015, p. 1). This form of abuse is a direct evolution of "granny-battering", the first approach to elder abuse focused on abuse as a phenomenon of physical violence. It has, however, grown more inclusive (Jackson, 2016). It can be said that physical abuse revolves around three types of interaction (Marques et al., 2019): 1) when physical force is used intentionally or unintentionally to inflict

pain or a lesion on the older adult; 2) when physical force is used to control or coerce an older adult and; 3) when physical or chemical means are used to restrict or confine an older adult. Though it may seem straightforward, identifying this form of abuse is not always easy. Physically abusive behaviours do not necessarily leave visible marks. When there are visible marks, the hypothesis that visible bruises or lesions can be due to accidental reasons (e.g., a fall) and not necessarily physical abuse must be considered. Likewise, some bruises can result from coronary diseases or sepsis (Langley & Brenner, 2004), adding another confounder to the mixture. Some researchers have found that some lesions are more typical of physical abuse than others. A study by Wiglesworth and collaborators (2009) found that physically abused older adults were more likely to have bruises on the face and neck, lateral right arm, back, chest, lumbar and gluteal regions than older adults in a control group. Plus, large bruises (>5 cm) are more frequent in physically abused older adults, while small bruises (<1 cm) are more frequently found in older adults with no abuse. Nevertheless, the older adult's report about the lesions' origin is of central importance for its correct diagnosis. More frequently than not, older adults who were physically abused know the origin of their bruises or lesions (Wiglesworth et al., 2009). Physical abuse is probably the first thing that comes to mind when talking about elder abuse, but its prevalence varies and is not always the most frequent form of abuse. In the prevalence study conducted by Pillemer and Finkelhor (1988), an essential reference in this field, data collected through phone interviews showed that physical abuse was the most prevalent form of abuse, present in 2% of the participants. However, this study was conducted when the concept of abuse was being refined, and, though historically important, these numbers may vary significantly in the following studies. Another important study was carried on in the Netherlands by Comijs and collaborators (1998) using questionnaires and found a prevalence of 1.2% of physical abuse. In the specific case of Portugal, the prevalence of physical abuse varies greatly. Three major epidemiological studies can be pointed out, and all showed similar prevalences of physical abuse. First, there was the ABUEL study (Soares et al., 2010), reporting 2.1%, then the AVOW study (Ferreira-Alves & Santos, 2011) with 2.8%, and then the Aging and Violence study (Gil et al., 2015) with 2.3% cases of physical abuse. The AVOW study is particularly interesting because it compares data from five countries (Portugal, Finland, Austria, Lithuania, and Belgium), and the prevalence of physical abuse varies from 0.5% in Austria to 4.5% in Lithuania (de Donder et al., 2011). These data suggest that there might be an influence of culture and quality of life on the prevalence of abuse. A more recent systematic review and meta-analysis provided a clearer picture of the variation found in the prevalence of physical abuse, which was found to have an average prevalence of 2.6%, varying from 1.6% to 4.4% (Yon et al., 2017). The multiple prevalence studies show that the prevalence of physical abuse is relatively stable, indicating consistency in the definition of

physical abuse and its measurement. It is, thankfully, a quite rare phenomenon, far from the numbers shown in the general prevalence of abuse. Its potential for suffering and disruption of the older adults' life makes it an important and unavoidable form of abuse to be studied. However, due to its prevalence, it usually requires very large samples.

Sexual abuse is another form of abuse consistently present in abuse typologies. It can be defined as any kind of non-consensual sexual contact with an older adult, capable or not of giving consent. Behaviours typically considered sexual abuse include unwanted touching, sexual assault, coerced nudity, sexually explicit image recording, and forced exposition to pornographic content (National Center on Elder Abuse, 2015, p. 8). Typically, sexual abuse emerges in a crescendo and may not start as sexual abuse. The aggressor might start with inappropriate comments and, over time, progress into coercion and later to unwanted touching and sexual assault (Brandl et al., 2007, p. 26). Plus, when sexual violence emerges in a long-term relationship, it can change its form as the aggressor ages, going back from physical assault to inappropriate comments and sexually abusive insults (Band-Winterstein & Avieli, 2021). As its onset overlaps with other forms of abuse, it can be difficult to establish the onset and whether or not other forms of abuse might turn to sexual abuse. Understanding the relationship between the older adult and the perpetrator is very important for conceptualising this particular form of abuse. Different studies identify different perpetrators of sexual abuse. The more frequently identified perpetrators are the spouse/partner, friends/acquaintances/neighbours or other family members (Ferreira-Alves & Santos, 2011; Soares et al., 2010). Understanding the relationship between victim and perpetrator is important and relates to the concept of consent that is central to the definition. Consent is key to distinguishing sexual abuse from normal sexual behaviour (Teitelman, 2006). The problem emerges when the older adult has some form of cognitive deficit or other pathology that disturbs the ability to freely and knowingly consent or not. In these cases, the question of consent can lead to difficult conceptual dilemmas. For example, would it be sexually abusive for a husband to kiss a wife with Alzheimer's disease and unable to provide consent? To clarify such situations, an analysis of the sexual patterns of the couple before and after the onset of dementia would probably be of major importance (Lingler, 2003). Consent can also be a tricky concept in other ways. As sexual abuse can start with covert behaviours and progress to more overt behaviours, it is important to consider the influence of manipulation and coercion in the ability to give consent. These might be some of the reasons why sexual abuse might be underreported, as many specialists believe (Lingler, 2003; Teitelman, 2006). Important conceptual obstacles lead to measurement and identification obstacles. That may be why this form of abuse is not always included in prevalence studies. It was, however, included in the three major epidemiological studies conducted in Portugal, showing a variation

between 0.2% and 3.6% (Ferreira-Alves & Santos, 2011; Gil et al., 2015; Soares et al., 2010). It should be noted that the figure of 3.6% was obtained in the AVOW study conducted only with older women; therefore, the number can be inflated since females report sexual abuse with more frequency (Soares et al., 2010). On the international picture, and considering a larger corpus of research, it is estimated that the prevalence of sexual abuse is about 0.9%, varying from 0.6% to 1.4% (Yon et al., 2017). Though the experts on elder abuse seem to be tired of discussing definitional issues regarding this form of abuse, the conceptual panorama might be one of the more urgent areas to work on, given that it relies upon our trust in measurements and figures.

Emotional or psychological abuse has been a topic of interest for many researchers from the beginning of the field. It can be defined as the infliction of anguish, pain, or distress through verbal or non-verbal actions. Examples include any form of verbal assault, insult, humiliation, infantilisation, or forced isolation (National Center on Elder Abuse, 2015, p. 3). This type of abuse has two main difficulties attached to it. First, there is a conceptual vagueness to it. We can start analysing this vagueness, starting with the term. As named by many experts, emotional and psychological abuse is also frequently named as emotional abuse, psychological abuse, verbal abuse, and even mental abuse (Marques et al., 2019).

However, all of these terms could be pointing to specific behaviours of different nature. Barboza (2016, p. 329) suggests that emotional or psychological abuse can be divided into emotional abuse, focusing on diminishing the older adult's value; psychological abuse, focused on controlling and manipulating the older adult; and verbal abuse, focused on inflicting pain by using language. However, both emotional and psychological abuse can be verbal or non-verbal, which can be a point against this taxonomy. The second main difficulty is that this form of abuse usually happens simultaneously with other forms of abuse. In fact, by its definition, any other form of abuse can be considered emotional or psychological abuse. There is then no surprise when Anetzberger (1998) concluded that in 89.7% of the cases, emotional or psychological abuse is accompanied by other forms of abuse. This overlap can also hinder an accurate definition of this form of abuse. It can also contribute to why there seems to be a greater focus on the consequences of emotional or psychological abuse, with the terms "anguish", "pain", and "distress" rather than on the behaviours that elicit it.

Emotional or psychological abuse is the more frequent form of abuse. It is estimated that 11.6% of older adults have experienced this form of abuse, though this prevalence tends to vary considerably - 8.1% - 16.3% (Yon et al., 2017). In Portugal, though one study reports a prevalence of emotional abuse below these numbers - 6.3% (Gil et al., 2015), others show an incredibly high prevalence of 21.9% (Soares et al., 2010) and 32.9% (Ferreira-Alves & Santos, 2011). Some of these differences can be

explained by methodological, and measurement differences since this form of abuse gives way to much measurement variability. However, in the international studies that include Portugal, the prevalence is superior to other European countries, suggesting that there is a significant problem in this part of the world.

Financial or material exploitation, often called financial abuse, can be defined as the improper, illegal, or unauthorised use of an older adult's funds, property, or assets. Abusive behaviours that fall into this category include stealing money, jewellery, or other values, forging signatures, and coercing or deceiving the older adult to sign documents or dispose of assets (National Center on Elder Abuse, 2015, p. 5). One of the key elements of this form of abuse is the relationship between older adults and perpetrators. To be considered elder abuse, a perpetrator is expected to be someone the older adult trusts, as stated in the general definition. The inclusion of financial scams explicitly aimed at older adults in this form of abuse is debatable.

On the one hand, it can be argued that the scammers deceive and manipulate to build this relationship of trust and aim their scams specifically at older adults (Kemp & Mosqueda, 2005). On the other hand, it can be argued that the relationship built exclusively to scam the older adult can be considered artificial and that these scammers might target older adults and younger adults. Another argument that we find very compelling in favour of this last perspective is that one of the ends of financial abuse is getting financial control over the older adult by controlling his or her finances (National Center on Elder Abuse, 2015, p. 6). This point is more congruent with long-term relationships rather than with scammers. However, in any of these cases, older adults with less familial relations (single or without children) and cognitive difficulties are more frequently victims of this form of abuse (Garre-Olmo et al., 2009; Jackson & Hafemeister, 2011). It is estimated that 6.8% of older adults have experienced financial abuse, making this form of abuse one of the most prevalent (Yon et al., 2017). In Portugal, the prevalence of financial abuse is similar to other countries, but estimates vary considerably from study to study. While the AVOW study reported a prevalence of 16.5% (Ferreira-Alves & Santos, 2011), the Aging and Violence study reported a prevalence of 6.3% (Gil et al., 2015). This difference of more than 10% is troubling and difficult to explain. It is possible (if not probable) that some cultural aspects might influence the construction of measures of financial abuse, leading to these discrepancies.

The fifth and last of the more agreed-upon forms of abuse is neglect. As previously discussed in the earlier definitions of elder abuse, neglect was the subject of some debate. In the earlier definitions, we would talk about elder abuse and neglect or mistreatment and neglect, defining neglect as something different from abuse (Mysyuk et al., 2013). However, in the later definitions, neglect is included inside

the larger conceptual umbrella of elder abuse and is considered a type of abuse (e.g., World Health Organization, 2002). Neglect can be defined as the failure of a person to fulfil his/her duty or obligations towards an older adult or to satisfy his/her needs, such as the activities of daily living, the instrumental activities of daily living and the need for physical and mental wellness (National Center on Elder Abuse, 2015, p. 10). Frequent examples are the failure to provide adequate care in any form, such as food, water, clothing, or shelter, and the failure to provide assistance, such as helping to move to/or from bed.

One main characteristic helps distinguish this form of abuse from the others. While in other forms, abuse results from a perpetrator's action, in this case, abuse emergers from the absence of appropriate action or by actions that are insufficient in fulfilling the needs of the older adult. Consequently, determining who is the perpetrator of neglect can be very hard. Determining the person who would have a duty or obligation to the older adult can involve analysing legal aspects and even cultural, moral, political, and philosophical aspects. For instance, could an estranged adult child commit neglect? The main point is that it is not always easy to determine who is responsible for assisting an older adult who needs it. This complexity in identifying a perpetrator makes this form of abuse conceptually fascinating. An analysis of the support network would be essential to understand further how and when neglect happens.

Despite these conceptual issues, several prevalence studies have been conducted. It is estimated that about 4.2% of older adults have experienced neglect (Yon et al., 2017). Specifically, in Portugal, prevalence rates vary from 0.4% (Gil et al., 2015) to 9.9% (Ferreira-Alves & Santos, 2011). Several arguments can be pointed out to explain this wide range of variation, methodological, conceptual, and so forth. However, this variability is enough to raise scepticism in all the prevalence numbers presented, and we firmly believe that conceptual issues are at play in this variance.

The five types of abuse described so far are the more agreed upon and more frequently included in research and public-health statistics. However, some influential institutions and researchers consider more forms of abuse. One good example is another typology of abuse proposed by the NCEA from the USA, which adds self-neglect and abandonment (National Center on Elder Abuse, n.d.). Self-neglect is defined as the behaviour of an older adult that threatens his/her own health or well-being. It includes the failure to provide himself/herself with nourishment, clothing, hygiene, and so forth. This form of abuse excludes the cases where a mentally competent person willingly chooses not to take these self-caring measures. Abandonment is defined as the desertion of an older adult by an individual responsible for caring for him or her (National Center on Elder Abuse, n.d.). These two forms of abuse can be considered special cases of neglect. To be considered abandonment, an abusive situation fills all the criteria for neglect, so abandonment can be seen as neglecting all caring tasks. In the five-type nomenclature

proposed by NCEA, abandonment is considered a form of neglect (National Center on Elder Abuse, 2015, p. 10). Self-neglect can be a bit more tricky. By definition, self-neglect is perpetrated by the older adult to himself or herself, which directly conflicts with the general definition of abuse, where the perpetrator is another person. This assertion makes self-neglect conceptually debatable. Plus, in different cultures, there are different expectations about care. Research finds differences between cultural groups in which behaviours can be classified as self-neglectful (Filippo et al., 2007), thus supporting the claim that self-neglect is dependent on culture. It stands to reason that, in more individualistic societies, the inability to care for oneself could be labelled as self-neglect. Meanwhile, in more cooperative societies, if an older adult is not able to care for himself/herself, the responsibility of providing care falls on another's shoulders (a family member or the State), thus constituting neglect. As such, it comes as no surprise that self-neglect would fall under different scopes, depending on the culture (Braye et al., 2015). The summation of cultural differences with the overlap of these forms of abuse with neglect makes them debatable, and that may be why they are more controversial than other forms of abuse.

Even less explored is a set of behaviours about the violation of personal rights, which probably would be better referred to as "denial of rights". Even though the general definition of abuse more frequently adopted frames abuse as a violation of human or civil rights, this theme is seldomly adopted in the abuse typologies. Yes, it is considered that every form of abuse is a violation of human rights but are not all violations of human rights abusive? Denying privacy, autonomy, freedom, restricting visits, or isolating the older adult are examples of behaviours that would fall into this category and have been considered in some studies (Ferreira-Alves & Santos, 2011). It could be argued that this category overlaps with psychological/emotional abuse. Though these behaviours share a focus on removing control from the older adult, emotional and psychological abuse is more focused on changing control from the older adult to the perpetrator, while in the violation of rights, the focus is on removing from the older adults the power of agency. A difference in focus could even lead to differences in the type of harm that results from such behaviours. We believe that this conceptual difference is important and particularly relevant to analysing these forms of abuse under the scope of some theories.

Results from the AVOW study (Ferreira-Alves & Santos, 2011) reinforce the need to consider the denial of rights as a form of abuse. Their results indicate that the denial of rights significantly affects the older adult population (6.4%). Plus, this is a different prevalence than the one found for psychological abuse (23.6%), suggesting some level of independence between these two forms of abuse. Based on these arguments, We believe that denial of rights is a conceptually important form of abuse to consider in research about elder abuse, and it may even help in the theoretical exploration of abuse.

As we discussed so far, when specialists discuss abuse, various categories emerge, some more or less agreed upon. These categories may have benefits like helping researchers and practitioners identify abuse, making the dissemination and sensitisation about elder abuse to the general public easier, and giving more structure to teaching and training activities about abuse. There are also downsides to categorising forms of abuse. Two aspects come to mind, and we think they should be discussed. First, some of these types of abuse have been named with an almost judicial tone, for instance, financial exploitation. This nomenclature sometimes denotes an intent of establishing a parallel between abuse typologies and judicial law. However, these typologies should, in our opinion, be considered just as an instrument to understand abuse. The effort of making a parallel between a phenomenological description and a judicially punishable behaviour is probably frustrating and most likely unfruitful. Domestic violence is a good example. Though the term was imported and applied to a judicial setting, in a large number of cases, events that can be phenomenologically labelled as domestic violence legally fall into other categories, such as crimes against physical integrity. A second aspect that we think is a downside of categorising abuse is that it might limit our view and prevent the study of other potentially abusive behaviours that do not fall under the established categories.

The typologies of abuse proposed by specialists are an interesting topic of discussion and an acceptable framework for studying the complex operations that lead to abuse. It is, however, noteworthy that these categories do not precisely describe the views or experiences of older adults regarding abuse. Results from Taylor and collaborators' (2014) qualitative study with focus groups indicate that older adults conceptualise abuse in two major categories: the first category encompasses what can be considered as societal abuse, including the notion of respect and the qualities that confer individuality, such as agency and self-awareness; the second category encompasses what happens on an individual level, and includes the emotional cost abuse, the vulnerability of the older adult, the intention of the perpetrator and familial and relational duties. Older adults' conceptions of elder abuse on an individual level are similar to those proposed by the specialists, encompassing physical, psychological, verbal, financial abuse, and neglect. In Taylor and colleagues' (2014) work, sexual abuse was only elicited if prompted, which is congruent with it being the least perceived and acknowledged and the least prevalent form of abuse. But the older adults' conception of elder abuse as societal abuse is an interesting result that differs from the specialists' opinions. This conception links the field of elder abuse very clearly with other concepts such as ageism and human rights, thus justifying more expressively the inclusion of denial of rights as a form of abuse in further studies. Plus, there might be other behaviours older adults consider abusive and are not included in these categorisations. Take, for example, the results of Rocha (2017) into account. By interviewing

older adults, six themes emerged, each portraying a class of abusive behaviour against older adults. They were: 1) exclusion – events when an older adult wanted to participate or be taken into account but was excluded; 2) breach of trust – situations when expectations about close ones are broken; 3) Aggressiveness – episodes that result in intentional physical and/or psychological harm; 4) Disrespect – episodes portrayed by younger people that seem to consider older people lesser people; 5) Depersonalisation – episodes portrayed by health or care professionals where adequate care is absent; and 6) Financial restriction – episodes related with limiting access to the older adult's own financial resources. Of these themes, aggressiveness and financial restriction can be considered equivalent to physical, emotional, and financial abuse definitions put out by specialists, while disrespect is more in line with the societal abuse found by Taylor and collaborators (2014). However, exclusion, breach of trust, and depersonalisation are interesting findings that add more knowledge to the already known forms of abuse.

It is clear to us that elder abuse cannot be restricted to a few selected forms or behaviours considered abusive by specialists. Though research cannot include every new aspect found about the abuse phenomenon, we think it is important to keep in mind that specialists' typologies of abuse, though necessary, pose a limitation to understanding elder abuse fully.

Conceptually, elder abuse and its forms are not entirely consensual. But, perhaps the variety and doubts raised by these definitions can reflect another problem: the lack of well-grounded explanations for abuse. Not being fully able to define abuse can be a side effect of not being able to explain how and why it happens.

Why Does Abuse in Older Age Happen?

Research on elder abuse has been focused on estimating prevalences, developing and validating measures and figuring out risk factors. These topics are highly relevant for practitioners but are centred on the phenomenon's description, while its comprehension is left behind. Understanding the "inner workings" of elder abuse is fundamental to progress in this field. The fundamental question is: why does it happen? – that is, what are the underlying mechanics of abuse?; is there any system that allows the prediction of abuse? To approach these questions is necessary to look into the theoretical explanations for elder abuse. However, research in this field has little concern about theoretical development. Nevertheless, the specialists have agreed that theoretical development is one of the most urgent gaps to fill in order to enhance everything else (Stahl, 2015).

In the following sections, we will address the theoretical explanations of elder abuse. We will start by discussing in more detail why theory is important in the field of elder abuse and then move to illustrate some of the theories.

The Importance of Studying Theoretical Explanations for Elder Abuse

The field of elder abuse is not primarily a research field but an applied area. Developing knowledge just for the sake of knowledge is not enough, and practical implications are demanded from whoever approaches this field. More exploration of theoretical explanations for elder abuse is necessary for the natural movement of knowledge from research to policy and practice to be smooth (Moore, 2020; Roberto & Teaster, 2017). These explanations are the backbone for predictions over why and how abuse happens and what consequences can be expected. By providing such explanations, theory gives a guiding frame to interpret and give meaning to empirical data. Consequentially, researchers', professionals', educators', and policymakers' choices are influenced by their theoretical knowledge (Roberto & Teaster, 2017). Relying on limited theoretical knowledge that results from the scarcity of studies testing theoretical frameworks leaves many researchers, professionals, and policymakers to rely on limited information and, sometimes, on their beliefs on the validity of each theory.

Elder abuse, being a field that only recently came to the scientific community's interest, has adopted a strategy of theoretical development common in many other blooming fields. That approach consists of borrowing theoretical explanations from other fields and applying them to elder abuse (Moore, 2020; Roberto & Teaster, 2017). Some theoretical models used to explain elder abuse were adapted from child abuse or intimate partner violence. Most of these theories are used to explain how specific processes lead to violent behaviours directed at older adults. Exploring several works that mention theories of abuse (Abolfathi Momtaz et al., 2013; Burnight & Mosqueda, 2011; Mathew & Nair, 2017; Moore, 2019; Pillemer & Wolf, 1986; Wilber & McNeilly, 2001), an enormous list of theoretical frameworks can be compiled: caregiver stress theory; social learning theory; bidirectional theory; psychopathology of the caregiver; social exchange theory; dyadic discord theory; power and control/feminist approach; ecological model; socio-cultural model; political-economic theory; role accumulation theory; stratification theory; and symbolic interactionism. There are probably, somewhere, more theoretical perspectives listed.

Not all of these frameworks typically referred to as explanations for elder abuse can predict if and when abuse occurs. However, each of the mentioned theoretical frameworks has its merits and uses. The title of this thesis makes it obvious on which theory we focus. However, a brief overview of the more

influential theories is essential to understand why we chose Social Exchange Theory. In the following sections, we will briefly describe the theories that traditionally have been more explored in the literature. Later, in Chapter II, we will get into more detail and review the literature supporting these and other theories of elder abuse.

Caregiver Stress Theory

The most divulged theory of abuse, and probably one of the more often criticised, is the caregiver stress theory (Bergeron, 2001; Pillemer & Wolf, 1986). According to this theory, abuse occurs in caregiving relationships when the caregiver is overburdened and becomes unable to care for the older adult appropriately. This explanation assumes that caregiving is an inductor of stress and that there is an interaction between the personal factors of the caregiver (e.g., coping skills; caregiving skills), care-recipient factors (e.g., high dependency; low health) and environmental factors (e.g., economic status; lack of support), resulting in feelings of burden (Mathew & Nair, 2017). In turn, an overburdened caregiver would provide care with inferior quality and unleash his/her frustrations and anguishes on the care-receiver in an abusive way. This perspective was criticised for several reasons, among them the argument that non-abusive caregivers also experience stress and that anxiety is more often a response to stress than violence (Brandl & Raymond, 2012).

Psychopathology of the Caregiver

Psychopathology of the caregiver is also a common explanation for elder abuse. This explanation attributes the use of violence in caregiving relationships as a consequence of the caregiver's abnormal mental health state. The clinical condition of the caregiver is classified in a diagnostic system of possible dysfunctions of human behaviour. The main hypothesis of this theory is that mental health problems hinder the ability to perform adequate care and might even induce violent responses (Fulmer et al., 2004). This explanation arises from the literature that finds perpetrator characteristics to be the more frequently associated with abuse (Kleinschmidt, 1997), mainly behaviour problems and mental/emotional problems (Reis & Nahmiash, 1998). Substance abuse and dependence also appear frequently associated with abuse (Chen & Dong, 2017). Despite caregiver psychopathology being a theoretical explanation, it is not particularly insightful in its broad sense, and that is one of the criticisms that can be pointed out. The explanation is based on the co-occurrence of two phenomena (elder abuse and mental health problems), and data generally supports this association (Conrad et al., 2019; Wiglesworth et al., 2010). However, there are studies showing that mental health might just be another piece of the puzzle and not the direct

precipitant of abusive situations (MacNeil et al., 2010; Williamson et al., 2001). It can be argued that this theory might confuse correlation with causation since it is unclear what had the first onset – psychopathology or abuse.

The Feminist Approach/Power and Control Theory

If we want to account for influence on policy and societal awareness of elder abuse, the power, and control theory, more commonly known as feminist theory, is unavoidable. Again, this theory was not designed for elder abuse but is frequently used as a framework for it. The explanation provided by the feminist approach focus on spousal elder abuse (Abolfathi Momtaz et al., 2013). According to this approach, abuse is perpetrated by men against older women within a social and cultural context that attributes more social and financial power to men. Violence is, in this approach, a consequence of men having more power and regarding women as property (Abolfathi Momtaz et al., 2013). Several points make this approach criticizable as an explanation for elder abuse. First, this approach does not explain male victims of elder abuse. A recent meta-analysis found no gender differences in elder abuse victims (Yon et al., 2017). Plus, this approach focuses on spousal elder abuse perpetrated by men. Studies find a complex variability of perpetrators of elder abuse, who are frequently women, depending on the level of risk in the situation and the type of abuse (Deliema et al., 2018; Jackson, 2014; Santos et al., 2019). In fact, because of these limitations, some scholars have proposed a different explanation, the dyadic discord theory, that instead of relying on gender and social/cultural attributions to gender roles, relies on the relationship dynamics, more specifically in the history of relational satisfaction or conflict as the cause for abuse (Burnight & Mosqueda, 2011).

Obstacles to Theoretical Development in Elder Abuse

As argued before, the development of theories about elder abuse has been lacking. Several factors can hinder the effort to develop and test theories that explain elder abuse. Next, we will discuss the obstacles that we find more worrying.

Lack of Immediate Practical Implications. The field of elder abuse is generally concerned with practical applications. The absence of immediate practical implications derived from the theoretical exploration of elder abuse is one aspect that usually discourages the focus on this subject (Roberto & Teaster, 2017). Studies about prevalences, screening instruments and risk factors are usually more interesting for practitioners. However, theories pose the base for organising knowledge that will eventually have practical implications.

Lack of Interconnectedness Between Theories. The theories mentioned in the previous section have a very narrow scope, focusing on very concrete processes. That is probably why some authors consider that each theory should not be used blindly without considering elements of the others (Abolfathi Momtaz et al., 2013; Burnight & Mosqueda, 2011). The insufficient theoretical depth of each theory, when used separately, is a possible explanation for the failures in developing interventions (Burnes et al., 2020). Nevertheless, the lack of theoretical research, the variety of theoretical positions, or their possible interconnectivity might hinder the further development of theories that explain abuse.

Explaining vs Blaming. Sometimes, criticising theoretical positions, whilst forgetting the function of a theory, can be counterproductive. One good example is a frequent criticism made to caregiver stress theory. Disturbingly, this criticism can be applied to pretty much any other theory. Brandl and Raymond (2012) state (and have been supported by others) that the proposition made by caregiver stress theory can be used to blame the victims and minimize the offender's accountability. Any other theory that provides explanatory mechanisms can be used to such ends. However, it is not the purpose of a theory to pose moral or criminal judgments over anything; the purpose of a theory is merely to provide an explanation based on objective observations. We think these judgments over theoretical explanations are misguided and hinder the theoretical development and, consequently, the progress that could be achieved with a way to predict elder abuse.

Not One Abuse, But Many. Some recent works have focused on the development of new theories based on collected data that try to explain different mechanisms for different forms of abuse (e.g., Jackson & Hafemeister, 2013). The subjacent idea is that each form of abuse is a construct on its own, and thus abuse cannot be seen as a monolithic phenomenon (Jackson & Hafemeister, 2013). This idea is interesting but also has its downsides. We find two compelling reasons for not creating theories for each form of abuse. First, though scholars such as Jackson and Hafemeister (2012) consider mixed forms of abuse in their works, the range of possibilities of overlap between types of abuse is so vast and phenomenologically different that it would probably demand a number of theories as vast as the number of possible abusive acts. Second, and the one we find more compelling, the types of abuse we know of and are subjacent to the current definitions of abuse are categorisations created by specialists and might be a poor fit for the older adults' experience of abuse. We can look at studies that ask for older adults' perceptions of abuse to support this claim. The categories that emerge are quite different from the ones proposed by specialists. They can include, for example, exclusion, trust breach, aggressiveness, disrespect, depersonalisation, financial restriction (Rocha, 2017), societal abuse and individual abuse (Taylor et al., 2014) and violation of family obligations and loyalties (Chang & Moon, 1997). These

differences between what older adults and specialists consider abuse could limit theories built upon abuse typologies.

Social Exchange Theory – an alternative explanation

Two of the obstacles to theory development previously discussed are easier to tackle: the variety of representations of abuse and the interconnectedness between the micro-processes of each theory. Perhaps to deal with these issues, we do not need a new theory. Perhaps we need to reinterpret an old one, preferably one that is not focused on micro-processes of abuse but on relational macro processes, therefore accounting for the multiplicity of abusive interactions, without being dependent on typologies. Social exchange theory has the potential to fulfil that requirement.

Social exchange theory was not designed to explain violence but rather to work as a frame for analysing all forms of human interaction (Blau, 1964; Emerson, 1976; Homans, 1961). In this way, the processes described by the other theories of abuse can also be described as social exchanges. Social exchange theory classifies what can be described as a metatheory, a theory that allows for the description and inclusion of multiple theories into the same framework. The possibility of coupling multiple theoretical stances allows social exchange theory to integrate the differences found in theories that better explain one form of abuse over another.

In the elder abuse literature, social exchange theory is mentioned frequently, but it is almost always oversimplified. Social exchange theory is a fairly complex theory with many underlying concepts, and simplification can result from their misinterpretation. As understanding its bases is essential to formulate an operationalisation capable of explaining elder abuse, we will dedicate the next section to exploring the basic principles of social exchange theory in detail. Equipped with that set of basic principles, we will move to how some authors have conceptualised the impact of ageing on social exchanges, and only after that will we apply social exchange to elder abuse.

Basic principles of social exchange theory

Social exchange theory's main influences come from sociology and psychology. It is derived from the philosophical perspective of utilitarianism and is clearly influenced by B. F. Skinner's operant conditioning (Cook et al., 2013). The influences from economic theories are present in social exchange theory, and some authors point to Adam Smith, the father of modern economics, as the historical precedent of social exchange theory (Nord, 1973). Many authors contributed to its development, mainly John W. Thibaut and Harold H. Kelley, George C. Homans, Peter M. Blau, Richard M. Emerson, and

Claude Lévi-Strauss (Molm, 2006). Despite the contribution of these many theorists and others that continued developing social exchange later, Homans, Blau and Emerson are considered the founders of the core concepts of social exchange (Cook et al., 2013). As for its uses, the social exchange theory provides a set of base concepts and propositions to explain relationships' occurrence, maintenance and outcome. It has been applied to all types of relationships (Blau, 1964). Some authors consider that naming social exchange a theory can be a bit misleading since it is not a solitary framework but more like a family of related theoretical frameworks that depart from the same premise, but where different authors extract different implications and mechanisms (Molm, 2006). It is reasonably complex, with multiple perspectives on the same subject and precise terminology that forms almost a "language" of its own.

Social exchange theory breaks social relationships down into a set of micro-level processes. Homans defines social behaviour as the exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons (Homans, 1961). Some argue that in this way, social exchange theory simplifies social behaviour by comparing it to an economic transaction (Zafirovski, 2005). So, let us start from the beginning: social exchange posits that every interaction is an exchange between two persons, often designated as "actors" (Cook et al., 2013). Stating that interaction is an exchange assumes that both actors play an active role, and exchanges are based on reciprocity, or, at least, on the expectation of reciprocity (Blau, 1964; Homans, 1961). Now, what is exchanged? Homans calls it “activity” in the definition but later adopts the term “resources”, used by other theorists (Blau, 1964; Homans, 1961). Resources are the "object" of the exchange and can be material or non-material (Homans, 1961). Material resources can be reasonably easy to understand due to their similarity to economic transactions. An example of exchanging material resources could be trading "money" for "coffee". Non-material resources are more similar to verbal or behavioural interactions, for example, trading "directions" for a "thank you". Then, of course, there are mixed transactions using both resources, for example, asking someone at a dinner table to "pass the salt" and, in return, give a "thank you". Despite being material or non-material, all of these interactions are social interactions and occur all the time.

When we consider our daily interactions, we can ascertain that our most commonly used resource is any form of behaviour (verbal or nonverbal). Perhaps because of this connection between the exchange and human action, both Homans and Emerson frame some exchange processes on associative learning processes, namely an operant conditioning system of reinforcements and punishments (Emerson, 1976; Homans, 1961). As a result, social exchange adopts new concepts. First, there is cost – each resource exchanged has a cost to the actor who trades it. Two main factors are important to estimate the cost of

a particular exchange: 1) the effort put into trading a resource on a specific exchange and 2) the trade opportunities lost for engaging in that particular exchange (Homans, 1961). If the resources we give have a cost to us, the ones we receive are rewarding. As proposed in operant conditioning, receiving a reward in a particular exchange will increase the proclivity to repeat that same exchange in the future. Not only receiving resources can be rewarding, but certain exchanges can be inherently rewarding because of the quality or type of meaning of the relationship with our exchange partner. Examples provided by Blau (1964) include friendship, family, and lovers. In this type of relationship, just being a part of the exchange is a reward. Blau (1964) classifies several types of rewards according to their uses and characteristics, including social approval, personal attraction, or prestige, but such lists might be of limited use due to various possible exchanges.

But how good is a reward? To answer that, we need to attribute value to it. According to Homans (1961), value corresponds to how much rewarding a reward is. A tautology, yes, but a necessary one. The subjectivity of this concept allows different people to extract different degrees of reward from the exact same exchange (they value the received reward differently). The difference in perception of value is determined by the needs of the person receiving the reward (Blau, 1964). For example, receiving "social acceptance" as a reward will be more valued by an actor who feels a greater need to be socially accepted than by an actor who does not. Plus, the value of a reward will also vary as a function of the repetition of the exchange. Repeatedly receiving the same reward will decrease its value, mainly because the needs for that reward get filled (Homans, 1961). For example, the exchange of "coffee" for "money" works well the first time, but it can only be repeated after a period of time when the need for the resource "coffee" arises again. If immediately after that exchange, a repetition was proposed, it would most likely be refused because the value of the reward "coffee" would drop. The way the frequency of exchange affects the value of a reward can vary significantly depending on the need for the received reward (Homans, 1961). Using the same example of "coffee" for "money", the actor receiving the resource "money" needs X units of "money". If that exchange alone does not fulfil that need, this actor will gladly repeat the exchange as soon as possible until the need for "money" is fulfilled.

In summary, a reward only has value as long as it fulfils a need. Its value is subjective to the actor receiving it, meaning that different persons can appreciate the same exchange differently. Once this need is fulfilled, the value of that reward decreases and interactions involving that reward become less appealing.

So, according to social exchange theory, every relationship consists of exchanges of behaviour between at least two persons, with costs and rewards of varying value. Now, the question is: how do

exchanges persist through time? Why do we conduct the same exchange with the same partners or with others? Regarding these questions, there are conflicting points of view that are important to mention. From the proposition of Homans and Emerson (Emerson, 1962, 1976; Homans, 1961), operant conditioning determines the continuity of exchanges. An exchange perceived as rewarding has a higher probability of repeating itself, although, as discussed, the frequency of repetition can decrease the perceived value of its reward (Homans, 1961).

Blau (1964), however, proposes a different system. Instead of operant conditioning that looks into our history of reinforcements, Blau suggests that exchanges are performed considering the expectation of a future return. So, while Homans and Emerson look into the history of reinforcements, Blau looks to the expectation of a fitting reward based on a utilitarian perspective. These different perspectives are interesting. However, this discussion leads to two questions. First, since action precedes the reward, are not exchanges always conducted based on the expectation of a reward? Second, what are our expectations of rewards based if not on our history of past rewards?

Though an interesting discussion, both views agree that the objective of exchanges is the same: maximize rewards while reducing costs (Blau, 1964; Homans, 1961). Inherent to this is an expectation of profit in every exchange. When this expectation is broken, people become angry and aggressive. This idea leads to another central tenant of social exchange: there is an emotional response to each reward. This emotional response is based on a perception of fairness of the exchange. Homans (1961) introduced the concept of distributive justice to account for this sense of fairness: the expectation that both actors in a particular exchange will receive rewards proportional to their investment (cost). When both actors perceive distributive justice; that is, a proportionate distribution between costs and profits for both; that exchange is, in a way, balanced. Both actors consider that exchange fair, setting a good base for future exchanges and having no reason to trigger negative emotions. However, if one of the actors perceives a break in distributive justice, he/she will classify that exchange as unfair since there is no balance in the distribution of costs and profits between actors. When one actor perceives an exchange as unfair, it triggers negative emotions regarding the relationship and increases the odds of suppressing future exchanges. To minimize losses, the actor who perceives a breaking in distributive justice will put less effort into future exchanges or deny them altogether.

So far, we have discussed how social exchange considers social interactions as exchanges between two persons. These exchanges have costs and rewards that work as operant conditioning reinforcements. We try to extract the most reward with the less possible cost while aiming for a fair distribution of costs and rewards by those involved (distributive justice). The concepts previously described

and necessary to make this statement are the five theoretical propositions of Homans for social exchange theory (Homans, 1961):

1. The success proposition: if an exchange has a positive outcome (profit), it is likely to be repeated;
2. The stimulus proposition: if a behaviour was rewarding in the past, it is likely to be repeated under similar circumstances;
3. The value proposition: if valued rewards are received in exchange for a specific resource, that resource is more likely to be used again;
4. The deprivations/satiation proposition: if a reward is received multiple times, its value will decrease;
5. The fifth proposition is not typically named but states that each exchange has an emotional appreciation. When distributive justice is broken, the actor at a disadvantage is likely to respond with anger. The actor in advantage can display happiness and also guilt for taking advantage of another.

These propositions focus on different aspects of the exchange (cost/reward; resources; value; repetition; distributive justice). Other authors have proposed different propositions, for example, Ivan Nye (1982) has proposed twelve theoretical propositions for social exchange theory, but the propositions of Homans provide a more straightforward summary of the main processes of social exchange theory.

So far, we have been focusing on the general processes of social exchange theory. The described principles, concepts, and examples do not consider that different people have access to or create various resources in real-world conditions. Different persons will undoubtedly use additional resources or use the same resources differently. As a result, it is necessary to consider resource inequalities, which leads to the emergence of another important concept of social exchange theory: the concept of power (Blau, 1964; Emerson, 1976). Blau defended that resource inequalities and power distribution were essential features of every ongoing social exchange (Blau, 1964). Inequalities arise when the actors possess/use resources differently valued by each other. Consider the following situation as an example. Manuel is a very sociable person, and Maria feels very lonely. Sharing a conversation between the two would have more value to Maria, who feels the need for social contact, than for Manuel because his need for social contact is currently satiated. As a result, Maria would perceive higher gains (higher rewards) from having a conversation (resource) with Manuel. In comparison, Manuel would perceive lower gains (lower rewards) from having a conversation (resource) with Maria. Such an exchange would be more appealing to Maria (she has more to gain) than Manuel (who has less to gain), reflecting resource inequality.

Resource inequalities would not mean that exchanges would not take place. The exchange can proceed, but the actor with the less valuable resources will incur a "social debt", meaning that he will "owe" something to the other actor, who has multiple ways of collecting that debt (Blau, 1964). Conducting exchanges with resource inequality and incurring "debt" is the starting point for what Emerson considered social exchange's power and dependence problem (Emerson, 1962, 1976). Emerson defined power as a consequence of dyadic relationships, stating that power is a function of the dependence of one actor on another (Emerson, 1962). That means that my power over the other is the other's dependence upon me, while the other's power over me is my dependence upon him/her. Perhaps an example can clarify these terms. Let us recover the two persons described in the previous example: Manuel, the sociable person, and Maria, the lonely person. We now have some new information about these two persons: Maria is an expert at something, zoology, for instance, and Manuel is in terrible need of tips about zoology.

In the first example, Manuel had less to gain with an exchange than Maria, but now, Maria has something that Manuel desperately needs, the resource "knowledge about zoology". Plus, Maria is an expert, which means that Manuel cannot get that knowledge from any other partner. Therefore, Manuel depends on Maria for her expertise in zoology (the resource). Manuel being dependent on Maria means that Maria has power over Manuel. As a result, Maria can change the conditions of their exchange to maximize rewards in her favour. For example, as Maria felt lonely, they could exchange the resource "knowledge" for the resource "company". Suppose Maria demands that they spend more time together (more "company", which means a greater amount of the resource) for the same amount of "knowledge". Manuel will be forced to accept that exchange, for he depends on Maria for the resource "knowledge". This movement or adjustment to the exchange is a way of balancing distributive justice as the perceptions of the value of the resources change.

There are two central ideas in power. First, power is relational and not a characteristic of a given actor (Emerson, 1962). In this example, Maria's power resides not on the resource she possesses (knowledge about zoology) but on Manuel's needs. Outside their relationship, that power would be meaningless. Second, power is potential power (Emerson, 1962). It may or may not be used in specific trades, and since it is connected to resources, it can change; if Manuel finds a book with all the information he needs, the power of Maria over him will dissipate.

To fully understand the power/dependence problem, we must consider more than the dyad. So far, we have thought relationships to occur in "hermetically sealed" dyads. While Homans (1961) was more concerned with the dyadic exchange, Blau (1964) and Emerson (1962, 1976) thought more about

how social exchange can influence social structures. For this to be clearer, it is important to consider the existence of multiple trade partners in our environment. Therefore, exchange possibilities are available, with multiple partners, with different costs and rewards (Blau, 1964). Power and dependence are dependent on the availability of exchange possibilities. More exchange options will allow the actors to seek more favourable exchanges and avoid depending on someone for a specific resource (Homans, 1961). On the other hand, a lack of availability of other exchange possibilities will result in being tied to one person for exchanges, which means conducting exchanges that are not always perceived as fair (Blau, 1964).

The power/dependence conundrum has something in common with the use of the concept of distributive justice: they both aim for balance. In distributive justice, if both persons are satisfied with their cost/reward ratio, they are satisfied with the exchange, and there is balance (Homans, 1961). Likewise, in power/dependence, if both persons equally need the resources of the other and have equal opportunities to get their resources, they have the same dependence level on each other and the same power over each other, and, therefore, the relationship is balanced (Blau, 1964). On the other hand, when there is no balance, we have a person who depends on another for a specific resource, meaning that the other has power over the exchange.

In situations where there is no balance, Emerson (1962) defends that the less powerful partner can either accommodate (which he calls *reducing costs*) or use strategies to restore balance, which he calls balancing operations. The first operation is *withdrawal* which consists of the dependent partner looking to reduce his or her interest in exchanging with this particular partner, thus reducing his or her dependence on a single partner. The second strategy is called the *extension of the power network*. In this strategy, the less powerful partner will seek to cultivate new connections that will eventually help fulfil needs and diffuse dependency over a network of partners. The third strategy, *emergence of status*, implies the emergence of skills in the less powerful partner, which increases the motivation of the more powerful partner to interact, thus reducing the power difference. The fourth strategy is *coalition formation*. This strategy involves including a third partner to ally with the less powerful partner in order to deny the more powerful partner alternative sources of achieving his goals, thus making the more powerful partner depend more on the less powerful partner.

This operation set has a limitation: only the less powerful partner can restore balance. It is assumed that the more powerful partner is always satisfied with unbalanced exchanges in his or her favour, and if that is not the case, he or she will stop making exchanges (Homans, 1961). However, we have to consider that perspective is mostly valid only if we consider exchanges in isolation. Sometimes,

the more powerful partner in the exchange might be "forced" to conduct an exchange that is not advantageous because there are consequences imposed by a third party (laws, society, family, just to name a few examples). In that case, should it not also be considered that, under certain circumstances, the more powerful partner might also seek balance in the exchange? In the more prominent works, that possibility has not been considered in the social exchange literature. However, by the basic principles of social exchange and considering that exchanges, even dyadic ones, are conducted within an environment full of variables, that possibility must be admitted. Let us consider the central axiom of social exchange theory (maximize rewards and diminish costs). A powerful partner might seek to balance an exchange from which he or she cannot withdraw by increasing the cost of the exchange for the other partner. Plus, as the value of resources is subjective, each partner might have a different perception about the balance of the exchange. With these arguments in mind, we can expand on the view of Emerson (1976) and consider that it is possible that both he who feels dependent and he who feels more powerful might act in order to seek balance in the exchange relationship.

This expansion of Emerson's idea of balancing operations is only possible due to the subjective nature of the concept of value, which reflects on each partner's perception of fairness. One person can perceive the exchange as unfair, while the other does not, and both can consider the exchange disadvantageous. The subjective nature of the value of the resources is the most severe difficulty of social exchange theory in terms of measurement and testing but allows the theory to be versatile and achieve a level of face validity not easy to find.

The Impact of Ageing on Social Exchange

Much more can be explored in social exchange theory. We could talk about the divergences between theorists on the acquisition, maintenance and use of power or about the influence of power on social status and vice versa. However, we have covered the core concepts of social exchange, and it is time to move forward. Before we can think about framing elder abuse in a social exchange paradigm, we need to consider how ageing may influence our needs and exchanges with others. We have already discussed the issue of biological, psychological and social changes in the ageing process. Now is the time to discuss how these changes may influence our exchanges with others.

The possibility for differences in social exchanges involving older actors has been considered by Dowd (1975), who has theorised about how older adults would fare in social exchange, giving a bigger incidence to macro social exchanges involving ageing and power. Dowd depicts the ageing process to be accompanied by a decrease in power and resources (Dowd, 1975). The argument is that as age

progresses, social expectations and institutions are set to limit the value of the resources owned by older adults. Retirement, for example, is depicted as depriving ageing adults of resources and power in their relations by limiting their economic resources and labour exchanges, putting the older adult always in a position of power inferiority at the beginning of an exchange. Adding to this, older adults are under the effect of something Webster and Driskell (1978) referred to as status generalisation, a set of expectations that influence the current interaction and are imported from other interactions with other actors. Assuming that a partner has limited resources from the start forces the actor to prove that he/she is a viable trade partner, lowering his/her initial power in any exchange (Dowd, 1975). This concept from the social exchange has a remarkable resemblance to ageism. Stereotyping under biased generalisations of the characteristics of an age group is halfway to creating power disadvantages for older adults even before an exchange starts.

Dowd considers that a major influence on power differences between younger and older adults is related to social and cultural experiences (Dowd, 1975). That is to say, differences in resources and power between younger and older adults result not from ageing itself or biological or cognitive changes but cohort-defining differences in experiences of educational, socioeconomic, familial or occupational nature. Dowd argues that with the onset of the industrial revolution and the subsequent specialisation of knowledge, the old worker has little to exchange with the young worker (Dowd, 1975). Though interesting, Dowd's work is tied to the societal view of older adults and the idea that resources are a product of labour or a career. However, even if retirement can limit resources, other facets of the self can also impact resources by decreasing, maintaining, or even increasing them in old age. Besides an active work life, other factors must be considered to understand how ageing changes resources. The impact of ageing on the ability to produce resources will be influenced by the biological, cognitive, and social changes of the ageing process, how individuals deal with those changes and how they adapt to their new reality.

Dowd's work is particularly relevant for several reasons. Mainly, it stresses the importance of the transition between working life to retirement in shaping social exchanges. However, in Dowd’s work, there is also the underlying idea that different ageing experiences and developmental pathways influence resources, needs and power in exchanges. So, what is the influence of the other ageing-related changes in the exchange? There is not much information in that regard, but some things can be hypothesised by studying theoretical frameworks of ageing.

Social Exchange Theory and Development in Later Adulthood

With the basic principles of social exchange in mind, we can look at some theories of adult development and find some common points. In the following paragraphs, we will explore a little bit how some theories about ageing can interact with social exchange theory. Hopefully, this discussion can help understand how normal ageing can change social exchanges, integrating social exchange through a developmental lens.

We think that the ageing process can alter exchanges meaningfully in two ways. The first one is by changing the objective of the exchange, the reason "why" we would prefer some exchanges over others. We can classify exchanges conducted on an everyday basis in two categories: 1) exchanges that are instrumental for our survival (obtaining food, clothing, safety) and 2) exchanges that are a means to our promotion of well-being and fulfilment of objectives, and self-actualization. Exchanges conducted to promote well-being or fulfil objectives probably have some parallels with adult development theories. Erikson's theory of psychosocial development conceptualizes a set of developmental stages across the lifespan, each stage with a developmental task (Erikson, 1963; Erikson & Erikson, 1998). Completing these tasks guides objectives in the various stages of development. Therefore, it can be understood that some exchanges are carried on with the objective of completing different developmental tasks. For example, some interactions between young adults might be conducted to find a partner, thus tackling the intimacy vs isolation stage. Likewise, an older adult telling a story about his or her life can be a reminiscence experience that will contribute to the challenge of integrity vs despair (Erikson & Erikson, 1998). Also, we may choose to conduct some exchanges simply because of their emotional outcome. In this case, we can establish a parallel with the Socio-emotional selectivity theory. This theory predicts a change of focus in advanced age from knowledge-oriented goals to emotion-oriented goals (Carstensen, 1991). This means that the prefered exchange will be one that suppresses an emotional need and not a more cognitive-oriented need. Plus, from this premise, we can predict that the goals of the exchange can differ in intergenerational relationships (Carstensen, 1991, 2006). Different goals in exchanges can result in some tension and eventually in conflict.

Research indicates that, in old age, there is a reduction in social contact in general. However, socio-emotional selectivity predicts that relationships in old age tend to focus on meaningful familiar and secure connections (Coleman & O'Hanlon, 2017). From the social exchange point of view, it could result in fewer partners to exchange with. A reduction in social partners has a major implication for exchanges. Dependency on a partner is directly conditional on the availability of other partners. A reduced or limited

social network reduces the possibility of finding alternative exchange partners, resulting in dependence and low power on the existing relationships (Emerson, 1962).

The second way ageing can interfere with exchanges is by changing the "how" of the exchange, how we conduct exchanges, the available resources, and how we adapt to resource limitations. As we explored at the beginning of this text, some functional changes are expected with old age, which can impact everyday life and, consequently, our exchanges. The theory of selective optimization with compensation explored earlier offers an explanation of mechanisms to adapt to these changes. According to this theory, adaptative change implies the use of three strategies: selection, optimization and compensation (P. B. Baltes, 1997). The application of these strategies can change the shape of the resources put in exchange and, therefore, condition exchanges. Plus, one possible way to suppress needs is simply by getting help, which can be viewed as a compensation strategy. Getting help implies conducting exchanges with others to obtain help. Therefore, getting help as a form of compensation can increase the number of exchanges and even lead to dependency (Homans, 1961).

Summing up, social exchange theory has quite a few connections with adult development theories. That does not necessarily mean that social exchange is a developmental theory, but it certainly means that it explains human interactions within their developmental context. Using social exchange theory to explain elder abuse means that abuse is understood within its developmental context. Accounting for development in the explanation of abuse is, in our opinion, a huge boon of social exchange theory. As a metatheory, the social exchange theory applied to elder abuse does not hide developmental processes; it allows the visibility of each actor's developmental needs and goals and, in that sense, admits the pursuit of a developmental view of abuse.

Applying Social Exchange Theory to Elder Abuse

So far, we have explored the basic principles of social exchange and their connection to ageing and development. We have also explored elder abuse from its conceptual standpoint, discussing the definition of abuse and the definitions of each form of abuse. It is now time to cross these two points and formulate a possible articulation and application of the basic principles of social exchange theory to explain elder abuse.

When we typically read about social exchange theory and elder abuse, dependency and limitations in the older adult's everyday life are commonly the central pieces of the explanation (Abolfathi Momtaz et al., 2013; Wilber & McNeilly, 2001). Few authors consider at least some of the principles of social exchange when explaining elder abuse (one example is Mathew & Nair, 2017). Without a detailed

application of the social exchange principles to elder abuse, any explanation will be superficial and potentially ignore the explanatory power of a complex theory such as social exchange theory. In the following paragraphs, we will formulate concrete explanations for elder abuse based on social exchange principles.

When considering an explanation for elder abuse based on the social exchange theory, it is helpful to first think about what assumptions that approach would have. Based on the principles of social exchange theory, we can formulate five assumptions:

1. Elder abuse is an exchange;
2. Abusive exchanges are better understood in the context of previous exchanges;
3. Abusive exchanges imply power inequalities;
4. Abusive exchanges are a response by the more powerful actor to a perceived broken distributive justice;
5. By using an abusive exchange, the more powerful actor will try to maximize rewards, decrease costs or reduce the gap between the perception of his/her profit and his/her perception of his/her partner's profit.

Let us delve into more detail about these assumptions. Looking at elder abuse from a social exchange perspective means that the relational nature of abuse is central (assumption 1). Abuse can only be read as a social exchange where the exchanged resource is abusive behaviour.

As discussed before, when choosing resources, the actors consider if those resources provided successful exchanges in the past. When framing elder abuse into a social exchange lens, we assume that abusive behaviour was not the first choice of resource to start a relationship. Consequently, we assume that abuse emerges in relationships gradually, meaning that other exchanges were conducted before the abusive exchange took place (assumption 2). There is some evidence supporting this assumption. Research shows that caregivers who commit abuse have a worse relationship with the care recipients than the caregiver who does not commit abuse (Compton et al., 1997). Plus, elder abuse committed by caregivers is positively correlated with the perception of fewer rewards from the past relationship with the older adult (Cooper et al., 2010).

The appraisal of past exchanges serves as a base for the expectations of future exchanges. As such, factors that contribute to increased dependency, such as the societal and labour factors identified by Dowd (1975) or other factors that contribute to dependency, also contribute to creating power inequalities. The emergence of abusive exchanges is tied to power inequalities (assumption 3). Exchanges conducted in relationships where power is equally distributed to the partners are mutually satisfying; they

cannot be abusive. On the other hand, in relationships with power imbalances, at least one of the actors is unsatisfied. This assumption is supported by research that indicates that relational quality is compromised in relationships where there is abuse (Cooper et al., 2010; Jackson & Hafemeister, 2011).

Power inequalities indicate that one actor is more powerful than the other, which is the same as saying that one actor is dependent on the other. Differences in power or dependency result from one actor perceiving the exchanges as unfair (broken distributive justice). As described in the fifth proposition of the social exchange theory (Homans, 1961), actors who perceive exchanges as unfair tend to respond less rationally. This interpretation of social exchange expects abuse to emerge in this context (assumption 4).

Supposing abusive behaviour is a response to an exchange history where one actor (the abuser) has the perception that his/her profit in that relationship is smaller than the profit of the other actor, as proposed in assumption 4. In that case, abusive behaviour is used as a strategy to decrease that gap (assumption 5). This means that abusive behaviour is used to increase rewards, decrease costs or decrease the profit of the other actor to make both actors' profits more comparable in the eyes of the abuser. This logic is by no means an excuse for the use of abusive behaviour; as discussed in the section about the basic principles of social exchange theory, other non-abusive strategies can be employed to restore balance in relationships. This point begs the question: if there are non-abusive alternatives to restore balance, why do some caregivers use abusive strategies instead of non-abusive strategies? Although this distinction was not the point of this work, we could venture to hypothesize that caregivers who use abusive strategies to restore balance probably lack the resources, knowledge or insight to choose non-abusive strategies. In a way, using abusive strategies shows an inability to find alternative strategies, stressing the idea that the caregiver is not necessarily someone to blame but someone who also needs help.

Types of Abuse on a Social Exchange View

A consequence of these assumptions, particularly two, four and five, is the variability of possible expressions of abusive behaviour. Suppose each abusive behaviour is the last link of a chain of exchanges and performed as a result of that history of exchanges. In that case, we should expect it to take different forms depending on that history. However, despite those many forms, we can cluster exchanges by similarity, for example, the similarity of the outcome. In that case, we can hypothesize that certain exchange chains can lead to similar outcomes. If these outcomes are the types of abuse, we can think of different exchange-based mechanisms to explain each form of abuse. This is one of the points that make

social exchange theory appealing. The possibility for different exchange-based mechanisms for the different types of abuse is aligned both with the different behavioural manifestations of abuse and with the opinion of some experts in theories of abuse (Jackson & Hafemeister, 2016), who defends that each type of abuse warrants its own explanation.

So, what could these exchange-based mechanisms look like? Well, considering assumption five, these mechanisms could try to 1) increase rewards for the abuser, 2) increase the cost of exchange for the older adult or 3) reduce the cost of exchange for the abuser. One way to increase rewards that can be classified as abusive is to take monetary compensation forcefully by seizing money or property from the older adult against his or her wishes. This kind of abusive behaviour can be classified as financial exploitation (National Center on Elder Abuse, 2015). In other situations, the actor might not be able to find strategies to increase rewards and might try to increase the cost of the exchange for the older adult in what we can classify as a lose-lose scenario. Abusive behaviours that configure physical and emotional abuse could be used to inflict pain or distress, thus increasing the cost of exchanges for the older adult. One way for the actor who commits abuse to reduce costs could be by withdrawing from providing care or providing insufficient care. This denial in providing care can be classified as neglect.

These individual mechanisms do not exclude situations where more than one form of abuse is present. As it is known, older adults who experience abuse frequently experience more than one form of abuse. These mechanisms can be used concomitantly, inflicting more than one form of abuse. For example, taking property can be classified as financial exploitation. However, this behaviour can also be used in order to humiliate the older adult, thus classifying it as psychological abuse. This same behaviour can be conceptually understood as two related but different exchanges: one where the resource was "take the property" and the other where the resource was "humiliate". Thus, this conceptualization includes the possibility of the same behaviour being abusive in more than one way.

Using the Principles of Social Exchange Theory to Predict Elder Abuse

From the theoretical premises explored in the previous section, we can say that any factor contributing to an increased risk of unbalanced exchanges can potentially lead to abusive exchanges. Therefore, two main issues can promote unbalanced exchanges: 1) lack of access to resources valued by the other and 2) high dependency (or low power) on the other. These two factors are essential contributors to assessing exchanges as not fulfiling the distributive justice principle. Understanding these two factors allows us to make some predictions about elder abuse. In the following sections, We will explore the role of resources in predicting elder abuse, the role of power/dependency and how the two

may come together, formulating the core of the predictions that become the central hypothesis for this thesis.

The Role of Resources

Difficulties accessing resources make it harder to reciprocate a received resource. Limitations in producing resources to exchange limit the ability to have balanced exchanges and, consequently, limited resources can be connected to the emergence of abusive exchanges. However, the wide variety of resources creates difficulty in assessing them and relating them to abuse. Probably the easier resources to measure are financial resources. Some studies relate financial resources to elder abuse, showing that older adults report abuse more frequently when they are unemployed, have low income or have low socioeconomic status (Abdel Rahman & El Gaafary, 2012; Acierno et al., 2010; Litwin & Zoabi, 2004; Naughton et al., 2012). These results are congruent with this theorization of abuse. However, most of our daily exchanges are not economic but based on behaviour, which creates a problem: how do we assess behavioural resources? We do not know how to answer this question, but we can propose an alternative route to assess behavioural resources. Instead of looking directly at resources, we can look for variables that are important for producing those resources. Let us think of a conversation as an example of an exchange where both actors may be trading information, experiences or simply pleasantries. To sustain such an exchange and contribute to it in full, those persons involved need to have access to particular cognitive abilities. Telling a story requires at least memory, verbal fluency and executive function. Good performance with these skills makes it more likely to participate in such exchanges successfully. As assessing resources directly could be troublesome due to their vast variability in behavioural representations, we can, alternatively, assess the necessary skills to create those resources. The idea that certain abilities and skills influence our behaviour, and therefore the resources used in exchanges, has some support. Continuing with the example of cognition, the results from Conner and collaborators (2011) indicate that cognitive impairment is a predictor of elder abuse mediated by behavioural problems. Thus, it seems that assessing variables that may change the form and content of the resources may be a way to approach the role of resources in a social exchange perspective of elder abuse. In assessing skills and abilities, we gain insight into what resources are available to exchange, allowing us to contour the issue raised by the variability of behavioural representations of resources. We can then test the social exchange explanation to elder abuse by testing if poor performance with these skills increases the chance of abusive exchanges.

Research on elder abuse does not frequently include variables that fit the reasoning above, except for cognitive status or cognitive impairment, which are included very frequently. However, the results obtained are sometimes contradictory. Many studies find a positive association between poorer cognitive functioning and elder abuse (e.g., Cooper et al., 2006; Lachs et al., 1997; Serra et al., 2018), but many others find no relationship between the two (e.g., Leung et al., 2017; Luo & Waite, 2011; Vida et al., 2002). Nevertheless, some principles of social exchange theory might help explain these contradictory results. As previously discussed, Social exchange may be used to think of different pathways that lead to different forms of abuse. In that case, it may make sense that some forms of abuse might be related to cognitive functioning while others are not. The cited studies only focus on abuse as a whole and not on its types. When looking at specific types of abuse, evidence suggests a positive association between poor cognitive function and financial exploitation (Garre-Olmo et al., 2009) and psychological abuse (Wang, 2006). Therefore, cognitive skills might be more important predictors for some forms of abuse than others, which supports the theorized explanation based on social exchange principles. However, we can go even further because we hypothesize that different cognitive structures might be necessary to perform different resources; thus, different cognitive structures might be differently associated with the different forms of abuse.

Nevertheless, research relating cognition with elder abuse rarely assesses cognitive structures independently of each other, depending instead on measures designed to screen for cognitive impairment that rely on a single and unspecific score for cognitive performance. Dong and collaborators (2011) conducted one of the few studies that can help us understand the relationship between different cognitive structures and the types of abuse. In this study, the authors explored relations between episodic memory and perceptual speed with physical abuse, emotional abuse, neglect and financial exploitation. The results indicate that episodic memory is a good predictor of neglect and financial exploitation, not physical and emotional abuse. At the same time, perceptual speed is a good predictor of emotional abuse, neglect and financial exploitation, but not for physical abuse. These results reiterate that neither cognition nor abuse can be treated as monolithic structures. Integrating these results within the social exchange framework supports the idea that different cognitive structures are behind different resources; therefore, they can be used to predict different forms of abuse when assessed independently. However, there is insufficient research relating specific cognitive structures to elder abuse. To more accurately include cognition in an explanation of elder abuse based on social exchange is necessary to explore a broader set of cognitive structures and determine which cognitive structures are relevant predictors of the different types of abuse.

However, it is not only cognition that shapes behaviour and, consequentially, resources. Looking only at cognition gives just a partial understanding of resources. It is necessary to study other domains that have the potential to determine the choice of one behaviour over another and, therefore, affect the selection of resources. Research that includes such kinds of variables is scarce. One example of one variable that would fit this description is personality. In support of this view, research shows a positive association between older adults' neuroticism and overall abuse (Li et al., 2020). The relationship between personality and abuse also changes depending on the form of abuse. Higher neuroticism is associated with an increased risk of psychological abuse, financial exploitation and caregiver neglect (Li et al., 2020). Though consciousness is negatively associated with overall abuse, high consciousness increases the risk of financial exploitation (Li et al., 2020). As exchanges are like two-way streets, determinants of resources for both older adults and caregivers are important to understand abuse. While the older adult's resources' determinants indicate older adult-related risk factors, determinants of the caregiver's resources indicate caregiver-related risk factors. Continuing with the example of personality to illustrate this point, high neuroticism in caregivers is associated with physical and psychological abuse (Fang et al., 2021). However, the increased risk posed by caregiver neuroticism disappears when the burden is low (Fang et al., 2021). Although Fang and collaborators (2021) found an association between caregiver neuroticism and neglect, that relationship was not affected by burden. In sum, determinants of resources of both older adults and their caregivers play an important role in the prediction of elder abuse. However, each resource seems to be tied to certain forms of abuse, suggesting that abuse needs to be understood by its type and not necessarily as a whole.

Many other variables can be studied to determine the role of resources in predicting elder abuse. Each contribution, even if small, can give important elements to add more detail to an explanation for elder abuse based on the principles of social exchange theory. However, it is not only determinants of resources that are important to understand elder abuse. As indicated in Fang and collaborators' (2021) study, other variables, such as burden, may affect the relationship between resources and abuse. We can conceptualize these variables as interfering with the power-dependence dynamics.

The Role of Power/Dependence

The power-dependency dynamics are important factors directly associated with evaluating exchanges as unbalanced. Power and dependency are closely related to resources. Difficulties in producing resources are strongly associated with increased needs. The higher the needs, the more likely one is to become dependent on another. So, how to approach power/dependence? One way is to focus

on variables related to increased needs, but this is no easy task. There are multiple areas where dependence can arise. General examples include economic dependence and social dependence. So, what indicators can we use? An indicator of dependence on everyday tasks can be obtained by assessing the activities of daily living and the instrumental activities of daily living. Activities of daily living (ADL) are tasks essential for self-care, and instrumental activities of daily living (IADL) are activities necessary to maintain independence within the environment (Sequeira, 2018). Considering the concept of power/dependence is expected that older adults who need assistance in these tasks will engage in more exchanges to fulfil their needs, thus increasing their dependence on others. So, older adults who need assistance in these tasks are at higher risk of experiencing elder abuse. Generally, research has found that functional dependence is associated with a higher risk of overall elder abuse (Abdel Rahman & El Gaafary, 2012; Beach et al., 2005; Pérez-Cárceles et al., 2009). However, some studies find that only IADL are associated with elder abuse and not ADL (Leung et al., 2017; Vilar-Compte et al., 2017). Plus, there seem to be differences depending on the type of abuse considered. Functional dependency (when ADL and IADL are scored together) seems to be associated with higher physical and emotional abuse but not neglect (Burnes et al., 2015). However, when studies differentiate between ADL and IADL, the results differ. Difficulties performing ADL are associated with emotional abuse and financial exploitation (Acierno et al., 2010), and IADL are only associated with financial abuse (Beach et al., 2016).

The difference between these two indicators might be explained in different ways. First, the concepts of ADL and IADL and their measures are very technical, and other typologies of functional ability might have more facial validity. There have been propositions to adopt different groupings of functional abilities that look closer to the real-world presentation of ADL and IADL, for example, shopping, transportation or bathing (Spector et al., 1987). Grouping functional dependency into different forms has shown interesting results; for instance, dependence on grooming/health and mobility is positively associated with elder abuse (Steinmetz, 1990). Second, the differences might be related to the level of assistance required. Difficulties performing ADL are usually more impairing and require a greater level of assistance than difficulties in IADL. Through the social exchange, we should expect that the higher the dependence, the greater the risk of elder abuse. However, the association between functional dependence and elder abuse is more prominent when there is moderate dependence and not severe or total dependence (Orfila et al., 2018). One possible explanation for these results is that caregivers of older adults who are highly dependent have developed ways to cope with that dependence more effectively. One way of doing that is by expanding the social network. Dependence on social exchange is also not just reflected by increased needs. It emerges when there are no alternative partners to conduct exchanges

(Emerson, 1962). Thus, older adults with an extensive social support network are expected to depend less on a single actor, therefore protecting them from the emergence of abuse. In favour of this reasoning, extensive evidence shows an association between low social support and elder abuse (Luo & Waite, 2011; Pereira, 2019; Tobiasz-Adamczyk et al., 2014; Vilar-Compte et al., 2017). Plus, not all sources of social support relate equally to elder abuse. Pereira (2019) has found a relationship between low social support from family, significant others and elder abuse but not between social support from friends and elder abuse. Such results support the view that not all relationships are equal. Social support as an indicator of the existence of alternative exchange partners also seems to intervene in the effects of functional dependence on elder abuse by nullifying them (Dong & Simon, 2010).

Although factors that affect dependence are important from a social exchange point of view, we should not forget that the other half of dependence is power (Emerson, 1962). Power is particularly difficult to operationalize. According to Dowd (1975), old age is accompanied by a series of events that reduce the status of the older adult as a potential exchange partner. As such, any variable that indicates if an actor is an attractive exchange partner is a potential way of addressing power. We hypothesize that social competence could be one of these variables. A person with high social competence is potentially someone pleasant to interact with, thus enjoying higher status than someone with low social competence. However, research on elder abuse seldomly considers variables related to successful development or high competence. Consequently, no research results support this prediction, which is solely based on our interpretation of social exchange theory.

Tackling variables related to resources and variables related to power/dependence is a valid way of approaching a social exchange view of elder abuse. However, in our daily exchanges, these concepts are not independent and work simultaneously to deliver the outcome of our exchanges. As such, and to end this operationalization of the social exchange principles regarding elder abuse, we shall discuss how to combine the concepts of resources and power/dependence.

Combining Resources and Power/Dependence

The independent analysis of the relation between the ability to produce resources and elder abuse and the relation between power/resources and elder abuse, though critical from a social exchange point of view, reduces the examination of exchanges to only part of the exchange components. A complete understanding of the exchange implies considering resources and power/dependence simultaneously and the effect of the interaction between the two.

Availability of resources is expected to directly influence the dimension of relational power and the level of dependence of each person. However, it is extremely difficult to establish causal relationships between resources and power/dependence when we consider the vastness of behavioural representations that resources can adopt. Establishing a causal relationship between a resource – a form of dependence – a form of abuse would be ideal for testing the assumptions of a social exchange view of elder abuse. But since this approach is not possible, a way to take into consideration resources and power/dependence simultaneously is to test if indicators of power/dependence change the relationship between resources and abuse. Low dependence and high power indicators in a certain domain (for example, having a very high social status) are expected to mitigate any increased risk of abuse caused by low resources in other domains. This kind of approach should be able to clarify some of the predictions of a social exchange-based explanation for elder abuse, thus indicating if it presents a promising framework to explore.

From the previous exposition, we can see that approaching elder abuse from a social exchange perspective is no easy task. The main reason for these difficulties is the level of abstraction that the concepts of resources and power/dependence warrant. Therefore, operationalizing these concepts is essential to test the theory's predictions, and this text reflects our best attempt. However, the abundance of perspectives within social exchange allows explaining abuse within this framework in different ways. So, the presented operationalization rather than describing a definitive way to approach elder abuse from a social exchange perspective is but one more attempt to understand elder abuse.

About this thesis

The test and development of theories to explain and predict elder abuse is considered one of the more pressing issues in the field. This work aims to contribute to the theoretical development in the field of elder abuse by testing some of the predictions proposed from a careful analysis of social exchange theory.

The choice of testing social exchange theory in this thesis was made because it is a relatively unexplored theory in the context of elder abuse and, perhaps, in psychology in general. However, it has a great potential to serve as a basis for predicting elder abuse, thus making it an important tool for prevention. Social exchange theory also includes older adults, family members, and caregivers as active players when explaining abuse, a feature that is not frequently covered in other theories. Thus, it is possible to explore the predictions of social exchange theory by exploring the association between elder abuse and resources and power/dependence in older adults, caregivers, and both. We opted to explore

this relationship in older adults for several reasons. First, social exchange theorists consider older adults to be at a power disadvantage in exchanges (Dowd, 1975), making the exploration of resources and power/dependence more pressing. Second, the age-related changes described earlier can definitely change both resources and the power/dependence dynamics, probably changing the vulnerability to abusive exchanges. And third, for practical reasons, the exploration of dyads of older adults and caregivers would be more informative for the adequacy of the theory, but we lack the resources to conduct such extensive research. Thus, the ultimate goal of the research agenda behind this thesis was to determine if social exchange theory has evidence-supported potential to be further developed and relied upon as a theoretical explanation for elder abuse. The following objectives were established to accomplish this main goal:

1. Determine the extent of support for multiple theoretical explanations of elder abuse;
2. Apply the principles of social exchange theory into a testable operationalization;
3. Expand our knowledge of social exchange theory applied to elder abuse by:
    3.1. Expanding known cognitive resources that can be used as predictors of abuse;
    3.2. Exploring new determinants of behaviour that affect resource selection and availability, namely moral intuitions and emotion recognition;
    3.3. Expanding the knowledge about the role of functional dependency as an indicator of power/dependence in the exchange relationships;
    3.4. Exploring the role of other power/dependence determinants, namely social skills.

As previously explored, social exchange theory is one of many theoretical approaches to elder abuse. If this work is to be based on the social exchange theory, the first sensible step is to determine how much support there is in the literature for it. Plus, for social exchange theory to be a good choice of a theoretical approach to explain elder abuse, it is necessary to analyse the supporting evidence in comparison to the supporting evidence of the other theoretical approaches. Thus, rises the first objective. To fulfil this objective, we conducted a systematic review of the literature (Chapter II), searching for evidence in favour or against six theories used to explain elder abuse.

To test any theory is necessary to operationalize it beyond its abstractions, allowing the formulation of specific and testable hypotheses. This is particularly important for social exchange theory. As discussed earlier, social exchange theory is fairly abstract, leading to frequent oversimplifications, mainly when applied to the context of elder abuse. Objective 2 was idealized to avoid oversimplification of the theory and provide a systematic way for making and testing its predictions. Our approach was to "go back to the basics" and look at the general principles of the theory and apply them to the context of

elder abuse. The resulting operationalization of elder abuse is detailed in this introduction and, more briefly, in Chapters II, IV and V.

Analysing social exchange theory from its basic principles allows a deeper understanding of the theory and the elaboration of more specific and testable predictions, in the case of the presented operationalization, based on the role of resources, power/dependence and their interaction. Objective 3 aims at testing these predictions. As described in the previous section, cognitive functioning, as an indicator of the ability to produce resources, seems to be related to elder abuse. However, besides perceptual speed and episodic memory (Dong et al., 2011), it is not clear which cognitive functions are important indicators of resources and which ones are not. Thus, objective 3.1 aims to replicate the association between elder abuse and the cognitive functions of perceptual speed and episodic memory and add two new cognitive functions: executive function and verbal fluency. Executive function is the term frequently used to designate several essential functions like scanning, visuomotor tracking, cognitive flexibility, and divided attention, associated with the integrity of the frontal cortex (Miyake et al., 2000; Salthouse et al., 2003). Poor performance in any of these basic functions is expected to limit how persons interact, affecting the resources available to conduct exchanges. Verbal fluency, divided into phonemic and semantic fluency, uses processes of semantic memory, working memory, executive control, and cognitive flexibility to produce verbal content (Baldo et al., 2006). Verbal content is the basis of any verbal interaction; thus, access to verbal content should affect verbal exchanges. It was hypothesized that poor performance in any of these four cognitive functions (perceptual speed, episodic memory, executive function and verbal fluency) was a predictor of elder abuse. The predictive role of these cognitive performance indicators was the subject of Chapter IV.

But, it is not only cognitive functioning that determines resources, as previously discussed. As such, objective 3.2 is to study previously unexplored variables that affect resource selection and availability, specifically, moral intuitions and emotion recognition. As described earlier, there is a relationship between personality and elder abuse (Li et al., 2020). We expect moral intuitions to influence elder abuse similarly to personality; by determining what behaviours one is more likely to adopt. According to the moral foundations theory, humans have intuitive ethics that give an innate sense of approval or disapproval for ideas, thoughts or behaviours (Haidt & Joseph, 2004). Moral foundations theory describes five foundations and modules of intuition that determine our sense of approval or disapproval for our own behaviour and the behaviour of others. These intuitions have been developed based on our species' evolutionary history and culture, thus explaining some cultural differences (Haidt & Joseph, 2004). Determining what behaviours are morally acceptable or unacceptable should, theoretically, influence our

choice of resources in each exchange; thus, we hypothesize that these intuitions could serve as indicators of resources and be related to elder abuse. Emotion recognition could also play a role in the process of selecting resources for exchange. When this ability is decreased, for example, in patients with schizophrenia, there is also a decrease in social competence (Kalin et al., 2015), making recognising emotions in others an important part of social interaction. Therefore, we expect that persons with lessened abilities to recognize emotions might have more difficulties selecting the appropriate resources and thus be more likely to suffer from elder abuse. The relationship between these two variables (emotion recognition and moral intuitions) with elder abuse is explored in Chapter V.

Exploring the role of resources is not enough to approach elder abuse from a social exchange perspective; the effect of resources needs to be considered in the context of power and dependence. As explored in the previous section, functional dependence is the indicator of dependence more frequently reported in the literature. Objective 3.3 aims to include functional dependence as a moderator of the relationship between the resources previously identified and elder abuse. From the presented operationalization of social exchange theory to elder abuse, persons with fewer resources and high dependence are expected to be at a higher risk of elder abuse. Plus, as power/dependence indicators are expected to shape any exchange relationship, low dependence is expected to counteract the effects of low resources, thus counterbalancing any risk increase posed by difficulties in producing resources. These hypotheses are approached in Chapters IV and V.

However, as described in the basic principles of social exchange theory, dependence only makes sense in opposition to power, as the concepts are inversely proportional to each other. Studying indicators of power makes theoretical sense and helps to include in the study of older adults and elder abuse variables that classify competence and not only the typical variables that imply frailty. Objective 3.4 aims to include social skills, which we understand as an indicator of power, as a moderator of the relationship between resources and elder abuse. We expect abuse to be more likely in persons with fewer resources and limited social skills. Like functional dependence, we also expect higher social skills scores to counteract any risk of elder abuse posed by having fewer resources. These hypotheses are tested in Chapters IV, and V. Chapter III is instrumental for testing those predictions, as it validates a measure of social skills. Without this instrument, which has many other potential uses in the field of adult safeguarding, the hypothesis regarding social skills as an indicator of relational power could not be tested.

These are the objectives and hypotheses this thesis aims to fulfil and test. The next two chapters of this thesis consist of the four articles that, hopefully, will contribute a little to support a new theoretically-informed view of elder abuse.

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Chapter II

Theoretical approaches to elder abuse: a systematic review of the empirical evidence.

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Abstract

Purpose: The study of theoretical models explaining elder abuse has been one of the main gaps in the literature of the field. The extent of support of each theory is not clear. In this study, we conducted a systematic review to examine research supporting or opposing six theories of elder abuse: caregiver stress theory, social exchange theory, social learning theory, bidirectional theory, dyadic discord theory and the psychopathology of the caregiver.

Methodology: We conducted a systematic review of the literature. Seven databases were searched six times using different keywords about each theory.

Findings: We found 26,229 references and then organised and analysed these references using pre-established criteria. Eighty-nine papers were selected, which contained 117 results of interest; these papers were summarised and assessed for conceptual, methodological and evidence quality. The results showed evidence in favour of all the explored theories, except for social learning theory, whose results indicate multiple interpretations of the theory. We finish this paper by proposing that each of these theories might explain different facets of elder abuse and that more research is necessary to understand how the predictions of these different theories interact.

Originality/value: This paper presents an extensive review of the literature on theoretical explanations of elder abuse. Our findings can be of value for selecting theories for prevention programmes or providing a summary of the evidence for researchers and practitioners interested in the theoretical explanation of elder abuse.

Keywords: elder abuse; theoretical approaches; older adults; mistreatment

Theoretical approaches to elder abuse: a systematic review of the empirical evidence

Since the issue of elder abuse first came to the attention of the scientific community in 1975 (Baker, 1975; Burston, 1975), many social and scientific views have been articulated, thus shaping the field as we know it today. The prevalence, risk factors and assessment strategies of elder abuse have been studied across a vast number of countries. Awareness of this problem grew and, fortunately, continued to grow as governmental and non-governmental organisations dedicated themselves to this issue. More importantly, some international organisations have focused their attention on elder abuse. The World Health Organization made a valuable contribution with the Declaration of Toronto (World Health Organization, 2002) by defining elder abuse as a single or repeated action (or absence of an appropriate action) that results in harm or distress and occurs in a relationship where there is an expectation of trust. Prevalence studies estimate that 15.7% of older adults have experienced mistreatment (Yon et al., 2017). Elder abuse has serious consequences for older adults' physical and mental health and is responsible for part of the hospitalisation, institutionalisation and mortality rates among older adults (Yunus et al., 2019). The considerable prevalence and its nefarious consequences may be one reason why organisations such as the United Nations included elder abuse in the international political agenda in The Madrid International Plan of Action on Ageing (United Nations, 2002).

The field of elder abuse has now reached a tipping point. An increasing number of recent suggestions from experts focus on protecting older adults by developing intervention and prevention strategies for elder abuse (Stahl, 2015). However, some of these interventions are somewhat ineffective and sometimes even counterproductive (Daly, 2011). One explanation for this outcome is that interventions have insufficient theoretical foundations or simply lack them altogether (Jackson & Hafemeister, 2016). Theory's role is of major importance in this context because the theory explains the causes and consequences of a phenomenon. In this way, theory influences researchers' choices and contributes to the development of professional practices and policy initiatives (Roberto & Teaster, 2017), therefore giving a fundamental basis for choosing intervention or prevention strategies.

Traditionally, theories used to explain elder abuse have been adapted from other fields, such as child abuse or intimate partner violence (Roberto & Teaster, 2017), although some exceptions exist. Some of these theories are controversial, while others are understudied. We lack a clear picture of what support each theory gathers. Hence, we conducted this systematic review to systematically analyse research that can empirically support theories of elder abuse, thus providing a synthesis of evidence in favour of or against each theory. Hopefully, this review will summarise the evidence to guide researchers who want

to proceed with theory testing and to lay some foundations to guide an informed selection of theoretical frameworks on which to base intervention and prevention strategies.

Many different theories have been used to explain elder abuse. In five different works (Abolfathi Momtaz et al., 2013; Burnight & Mosqueda, 2011; Mathew & Nair, 2017; Pillemer & Wolf, 1986; Wilber & McNeilly, 2001), we counted a total of 13 theories: caregiver stress theory; social learning theory; bidirectional theory; psychopathology of the caregiver; social exchange theory; dyadic discord theory; power and control/feminist approach; ecological model; sociocultural model; political-economic theory; role accumulation theory; stratification theory; symbolic interactionism. This list of theories was the starting point for the current review. Political-economic theory is very rarely cited and can be considered a specific case of social exchange theory. Role accumulation theory and stratification theory are also rarely cited and are both specific cases of caregiver stress theory.

When addressing theoretical approaches, it is fundamental to differentiate between theories and models. A theory shapes empirical fact with logic and reasoning into an explanatory framework, allowing predictions based on the formulation of a hypothesis for testing. A model, however, is a representation of a phenomenon (often distorted) to enhance conceptual understanding (Burnight & Mosqueda, 2011). The main difference between model and theory is that theories focus on establishing causal prediction, while models focus on framing descriptions of phenomenons. Models are helpful in case analysis but have low power establishing predictions or hypothesis development. The ecological model is a good example; it is a powerful tool to categorise risk factors and organise cases (check Schiamberg et al., 2011, for an application of the ecological model). However, it has limitations in providing a processual explanation for how abuse happens. For these reasons, models will not be included in this review, excluding the ecological model, sociocultural model and symbolic interactionism theory. The power and control/feminist approach will also not be included in this review. A meta-analysis by Yon and collaborators (2017) showed no gender differences in overall elder abuse, indicating that the mechanics behind elder abuse might be more complicated than just gender roles and expectations, which supports previous findings in the field of intimate partner violence (Archer, 2000). Additionally, dyadic discord theory emerged as a response to these perspectives, offering an expanded explanation of violence, accounting for these data. In summary, we focus on theories that propose a causal mechanism for the prediction of elder abuse and, in this sense, have important repercussions for practical purposes, such as risk assessment and prevention.

We will focus on six theories in this systematic review: caregiver stress theory, social exchange theory, social learning theory, bidirectional theory, dyadic discord theory, and the psychopathology of the

caregiver. These theories have been pointed out as the best bets to explain elder abuse theoretically (Abolfathi Momtaz et al., 2013; Burnight & Mosqueda, 2011; Mathew & Nair, 2017; Wilber & McNeilly, 2001), but they are not mutually exclusive. Sometimes, their predictions are entangled, proving it difficult to support only one theory. We will briefly describe each one and their main predictions.

Caregiver Stress Theory

Caregiver stress theory, sometimes addressed as situational stress theory, posits that elder abuse occurs when a stressed/overburdened caregiver unleashes his/her frustrations on the care recipient (Bergeron, 2001; Pillemer & Wolf, 1986). The central premise of this theory is that caregiving is a stressful situation. Sometimes it can be. Stress emerges either from personal factors – such as inadequate coping skills, multiple roles in the family, health problems, lack of caregiving skills; care-recipient factors—such as high levels of dependency, poor health, decreased mental capabilities; or environmental factors—economic difficulties, lack of support from society-level agencies, and social isolation. These factors combined can make the caregiver feel overburdened and frustrated, unleashing it on the care recipient (Mathew & Nair, 2017). This theory has been controversial for several reasons, but mainly because it can be used as a strategy to blame the victim for the abuse, thus reducing the perpetrator's accountability (see Brandl & Raymond, 2012, for a detailed discussion). However, this theory provides a clear hypothesis. Caregiver stress theory predicts that a stressful or burdened caregiver is at greater risk of committing abuse than a caregiver with less burden. Therefore, good evidence for this theory would be a straightforward relationship between stress and abuse, or, on a more experimental note, the disappearance of abuse after diminishing the caregiver's stress on previously abusive relationships.

Social Exchange Theory

Social exchange theory was developed by very different study areas (sociology, psychology and economics) and is usually analysed superficially. According to this theory, every social interaction is an exchange of material or nonmaterial resources between two partners, where all involved partners will try to maximize profits and reduce costs. When all involved parties perceive a balance between profit and costs, there is a mutually satisfying balanced exchange (Blau, 1964). Elder abuse is not expected in balanced relationships but in unbalanced relationships. If one of the exchange partners has limited resources to trade and has increased needs, he/she will become "dependent" on his/her partner. In turn, this partner will gain more "power" over the relationship and manipulate the exchanges to maximize profit and cut losses. The manipulation of exchanges can take many forms: deny necessary exchanges

(neglect); take monetary compensation by force (financial exploitation), or even inflict pain or distress (physical and emotional abuse) as a mechanism to vent emotions, to increase the power gap or to create a "balance" where both traders lose. Someone who lacks resources (material or nonmaterial) and has few exchange partners (no social support system to trade with) might become dependent on this "powerful" partner, perpetuating unfair trades (Fundinho & Ferreira-Alves, 2019). However, the term "resources" is too vague (Blau, 1964, lists some resources such as social acceptance or prestige), and it is easier to look for variables that increase the needs and make it more challenging to produce resources. Therefore, evidence for this theory might include a relationship between abuse and physical or cognitive impairments (that increase needs). Additionally, this theory relies on the availability of trade partners; therefore, variables such as network size or loneliness are also of interest.

Social Learning Theory

Social learning theory (Bandura, 1978) has been known by many names: intergenerational transmission of violence, transgenerational theory, and the cycle of violence theory. From the literature on child mistreatment, social learning theory proposes that violence is learned through observation and modelled into our behavioural repertoire. Social learning posits that someone who was a victim or was exposed to violence as a child is more likely to learn that violent actions are valid strategies to deal with others, resulting in the use of violence in caregiving relationships, thus continuing the violence cycle (Pillemer & Wolf, 1986). The main prediction from this premise is that abusers are more likely to have experienced abuse in their childhood than non-abusers. However, the definitive evidence would have to come from longitudinal studies, following children who were victims or who witnessed abuse and to see if they become perpetrators when the time comes to assume the role of caregiver to their parents.

Bidirectional Theory

Bidirectional violence theory arises from the work of Steinmetz (1988), who first noticed that, in some cases, it is difficult to pinpoint a perpetrator and a victim since when abuse occurs, older adults and caregivers are mutually aggressive to one another. This theory states that people raised in environments where violence is used as an interaction strategy or in situations where a caregiver or care receiver feels highly stressed are prone to violent outbursts, to which they are responded with more violence (Steinmetz, 1988). Therefore, the main predictions are that, at some point, older adults and caregivers were both victims and perpetrators. Therefore, the evidence that might support this theory would be reports of mutual violence between caregivers and care receivers.

Dyadic Discord Theory

Dyadic discord theory was developed in the intimate partner violence literature. When the incidence of intimate partner violence began to be studied in larger, nationally representative samples across multiple sources (courts, shelters, police reports, and hospitals), a new understanding of violence emerged regarding gender, since these large-scale studies indicated that women were as violent as men (Archer, 2000). Dyadic discord builds on this finding and focuses on conflict and discordance in relationships (disregarding the gender variable). According to this theory, conflict and discord emerge in a relationship because of contextual factors (history of family violence) and situational factors (e.g., low satisfaction with the relationship), and this discord might work as the onset for violence (Burnight & Mosqueda, 2011). Dyadic discord and bidirectional theory share a relational focus but differ in the depth of analysis. While bidirectional theory is concerned with mutual aggression between two people, dyadic discord considers the family environment and the elements that precede aggression, such as discord and dissatisfaction in a relationship. This theory predicts that highly conflictual relationships are prone to be associated with violence. Favourable evidence for this theory would be, for example, an association between family conflict and elder abuse.

Psychopathology of the Caregiver

The psychopathology of the caregiver states that elder abuse emerges because the person assuming the caregiving role is suffering some form of psychopathology that makes him/her unable to provide adequate care or even prone to violence (Fulmer et al., 2004). Substance abuse and depression are the more common mental health issues linked to abuse (Chen & Dong, 2017) but are not the only mental health problems. This theory's prediction is straightforward – if the caregiver has a mental illness, the odds of committing elder abuse increase. Finding evidence for this theory can be tricky; it is not just a simple case of finding associations between mental illness and elder abuse. It is also necessary that mental illness is present before the caregiving relationship starts; otherwise, the causal link cannot be established. If the onset of the mental illness is after the beginning of the caregiving relationship, the mental illness might be a by-product of the relationship, therefore disproving this theory.

Methodology

Search Strategy

We searched databases (Web of Science, Psychinfo, Scopus, Science-Direct (Elsevier), PubMed, Sage and Ageinfo) for research-based articles written in the English language and published in scientific journals

from 1975 to October 2018. We used a combination of the following keywords: *"elder abuse", "mistreatment older adults", "violence older adults", and "older adults abuse neglect"*, added to some theory-specific keywords. The theory-specific keywords were as follows: caregiver stress theory - *"caregiver stress", "caregiver burden", "stress", "coping"*; social exchange theory – *"social exchange", "dependency", "impairment", "deficits", "rewards"*; social learning theory – *"learning", "abused children", "abused spouse", "intergenerational"*; bidirectional theory – *"caregiver", "mutual violence", "violent care receiver"*; dyadic discord theory – *"relational conflict", "relational satisfaction", "disagreement";* psychopathology of the caregiver – *"caregiver mental health", "caregiver psychopathology"*.

Inclusion and Exclusion Criteria

From applying this search strategy, six massive databases of references, one for each theory, were gathered and managed using Mendeley, a reference manager software. Papers were excluded from these databases by analysing the titles and abstracts and applying the following criteria: a) not about elder abuse; b) not presenting empirical data (the reference list of literature reviews was combed for references that respected the previous criteria and were added to the database). Both quantitative and qualitative studies were accepted. Next, two researchers of elder abuse, experts on the theoretical explanations of abuse, analysed the databases and proceeded to a full-text appreciation to apply the last criteria: c) the paper includes a result that might provide evidence in favour or against the theory. In qualitative studies, results of interest would be themes that describe affirmatively or contradict the hypothesis of each theory, as can be seen later. Disagreements were resolved by the two researchers reaching a consensus. The number of articles resulting from each step can be found in Table 1.

Table 1- *Number of citations retained during paper selection process*

	Caregiver Stress Theory	Social Exchange Theory	Bidirectional Theory	Social Learning Theory	Dyadic Discord Theory	Psychopathology of the caregiver
Total number	2908	6045	2932	4833	5854	3657
Criterion a)	1614	3350	1701	2128	1272	1299
Criterion b)	217	376	351	161	47	118
Criterion c)	32	35	18	10	7	15

Data Extraction

Selected articles were analysed independently by the two researchers, summarised by mutual agreement and are organised in a table, which displays the sample size, measurement of elder abuse,

variable(s) of interest for the theory, the measurement instrument and main results. The table is available in the supplementary material (Appendix A).

The two researchers assessed the extracted results in three areas: conceptual/theoretical quality, methodological quality, and evidence quality. To do so, the researchers used the standardised checklist presented in Table 2, created by the authors, specifically aimed to assess the theoretical focus of each paper objectively. The methodological quality questions were created based on previous systematic reviews in the field of elder abuse. One question, presented below as "Evidence", was used to classify the results as favourable or contradictory for each theory. A consensus between the researchers resolved disagreements.

Table 2 – *Checklist for assessment of conceptual/theoretical, methodological, and evidence quality of the selected articles*

Conceptual/Theoretical Quality (0=No; nc=Not clear; 1=Yes):
(1) Was the adopted definition of abuse specified?
(2) Is a theoretical framework mentioned?
Methodological Quality (0=No; nc=Not clear; 1=Yes):
(1) Were the measures used validated for the assessed population?
(2) Were participant characteristics identified?
Evidence (-1 = evidence against; 0 = contradictory evidence; +1 = evidence in favour):
(1) Some results support/disprove the theory?

Results

A total of 89 studies were selected for final revision. Some studies included variables relevant for more than one theory; hence, they were included in all theories where their data were valuable, giving a total of 117 results to analyse.

Regarding the conceptual/theoretical quality assessment of the analysed articles, of the 89 studies, 62 (70%) defined how they understood mistreatment, but only 29 (33%) mentioned mistreatment in a theoretical framework. Regarding methodological quality, 51 (57%) studies used validated measures. Finally, 75 (84%) of the studies presented participant characteristics sufficient enough for replication.

Caregiver Stress Theory

Thirty-two studies were analysed regarding evidence for the caregiver stress theory. Of these, 25 presented caregiver stress or burden as positively associated with mistreatment, therefore favouring the caregiver stress hypothesis. Four studies showed contradictory evidence by finding an association between caregiver burden and some forms of mistreatment, but not others, for example, finding an association between burden and neglect but not physical or psychological mistreatment (Gainey & Payne, 2006; Orfila et al., 2018). Three studies did not support the caregiver stress hypothesis. Cooper and collaborators (2010) did not find any relationship between caregiver burden, dysfunctional coping and mistreatment. The other two negative results are interesting to analyse since they were intervention studies. One intervention programme could diminish mistreatment but not stress (Hsieh et al., 2009), and another could diminish stress but not mistreatment (Reay & Browne, 2002). These results suggest the influence of other variables on the stress-mistreatment relationship. In line with these findings, two studies suggested that stress might have a mediating role rather than be a direct predictor of mistreatment. For instance, with nurses' aides, caregiver burden acted as a mediator between work stressors and mistreatment, meaning that exposure to work stressors increases abuse indirectly by increasing the feeling of burden (Shinan-Altman & Cohen, 2009), while with the general population of caregivers, caregiver burden was a mediator for social support and resilience (Serra et al., 2018). These mediation results are fascinating because they show that one of the main predictors of caregiver stress theory (caregiver burden) is not the direct cause of abuse but rather one piece of other causal relationships.

Of the total number of articles analysed, 20 focused solely on non-professional caregivers of older adults with some form of impairment (e.g., dementia and physical disabilities). Of these, 16 studies presented positive evidence in favour of the caregiver stress hypothesis. Additionally, six studies focused on professional caregivers (e.g., nursing home employees), and of these, 3 presented favourable evidence towards caregiver stress theory. Of the remainder, three studies focused on victims or older adults signalled adult protective services, and three focused on community-dwelling older adults without disabilities. These characteristics of the sample are important to note. The functional status of older adult participants and the professional vs non-professional status of the caregivers may act as confounding variables.

Social Exchange Theory

There is no direct way to test social exchange theory; thus, we have explored the evidence for this theory, searching for studies that assessed the resources, needs and factors affecting dependency. Most likely, for this reason, the number of articles collected was 35, higher than the other theories. The first interesting result is the narrow variety of personal resources studied in association with abuse. Physical function/dependency was present in 28 studies, cognitive function/impairment in 18 and social function variables, widespread from social support to isolation and loneliness, were present in 20 studies. Eight studies included other resources, mainly economic, such as income or working status.

Regarding the predictions of social exchange theory, 19 studies support the predictions, while 3 find evidence against them. Thirteen studies find contradictory evidence. In these cases, only one form of personal resource was associated with abuse (e.g., Sasaki et al., 2007), or different resources were associated with different forms of abuse (e.g., Orfila et al., 2018). As we were interested in mistreatment in all its forms, these studies were classified as contradictory evidence, but it might not be contradictory after all, considering that different needs warrant different resources; therefore, different needs might lead to different forms of mistreatment. Finally, a few studies pointed out mediating roles for some variables of interest for social exchange. For example, in Conner and collaborators (2011), cognitive impairment does not directly predict susceptibility to abuse, but it is mediated by older adults' problematic behaviours. Kong and Jeon (2018) found no direct association between physical functionality and emotional mistreatment; however, self-esteem and family assistance mediated that relation. Social support also appears to affect mistreatment, mediated by caregiver burden (Serra et al., 2018). These results suggest that we have limited knowledge of what resources are relevant to predict mistreatment and how they manifest themselves in behavioural terms, which is why finding these mediators is essential.

Social Learning Theory

Ten studies were analysed for evidence for social learning theory. Of these studies, four presented results in favour of the cycle of violence hypothesis, where experiencing or witnessing violence earlier in life would be a predictor of committing violent acts later in life (Dong et al., 2017; Korbin et al., 2005; Reay & Browne, 2001; Yan & Tang, 2003). Of these, Yan and Tang (2003) did not study mistreatment directly but rather the proclivity to commit it, and they found that participants who experienced violence earlier in life were more likely to find mistreatment to older adults acceptable. One important note is that, except for this last study, the participants in previous studies were always caregivers. However, three studies pointed out that experiencing mistreatment at an earlier age would be a risk factor to experience

it again later in life (Grunfeld et al., 1996; McDonald & Thomas, 2013; Stöckl et al., 2012). In these three studies, participants were older adults receiving care. Two of the remaining studies showed contradictory evidence (Jackson & Hafemeister, 2011; Jooyoung Kong & Easton, 2018), where previous violence can be a risk factor for some forms of mistreatment but not for others. Last, the participants in Wuest and collaborators' (2010) qualitative study added that caregiving a previously abusive parent is an opportunity to make amends.

From the collected results, it seems that there is contradictory evidence for social learning theory. Two main patterns emerge, first, those who experience violence are more likely to commit violence, and second, those who have experienced violence are more likely to continue experiencing it. The second pattern is not entirely out of the theoretical principles proposed by social learning because when experiencing/witnessing violence at an earlier age, there is exposure to both aggressors and victims as role models. It would not be theoretically wrong to assume that one can learn how to be both abuser and victim.

Bidirectional Theory

Eighteen studies were analysed for relevant results regarding bidirectional theory. Of these, only 3 showed no relationship between caregiver mistreatment and care-receiver aggressiveness or violence (Cooper et al., 2010; Heydrich et al., 2012; Phillips et al., 2001). The remainder of the articles supported the hypothesis that violence is mutual, showing associations between aggressiveness and violence of the care receiver and mistreatment by a caregiver. Of these supporting studies, 2 (Özcan et al., 2017; Post et al., 2010) show that when looking into the forms of abuse, different forms of violence can be used in response to different types of mistreatment; for example, neglect of the caregiver is associated with physical abuse by the care receiver (Özcan et al., 2017).

Dyadic Discord Theory

Of the seven studies whose data could support dyadic discord theory, four focused on relational conflict, finding a positive relationship between conflict and mistreatment (Cohen et al., 2006; Pillemer & Finkelhor, 1989; Reay & Browne, 2001; Shugarman et al., 2003). The three other studies focused on relationship quality, all with consistent data that the poorer the relational quality, the higher the risk of abuse (Compton et al., 1997; Cooper et al., 2010; Jackson & Hafemeister, 2011). Both results are consistent with the predictions of dyadic discord theory, and therefore, all the studies support this theory. Important to highlight are the results of Jackson and Hafemeister (2011), who found inferior relational

quality in victims of physical mistreatment compared to victims of financial mistreatment. These results suggest that different types of mistreatment may be related to different levels of relational quality.

Psychopathology of the Caregiver

Of the 15 analysed studies, one did not find differences in the history of mental health problems, depression or alcohol consumption between caregivers who mistreat and caregivers who do not (Cooney et al., 2006). The remaining studies show a positive relationship between mental health, depression, anxiety, substance use, and mistreatment. However, two results seem of importance. First, two studies found that neglect had no relationship to mental health (Conrad et al., 2019; Leung et al., 2017), while only one showed a relation between anxiety and neglect (Reay & Browne, 2001). These results suggest that neglect might be a form of abuse not directly explained by this theory. Second, two studies suggest that mental health plays a moderating or mediating role between other variables and mistreatment; namely, depression and anxiety moderate the relationship between anger and the risk of mistreatment (MacNeil et al., 2010), and depression partially mediates the relationship between relational rewards and the risk of mistreatment (Williamson & Shaffer, 2001). These results suggest that the caregiver's mental health might not be the first piece of the puzzle but an important risk factor for mistreatment that should always be considered.

Discussion

This systematic review analysed 89 research papers searching for empirical support for six theories used to explain elder abuse. Except for social learning theory, which had mixed results, all other theories were supported by empirical findings. These findings require some discussion to draw practice, research and theoretical implications.

Can All the Theories Be Correct?

The more striking result we found is that five of the six explored theories had more evidence in favour than against their theoretical predictions (the sixth is social learning theory, which had mixed results). These findings suggest that not one but rather all of these theories have a role in explaining abuse.

To understand these findings is important to consider how these theories came to explain abuse against elderly individuals. Different authors adapted theoretical formulations from other fields to explain elder abuse (Roberto & Teaster, 2017). The result is a series of (apparently independent) theories that

focus on different facets of the phenomenon of elder abuse. For instance, we have caregiver stress theory and the psychopathology of the caregiver, focused on the caregiver's role, and bidirectional theory and dyadic discord theory focused on explaining interpersonal violence. However, while these four theories are centred on specific interpersonal behaviour processes, social learning theory and social exchange theory are more general theories that can explain behaviours other than abuse. These theories can be used as frameworks to analyse, compare, and evaluate all of the other theories and, therefore, may be considered metatheories.

When we find evidence supporting the more focused theories (the caregiver stress theory, bidirectional theory, dyadic discord theory and psychopathology of the caregiver), we may be getting information about processes involved in elder abuse. Understanding abuse as a whole would require the integration of these theories into a bigger picture, that is, the use of a metatheory. Several of the analysed studies hinted that each theory explains only part of the phenomenon. The hints were evident in studies that used mediation analysis. For example, stress (Serra et al., 2018; Shinan-Altman & Cohen, 2009), violent behaviour of the care receiver (Conner et al., 2011) and the psychopathology of the caregiver (MacNeil et al., 2010; Williamson & Shaffer, 2001) were found to have mediating roles, meaning that their causal effect on abuse is actually due to other variables. Thus, it is plausible that, despite all the favourable evidence, these more specific theories can miss other essential factors to understand abuse and that theories such as social exchange theory or social learning theory can be helpful. However, social exchange theory has two main problems: first, it is not clear what personal resources have a role in putting at risk or protecting against elder abuse, and more research is needed to find new resources instead of focusing on general measures of ability, be it physical, cognitive or social; and second, the theory needs further development, namely, in establishing a more concrete hypothesis regarding elder abuse. Social learning theory presents other limitations that we will explore further.

The Case of Social Learning Theory

Of all of the analysed studies, only 10 presented findings relevant to the test of social learning theory. The small number of studies is understandable; methodologically speaking, testing social learning theory predictions would be best accomplished by longitudinal studies, so testing the social learning hypothesis for elder abuse would require lengthy and expensive studies. In the absence of longitudinal studies, we analysed the findings from cross-sectional studies.

Two major findings emerged from the analysed papers. The first is congruent with the hypothesis extracted from social learning theory; people who witnessed or experienced abuse earlier in life are more

likely to become abusive caregivers (Dong et al., 2017; Korbin et al., 2005; Reay & Browne, 2001; Yan & Tang, 2003). The participants in these studies were adults caring for older adults. However, when studying past experiences of violence with samples of older adults, the results indicate that older adults who have experienced violence previously in life are more likely to experience elder abuse than those who have not experienced violence (Grunfeld et al., 1996; McDonald & Thomas, 2013; Stöckl et al., 2012). According to social learning theory, behaviour is learned and included in our behavioural repertoire by modelling exposure to other behaviour patterns (Bandura, 1978), which means that people exposed to violence in childhood would learn and adopt violent behaviours and use them when they became caregivers. This prediction is congruent with the results of some of the studies analysed. However, it is not clear what happens to explain the second set of findings, where older adults with a history of abuse in earlier life are more likely to experience elder abuse. An important hint for what may be happening is provided by McDonald and Thomas (2013), who found that older adults who were victims in childhood, young adulthood and adulthood were more likely to experience elder abuse. Therefore, on the one hand, experiencing abuse earlier in life increases both the risk of becoming an abusive caregiver and an abused older adult. It is not clear how social learning theory can explain both of these results. Too many questions are left unanswered. What exact behaviours are learned in childhood when witnessing violence? What determines who learns how to be violent and who continues to be a victim? More studies are necessary to clarify the predictions of social learning theory, especially longitudinal studies.

One Abuse or Multiple Abuses?

Our main research question focused on how much support each theory had in explaining elder abuse in general and not specific types of abuse. Likewise, all the theories included in this paper explain the emergence of elder abuse but consider abuse in general, not the specific types of abuse. There is an unspoken assumption here that the mechanism underlying the emergence of abuse is always the same, despite the form of abuse. However, this assumption is not supported by the results found in several of the analysed studies, for example, regarding caregiver stress theory. The results of Orfila and collaborators (2018) show a significant association between caregiver burden and neglect but not between this burden and physical/psychological abuse. Likewise, regarding caregiver psychopathology, the results of Leung and collaborators (2017) show that poor mental health in the caregiver is associated with an increased risk of psychological and physical mistreatment but not with neglect. The disparity between results across the multiple forms of abuse suggests that some theories might be better at explaining certain forms of abuse than others. However, given the general formulation of each theory, only aiming at abuse in general

and not considering the differences between each form of abuse forced us to classify results such as the abovementioned "contradictory evidence"; they support the theory in some cases but not in all. Of course, if the theories considered that their predictions could be applied to some forms of abuse, but not all, then this evidence would not be contradictory at all. The idea that the theoretical explanation of abuse should not consider it a monolithic phenomenon but consider the different forms of abuse that have been suggested in the literature (e.g., Jackson & Hafemeister, 2016) has not yet been fully explored. Therefore, it would be of great importance to understand what theories are better suited to explain any particular form of abuse.

Is Theory no Longer Worth Studying (mentioning)?

As part of the conceptual and methodological quality assessment, we searched how many of the studies included in this review referred to a guiding theoretical framework. The results were an indication of how little the field of elder abuse is concerned with theoretical development. The lack of interest in theoretical advancement indicates that elder abuse is a domain not worried about understanding the phenomena that underpin it. Theories are systematic ways of understanding and interpreting phenomena essential for practice, prevention, policy-making, and, of course, research. Therefore, further theoretical exploration is imperative, in contrast with the overreliance on caregiver stress theory (Jackson & Hafemeister, 2013).

Close to this subject is the diversity (or lack thereof) of variables explored in the various studies. Many different variables of interest were expected in the studies that fit as evidence for social exchange theory, considering the multiplicity of resources and forms of power/dependence. However, we found a considerable focus on physical function or physical dependency. The message this finding communicates is that we keep studying the same variables, over and over. Perhaps a new and inventive look at the theoretical approaches used to explain abuse can give researchers ideas to innovate and pursue new variables and new avenues of research.

Conclusion

In this systematic review, we summarised evidence in favour of or against six theories used to explain elder abuse. Overall, the research findings support caregiver stress theory, social exchange theory, bidirectional theory, dyadic discord theory and psychopathology of the caregiver. Social learning theory was one of the least explored theories and presented contradictory evidence, suggesting that more research is necessary to contextualise its use. Theories such as caregiver stress theory focused on specific

processes within care relationships seem to be entwined with other process-specific theories. Finding new mediators for stress, psychopathology, and relational conflict is an important step to fortify or amplify these theoretical frameworks' predictive power and better understand how these theories relate to each other. A metatheory to help organise and compare the multiple specific inputs of a theory also provides an interesting research avenue. This effort could lead to an inclusive framework that considers all the key elements of these theories to shed light on how these theories interact. That approach could be the development we need to provide better predictions about elder abuse, which are necessary to provide trustworthy foundations for prevention programmes.

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Chapter III

Measuring social skills: cultural adaptation and validation of the SSI-Del Prette.

Fundinho, J. F., Ferreira-Alves, J., Braz, A. C., Del Prette, Z. A. P., & Del Prette, A. (2021). Measuring social skills: cultural adaptation and validation of the SSI-Del Prette. *The Journal of Adult Protection, 23*(5), 337-350. https://doi.org/10.1108/JAP-03-2021-0012

Abstract

Purpose: Identifying and assessing social skills has been a powerful way of linking human behaviour and human interaction with their consequences at significant developmental levels. There are some data connecting social skills with interpersonal violence but not yet with elder abuse. The reason might be the scarcity of quick and easy-to-apply measures of social skills. This study aims to adapt and validate the Social Skills Inventory (Z. A. P. Del Prette & Del Prette, 2001) to the Portuguese population.

Methodology: We conducted two studies. In study 1, we gathered the psychometric characteristics of the SSI-Del-Prette through exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). In study 2, we correlated the new measure with measures of depression and empathy to test for divergent and concurrent validity.

Findings: The obtained version of the SSI-Del-Prette showed a good model fit and internal consistency. This measure presented six factors: *Conversation and social confidence*, *Easiness of self-exposure*, *Self-expression of positive affect*, *Coping assertively with risk*, *Defending interests and opinions*, *Giving and receiving praise*. The indicators of convergent and divergent validity supported the integrity of the measure.

Originality/value: This paper provides an adaptation of a measure of six social skills expanded to the older adult population.

Research limitations/implications: The adaptation of this measure of social skills opens new possibilities for studying these skills.

Keywords: social skills, scale adaptation, validation, depression, empathy, adulthood

Measuring social skills: cultural adaptation and validation of the SSI-Del Prette

Probably no one more than Carl Rogers in his seminal work (Rogers, 1952, 1992) stated so powerfully and clearly that, in adult life, the way people relate to each other (which we call *social skills*) can be (or not be) supportive of human development and change. This support for human development means that people with higher social skills are more caring, more helpful, empathic, and ready to derive meaning from their interactions with others. Although this theory is appealing, it lacks the operationalisation that some authors provided later, pointing to *microskills* as the central verbal and non-verbal components of facilitating relationships in terms of counselling, psychotherapy, or teaching. However, social skills are not only essential for professionals who use personal relationships as the primary tool of their trade; social skills and interactions are important for every human being because of their role during several developmental stages within their protecting and challenging functions. For some authors, social skills are a determining part of social interactions and are vital as instruments, products, and by-products of different developmental challenges (Riggio et al., 1993).

Beyond their link to human and psychosocial development, social skills (or their absence) are inextricably linked to interpersonal violence. Some authors have found a relationship between deficits in social skills and internalisation of problems, loneliness, depression, anxiety, and problem-solving skills (e.g., de Almeida & Benevides, 2018; Moeller & Seehuus, 2019; Salavera et al., 2019). Research in various contexts has suggested the importance of social skills for risk assessment, prevention, and treatment of some violent situations. In adolescents, social skills training significantly decreases the use of verbal violence (Babakhani, 2011), and children who experience bullying have significantly fewer social skills than children who do not (Fox & Boulton, 2005). Studies about the role of social skills in violence with adults are less frequent than studies about the role of social skills in violence with children and adolescents, and studies targeting older adults are even rarer. However, theoretical connections can be established between social skills and elder abuse. Some theoretical hypotheses that attempt to explain elder abuse base their predictions on the caregiver's mental health or experience of stress - situational theory (Moore, 2019). In this regard, a lack of social skills has been related to the emergence of stress and mental health in adults (Segrin, 2019). Other explanations for elder abuse rely on the equilibrium between the perception of benefits and costs in a relationship - Social Exchange Theory (Moore, 2019). The relational competencies of both caregivers and older adults, and consequently social skills, are in this case of great importance for explaining elder abuse. Despite the absence of a clear connection between social skills and elder abuse, caregivers, older adults who receive care, care professionals point to social skills as fundamental for avoiding conflicts in care relationships, especially skills that involve

expressing positive feelings, controlling and preventing aggressiveness, and discussing problems (Pinto et al., 2016). One particular social skill has been more frequently used in intervention programmes in the context of older adult caregiving than any other; this social skill is assertiveness. For example, the START programme (Livingston et al., 2013), aimed at promoting mental health among caregivers of family members with dementia, includes a topic about assertive communication. This programme decreases depressive symptomatology and anxiety in family carers, which can be an important risk factor for abuse. Assertive communication has also been the focus of some prevention programmes aimed specifically at preventing elder abuse (Diaz Hernández et al., 2014; Fernández et al., 2012), but the effectiveness of the results are not clear. Although assertiveness is an important social skill, it is one of many competencies; the importance of the other skills remains untested and unexplored.

Finally, we look to social skills as a foundation for best practices in caring for or helping people, mainly older adults. To that end, we will take advantage of the work of Stolee and collaborators (2012). By searching iteratively in literature reviews, internet reviews and stakeholder opinions, these authors constructed a set of proposals for planning and implementing best practices in the elder abuse domain. Specifically, these authors concluded that there is almost no evidence to carry out actual assessment and intervention strategies within that domain. Therefore, these authors recommended two strategies: *"build capacity for research and program evaluation to advance knowledge of effective practices and build capacity for knowledge exchange to enhance professionals' efforts"* (p. 180). These recommendations fit very well with the need to translate to practice what we know when we have evidence from good research. If we consider some of the recommendations of Stolee and collaborators (2012) on what best practices surrounding elder abuse should include, we can see the obvious usability of virtually any measure of social skills. Their recommendations are: (a) "include the perspectives of older adults and victims in research, evaluation, and policy and procedure development"; (b) "use a client-centred approach (not "one size fits all")"; (c) consider gender, family violence, and intergenerational approaches; (d) "be sensitive to variations in language, culture, ethnicity, religion, and Aboriginal identity"; and finally (e) "ensure coordination and integration across professionals/organisations" (p. 185). What could be a more direct way to train professionals (e.g., social workers, physicians, psychologists, nurses, and even researchers) within the scope of these recommendations than social skill education and training?

In summary, we have enough evidence that social skills affect psychosocial development processes, the understanding and planning prevention of interpersonal violence, and implementing best practices within health and social care systems.

In the present paper, we aim to present psychometric data for a measure of social skills, the Social Skills Inventory–Del Prette (Z. A. P. Del Prette & Del Prette, 2001), collected from a Portuguese sample.

Del Prette and Del Prette defined social skills as *"a descriptive construct of the social behaviours valued in a particular culture with a high probability of favourable results for the individual, group and community that may contribute to a socially responsible performance in interpersonal tasks"* (A. Del Prette & Del Prette, 2018, p. 24). From this conceptual standpoint, it is possible to classify social skills by their form (e.g. tone of voice, gestures, facial expressions) and functionality. Additionally, behaviours may have a similar function but might vary in form (A. Del Prette & Del Prette, 2018), which means that our social behaviour can vary quite a bit without changing its function.

Another aspect to consider is the intimate relationship between social behaviours and social habits, making culture a determinant of the form and function of social skills. Cultural practices shape our social behaviour and influence social skills' behavioural representations (Z. A. P. Del Prette & Del Prette, 2013). Additionally, social skills are ways of adaptation and coping. These are reasons enough to justify validating social skills measures, even from same-language countries, such as Portugal and Brazil.

In the following paragraphs, we will present the measure for which we ran procedures of adaptation and validation.

The Social Skills Inventory – Del Prette

The Social Skills Inventory – Del Prette (Z. A. P. Del Prette & Del Prette, 2001) is a self-report instrument widely used in Brazil (Z. A. P. Del Prette & Del Prette, 2019); it assesses a range of social skills required in several kinds of everyday interpersonal situations. The items describe different skills in distinct contexts and their use in different interpersonal relationships.

The scale's original factor structure was composed of five factors, described by Z. A. P. Del Prette and Del Prette (2013). These factors represent classes of social skills, mainly organised by the functionality of the behaviour. The first factor is *"Coping and self-assertion with risk"*, referring to the skills needed to deal with interpersonal situations with assertiveness, entailing the possibility of an aversive reaction of the interlocutor (e.g. *Item 16: "In a group of known people, if I do not agree with the majority, I verbally express my disagreement"*). The second factor is *"Self-assertion in the expression of positive affect"* and involves skills related to the expression of positive affect, showing appreciation and respect for others (e.g. *Item 10: "I express affection by words or gestures to my family, friends and colleagues"*). The third factor is *"Conversation and social confidence"* and consists of skills required to conduct and

maintain a neutral social relationship, denoting knowledge of usual standards on daily relationships (e.g. *Item 1: "In a group of unknown people, I am at ease, talking naturally"*). The fourth factor, *"Self-exposure to unknown people and new situations"*, comprises skills to approach unknown people (e.g. *Item 23: "I avoid asking questions to unknown people"*). This factor is somewhat similar to the previous one but encompasses higher risk and exposure. The fifth factor, *"Self-control of aggressiveness"*, aggregates skills to control one's anger and aggressiveness in aversive situations (e.g. *Item 18- "When one of my relatives criticises me for some reason, I react aggressively"*).

The original scale aimed to assess adults between 18 and 25 years old, and it was later extended to 59 years old (Z. A. P. Del Prette & Del Prette, 2018). Additionally, there is a version explicitly directed toward older adults, with differently worded items, removing references to school or work environments to target the elderly population (Braz et al., 2013). Given that some stability is expected in the performance of social skills classes, we opted to design a single version scale for those ages 18 and up. A possible disadvantage is that a single version, analytically speaking, is likely to focus on behaviours that remain more stable across the lifespan, thus focusing on skills that are less prone to change and, as a result, the measure will most likely have fewer items. Nevertheless, this version can be an important tool for exploring and understanding the relationship between social skills and human development.

We present the data from this adaptation and validation in two studies. Study 1 focused only on the cultural adaptation of the SSI-Del-Prette and its psychometric characteristics. Study 2 centred on convergent and divergent validity by relating the factorial structure obtained in study 1 with two measures: a measure of empathy and one of depression.

Study 1

The first study aimed to find a factorial structure of the SSI-Del-Prette for the Portuguese population and its associated psychometric characteristics.

Participants

Given the possible cultural variations in social behaviours, we opted for cross-validation. We gathered data from 287 participants, 215 (74.9%) of whom were female, ranging in age from 19 to 94 years (M=41.23; SD=23.26). Regarding marital status, 152 (53%) of the participants were single, 83 (28.9%) were married, 27 (9.4%) were widowers/widows, and 25 (8.7%) were divorced. Regarding education level, 10 (3.5%) participants attended but did not complete elementary school, 44 (15.3%) did complete elementary school, 6 (2.1%) completed middle school, 115 (40.1%) completed high school, and

112 (39%) had a university degree. We screened participants 65 or older for cognitive impairment using the Mini-Mental State Examination (Folstein et al., 1975, Portuguese version by Guerreiro et al., 1994). We recruited participants online. We also recruited older adult participants from social recreational centres. We randomly divided the dataset into two datasets, accounting for demographics, thereby splitting the dataset into two demographically equivalent data sets: dataset 1 (n=141) for exploratory factor analysis (EFA) and dataset 2 (n=146) for confirmatory factor analysis (CFA).

Procedure

We collected the participants' answers as part of a larger investigation that was submitted and approved by an ethics committee. Three formats were used: online, paper-and-pencil, and a touchscreen system with the read-aloud option. The answering time for SSI-Del-Prette (Z. A. P. Del Prette & Del Prette, 2001) varied due to the data collection method and across age groups; older participants were prone to thinking more cautiously about each question, thus taking longer. In general, it took between 8 and 25 minutes to answer all the items.

Measures

For this validation, we used the 38 items of the SSI-Del-Prette (Z. A. P. Del Prette & Del Prette, 2001). The items were subjected to two adaptations: a) we made small changes in wording so that the item's wording could be closer to the use of the Portuguese language in Portugal; and b) given the goal of producing a single version to be applied across the entire adult lifespan, we removed references to places more commonly frequented by a given age group (e.g. references to school). We sent our adaptations back to the original authors, who approved them before application. Participants marked the frequency with which they performed the behaviour described in each item on a 5-point Likert scale (1= Never or rarely to 5 = always or almost always).

Data Analysis

We conducted statistical analysis using the Statistical Package for the Social Sciences (SPSS) and AMOS, both from IBM (version 24).

First, we scanned the collected data for missing data, outliers and normality. We also transformed the scores of reverse worded items. We conducted EFA using dataset 1 and CFA using dataset 2. We performed EFA with maximum likelihood estimation and Promax rotation. To assess the fit of the model obtained during CFA, we calculated the standardised root mean square residual (SRMR), the root mean

square error of approximation (RMSEA), the comparative fit index (CFI), and the $\chi 2$/d.f. (chi-square/degrees of freedom). We tested two models using CFA: the model obtained through EFA and a theory-driven model. We built the theory-driven model respecting the original structure of the scale and considering our samples' cultural differences. The theory-driven model has six factors developed from 22 of the original items: Factor 1 is "*Conversation and social confidence*", representing behaviours about being at ease during social interactions; Factor 2 is "*Easiness of self-exposure*" regarding familiar and unfamiliar situations where the respondent might feel socially exposed; Factor 3 is "*Self-expression of positive affect*", which entails items related to the self-expression of affection; Factor 4 is "*Coping assertively with risk*", with the common theme of behaving assertively in risky situations; Factor 5 is "*Defending interests and opinions*", which is related to defending one's and other's interests, a sort of assertiveness that encompasses a sense of justice and has a higher risk of confrontation; and Factor 6 is "*Giving and receiving praise*", which is exclusively related to giving and receiving praise.

Results

Exploratory factor analysis.

The first outcome of EFA was Bartlett's test of sphericity, which was significant ($\chi^2(325)=1135.969$, $p<.001$), indicating the appropriateness of using EFA on this dataset and the Kaiser-Meyer-Olkin indicated middling sampling adequacy (KMO=.739). The final five-factor solution had 26 items, explaining 40.306% of the variance. Table 1 displays the rotated pattern matrix.

Table 1 - *Factor loadings from EFA extracted with maximum likelihood and Promax rotation.*

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Item 23	**.736**	-.060	-.044	-.098	-.088
Item 36	**.683**	.150	-.020	-.163	.088
Item 9	**.630**	-.015	-.059	-.091	-.094
Item 17	**.519**	-.161	-.065	.187	**-.266**
Item 12	**.479**	.106	.072	.012	.029
Item 1	**.431**	**.364**	.013	-.127	.115
Item 14	**.426**	-.160	**.290**	.055	.123
Item 8	**.418**	.064	.125	.030	.076
Item 30	**.377**	-.087	.143	**.287**	-.021
Item 13	**.377**	.051	-.206	.045	.223
Item 26	**.257**	-.182	.064	-.036	.121

Item 7	.094	**.732**	-.068	-.102	-.118
Item 31	-.179	**.539**	-.058	.036	**.361**
Item 20	.043	**.495**	-.029	.136	.036
Item 10	-.097	**.485**	.056	**.272**	.009
Item 21	-.157	**.385**	.222	.037	-.091
Item 15	-.074	-.033	**.861**	**-.265**	.105
Item 16	.044	-.113	**.792**	.109	.131
Item 11	.008	.113	**.530**	.228	-.163
Item 27	.051	**.343**	**.485**	-.099	-.165
Item 28	.022	-.077	-.105	**.734**	.218
Item 25	-.224	.102	-.042	**.593**	-.048
Item 29	.101	**.271**	.066	**.482**	-.103
Item 3	-.045	-.143	.049	.012	**.822**
Item 32	.034	.143	.031	.061	**.428**
Item 6	.122	**.287**	.003	.159	**.301**
% of variance explained	17.142	8.96	6.523	3.993	3.688

Bold values represent loadings higher than .25.

The five factors extracted from EFA did not clearly reflect a theoretically solid factor structure. For example, Factor 2 was composed of items regarding the expression of affection, but it had an off-the-topic item, namely, *Item 21,* which states – *"When receiving a defective product, I go back to the store and demand a replacement"*.

Confirmatory factor analysis.

We adopted a competing model approach, testing two models: the model extracted through EFA and the theory-driven model. Fit indexes for both models can be found in Table 2.

Table 2 - *CFA results for the theory-driven model*

Construct		Standardized regression weight	Critical ratio	Internal consistency (CR)
Conversation and social confidence	Item 1	.785	-	.61
	Item 7	.470	4.749***	
	Item 8	.478	4.822***	
Easiness of self-exposure	Item 23	.759	-	.72
	Item 26	.480	5.029***	
	Item 9	.658	6.660***	

	Item 12	.461	4.843***	
	Item 14	.550	5.719***	
Self-expression of positive	Item 31	.534	-	.61
affect	Item 10	.611	4.841***	
	Item 20	.500	4.294***	
	Item 32	.464	4.081***	
Coping assertively with risk	Item 16	.739	-	.70
	Item 15	.606	5.866***	
	Item 11	.596	5.791***	
	Item 27	.472	4.757***	
Defending interests and	Item 29	.747	-	.65
opinions	Item 30	.685	6.823***	
	Item 25	.411	4.325***	
Giving and receiving praise	Item 6	.761	-	.64
	Item 3	.397	4.042***	
	Item 28	.657	6.096***	

***p<.001

Regarding the model's fit, the EFA model does not achieve enough indicators to be considered an acceptable solution. The theory-driven model, however, achieved the minimum fit indicators and was considered an acceptable solution.

In the theory-driven model, items presented adequate loadings for their respective factors, and internal consistency was acceptable (total scale Cronbach's alpha=.797). The factor loadings and internal consistency of the subscales are presented in Table 3.

Table 3 - *Goodness of fit indicators for the tested models: Model 1 (EFA); Model 2 (theory-driven model) - (n=146)*

	$\chi 2$	*df*	$\chi 2/df$	CFI	RMSEA	SRMR
Model 1	533.317***	289	1.845	.690	.076	.104
Model 2	259.95**	194	1.337	.902	.048	.076

**p<.01

***p<.001

Discussion

The main objective of study 1 was to find a factorial structure for the SSI-Del-Prette (Z. A. P. Del Prette & Del Prette, 2001) and its psychometric characteristics using data collected in Portugal. As previously argued, there could be cultural differences that affect our social behaviour; therefore, we opted to perform exploratory and confirmatory factor analysis. The EFA was helpful, but it was necessary to

perform a careful analysis of each item's content and the patterns presented to generate a theoretically defendable model. This theoretical model achieved adequate fit; therefore, it is an acceptable model to assess social skills in the Portuguese population based on the items of the original SSI-Del-Prette (Z. A. P. Del Prette & Del Prette, 2001).

The resulting model has some similarities with and differences from the original scale's structure. Four factors of our version are conceptually identical to four factors of the original scale ("*Conversation and social confidence*", "*Easiness of self-exposure*", "*Self-expression of positive affect*", and "*Coping assertively with risk*"). Here, unlike in the original works of Z. A. P. Del-Prette and Del-Prette (2001), we did not find a factor for "Self-control of aggressiveness"; however, we found a factor related to protecting one's opinion, a narrower form of assertiveness, with higher stakes. We called it "*Defending interests and opinions*". A certain degree of control of aggressiveness is implicit in this new factor so that it might be, to some degree, related to the factor in the original proposal. The main difference was our sixth factor, "*Giving and receiving praise*". This new factor has been considered since in the more recent works of A. Del Prette and Del Prette (2018); giving and presenting praise is mentioned in two different sections of the social skills portfolio (Communication and Making and Maintaining Friends). Overall, the obtained factor structure was close enough to the original one to support the idea of universality in social skills and different enough to support the argument that there are cultural specificities in social behaviour.

Study 2

This study focused on the convergent and divergent validity of the Portuguese adaptation of the SSI-Del-Prette, namely, by correlating our obtained measure outcomes with two indices: depression and empathy.

The role of social skills in depression is frequently examined but is not completely clear. For instance, differences in social skills between adolescents with and without depressive symptoms also relate to gender (Campos et al., 2018). However, several theoretical relationships between social skills and depression have been proposed (Segrin, 2000); the exact role of social skills in depression remains unclear. For example, Segrin and collaborators (2016) used depression as one of several psychological distress indicators and found a negative association between psychological distress and social skills. Although the relationship between social skills and depressive symptoms is not clear, the direction of this relationship seems negative; therefore, we chose depressive symptomatology as an indicator of divergent validity.

We chose empathy as an indicator of convergent validity because empathy, as Davis (1983, p. 113) put it, *"refers to the reactions of one individual to the observed experiences of another"*. Therefore, by definition, successfully using social skills is associated with the ability to react to others' experiences; therefore, a positive relationship is expected between them. Some authors consider empathy to be a behavioural portfolio's primary social skill (A. Del Prette & Del Prette, 2018). Moreover, empathy measures are standard benchmarks of convergent validity for measures of social skills (e.g. Anastácio et al., 2016).

Participants and Procedure

A total of 212 participants ranging in age from 19 to 68 years (M=31.29; SD= 12.98), 172 (81.1%) of whom were female, and also participated in study 1, completed the measures of depression and empathy, in addition to the items of the SSI-Del-Prette, taking 20 minutes on average. Regarding demographic traits, participants' marital status indicated that 137 (64.6%) were single, 57 (26.9%) were married, 17 (8%) were divorced, and 1 (0.5%) was widowed. Regarding education level, 1 (0.5%) completed middle school, 109 (51.4%) completed high school, and the remaining 102 (48.1%) had a university degree.

Measures

In this study, we used the version of the SSI-Del-Prette (Z. A. P. Del Prette & Del Prette, 2001) generated in study 1. We calculated a total scale score and factor scores, as described in study 1.

To measure empathy, we used the Interpersonal Reactivity Index (IRI; Davis, 1983; the Portuguese version for research by Ferreira-Alves et al., 2012). This measure has 28 items describing behaviours and emotions based on 4 dimensions of empathy: Perspective-taking, Fantasy, Empathic concern and Personal distress. The participants answered each item on a six-point Likert scale, from 1 (Does not describe me well) to 6 (Describes me very well).

We assessed depressive symptomatology using Beck's Depression Inventory (BDI; Beck et al., 1961, the Portuguese version by Coelho et al., 2002). This measure has 21 items, where each alternative presents a higher level of depression than the previous measure. The total score varies from 0 to 63 points.

Data Analysis

First, we performed CFA on all measures, as Hair Jr and collaborators (2014) suggested as a good practice, following the same guidelines as in study 1. Second, we observed descriptive statistics of all of measures. Third, we used Pearson correlations to check the relationship between our version of the SSI-Del-Prette and the variables of Empathy and Depression.

Results

First, to confirm the factor structure of IRI, we conducted CFA. The four-factor structure presented acceptable model fit ($\chi 2$=96.409, *df*=48, *p*<.001, CFI=.926; RMSEA= .069; SRMR=.061). Internal consistency was acceptable (full-scale Cronbach's α=.788; Fantasy CR=.66; Empathic concern CR=.73; Perspective-taking CR=.73; Personal Distress CR=.75).

The BDI showed a previously reported two-factor (somatic-affective factor and cognitive factor) structure (Arnau et al., 2001) with good model fit ($\chi 2$=292.280, *df*=166, *p*<.001, CFI=.900; RMSEA=.060; SRMR=.060). It also showed good internal consistency (full-scale Cronbach's α=.895; somatic-affective factor CR= .85; cognitive factor CR=.77). Descriptive statistics for all three measures are displayed in Table 4.

Table 4 - *Descriptive statistics of the variables social skills, depression, and empathy*

	M (SD) (N=212)	Min	Max
Social Skills (SSI-Del-Prette total score)	76.334 (11.279)	51	107
F1 - Conversation and social confidence	3.160 (.761)	1.33	5.00
F2 - Easiness of self-exposure	2.835 (.736)	1.00	4.80
F3 - Self-expression of positive affect	3.462 (.783)	1.75	5.00
F4 - Coping assertively with risk	3.553 (.796)	1.50	5.00
F5 - Defending interests and opinions	3.896 (.670)	1.67	5.00
F6 - Giving and receiving praise	4.310 (.592)	2.67	5.00
Depression (BDI)	7.948 (7.391)	0	41
Somatic-affective	5.406 (4.775)	0	22
Cognitive	2.382 (2.926)	0	18
Empathy (IRI)	114.009 (13.26)	79	155
Perspective-taking	4.342 (.713)	2.29	6
Empathic concern	4.767 (.632)	2.86	6
Fantasy	3.933 (.888)	2.29	5.86
Personal distress	3.246 (.795)	1.29	5.86

To test for convergent and divergent validity, we correlated the measure of depressive symptomatology (BDI) and the measure of empathy (IRI) with the social skills measured by the SSI-Del-Prette. We expected that social skills would be positively associated with empathy and negatively associated with depressive symptoms, as previously justified. Table 5 presents the correlation coefficients between the SSI-De-Prette and the IRI and the BDI.

Table 5 - *Pearson correlations between SSI-Del-Prette factor scores and total score, and the total depressive symptomatology (BDI) and its subscales, and the measure of empathy (IRI) and its subscales.*

	Total Score	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Depression (BDI)	-.194**	-.151*	-.244**	-.084	-.196**	-.031	.005
Somatic-affective	-.186**	-.151*	-.234**	-.094	-.167*	-.031	.001
Cognitive	-.170*	-.115	-.219**	-.051	-.200**	-.030	.005
Empathy (IRI)	.123	.044	.030	.138*	.005	.161*	.226**
Fantasy	.080	.026	.057	.042	.066	.086	.068
Empathic concern	.179**	.163*	.054	.210**	-.037	.171*	.320**
Perspective-taking	.314**	.210**	.150*	.259**	.155*	.356**	.277**
Personal distress	-.221**	-.241**	-.170*	-.116	-.172*	-.167*	-.040

** $p < .01$

* $p < .05$

Note: Factor 1 - Conversation and social confidence; Factor 2 - Easiness of self-exposure; Factor 3 - Self-expression of positive affect; Factor 4 - Coping assertively with risk; Factor 5 - Defending interests and opinions; Factor 6 – Giving and receiving praise

The main results indicate a negative correlation between the BDI and the SSI-De-Prette total score, and negative correlations between the BDI and *"Conversation and social confidence"*, *"Easiness of self-exposure",* and *"Coping assertively with risk"*. *"Self-expression of positive affect"*, *"Defending interests and opinions",* and *"Giving and receiving praise"* did not correlate with the BDI. The BDI subscales showed the same pattern, except for cognitive symptoms, which did not correlate significantly with *"Conversation and social confidence"*.

Like in opposition, the total score for empathy correlated significantly and positively only with *"Self-expression of positive affect"*, *"Defending interests and opinions",* and *"Giving and receiving praise"*. The IRI subscales revealed a more complex pattern. Fantasy did not correlate significantly with any indicator of the SSI-Del-Prette. Empathic concern showed the opposite pattern of the cognitive symptomatology subscale: it correlated positively with the total scale and *"Conversation and social*

confidence", *"Self-expression of positive affect"*, *"Defending interests and opinions",* and *"Giving receiving praise"* and did not correlate with *"Easiness of self-exposure"* and *"Coping assertively with risk"*. Perspective-taking correlated positively with all indicators of the SSI-Del-Prette. Personal distress revealed a similar pattern to the BDI and negatively with *"Defending interests and opinions"*.

Discussion

The main objective of study 2 was to present indicators of convergent and discriminant validity for our newly adapted SSI-Del-Prette. First, we tested the structure of the measures used for convergent and discriminant validity and deemed them acceptable. Second, we examined the descriptive statistics of the BDI and the IRI. Third, we correlated the measures as indicators of convergent and discriminant validity.

The obtained results are congruent with the expected relations between the measures. Depressive symptomatology and social skills do not always have a clear relationship (Campos et al., 2018; Segrin, 2000). Our results suggest that for depressive symptoms, social skills might perhaps adopt a mediating role between depressive symptoms and other variables. We found negative correlations between depressive symptoms and *"Conversation and social confidence"*, *"Easiness of self-exposure",* and *"Coping assertively with risk",* but not with *"Self-expression of positive affect"*, *"Defending interests and opinions",* or *"Giving and receiving praise"*. These results are congruent with Segrin and collaborators (2016), who proposed that depressive symptoms could relate to social skills but only as part of distress since the related factors seem to be the ones more likely to cause distress. A surprising outcome is the lack of relationship between the somatic-affective subscale and *"Self-expression of positive affect"*. Perhaps there is a difference between experiencing affective symptoms of depression and expressing affection to others.

For the empathy measure, there was no correlation between the measures' total scores, while we expected a positive association. This result might be because the total IRI score includes the score of Fantasy, which showed no relationship with social skills. The absence of a relation between Fantasy and social skills seems reasonable since no theoretical reason for this relationship exists. The relationships found with Empathic Concern make sense; the one relationship that could seem odd is with *"Defending interests and opinions"*, but this factor has an item about other people's interests; therefore, some level of empathic concern is understandable. Perspective-taking is associated with all the SSI-Del-Prette indicators, which makes sense as taking the perspective of the people we interact with is essential to all the assessed skills. Last, the only difference between personal distress and the BDI is the negative relation

with *"Defending interests and opinions"*. This factor might lead to confrontation; this does not necessarily cause depressive symptomatology but quite likely causes personal distress. Hence, there is some logic in this outcome.

The obtained correlations, in our view, support the discriminant and convergent validity of the SSI-Del-Prette, adding arguments in favour of its use.

General Discussion

The purpose of this article was to present a cultural adaptation of the SSI-Del-Prette (Z. A. P. Del Prette & Del Prette, 2001) for the Portuguese population and its psychometric characteristics. Moreover, we intended to show some evidence of the resulting measure's divergent and convergent validity by associating it with a measure of depression and one of empathy.

Due to cultural influence, social skills provide a challenge when one wants to validate measurement instruments (Z. A. P. Del Prette & Del Prette, 2013). Nevertheless, the variety of social skills training programmes (e.g. Braz et al., 2013; Turner et al., 2018) and the other research possibilities that emerge from this measure make its validation meaningful. However, a difficulty inherent in measures based on cultural behaviours is that they are ever-changing, making the process of adaptation and validation never definitive but always subject to re-evaluation.

Regarding the convergent and divergent validity, the obtained results, as explored previously, were as expected and contribute as an indicator of quality for our version of the SSI-Del-Prette.

However, this validation presents some limitations. First, we did not test the test-retest reliability, as was done with the original version (Bandeira et al., 2000). It is fundamental to test for temporal stability of a measure that can be used to gauge interventions. The second limitation is the absence of a comparison of the scale performance between genders. This comparison was not on our objective for this paper, but there could be gender differences in the use of social skills. Testing the metric invariance of this measure would clarify whether this version works equally well for men and women. We did not perform such a test due to the small number of male participants. Third, as an adaptation of a measure, we could have overlooked behaviours that are more common in the Portuguese population, which are part of the assessed social skills but were not present in the original items. Although Portugal and Brazil share a language, there are enough differences in social behaviour to suggest that some extra items could lead to a more similar set of classes as the ones suggested by the original authors (Z. A. P. Del Prette & Del Prette, 2018), even if our behavioural portfolios might vary.

Conclusion

In summary, we generated a measure with good indexes of internal validity; this means that people reply differentially according to the dimensions of "*Conversation and social confidence*", "*Easiness of self-exposure*", "*Coping assertively with risk*", "*Self-expression of positive affect*", "*Defending interests and opinions*", and "*Giving and receiving praise*". Further, we obtained good indexes of external validity because this measure was significantly and positively linked to empathic concern and perspective-taking and negatively related to personal distress and depression.

In our view, the measure validated in this paper and other measures of the same nature can be important tools to develop and assess intervention, prevention, and training programmes for professional or voluntary carers aimed at safeguarding adults. Although assertiveness has been a competence of interest for interventions with caregivers and older adults (e.g. Diaz Hernández et al., 2014; Livingston et al., 2013), other social skills may have a relevant role to play. The training and promotion of social competence can very well be a way to prevent elder abuse since it emerges in social relationships. Enhancing social skills can also be of value for the training of social and health professionals that work in adult protection. Social skills can be important competencies for professionals, contributing to better communication with patients and clients. These skills have the potential to enhance these interactions and perhaps even contribute to building safer social environments between professionals and adult victims.

The previously stated connections between the social skills of professional caregivers, or even older adults themselves, regarding the quality of adult care provide a foundation for many future studies within the field as action research. The inclusion of social skills in the education of professionals can, in our view, benefit the realm of adult protection. A first step, however, needs to be the creation, adaptation, and validation of measures. We hope that this paper can provide researchers and professionals with an alternative to measure social skills and inspire the inclusion of these variables in the sphere of professional education to achieve adult protection.

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Chapter IV

Elder abuse as a social exchange: the role of cognition, functionality and social skills.

Fundinho, J. F. & Ferreira-Alves, J. (2022). *Elder abuse as a social exchange: the role of cognition, functionality and social skills*. [Manuscript submitted for publication]. School of Psychology, University of Minho

Abstract

This study operationalizes and tests some predictions of a social exchange theory of elder abuse. The theory proposes that older adults with low resources and high dependency/low relational power have a higher risk of abuse. We operationalize resources as being determined by cognitive structures (episodic memory, perceptual speed, verbal fluency, executive function) and dependency/relational power determined by functionality and social skills. We collected data from 62 older adults. Results showed that emotional abuse is predicted by episodic memory and phonemic fluency, financial abuse by perceptual speed and phonemic fluency, and neglect by perceptual speed. These effects were particularly expressive in older adults with higher dependence on movement and lower dependence on hygiene and daily organization. Higher assertiveness, defending opinions, and expression of positive affect also potentiated the effects of cognition on abuse. Our results support a social exchange view of elder abuse but warn of the complexity of the theory.

Keywords: elder abuse; social exchange theory; cognitive functioning; social skills; theories of abuse

Elder abuse as a social exchange: the role of cognition, functionality and social skills

Elder abuse is defined by the World Health Organization (2002) as a single or repeated action (or absence of action) that results in harm or distress to the older adult and is carried out by a person whom the older adult trusts. Since its first reference by the scientific community in 1975 (Baker, 1975; Burston, 1975), elder abuse has been a subject of interest for researchers. Frequently, research focus on issues of practical relevance such as prevalence estimation, measurement, and risk factors. However, theoretical development has been somewhat neglected (Fundinho, Pereira, et al., 2021). Developing and testing theories explaining elder abuse is crucial to predicting and intervening in future cases. There are different proposals to explain abuse or mistreatment, for example, the caregiver's stress hypothesis or the psychopathology of the caregiver. Evidence from previous works indicated that more than one theory of abuse gathers support from data, suggesting that it is necessary to investigate the more complex and inclusive approaches to explain abuse. Social Exchange Theory was recently proposed to serve as a framework for that integration, but it is necessary to test further operationalizations of the theory (Fundinho, Pereira, et al., 2021).

Social Exchange Theory views human interactions as trades of material (e.g., money) or non-material (e.g., social acceptance) resources between two persons (Blau, 1964; Dowd, 1975; Homans, 1961). In a particular exchange, both actors will maximize their rewards and minimize their costs. A well-balanced exchange is mutually satisfying, where both persons feel there was a just distribution of rewards according to their costs. Elder abuse does not occur in mutually gratifying relationships (or balanced relationships). Instead, it emerges in relationships where at least one of the partners feels that the distribution of costs and rewards is unfair. If it becomes more difficult for an older adult to produce or use resources while his or her needs increase, more exchanges will be necessary to fulfill these needs. Increased needs and fewer resources for exchange lead to fewer exchange opportunities, creating dependency, typically on a caregiver. One person's dependency gives the other more power over the relationship, creating unbalanced exchanges. In these unbalanced exchanges, the more powerful actor can set the tone of the subsequent interactions, aiming to maximize rewards and minimize costs. Sometimes, the strategies used to manage unbalanced relationships can be classified in what is understood as elder abuse.

Through social exchange theory, elder abuse can be conceptualized as an unbalanced exchange created by difficulties in accessing resources, which leads to dependency and low power in managing the

relationship. Unbalanced relationships are perceived as unfair by the person with more power, generally a caregiver, that will employ strategies to maximize rewards and reduce costs. Some of these strategies are part of a typical caregiving experience. For example, a caregiver seeking help to perform everyday tasks or learning to give more importance to the positive aspects of caregiving is trying to reduce costs and maximize rewards. However, some strategies are not as healthy as these. For example, a caregiver might seize property or other material goods from the older adult (what is defined as financial exploitation), or a caregiver can disengage from future exchanges to avoid non-profitable interactions (resulting in neglect). In addition, in some cases, the more powerful partner can try to replicate the perceived costs in the interaction by inflicting distress or pain. These behaviors can fall under the definition of physical and emotional abuse in what can be described as a lose-lose exchange.

From these theoretical assumptions arise two critical predictions: first, the fewer the resources to trade, the higher the likelihood of suffering mistreatment; and second, power and dependence should moderate the effect of resources in the prediction of abuse.

Therefore, to provide evidence to support this theory, we should measure power/dependence and the availability of resources. The difficulty we face is selecting appropriate measurements, for none of these can be measured directly. There are several ways for someone to be dependent on another person. One way of operationalizing dependence would be through measuring deficits, for example, functionality. People with lower functionality rely more frequently on exchanges with others to fulfill their basic needs. Several studies identify functionality as one of the predictors of elder abuse (Burnes et al., 2015; Conner et al., 2011; Orfila et al., 2018). However, measuring functionality as a whole provides a limited way to measure dependence, not taking into account several other ways of dependency.

Resources are very complex to approach, for there are many ways of interacting with others. One way of looking indirectly at resources is to look for the ability to produce them. For instance, someone with cognitive impairment is less likely to be an attractive trade partner because he/she does not have the same ability to interact. A more specific example could be that a memory deficit can make producing the resource "telling a story" more challenging. This reasoning has support in several studies that show ties between cognitive impairments and elder abuse (Dong et al., 2014; Serra et al., 2018; Wang, 2006); These studies generally do not go beyond associating abuse with cognitive impairment, not exploring what happens with specific cognitive skills. Only a few studies like Dong, Simon, Rajan, and Evans (2011)' analyzed the effects of specific cognitive skills and found a relationship between episodic memory and perceptual speed and elder abuse. There were subtle differences according to the type of abuse; for example, episodic memory was only associated with neglect and financial exploitation, and perceptual

speed was associated with these types of abuse, plus emotional abuse. Neither was associated with physical abuse. This differentiation that has also been hinted in other works (Orfila et al., 2018), is important and supportive of the social exchange hypothesis – different exchanges require different skills and can elicit to different abusive responses. Therefore, in order to consider social exchange a viable explanation for elder abuse it is necessary to increase our knowledge about how specific abilities relate to specific forms of abuse and how these relationships are influenced by power and dependency.

Furthermore, and given that social exchange is an explanation based on the behavioral aspect of human interaction, it is crucial to understand how skills that shape social behavior affect the relationship between these cognitive abilities and abuse. The study of social skills in this context is particularly relevant. Social skills are social behaviors valued in a specific culture with a high probability of producing favorable results in interpersonal tasks (Del Prette & Del Prette, 2018). Therefore, specific social skills may play a role in maintaining the power/dependence balance. Specific skills might add social value (while others might subtract), and a person with more social value is a more attractive trade partner (Dowd, 1975). Given this rationale, social skills might play a role, like functionality, altering the power dynamics in a relationship and, therefore, influencing the relationship between resources and abuse.

Given this rationale, this paper has several aims. First, to replicate the results of Dong and collaborators (2011) on the relationship between episodic memory, perceptual speed, and abuse. Second, explore the possible association of other cognitive skills with elder abuse. For this purpose, we added the variables executive function and verbal fluency, considering that they may considerably influence the quality of social interactions. Third, explore the moderator role of power/dependency predicted by social exchange theory in the relationship between cognitive abilities and abuse. To assess power/dependency, we used functionality. Fourth and last, to explore the moderator role of social skills in the relationship between cognitive abilities and abuse. Social skills require cognitive dexterity but are more complex and have a determinant role in social behavior.

Methodology

Participants

Participants were recruited in cooperation with eight social, recreational centers for older adults in the province of Minho, Portugal, during the year 2018. To be eligible for this study, participants had to screen negative for cognitive impairment in the Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975, Portuguese version by Guerreiro et al., 1994). This restriction was implemented for the answers to the self-report measures to be more reliable. A total of 62 older adults (40 females) between

64 and 94 years old (M=79.44, SD=8.617) participated in this study. As for marital status, 41.9% of the participants were widowers, 32.3% were married, 14.5% were single, and 11.3% were divorced. Regarding education, the majority (71%) completed elementary school, but 16.1% frequented elementary school without completion, acquiring only the ability to read and perform basic mathematical operations. Also, 12.9% of the participants had an educational level higher than elementary school, with two participants with a college education.

Measures

In the present study, we used seven measures: four measures for four different cognitive abilities, namely, episodic memory, perceptual speed, verbal fluency, and executive function; and three other measures, one for social skills, one for functionality, and one for abusive behaviors.

Episodic Memory

We used the Hopkins Verbal Learning Test – revised version, form 3 (HVLT-RV, Brandt & Benedict, 2001) to assess episodic memory, translated and adapted for the Portuguese population by Fernandes and Pinho, 2010). This test consists of 3 tasks. In the first task, a list of 12 words (concrete nouns) belonging to 3 distinct semantical categories is presented three times. At the end of each presentation, participants were asked to recall as many of the given words as possible. The second task is delayed recall, taking place 20 to 25 minutes after learning the list of words. The third task is a recognition test. The 12 presented words are mixed with 12 new words, some semantically related and others unrelated. Each word was displayed individually on a screen, and the participant was asked if the word was presented earlier. The scoring of the HVLT-RV gives us several indicators of the functioning of the participant's episodic memory. In this study, we used two of them. First is the total recall capacity, i.e., the total number of words recalled in the first three trials. Second is the discrimination index for the recognition test, which is the value obtained by subtracting the number of false alarms from the number of hits.

Perceptual Speed

To assess perceptual speed, we used a variation of the Letter Comparison Test (Salthouse & Babcock, 1991), where the participant has to discriminate between equal or different stimuli as fast as possible. This procedure consisted of presenting letter strings on a computer screen, one pair at a time, one string on the right, and the other on the left side of the screen. The procedure started with one single

letter and, after five trials, added another letter to the string, and so forth. This procedure stopped automatically after three errors. The participant had been instructed to answer as fast as possible. For this study, as an indicator of perceptual speed, we considered the mean ratio between the time to answer and the length of the string, therefore getting the average time of processing per letter.

Executive Function

As some authors argue, executive function is a broad term to refer to several critical functions related to the integrity of the frontal cortex (Miyake et al., 2000; Salthouse et al., 2003). In this study, the Trail Making Test (Reitan, 1992, Portuguese norms by Cavaco et al., 2013) was used as a measure of executive function, for it has been widely used as a measure of some of these functions, like scanning, visuomotor tracking, cognitive flexibility, and divided attention. The TMT has two parts (A and B). In this study, we consider only part A. In part A, participants face numbers ranging from 1 to 25, randomly distributed in space, and are asked to connect those numbers by ascending order. The beginning (number 1) and the end (number 25) are signaled. The participant has 200 seconds to connect as many numbers as possible. Instead of the classical paper and pencil format, we opted for a computerized version, which is not unprecedented (e.g., Zakzanis, Mraz, & Graham, 2005). As not all participants were able to finish within the time limit, instead of counting the time to finish, as suggested in the norms (Cavaco et al., 2013), we coded the participant's ability to finish within the given time (0 = unable to finish; 1= able to finish).

Verbal Fluency

The Controlled Oral Word Association Test (COWAT; Benton & Hamsher, 1976) consists of a phonemic fluency test and a semantic verbal fluency test. The phonemic fluency test requires using processes of working memory, executive control, and cognitive flexibility (Baldo et al., 2006). In this task, the participant has one minute to enunciate as many words as possible that start with a given letter. The Portuguese version consists of 3 trials, one for each of the letters P, M, and R. Each correct word is scored with one point, and the total score is obtained by adding all the points. In this study, we opted for an indicator typically considered more demanding, which is the number of correct words enunciated in the first 15 seconds of each trial (Isaacs & Kennie, 1973; Lezak, 1995).

The semantic fluency test assesses the accessibility of semantic or conceptual contents. In this test, the participant has one minute to enunciate as many words as possible belonging to a given category. Like in the phonemic fluency test, the score is given by counting the number of correctly recalled words

and the number of errors. Two semantic categories were used in this study. The first one was the animals' category (Read, 1980), and the second category was things that could be bought at a supermarket (Strauss et al., 2006).

Functionality

We compiled the items of Barthel's Index (Mahoney & Barthel, 1965, Portuguese version by Sequeira, 2007) and Lawton-Brody's Index (Lawton & Brody, 1970, Portuguese adaptation by Azeredo & Matos, 2003) into a measure of three components of functionality. This approach was adopted because, through social exchange theory, we wanted to focus on specific forms of everyday dependence. Through Confirmatory Factor Analisis (CFA), described in the results section, we obtained three forms of functionality: movement, hygiene, and daily organization. Functionality for movement included all tasks that require physical acuity (e.g., climbing stairs). Hygiene included all tasks related to daily hygiene (e.g., bathing). The daily organization included tasks required for daily household maintenance (e.g., grocery shopping). The answers to both measures were standardized and coded in 3 points: 0 – Independent; 1 – Independent with assistance, and; 2 – Dependent.

Social Skills

The Social Skills Inventory – Del Prette (Del Prette & Del Prette, 2001), a Portuguese version by Fundinho et al. (2021), was used to assess social skills. The inventory is composed of 22 items, each describing behavior that requires applying a specific social skill. Participants rate the frequency of occurrence of each competency on a 5-point Likert scale, from 1 – Never to 5 – Always. Each item is part of one of six subscales representing six social skills. Subscales are Conversation and Social Confidence, Easiness of self-exposure, Self-expression of positive affect, Coping assertively with risk, Defending interests and opinions, and Giving and receiving praise. Each subscale score was obtained by calculating the mean of the answers. Higher scores represent the more frequent use of the assessed social skills. Also, a total score of social skills can be calculated by adding the response to all items.

Abusive Behaviors Targeted at Older Adults

We compiled a list of abusive behaviors based on previous instruments, abuse typologies, and scientific literature. The items were phrased to represent the theoretical model we adopted. The items describe specific behaviors that, by definition, constitute abuse (e.g., *"Yelled at me"*). Phrasing the items as behaviors makes them conceptually exchange resources. The instruction to the participant asked to

think about interactions with the caregiver while responding. The list was composed of 32 behaviors, where eight were relative to physical abuse, and the remainder 24 were equally distributed to emotional, financial, neglect, and denial of rights. The participants were asked to identify which of the listed behaviors (if any) were experienced in the past year

Procedure

Data collection occurred in the context of a more extensive study that was submitted and approved by the ethics committee for social and human sciences of the University of Minho (SECSH 024/2016). All participants provided written informed consent. The data collection procedures took place during 2018 and were divided into two sessions of approximately 60 minutes. The rhythm of the sessions was adapted to the rhythm of the participant. The principal researcher conducted the sessions in an adequately lit and comfortable office provided by the day-care facilities. Every procedure was computerized, programmed for a touchscreen device with the approximate dimensions of a paper sheet using PsychoPy (Peirce & MacAskill, 2018). All instructions, questions, and answering options were presented on the screen and read aloud by the researcher. The touchscreen device was set at the same distance for every participant. The participant would use his/her fingertip to complete the tasks or select the answer for the questionnaires from the visual aid presented on the screen.

Statistical Analysis

The statistical analysis was conducted on the Statistical Package for the Social Sciences (SPSS). AMOS was used to test the model fit for the instruments used. Fit indexes were selected based on the recommendations of Brown (2006). As a support tool for moderation analysis, we used Andrew Hayes' PROCESS (Version 3.5) macro for SPSS (Hayes, 2013). To test our hypotheses, we used multiple stepwise (backward) regressions, hierarchical regressions, and simple slope analyses on the interaction effects.

Results

First, we will summarize the descriptive statistics of the assessed variables and then explore the relationship between cognitive skills and abuse. Lastly, we test the role of functionality and social skills in the relationship between cognition and elder abuse.

Descriptive Statistics

Regarding the findings of the measurement of abuse, 20 participants (32.3%) reported having been the target of at least one of the enumerated abusive behaviors. Considering specific types of abuse, only 1 participant reported physical abuse. Its low frequency (no variance) did not allow for further statistical testing, and, for that reason, no further analyses were conducted for physical abuse. As for emotional abuse, it was reported by 8 participants (12.9%), financial exploitation and neglect were both reported by 9 participants (14.5%) each, and denial of rights was reported by 4 participants (6.5%). The list of abusive behaviors aimed at older adults showed excellent internal consistency (Cronbach's alpha = .96). The subscales for each type of abuse also showed acceptable values of internal consistency: emotional abuse (Cronbach's alpha = .919); financial exploitation (Cronbach's alpha = .903); negligence (Cronbach's alpha = .812); and denial of rights (Cronbach's alpha = .782).

Concerning functionality, we started by testing the hypothesized three -factor structure using CFA. Three items were removed from the analysis, the two incontinence items from Barthel's Index and the medication item from Lawton-Brody's due to low variance. The three-factor solution for functionality was tested and showed adequate fit, $\chi^2 = 113.252$, df = 87, $p = .031$, CFI = .927; RMSEA = .070; SRMR=.076. The internal consistency was assessed by composite reliability (Hair, William, Babin, & Anderson, 2014), where CR is considered good above .70 but is acceptable above .60. In general, the factors showed good or acceptable values of CR: Movement (CR = .793); Hygiene (CR = .685); and Daily Organization (CR = .845). Regarding Movement, participants were mostly independent (M = .398; SD = .343), as they were with hygiene (M = .763; SD = .580). In daily organization, participants were mainly independent with help (M =1.229; SD = .578).

Descriptive statistics for social skills are presented in Table 1. As for the cognitive skills assessed, means and standard deviations for the indicators of episodic memory, perceptual speed, and verbal fluency are also presented in Table 1. Regarding executive function, 32.3% of the participants could complete the TMT-part A in time, with an average of 1.98 errors (SD=2.433).

Table 1 - *Descriptive statistics for Episodic Memory, Perceptual Speed, Verbal Fluency and Social Skills.*

	Min	Max	Mean (SD)
Cognitive Skills			
Episodic Memory			
Total Recall	3	21	11.15 (4.284)
Discrimination Index	0	24	15.45 (5.577)

Perceptual Speed	.336	15.349	2.103 (3.366)
Verbal Fluency			
Phonemic Fluency	0	22	6.21 (4.301)
Semantic Fluency	2	16	7.87 (3.257)
Social Skills Total	48	90	71.919 (10.815)
Conversation and Social Confidence	1.33	5.00	3.199 (1.130)
Easiness of self-exposure	1.00	3.80	1.652 (.746)
Self-expression of positive affect	1.75	5.00	4.161 (.805)
Coping assertively with risk	1.00	5.00	3.210 (1.196)
Defending interests and opinions	1.00	5.00	3.855 (.980)
Giving and receiving praise	2.00	5.00	4.339 (.811)

Relationship Between Cognition and Elder Abuse

To explore the relationship between cognition and elder abuse, we started by correlating the selected indicators of cognitive functioning and the different types of abuse. The correlation coefficients are presented in Table 2.

Table 2 - *Association between abusive behaviors by type and Episodic Memory, Perceptual Speed, Verbal Fluency, and Executive Function.*

	Abusive Behaviors	Emotional	Financial	Denial of rights	Neglect
Episodic Memory					
Total Recall	.060	.129	.142	.066	-.114
Discrimination Index	-.054	-.108	-.061	-.152	.047
Perceptual Speed	.344**	.244	.298*	.152	.342**
Verbal Fluency					
Phonemic Fluency	.489**	.454**	.441**	.303*	.399**
Semantic Fluency	.257*	.332**	.179	.178	.205
Executive Function					
Completion Success	.242	.193	.200	.276*	.183
Number of Errors	-.078	-.046	-.057	-.109	-.020

* $p < .05$
** $p < .01$

Unlike in Dong and collaborators (2011), no relationship was found between episodic memory and elder abuse. As for perceptual speed, the relation found is congruent with the previous findings, where the longer it takes to process the letters, the higher the number of abusive behaviors reported. The exception for this relationship is emotional abuse and denial of rights.

When adding the two new indicators of cognitive function, we found a positive relationship between executive function, measured by the success to complete TMT-part A in time, and denial of rights. Regarding verbal fluency, phonemic fluency has a positive relationship with every type of abuse. In contrast, semantic fluency is only positively related to elder abuse total and emotional abuse, meaning that the more words a participant could enunciate in the first 15 seconds of each trial, the higher the number of abusive behaviors reported.

To better understand how these cognitive indicators influence each other and predict the frequency of abusive behaviors, we conducted a series of regression analyses with two models: Model A considers only the previously identified predictors of elder abuse (episodic memory and perceptual speed), and Model B is a full model, including all cognitive indicators we have studied, in the regression. The first regression models were tested to predict the total number of abusive behaviors targeted at older adults based on their cognition, no matter the type of abuse. In Model A, a significant regression equation was found ($F(3, 58) = 3.294$, $p=.027$) with an R^2 of .146. In this model, both indicators of episodic memory were not significant predictors of abusive behaviors, unlike perceptual speed. The number of abusive behaviors experienced increased by .799 for each second more it took the participant to process each letter. The full model (Model B) also presented a significant regression equation ($F(7, 54) = 4.191$, $p=.001$) with an R^2 of .352. In this model, perceptual speed remained a significant predictor, where the number of abusive behaviors increased by .639 for every second more it took to process each letter. Also, Phonemic Fluency was a significant predictor, where the number of abusive behaviors increased by .610 for each word recalled. Put simply, for about every two seconds more of processing time or about two more words recalled in the Phonemic Fluency task, one more abusive behavior was reported.

The same analysis was conducted for each type of abuse. A summary of these regression analyses is presented in Table 3. Denial of rights was the only form of abuse to show no significant regression equation and was, therefore, not included in any further analyses. Both models presented the same pattern in the case of neglect, with a positive association between perceptual speed and neglect. Model B explained more variance in financial abuse, and perceptual speed and phonemic fluency were the two significant predictors. Emotional abuse poses a more complex picture. In Model A, only perceptual speed is a significant predictor, but in the full model, there are changes. With the addition of the other cognitive variables, perceptual speed is no longer a significant predictor. The ability to discriminate between presented and not presented words in the episodic memory task becomes a significant predictor. The higher the ability to discriminate, the less reported abusive behaviors. Moreover, phonemic fluency also becomes a predictor, with an effect in the same direction as presented in financial abuse.

The Moderating Role of the Functionality on the Relationship Between Cognition and Abuse

Considering the regression analysis results presented, we conducted a series of moderation analyses to test a set of predictions based on our conceptualization of an explanation for elder abuse based on social exchange theory. The regression analysis results showed which cognitive resources were essential predictors of elder abuse and, therefore, were the chosen predictors for the moderation analysis.

To test the hypothesis of functionality acting as a moderator in the relationship cognition-abuse, we conducted a series of hierarchical regression analyses, summarized in Table 4 (for a graphical representation of the significant moderation effects, check the supplementary material – Appendix B). In the first step, we included the functionality and cognitive indicators. The predictor variables were centered, and interactions were calculated (Aiken & West, 1991). In the second step were included the interactions between predictors and moderators. With the addition of the interaction terms, all models accounted for a significantly higher proportion of the variance.

In predicting the total number of abusive behaviors reported, there was a significant interaction between perceptual speed and dependency on daily organization tasks. Analyzing the conditional effect of the predictor at fixed values of the moderator, we realize that, for low levels of dependency for daily organization, every second more taken processing visual stimuli is associated with reporting almost two more abusive behaviors ($b = 1.736$, $t(54) = 5.191$, $p < .001$). For medium levels of dependency for daily organization, there is no relationship between perceptual speed and abusive behaviors ($b = .253$, $t(54) = 1.022$, $p = .311$). For high levels of dependency for daily organization, every second more taken in processing visual stimuli is associated with reporting one less abusive behavior ($b = -1.230$, $t(54) = -4.130$, $p < .001$).

Table 3 - *B coefficient (Standard Error) from regression analysis where cognitive skills Episodic Memory, Perceptual Speed, Verbal Fluency and Executive Function are the predictors and Abusive behaviors are the outcome.*

	Emotional		Financial		Denial of rights		Neglect	
	Model A	Model B	Model A	Model B	Model A	Model B	Model A	Model B
Episodic Memory								
Total Recall	.109 (.062)	.069 (.062)	.106 (.060)	.090 (.061)	.046 (.037)	.030 (.039)	-.040 (.047)	-.075 (.048)
Discrimination Index	-.085 (.048)	-.096 (.046)*	-.068 (.046)	-.088(.045)	-.050 (.029)	-.055 (.029)	.013 (.036)	.011 (.036)
Perceptual Speed	.171 (.074)*	.123 (.072)	.194 (.071)**	.150 (.071)*	.066 (.044)	.057 (.045)	.148 (.056)*	.123 (.056)*
Verbal Fluency								
Phonemic Fluency		.162 (.063)*		.165 (.062)*		.059 (.039)		.093 (.049)
Semantic Fluency		.088 (.078)		-.021 (.077)		.008 (.049)		.065 (.061)
Executive Function								
Completion success		.412 (.523)		.571 (.515)		.557 (.329)		.430 (.410)
Number of errors		.059 (.100)		.066 (.098)		.009 (.063)		-.006 (.078)
R^2	.127	.322	.146	.301	.077	.204	.128	.279
F	2.808*	3.667**	3.312*	3.322**	1.622	1.974	2.832*	2.985*

Model A – Episodic Memory and Perceptual speed; Model B – full model with Episodic Memory, Perceptual speed, verbal fluency and executive function.

* $p < .05$

** $p < .01$

Table 4 - *B coefficient (Standard Error) from hierarchical regression analysis testing main effects and the interaction with functionality.*

	Abusive behaviors		Emotional		Financial		Neglect	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Functionality								
Movements (Mov)	3.044 (3.705)	1.488 (2.400)	1.571 (.957)	.708 (.833)	1.389 (.927)	.584 (.838)	-.187 (.778)	-.502 (.555)
Hygiene (Hyg)	-1.124 (2.228)	-2.188 (1.454)	-.622 (.563)	-.722 (.556)	-.835 (.560)	-1.247 (.576)*	-.053 (.468)	-.291 (.336)
Daily Organization (DO)	-2.102 (1.978)	-.732 (1.291)	-.438 (.503)	.261 (.479)	-.313 (.492)	.495 (.462)	-.343 (.415)	-.068 (.298)
Perceptual Speed (PS)	.695 (.270)*	.253 (.248)	-	-	.085 (.070)	.070 (.091)	.143 (.057)*	.034 (.057)
Phonemic Fluency (PF)	-	-	.234 (.053)***	.105 (.053)	.189 (.054)**	.122 (.052)*	-	-
Episodic Memory (EM)	-	-	-.062 (.042)	-.030 (.037)	-	-	-	-
PS × Mov		-1.136 (.572)		-		-.426 (.239)		-.143 (.132)
PS × Hyg		-.003 (.559)		-		.122 (.214)		-.083 (.129)
PS × DO		-2.568 (.342)***		-		-.341 (.128)*		-.492 (.079)***
PF × Mov		-		.529 (.228)*		.710 (.264)*		-
PF × Hyg		-		-.439 (.160)**		-.444 (.165)*		-
PF × DO		-		-.201 (.102)		-.012 (.105)		-
EM × Mov		-		-.536 (.182)**		-		-
EM × Hyg		-		.241 (.102)*		-		-
EM × DO		-		.033 (.092)		-		-
R^2	.147	.667	.287	.567	.276	.547	.147	.596
F	2.453	15.418***	4.518**	5.945***	4.269**	5.478***	2.448	11.360***

* $p < .05$
** $p < .01$
*** $p < .001$

As for emotional abuse, episodic memory and phonemic fluency were the predictors identified in the previous analysis. Dependency for movement and hygiene interacted significantly with both episodic memory and phonemic fluency. Starting with the interaction between phonemic fluency and dependency for movement, we found that at low levels of dependency (b = -.077, t(50) = -.861, p = .393) and at medium levels dependency in movement (b = .105, t(50) = 1.989, p = .052) there is no relationship between phonemic fluency and reporting behaviors consistent with emotional abuse. But, with more difficulties in movement, for each three and a half words recalled in the phonemic fluency task, one more emotionally abusive behavior is reported (b = .286, t(50) = 2.888, p = .006). As for Hygiene interacting with phonemic fluency, we realize that at low levels of dependency for hygiene, for each three more words recalled in the phonemic fluency task, one more emotionally abusive behavior was reported (b = .359, t(50) = 3.597, p = .001), while at medium (b = .105, t(50) = 1.989, p = .052) and high levels (b = -.150, t(50) = -1.322, p = .192), there was no association. Regarding the predictor episodic memory, and staring with the interaction with dependeny for movement, we realize that at low levels (b = .154, t(50) = 1.907, p = .062) and medium levels of dependency for movement (b = -.030, t(50) = -.809, p = .422), there is no association between episodic memory and emotional abuse. But, the more dependent the participant is moving around, for each five more points in the discrimination index of the episodic memory task , one less emotionally abusive behavior was reported (b = -.214, t(50) = -3.339, p = .002). Also, at low levels of dependency for hygiene, for each six points in the discrimination index of the episodic memory task, one less emotionally abusive behavior was reported (b = -.170, t(50) = -2.886, p = .006). At medium levels (b = -.030, t(50) = -.809, p = .422) and high levels (b = .110, t(50) = 1.377, p = .175) of dependence in hygiene tasks, there was no relationship between episodic memory and emotional abuse.

Financial abuse had as predictors perceptual speed and phonemic fluency. Three significant interaction effects were found. First, there was an interaction between perceptual speed and dependency for daily organization. With less difficulties in the organization of daily tasks, four more seconds taken in processing visual stimuli were associated with reporting one more financially abusive behavior (b = .267, t(50) = 2.105, p = .040), while at medium levels (b = .070, t(50) = .764, p = .449) and at high levels (b = -.127, t(50) = -1.191, p = .239) there was no predictive relationship. Second, regarding the interaction between phonemic fluency and movement, at lower levels of dependency in movement, there is no relationship between phonemic fluency and financial abuse (b = -.122, t(50) = -1.209, p = .232), but at medium levels of movement there is an effect (b = .122, t(50) = 2.364, p = .022), that triples at high levels of dependency in movement (b = .366, t(50) = 3.384, p = .001), meaning that with higher difficulties in movement, for each three more words recalled in the phonemic fluency task, one more

financially abusive behavior is reported. The last interaction for financial abuse was between phonemic fluency and dependency for hygiene, where, at high levels of dependency, there is no predictive relation (b = -.135, t(50) = -1.201, p = .235), but at medium levels there is an effect (b = .122, t(50) = 2.364, p = .022) that more than triples at low levels of dependency in hygiene (b = .380, t(50) = 3.634, p = .001), meaning that for the participants with less difficulties conducting their hygiene, for each two and a half more words recalled in the phonemic fluency task, one more financially abusive behavior was reported.

Lastly, in neglect, the identified predictor was perceptual speed. The only significant interaction effect was between perceptual speed and dependency for daily organization. At low levels of dependence on daily organization tasks, for around three more seconds taken processing visual stimuli, one more neglectful behavior was reported (b = .318, t(54) = 4.119, p < .001). At medium levels of dependency in daily organization there is no relationship (b = .034, t(54) = .595, p = .554), but at high levels of dependence in daily organization, faster perceptual speed is associated with reporting less neglectful behaviors (b = -.250, t(54) = -3.637, p = .001).

The Moderating Role of Social Skills Between Cognition and Abuse

To understand the moderating influence of social skills on the relationship between cognition and abuse, we used the cognitive indicators identified in Table 3. We conducted a series of hierarchical regression analyses, with the social skill included in the first step and the interaction in the second. Table 5 summarizes the analysis (for a graphical representation of the significant moderation effects, check the supplementary material). Conversation and social confidence, easiness of self-exposure, and giving and receiving praise did not affect the relationship between cognition and abuse. Self-expression of positive affect, coping assertively with risk, and defending interests and opinions affected different forms of abuse.

Table 5 - *B coefficient (standard error) at Step 2 of hierarchical regression analysis testing main effects for each social skill and the respective interaction terms with the cognitive indicators identified in Table 3: perceptual speed (PS), phonemic fluency (PF), and episodic memory (EM).*

	Emotional	Financial	Neglect
Conversation and Social Confidence (CSC)	.067 (.219)	.236 (.210)	.220 (.159)
PS × CSC	-	.089 (.069)	.097 (.053)
PF × CSC	.044 (.062)	.104 (.059)	-
EM × CSC	-.025 (.046)	-	-
R^2 (ΔR^2)	.256 (.009)**	.218 (.050)**	.187 (.047)**
Easiness of self-exposure (ESE)	-.067 (.316)	-.217 (.327)	.117 (.265)

PS × ESE	-	-.026 (.087)	-.033 (.067)
PF × ESE	.069 (.069)	-.001 (.070)	-
EM × ESE	-.142 (.076)	-	-
R^2 (ΔR^2)	.293 (.045)**	.238 (.001)**	.123 (.004)
Self-expression of positive affect (PA)	.312 (.272)	.223 (.268)	.479 (.191)*
PS × PA	-	.147 (.091)	.312 (.062)***
PF × PA	.133 (.070)	.112 (.069)	-
EM × PA	.072 (.060)	-	-
R^2 (ΔR^2)	.346 (.076)***	.327 (.089)***	.412 (.259)***
Coping assertively with risk (CAR)	-.066 (.201)	-.042 (.195)	.009 (.144)
PS × CAR	-	.146 (0.71)*	.183 (.055)**
PF × CAR	-.004 (.058)	-.013 (.056)	-
EM × CAR	-.044 (.033)	-	-
R^2 (ΔR^2)	.273 (.024)**	.288 (.056)**	.261 (.142)**
Defending interests and opinions (DIO)	.710 (.234)**	.689 (.245)**	-.019 (.175)
PS × DIO	-	.073 (.058)	.174 (.048)**
PF × DIO	.267 (.068)***	.212 (.068)**	-
EM × DIO	-.070 (.037)	-	-
R^2 (ΔR^2)	.448 (.169)***	.385 (.123)***	.282 (.164)***
Giving and receiving praise (GRP)	.381 (.295)	.451 (.292)	.128 (.227)
PS × GRP	-	.086 (.123)	.180 (.100)
PF × GRP	.082 (.083)	.105 (.068)	-
EM × GRP	-.012 (.071)	-	-
R^2 (ΔR^2)	.277 (.015)**	.279 (.034)**	.166 (.046)*

Note: All results were controlled for the main effect of the predictors identified in Table 3: a) emotional abuse controlled for episodic memory and phonemic fluency; b) financial abuse controlled for perceptual speed and phonemic fluency; c) neglect controlled for perceptual speed.
* $p < .05$; ** $p < .01$; *** $p < .001$

First, only defending interests and opinions contributed to a better understanding of the studied relationship between cognition and emotional abuse. We found that the social skill of defending interests and opinions moderated the relationship between phonemic fluency and the number of emotionally abusive behaviors. The moderation effect showed that at low (b = -.156, $t(56)$ = -1.490, p = .142) and medium (b = .106, $t(56)$ = 1.928, p = .059) levels of defending interests and opinions, there is no relationship between phonemic fluency and reporting emotionally abusive behaviors. However, at high levels (when a participant strongly defends his opinions and interests), for each three more words recalled in the phonemic fluency task, one more emotionally abusive behavior was reported (b = .367, $t(56)$ = 5.887, $p < .001$).

Second, coping assertively with risk and defending interests and opinions influence the relationship between cognition and financial abuse. The level of the social skill coping assertively with risk changed the relationship between perceptual speed and financial abuse. Perceptual speed was not a predictor of financial abuse at lower (b = -.063, t(56) = -.578, p = .566) and medium (b = .112, t(56) = 1.659, p = .103) levels of coping assertively with risk. However, for participants who use more of this social skill, a slower perceptual speed of about 3.5 seconds is associated with reporting one more financially abusive behavior (b = .287, t(56) = 2.646, p = .011). The predictive value of phonemic fluency on financial abuse is also influenced by the social skill of defending opinions and interests. We found no predictive value of phonemic fluency on financial abuse at low (b = -.150, t(56) = -1.409, p = .164) and medium (b = .058, t(56) = 1.004, p = .319) levels of the social skill defending interests and opinions. However, for participants that more frequently defended their interests and opinions, we found that for each four more words recalled in the fluency task, one more financially abusive behavior was reported (b = .266, t(56) = 4.060, p < .001).

Third, on neglect, where perceptual speed was the sole predictor, three social skills change the relationship between cognition and abuse: self-expression of positive affect, coping assertively with risk, and defending interests and opinions. At low levels of self-expression of positive affect, we found that there was no relationship between perceptual speed and neglect (b = -.038, t(58) = -.629, p = .532). But at medium levels (b = .214, t(58) = 4.586, p < .001), and at high levels (b = .465, t(58) = 6.162, p < .001) there was a positive effect, meaning that for participants that express the more positive affect, taking around two more seconds to process visual stimuli corresponds to reporting one more neglectful behavior. The moderation effect of coping assertively with risk indicated that at low levels of this social skill, there was no relationship between perceptual speed and neglect (b = -.703, t(58) = -.861, p = .393). But at medium levels (b = .143, t(58) = 2.876, p = .006), and higher levels (b = .365, t(58) = 4.497, p < .001) there was a significant positive effect. This effect indicates that for participants who use more the social skill coping assertively with risk, taking three more seconds in processing visual stimuli is associated with reporting one more neglectful behavior. Lastly, at low levels of defending interests and opinions, we found no relationship between perceptual speed and neglect (b = .012, t(58) = .190, p = .850). However, at medium (b = .183, t(58) = 3.575, p = .001) and high levels of the social skill (b = .353, t(58) = 4.772, p < .001) there was a positive effect, meaning that for participants that defend more their opinions and interests, slower perceptual speed is associated with more reports of being the target of neglectful behavior.

Discussion

This study aimed to contribute to the theoretical understanding of elder abuse. For this, we tested some predictions obtained from applying the basic principles of social exchange theory to the context of elder abuse. This theoretical perspective conceptualizes abuse as an unbalanced exchange (or chain of exchanges) in an interpersonal relationship. In this perspective, the absence of resources (or an inability to produce them) hinders the ability to contribute to a relationship adequately. It changes the power/dependence dynamics within the relationship, creating unbalanced exchanges. A caregiver may use different strategies to deal with unbalanced exchanges. Some of these strategies may occur in any caregiving relationship. Examples include seeking help to perform caregiving tasks or reevaluating the positive aspects of the relationship. However, some strategies used by the caregiver to deal with unbalanced exchanges may be abusive, for example, taking monetary compensation for the perceived losses (financial abuse). Studying the ability to produce resources and variables that influence the balance of a relationship can help us identify unbalanced relationships that have a higher probability of abuse. We used several cognitive performance indicators as pointers for the ability to produce resources and functionality and social skills as indicators that contribute to maintaining the balance between power and dependence in a relationship.

One-third of the participants reported being the target of abusive behaviors, which is congruent with some of the prevalence studies conducted in Portugal (Santos et al., 2011). Physical abuse was only reported by one participant, which is also congruent, for it is one of the less frequent forms of mistreatment. Denial of rights was included in this study as a form of abuse, despite not being considered in some of the more used typologies of abuse (NCEA, n.d.). However, unlike the other forms of abuse, it did not relate to any of the indicators assessed. One possible explanation is that denial of rights encompasses more complex cognitive operations than the basic cognitive processing abilities assessed. Supporting this perspective is research showing that moral intuitions, which are more complex determinants of behavior, are predictors of denial of rights (Fundinho & Ferreira-Alves, 2022).

The main results regarding our hypothesis show that perceptual speed and phonemic fluency are good predictors of abuse. The perceptual speed results are congruent with previous findings (Dong et al., 2011). Still, the same cannot be said about the results concerning episodic memory, which we could not confirm. We found that episodic memory was only a predictor of emotional abuse when controlling for other cognitive variables. The specificity of the indicators used can explain this result; instead of a summarized index, we used different indicators of performance associated with different mnemic structures. As indicated by the absence of a relationship between some cognitive indicators and abuse,

not every cognitive system might be a relevant indicator of abuse. The lack of specificity in cognitive function measures used in research, namely general cognitive impairment measures, can explain why some papers report an association (e.g., Cooper et al., 2006; Dong et al., 2014) and others do not (e.g., Conner et al., 2011; Leung et al., 2017). Plus, we found that the various cognitive performance indicators assessed are associated with different forms of abuse. That result is congruent with the social exchange hypothesis for elder abuse. Not all interactions require the same resources. Deficits in specific resources may lead to different experiences of abuse. Plus, a new cognitive indicator was found to be related to emotional and financial mistreatment - phonemic fluency - but the effect showed an unexpected direction. More proficiency in the phonemic fluency task was associated with higher emotional and financial abuse rates, but not neglect or the total abuse score.

Phonemic and semantic fluency tasks can be used to assess the integrity of the frontal and temporal lobes (Baldo et al., 2006). Both phonemic and semantic fluency decrease during the normal aging process, but the decrease is steeper in semantic fluency in old age (Kavé & Knafo-Noam, 2015). Gordon and collaborators' (2017) study shows that the primary predictor of semantic fluency is the efficiency of lexical retrieval, while the main predictor of phonemic fluency is vocabulary knowledge, indicating that these tasks rely on different cognitive processes. Understanding the differences between these tasks helps to understand why our results find a positive association between phonemic fluency and emotional and financial abuse and no relationship between semantic fluency and any type of abuse. We may not have found a relationship between semantic fluency and abuse because we controlled for other variables of cognitive efficacy, such as perceptual speed and episodic memory. By controlling for these variables, the results found with phonemic fluency probably refer to components not shared with the controlled variables. Given the predictive role of vocabulary knowledge on phonemic fluency performance, it is probable that this component strongly determines our results, although that idea needs to be further tested.

Nevertheless, our results indicate that verbal competency plays a role in predicting abuse. There may be two possible explanations for the effect found. First, this result may indicate that a minimum level of verbal performance might be necessary to recognize emotional and financial abuse. To perceive a verbal interaction as emotionally abusive is necessary to understand the words used in the exchange and their possible meanings. Likewise, understanding that one was the target of financial abuse requires some understanding of the content of bank letters and the state of his/her finances. These capabilities may require a minimum level of vocabulary knowledge. It probably becomes easier to detect events or behaviors that constitute these types of abuse when the older adult has a higher verbal ability. A second

explanation is based on something we did not assess. Phonemic fluency is highly determined by vocabulary knowledge, but we do not know how our participants use their vocabulary. It is possible that persons with more fluency have more tools (i.e., words) to express their ideas, which a caregiver could interpret as argumentative or verbally aggressive, potentiating abusive exchanges. However, this explanation is highly hypothetical and warrants testing. Irregardless of the explanation, these results are an indication that the "lack of resources" view usually adopted in social exchange theory is reductionist, and it might be more exciting and appropriate to think about patterns of functioning, where sets of resources, either high or low could be seen as a set of characteristics common to those targeted with abusive behaviors.

The results found regarding the role of functionality in the relationship between the cognitive indicators and abuse have particular theoretical relevance. The absence of a direct effect of physical function on mistreatment found in our data is not new but is still unclear. Some previous works have found no relation between functionality and abuse (e.g., Luo & Waite, 2011), while others did find such a relationship (e.g., Pérez-Cárceles et al., 2009). Plus, we found that different forms of dependence have a distinct influence on the relationship between the cognitive indicators and the various forms of abuse, which is congruent with our conceptualization of elder abuse as a social exchange. Concretely, we found that lower levels of functionality increase the effects of the cognitive indicators on abuse. In comparison, with higher levels of functionality, the impact of cognition decreases and, in some cases, is inverted. These results are congruent with the hypothesis presented by social exchange theory, where resources may contribute to violent exchanges, but a balance between power and dependency in a relationship protects from violent exchanges. The interaction effects found in this study go in this direction: on the one hand, low functionality, which tips the power balance against the older adult, increases the effect of lower cognitive performance, that indicates fewer resources; and on the other hand, higher functionality, which suggests a more balanced relationship, decreases or nullifies the effect of cognition on abuse. These results suggest that the effect of some risk factors, e.g. cognitive resources, might be nullified by having a balanced relationship.

Hygiene as a moderator is an interesting case of analysis. The moderating role of dependence in hygiene tasks was only present when the participant was independent in these tasks, and this independence increased the effect of the cognitive predictors. It might be the case that depending on someone for hygiene is such an extreme unbalance in the power/dependence balance that any effect a cognitive resource could have becomes irrelevant when this dependence exists. Comparing the results obtained with hygiene and the other forms of dependence gives a good indication of what social exchange

defends: dependence seems not to be one-size-fits-all, and different conditions of dependence may affect relationships differently. Such a result could be an excellent premise to explore the effects of other forms of dependence on elder abuse.

Neglect also presents an interesting case. Our results indicate that having a slower perceptual speed increased the risk of neglect when there was a low dependency on daily organization tasks but reduced the risk of neglect when there was a high dependency on the same tasks. Perceptual speed is considered a powerful indicator of cognitive decline (Salthouse et al., 2003), and, as indicated by the results, cognitive processes are good indicators of resources. The more interesting part of this result is the interaction between perceptual speed and dependency on daily organization tasks, which alerts us to the importance of power/dependence when working with cognitive predictors of abuse. Poor performance on the task (slower perceptual speed) could either increase the probability of neglect or protect from it, depending on the level of dependence. In this case, dependence might indicate help-seeking. Likewise, a caregiver could interpret low dependence as a sign of autonomy and thus restrain from providing help. Nevertheless, persons who require more aid have increased dependency but may find their needs more frequently met, thus reporting less neglect. However, some older adults may have less dependency but leave some needs unattended, thus reporting more neglect. What is not clear from our results and could be explored in future research is how can perceptual speed and other cognitive indicators relate to the levels of dependency. Hypothetically, poor performance in tests of cognitive accuracy should be related to increased needs, but cognition is probably not the only nor the more important determinant of dependency. Despite these questions, our results are congruent with the theoretical hypothesis; dependency, as an indicator of the power/dependency balance, has an important role in predicting abuse, though it requires further study.

The role of social skills in relation to cognition and abuse is also a new result with interesting theoretical and practical implications. In summary, we found that three social skills potentiate the effects of the cognitive indicators on different forms of abuse. More specifically, higher defense of interests and opinions potentiates phonemic fluency's effects on emotional and financial abuse. In contrast, using more frequently the social skill coping assertively with risk potentiates the effects of phonemic fluency on financial abuse. Plus, both these skills and self-expression of positive affect potentiate the effects of perceptual speed on neglect at their medium and high levels. The idea behind the inclusion of social skills with this theoretical model is that they contribute to what has been described as social value (Dowd, 1975) and could add power to an intervenient in the exchanges. However, both defense of interests and opinions and coping assertively with risk may have led users to engage in conflicts more frequently,

despite doing it constructively or not. Moreover, although assertiveness is considered competent social behavior, being assertive in a conversation does not mean that an agreement is reached, making assertive action frequently interpreted as impolite and inappropriate (Spitzberg, 1993). Therefore, these skills may decrease this subjective evaluation of the social value of a trade partner, and a less confrontational character might have more amenable exchanges.

The results obtained with neglect also include the social skill self-expression of positive affect, and considering that neglect is a very particular form of abuse, this result also makes sense. Expressing positive affect can be regarded as equivalated to a type of reward that Blau (1964) refers to as "expressing esteem" in his conception of Social Exchange Theory. We could be before a case where the desired level of reciprocity of the exchange is not met. A person that expresses a positive affect with more frequency can feel neglected if the exchange return is less than expected. These results are, therefore, congruent with the tested theoretical explanation.

Conclusions and Limitations

This study has some limitations. The main limitation is assessing the concepts identified in social exchange theory. Assessing resources and the power/dependency balance in a relationship is challenging. The wide range of behavioral representations of these concepts makes it impossible to measure their full extent directly. We solved this challenge by assessing variables that are determinants for the availability and selection of resources and variables that we conceptualize as determining the balance between power and dependence, allowing us to collect evidence in support of this theory. Social exchange theory predicts that the availability of resources directly predicts the power/dependency balance. Following this prediction emerges another challenge: there are multiple forms of dependency, and we cannot be sure which resource predicts which form of dependency to test the causality chain predicted in theory. We approached this challenge using moderation analysis. Instead of focusing on difficult-to-determine causal links, we tried to understand how different indicators of power and dependency can alter the relationship between resources and abuse. In this way, our study still contributes favorable results in support of the social exchange theory. It can be thought of as a first step in studying this theory applied to elder abuse. It can also be argued that the sample size is small, but it was enough for one first exploration of this theoretical model.

Several implications can be taken for theory, research and practice. Theoretical implications have been explored in this text, but the results generally support an underexplored theory of abuse, paving new ways to conceptualize abuse. Social exchange theory needs to be further explored. It can give way to new

forms of research in the field of elder abuse and possibly in the field of human psychological development. Finally, for practice, though these results are not enough for drastic changes, they indicate new necessities for risk assessment in elder abuse. The obtained results indicate that general measures of cognition that encompass several cognitive structures in one index might be misleading in assessing risk since not all cognitive structures seem to have the same weight in predicting abuse. It is also important to remember that different forms of abuse seem to be associated with different cognitive structures. Of major importance to risk assessment is also the role of power/dependency. It is very important to consider and assess multiple forms of dependency and power in relation to different resources. The conjugation of resources with power/dependency results in identifying different patterns of functioning, some that can be protective and others that can increase the risk of abuse. In this way, we establish more realistic risk assessment procedures. Plus, identifying what functioning patterns can be protective could significantly impact the development of preventive strategies for elder abuse.

Beyond all the theoretical relevance of this theory to understanding why some relationships fail and become abusive, its more immediate usage could be educational, promoting new conceptions of human functioning in a relationship. Human relationships must be perceived as something that needs permanent study and never as something established or static.

In conclusion, this study supports social exchange theory as an explanatory theory for elder abuse. However, further research is necessary to expand these findings and make this theoretical approach more appealing. Its support can have significant implications, from risk assessment to the very conceptualization of elder abuse.

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Chapter V

Emotion recognition, moral intuitions and elder abuse: a social exchange perspective.

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Abstract

In this study, we operationalize and test some predictions of a social exchange theory of elder abuse. The theory proposes that a combination of low resources with high dependency/low relational power increase the older adult's risk of abuse. We tested these predictions by exploring the association between emotion recognition, morality (resources) and abuse, moderated by functionality and social skills (indicators of dependence/power). We collected data from 62 participants between 64 and 94 years old. We found that the moral intuition harm/care was positively associated with the report of emotionally and financially abusive behaviors and denial of rights. The moral intuition authority/respect protected individuals from the same types of abuse. The effects of moral intuitions on the types of abuse increased in older adults with higher dependence on movement (denial of rights) and lower dependence on hygiene tasks (financial abuse and denial of rights). Likewise, these effects were more prominent in older adults with generally high social skills and low assertiveness. In summary, the results are congruent with a psychological interpretation of a social exchange theory of elder abuse and highlight the importance of relational models where moral intuitions interact with dependency and social skills to predict elder abuse.

Keywords: elder abuse; social exchange theory; theories of abuse; emotion recognition; morality

Emotion recognition, moral intuitions and elder abuse: a social exchange perspective

Elder abuse is defined as a single or repeated act (or absence of appropriate action) conducted by a person in whom the older adult trusts, resulting in harm or distress (World Health Organization, 2002). Numerous studies have been conducted in this area, mainly focusing on prevalence and risk factors for older adults and caregivers. However, theoretical development in this field has been scarce, despite being necessary for practical purposes; if a theoretical model can explain how abuse happens, it can help prevent abuse.

A recent systematic review provided insight into how well theoretical models explain abuse (Fundinho, Pereira, et al., 2021). From this review, we learned that most theories have empirical support and that social exchange theory, as a broad theory, is a good starting point to organize the common attributes of other approaches and work on an integrated solution. Nevertheless, before that goal can be accomplished, it is necessary to look at elder abuse within the social exchange framework to understand it as a relational issue. However, relational models and variables have not been sufficiently studied. Therefore, this paper aims to examine elder abuse through social exchange theory and explore how personal characteristics that may direct our selection of behaviors in social interactions, namely, emotion recognition and moral intuitions, are related to elder abuse. Additionally, we aim to test whether these relations are affected by variables that impact the power/dependency balance, namely, functionality and social skills.

Social exchange theory derives from many different fields of knowledge, including sociology, economics, and psychology. According to this theory, every social interaction is an exchange of resources, which can be material – e.g., trading money for an object – or nonmaterial – e.g., trading a favor for social acceptance - where both parties try to maximize rewards and reduce costs. A balanced exchange is an exchange where all involved parties feel that they have profited equally and, therefore, is mutually satisfying (Blau, 1964; Homans, 1961). Elder abuse does not occur in balanced exchanges but in unbalanced exchanges. If it becomes difficult for an older adult to produce or use resources and the needs increase, more exchanges are required to fulfill them. Increased needs while relying on limited possibilities for exchange leads to dependency on one person, typically the caregiver. One person's dependence gives the other more power over the relationship. When an older adult is continually dependent on a caregiver, this is an unbalanced exchange. With more power, the caregiver can set the tone for future exchanges, always trying to maximize rewards (or cut losses). Some strategies used to maximize rewards may involve abusive behaviors. For example, a caregiver might withdraw from providing

care, resulting in neglect, or take monetary compensation by force, as in financial exploitation. In other cases, a caregiver might not be able to find alternative strategies to increase the gains from the relationship, so inflicting pain or distress is used to increase the cost of exchange for the older adult. We can frame physical and emotional abuse in this scenario, classifying it as a lose-lose scenario.

From the social exchange theoretical standpoint, anything that can lead to unbalanced exchanges has the potential to lead to abuse against the elderly. Therefore, we make some predictions from this theory. First, the fewer resources to trade, the higher the risk for unbalanced relationships. Material resources are easier to identify, and previous research has shown a positive link between the lower-income of older adults and abuse (e.g.: Naughton et al., 2012). Nonmaterial resources are used in most social interactions but can be challenging to understand - Blau (1964) lists some such as social approval or respect/prestige. In behavioral terms, we express such resources in multiple ways, such as through a handshake or a compliment. Compiling a list of the behavioral representations of nonmaterial resources would be an endless task. One way of looking at resources is to look at factors that directly impact the selection of behaviors we include in exchanges. One factor that we hypothesize as directly impacting resources is emotion recognition. Recognizing emotions in others is a valuable ability for social interaction. In patients with schizophrenia, there is a relationship between emotion recognition and social competence (Kalin et al., 2015). When this ability is impaired, the capacity to reciprocate exchanges diminishes. We expect that identifying emotions in others can serve as a guide to select resources for exchange adequately. Another factor we hypothesize as directly influencing the selection of resources for exchange is morality. According to moral foundations theory, humans have intuitive ethics that give them a sense of approval or disapproval for certain behaviors (Haidt & Joseph, 2004). This theory describes five foundations and modules of intuition to approve or disapprove of things based on our species' evolutionary history and culture (Haidt & Joseph, 2004). We hypothesize that these intuitions could play a role in selecting resources for exchange since they determine what behaviors would be morally acceptable or unacceptable.

Second, the larger the dependency is, the higher the risk for unbalanced relationships. This point can explain a relationship often encountered in research between functional dependency and elder abuse (e.g., Burnes et al., 2015; Orfila et al., 2018). Social skills are a construct that we hypothesize to influence the power balance and the attractiveness of a person to interact. Social skills are a set of behavioral tendencies that are culturally valued and established to have a high probability of producing favorable interpersonal interactions (A. Del Prette & Del Prette, 2018). Some social skills might make one a more attractive person to interact with, while other social skills are less appealing, affecting the power balance

of a relationship (Dowd, 1975). We expect functionality and social skills to have a role in the dynamics of abuse by directly affecting the power/dependence balance. Therefore, we study them as moderating the relationship between resources and abuse.

Given the rationale presented and the predictions of social exchange, this paper has four objectives. The first is to explore the relationship between emotion recognition and the different forms of abuse. The second is to explore the relationship, if any, between the moral intuitions identified in moral foundations theory and the multiple forms of abuse. Third, we explore functionality as a moderator between the studied resources (emotion recognition and moral intuitions) and the various forms of abuse. Finally, we explore the role of social skills as moderators between the explored resources and the multiple forms of abuse.

Methodology

Participants

A partnership was established with eight social recreational centers for adults in Minho, Portugal, in 2018, to recruit participants. Before their participation, all older adults answered the Mini-Mental State Examination (Folstein et al., 1975, Portuguese version by Guerreiro et al., 1994), used as a selection criterion; participants were only included if screened negative for cognitive impairment. A total of 62 older adults (40 women) aged between 64 and 94 years old (M=79.44, SD=8.617) participated in the current study. Most participants were widowers (41.9%) or married (32.3%), with a few who were single (14.5%) or divorced (11.3%). Most participants had completed elementary school (71%), but 16.1% attended but did not complete this level, having learned to read and perform basic mathematical operations. Only 12.9% of the participants had a higher educational level than elementary school.

Measures

We administered five measures in this study: a measure of emotion recognition, a measure of moral intuitions according to moral foundations theory, a measure of functionality, a measure of social skills, and a measure of abusive behaviors.

Emotion recognition

We used the Read the Mind in the Eyes Test (Baron-Cohen et al., 2001, Portuguese version by Sousa, 2010). This procedure is commonly used to assess various populations' emotion recognition, empathy, and theory of mind. In this procedure, the participant looks at photographs containing only pairs

of eyes and the surrounding area. Around the image are presented four adjectives describing emotional states (e.g., irritated, impatient). The participant's task is to choose the adjective that best represents what the person on the image is feeling. Only one answer is correct, and the participant receives no feedback. A total of 36 images are shown to each participant. The number of correct responses is used as the performance indicator of the participant's ability to recognize emotions in others.

Moral intuitions

Moral foundations theory (Haidt & Joseph, 2004) proposes five foundations or intuitions that guide our process of ethical approval or disapproval of something. These five foundations are harm/care, fairness/reciprocity, in-group/loyalty, authority/respect, and purity/sanctity. To assess the importance of each of these five bases, the authors propose the Moral Foundations Questionnaire (Graham et al., 2011). This measure has 32 items and is divided into two parts. In the first part, participants are asked to decide how important a set of affirmations are when deciding if something is good or evil, rating the importance on a scale of 0 (totally unimportant) to 6 (extremely important). In the second part, participants are asked to rate their agreement with some sentences, from 0 (totally disagree) to 6 (totally agree). A morality profile can be computed with these items, thus understanding the relative importance of each moral intuition.

Functionality

In this study, we used the items of the Barthel index (Mahoney & Barthel, 1965, Portuguese version by Sequeira, 2007) and the Lawton-Brody index (Lawton & Brody, 1970, Portuguese version by Azeredo & Matos, 2003) to assess three components of functionality. This approach is more adequate for the study of social exchange theory that is concerned with specific forms of everyday dependency. Functionality was, therefore, organized into three components: movement, hygiene, and daily organization. These components were obtained through confirmatory factor analysis (CFA), described in the results section. This differentiation allows for the extra level of detail that social exchange considers. The component movement was composed of all tasks that require physical acuity (e.g., transferring from bed to chair), hygiene was composed of all tasks related to daily hygiene (e.g., Bath), and the daily organization was composed of the tasks that are required for daily household maintenance (e.g., using money). The answers to both measures were coded in 3 points: 0 – Independent, 1 – Independent with assistance, and 2 – Dependent.

Social Skills

To measure social skills, we used the Social Skills Inventory – Del Prette (Z. Del Prette & Del Prette, 2001), Portuguese version by Fundinho, Ferreira-Alves, et al. (2021). In the Portuguese version, this measure has 22 items, each representing a behavior that requires the application of a specific social skill. The participants are asked to rate the frequency with which they perform each behavior using a 5-point Likert scale ranging from 1 (Never) to 5 (Always). A total score of social skills can be computed by summing all the responses to all items. Additionally, the six subscale scores representing six specific skills can also be calculated. The six social skills measured in this instrument are conversation and social confidence, easiness of self-exposure, self-expression of positive affect, coping assertively with risk, defending interests and opinions, and giving and receiving praise. The score for each subscale is obtained by calculating the mean of the responses in each subscale. The higher the score in any of the referred indices, the more frequently these social skills are used.

Abusive Behaviors Targeted at Older Adults

A list of abusive behaviors, compiled based on previous instruments, literature, and definitions of abuse, was used to assess how frequently the participants were the target of abusive behaviors. The items were specifically formulated to fit in the paradigm proposed by social exchange theory. The item phrasing had to describe specific behaviors that are targeted at the respondent and are abusive by definition (e.g., *"Yelled at me"*). Phrasing the items as behaviors allows us to consider them exchange resources. The instruction to the participant was to respond while thinking about interactions with the caregiver. A total of 32 behaviors were listed, assessing physical abuse (8 items), emotional abuse (6 items), financial exploitation (6 items), denial of rights (6 items), and neglect (6 items). The participant was asked to report which of the listed behaviors (if any) were experienced in the past year.

Procedure

The collection of the referred measures occurred in a more extensive study conducted during 2018 submitted and approved by the ethics committee for social and human sciences of the University of Minho (SECSH 024/2016). All participants provided written informed consent. Data collection was divided into two sessions of 60 minutes, although the timing was adapted to the rhythm of each participant. The primary researcher conducted the sessions in social recreational centers for adults in an adequately lit and comfortable office. All procedures were computerized using Psychopy (Peirce et al., 2019) and presented on a touchscreen device with screen dimensions of the approximate size of a sheet

of paper. All instructions, questions, and answering options were read aloud by the researcher, and the participant selected his or her response using the visual aid on the touchscreen.

Statistical Analysis

Statistical analysis was conducted with the Statistical Package for the Social Sciences (SPSS). AMOS was used to assess the model structure and fit of the instruments used. The selection of fit indices was made according to the recommendations of Brown (2006). As a support tool for moderation analysis, we used PROCESS (Version 3.5) macro for SPSS (Hayes, 2013). To test our hypotheses, we ran multiple stepwise (backward) regressions, hierarchical regressions, and simple slope analyses to check for interaction effects.

Results

First, we will present some descriptive statistics from our measures. Then, we test the hypothesis mentioned earlier, starting with exploring the relationship between emotion recognition and moral intuitions and the various types of abuse, and then explore the moderating effects of functionality and social skills.

Descriptive statistics

First, we will describe the adequacy of the measures adopted in this study and then the descriptive statistics of the participants' answers.

The measure of abusive behaviors aimed at older adults showed excellent internal consistency (α = .96) for the total scale. Full-scale results showed that 20 participants (32.3%) reported being the target of at least one of the listed behaviors. Only one participant reported physical abuse. Its low frequency (no variance) did not allow further statistical analysis, so this study did not explore physical abuse further. Emotional abuse was reported by eight participants (12.9%), and the subscale that measured it showed excellent internal consistency (α = .919). Nine participants reported financial exploitation, the same number as neglect (14.5%), and their measures showed excellent (α = .903) and good internal consistency (α = .812), respectively. Last, denial of rights was reported by four participants (6.5%), and its measure showed acceptable internal consistency (α = .782).

Regarding functionality, we started by testing the adequacy of the hypothesized three-factor solution. First, three items were removed: the two incontinence items of Barthel's Index and the medication item from Lawton-Brody's due to low variance. CFA showed adequate model fit, $\chi 2$=113.252,

df=87, p=.031, CFI=.927; RMSEA= .070; SRMR=.076, supporting the assessment of daily function with this three-factor solution. Composite reliability (CR) was calculated to evaluate internal consistency (Hair Jr et al., 2014). Commonly, CR is considered good above .70, but values above .60 are usually accepted. The three factors showed appropriate internal consistency: movement (CR = .793), hygiene (CR = .685) and daily organization (CR = .845). For the movement factor, the mean score indicates that the participants were mostly independent (M=.398; SD=.343), and the same pattern was found for the hygiene factor (M=.763; SD=.580). In daily organization, the participants were mostly independent with assistance (M=1.229; SD=.578).

The emotion recognition score varied from 7 to 17, with a mean score of 11.98 (SD=2.749). Descriptive statistics for moral intuitions are presented in Table 1. In-group/loyalty showed the highest minimum value, and purity/sanctity had the lowest mean. The descriptive statistics for social skills are also presented in Table 1. Giving and receiving praise had the highest minimum and the highest average, while easiness of self-exposure had the lowest maximum and the lowest mean.

Table 1 - *Descriptive statistics for emotion recognition, moral intuitions and social skills.*

	Min	Max	Mean (SD)
Moral Intuitions			
Harm/Care	1.50	5.00	4.367 (.761)
Fairness/Reciprocity	1.00	5.00	4.302 (.775)
In-group/Loyalty	2.30	5.00	4.173 (.598)
Authority/Respect	1.00	5.00	4.060 (.889)
Purity/Sanctity	1.50	5.00	3.734 (.836)
Social Skills Total	48	90	71.919 (10.815)
Conversation and social confidence	1.33	5.00	3.199 (1.130)
Easiness of self-exposure	1.00	3.80	1.652 (.746)
Self-expression of positive affect	1.75	5.00	4.161 (.805)
Coping assertively with risk	1.00	5.00	3.210 (1.196)
Defending interests and opinions	1.00	5.00	3.855 (.980)
Giving and receiving praise	2.00	5.00	4.339 (.811)

Relationship Between Emotion Recognition, Moral Intuitions and Abuse

To understand whether our variables influence each other in the prediction of abuse and their predictive value, we conducted a series of regression analyses. With no previous works to guide our search for predictors, we chose to conduct a stepwise (backward) regression (Field, 2009). Fairness/reciprocity

was excluded from the analysis after checking the multicollinearity assumption. The regression analysis results for each type of abuse are summarized in Table 2. The results show that emotion recognition is not a good predictor of any of the studied forms of abuse. Likewise, no significant regression equation was found for neglect, indicating that none of our variables was a good predictor for this form of abuse. The results show that the best predictors for the other three types of abusive behaviors considered were moral intuitions harm/care and authority/respect. The same pattern was present in the three types of abusive behavior: greater concerns with preventing harm/care are associated with reporting more abusive behaviors, and lower concerns with authority and traditions are associated with reporting more abusive behaviors.

The Moderating Role of Functionality Between Moral Intuitions and Abuse

To further test the predictions hypothesized from social exchange theory, we conducted a series of moderation analyses. The previous regression analysis showed that the moral intuitions harm/care and authority/respect were the more significant predictors of abuse, so they were chosen as predictors for the moderation analysis. The first set of moderation analyses used functionality as an indicator of dependency, thus testing the prediction from social exchange that increasing dependence would increase the importance of resources (in this case, moral intuitions) in predicting elder abuse. We conducted a series of hierarchical regression analyses to test this possible moderation, summarized in Table 3. The first step included the moral intuitions harm/care and authority/respect and the dependency indicators. Then, the predictor variables were centered, and the interaction terms were calculated (Aiken & West, 1991) and included in the second step.

The results showed no significant regression equation for emotional abuse when controlling for the dependency indicators and their interactions, meaning that the relationship between the moral intuitions harm/care and authority/respect and emotional abuse disappears when these dependency indicators are controlled.

For financial abuse, there was a significant interaction effect between authority/respect and dependency for hygiene tasks. Analyzing the conditional effect of authority/respect at fixed levels of dependency for hygiene tasks, we found that at low levels of dependency for hygiene (fewer difficulties), for every two points of importance given to the respect of authority, approximately three fewer financially abusive behaviors are reported, b = -1.616, $t(50)$ = -2.765, p = .008. At medium (b = -.477, $t(50)$ = -1.175, p = .246) and high levels of dependency for hygiene tasks (b = .662, $t(50)$ = .959, p = .342), there is no relationship between authority/respect and financial abuse.

Table 2 - *B coefficient (standard error) from stepwise (backward) regression analysis with emotion recognition and moral intuitions predicting the reported number of abusive behaviors of the different types of abuse.*

	Emotional		Financial		Denial of rights		Neglect[1]
	Model A	Model B	Model A	Model B	Model A	Model B	Model A
Emotion Recognition	-.092 (.091)	-	-.100 (.087)	-	-.085 (.048)	-	-.013 (.073)
Moral intuitions							
Harm/Care	1.174 (.453)*	1.138 (437)*	1.125 (.432)*	1.131 (.423)*	.809 (.240)**	.807 (.240)**	.022 (.365)
In-group/Loyalty	-.092 (.520)	-	.207 (.496)	-	.182 (.275)	-	.300 (.419)
Authority/Respect	-.806 (.427)	-.906 (.375)*	-.835 (.407)*	-.874 (.363)*	-.779 (.226)**	-.784 (.205)***	.027 (.344)
Purity/Sanctity	-.271 (.309)	-	-.392 (.295)	-	-.247 (.164)	-	.165 (.249)
R^2	.136	.113	.164	.117	.283	.210	.029
Adjusted R^2	.059	.083	.090	.087	.219	.183	-.057
F	1.767	3.775*	2.204	3.899*	4.412**	7.834**	.340

Notes: Model A – Full model with all candidate variables; Model B – Final model with best fit.

[1]No predictors were found for Neglect; a Model B was not possible to calculate for this type of abuse.

* $p < .05$

** $p < .01$

*** $p < .001$

In denial of rights, there are four significant interaction effects between moral intuitions and dependency for movement and dependency for hygiene. Starting with dependency for movement as a moderator, when analyzing the conditional effects at fixed points of the moderator, the results show that at low (b = -.363, t(50) = -.791, p = .432) and medium levels of dependency for movement (b = .348, t(50) = 1.399, p = .168), there is no relationship between harm/care and denial of rights. However, at high levels of dependency for movement, for every point of importance given to protecting people from harm, one more behavior that constitutes a denial of rights is reported (b = 1.059, t(50) = 3.297, p = .002). A different pattern is found in authority/respect, where at low levels of dependency for movement, there is still no relationship between the moral intuition and denial of rights (b = .349, t(50) = 1.117, p = .269), but at medium levels of dependency, there is an effect (b = -.413, t(50) = -2.031, p = .048) that more than doubles at high levels of dependency for movement (b = -1.215, t(50) = -4.419, p < .001). This effect means that, at the higher levels of dependency for movement, every point of importance given to the respect of authority and traditions is associated with reporting one less behavior that constitutes a denial of rights.

Regarding the interaction between harm/care and dependency for hygiene, the results show that at low levels of dependency, there is an effect of harm/care on denial of rights (b = 1.519, t(50) = 3.962, p < .001). This result means that for participants with fewer difficulties conducting their hygiene, for every two points of importance given to caring and protecting from harm, three more behaviors that constitute a denial of rights are reported. At medium levels of dependency (b = .348, t(50) = 1.399, p = .168) and high levels of dependency (b = -.823, t(50) = -1.704, p = .094), there was no relationship between harm/care and denial of rights. The interaction between authority/respect and dependency for hygiene shows a different pattern. At low levels of dependency for hygiene (b = -1.397, t(50) = -4.774, p < .001) and at medium levels (b = -.413, t(50) = -2.031, p = .048), there is a relationship between authority/respect and denial of rights. This effect means that, for the participants with fewer difficulties conducting their hygiene, for every point of importance given to the respect of authority and traditions, there is approximately one less behavior that constitutes a denial of rights being reported. At high levels of dependency for hygiene, no relationship was found (b = .571, t(50) = 1.653, p = .105).

Table 3 - *B coefficient (standard error) from hierarchical regression analysis testing the main effects of functionality, moral intuitions, and interaction terms on three types of mistreatment*

	Emotional		Financial		Denial of Rights	
	Step 1	Step 2	Step 1	Step 2	Step 1	Step 2
Functionality						
Movement (Mov)	1.234 (1.045)	.949 (1.038)	.955 (1.002)	.679 (.983)	.630 (.573)	.405 (.492)
Hygiene (Hyg)	-.498 (.612)	-.243 (.645)	-.768 (.586)	-.413 (.611)	-.437 (.335)	-.112 (.306)
Daily Organization (DO)	-.605 (.558)	-.861 (.565)	-.46 (.535)	-.772 (.534)	-.170 (.305)	-.436 (.268)
Moral Intuitions						
Harm/Care (HC)	1.214 (.448)**	.635 (.525)	1.234 (.429)**	.688 (.497)	.840 (.245)**	.348 (.249)
Authority/Respect (AR)	-.855 (.381)*	-.449 (.429)	-.833 (.365)*	-.477 (.406)	-.751 (.209)**	-.413 (.203)*
HC × Mov		1.865 (1.894)		1.627 (1.793)		2.071 (.898)*
HC × Hyg		-1.551 (1.303)		-2.015 (1.234)		-2.019 (.618)**
HC × DO		.597 (1.173)		.820 (1.110)		.739 (.556)
AR × Mov		-2.473 (1.471)		-2.609 (1.393)		-2.337 (.697)**
AR × Hyg		1.734 (.900)		1.963 (.852)*		1.696 (.427)***
AR × DO		-1.154 (1.025)		-1.052 (.971)		-.725 (.486)
R^2	.152	.274	.171	.308	.245	.516
F	2.010	1.718	2.307	2.024*	3.643**	4.853***

* $p < .05$
** $p < .01$
*** $p < .001$

The Moderating Role of Social Skills Between Moral Intuitions and Abuse

We conducted a series of hierarchical regression analyses to explore the moderating role of social skills in the relationship between moral intuitions and abuse. We included the moral intuitions harm/care and authority/respect and the explored social skill in the first step, adding the interaction terms in the second step. Table 4 presents a summary of the analysis.

There was no moderation effect of conversation and social confidence, self-expression of positive affect, or giving and receiving praise regarding emotional abuse. There was a significant interaction effect between easiness of self-exposure and authority/respect. At low levels of the social skill, there was no relationship between authority/respect and emotional abuse (b = -.285, $t(56)$ = -.558, p = .579). However, at medium levels, there was a negative effect (b = -1.271, $t(56)$ = -3.235, p = .002) that nearly doubled at high levels (b = -2.399, $t(56)$ = -3.084, p = .003) of the social skill. This result means that, for participants who find it easier to expose themselves socially, for every point more of importance given to the respect of authorities and traditions, two fewer emotionally abusive behaviors were reported.

Table 4 - *B coefficient (standard error) at Step 2 of hierarchical regression analysis testing main effects for each social skill and the respective interaction terms with harm/care (HC) and authority/respect (AR).*

	Emotional	Financial	Denial of Rights
Conversation and Social Confidence (CSC)	.086 (.219)	.135 (.209)	.139 (.112)
HC × CSC	.536 (.490)	.716 (.467)	.693 (.251)**
AR × CSC	-.507 (.394)	-.677 (.375)	-.560 (.202)**
R^2 (ΔR^2)	.141 (.026)	.171 (.050)	.331 (.106)***
Easiness of self-exposure (ESE)	.836 (.357)*	.648 (.354)	.514 (.189)**
HC × ESE	1.355 (.704)	.932 (.697)	1.030 (.372)**
AR × ESE	-1.513 (.741)*	-1.125 (.734)	-1.188 (.391)**
R^2 (ΔR^2)	.210 (.060)*	.177 (.035)*	.347 (.108)***
Self-expression of positive affect (PA)	.155 (.354)	-.045 (.347)	-.087 (.195)
HC × PA	-.147 (.688)	.078 (.673)	-.135 (.379)
AR × PA	.626 (.707)	.182 (.692)	.301 (.389)
R^2 (ΔR^2)	.142 (.028)	.127 (.008)	.230 (.013)*
Coping assertively with risk (CAR)	-.103 (.212)	-.141 (.200)	-.127 (.103)
HC × CAR	-.967 (.472)*	-1.119 (.445)*	-.893 (.230)***
AR × CAR	.871 (.379)*	1.030 (.357)**	.824 (.184)***
R^2 (ΔR^2)	.199 (.085)*	.243 (.125)**	.436 (.222)***

Defending interests and opinions (DIO)	.450 (.245)	.373 (.236)	.187 (.124)
HC × DIO	1.285 (.604)*	1.322 (.581)*	.983 (.306)**
AR × DIO	-.835 (.356)*	-.911 (.343)*	-.769 (.180)***
R^2 (ΔR^2)	.231 (.081)*	.241 (.099)**	.415 (.190)***
Giving and receiving praise (GRP)	.182 (.366)	.073 (.352)	.039 (.193)
HC × GRP	.832 (.51)	.868 (.490)	.640 (.270)*
AR × GRP	-.658 (.437)	-.775 (.420)	-.594 (.231)*
R^2 (ΔR^2)	.163 (.046)	.178 (.060)*	.307 (.095)**

Note: All results controlled for Harm/care and Authority/respect
* $p < .05$
** $p < .01$
*** $p < .001$

Another significant interaction was found between coping assertively with risk and both harm/care and authority/respect. The results indicate that at medium levels of coping assertively with risk, there is an effect between harm/care and emotional abuse ($b = .962$, $t(56) = 2.177$, $p = .034$), an effect that doubles at low levels of coping assertively with risk ($b = 2.118$, $t(56) = 3.351$, $p = .001$). This result means that in participants who find it more difficult to be assertive, for every point of importance given to caring and protection from harm, two more emotionally abusive behaviors are reported. At high levels of assertiveness, there was no relationship ($b = -.194$, $t(56) = -.245$, $p = .807$). This pattern reverses in regard to authority/respect, where at high ($b = .364$, $t(56) = .542$, $p = .590$) and medium levels of assertiveness ($b = -.678$, $t(56) = -1.769$, $p = .082$), there is no relationship between authority/respect and emotional abuse, but at low levels of assertiveness, for every point of importance given to authority/respect, nearly two fewer emotionally abusive behaviors are reported ($b = -1.720$, $t(56) = -3.430$, $p = .001$).

The inverse pattern was found with defending interests and opinions. The results indicate that at low levels ($b = -.637$, $t(56) = -.720$, $p = .475$) and at medium levels of defending interests and opinions ($b = .623$, $t(56) = 1.340$, $p = .186$), there is no relationship between harm/care and emotional abuse, but at high levels, for every point of importance given to caring and protection from harm, almost two more emotionally abusive behaviors are reported ($b = 1.882$, $t(56) = 3.190$, $p = .002$). Once again, the direction of the relation changes when looking at authority/respect. At low levels ($b = .229$, $t(56) = .412$, $p = .682$) and medium levels ($b = -.590$, $t(56) = -1.540$, $p = .129$), there is no relationship, but at high levels of defending interests and opinions, for every two points of importance given to the respect of traditions and authority, three fewer emotionally abusive behaviors are reported ($b = -1.408$, $t(56) = -$

2.944, $p = .005$).

As seen in Table 4, financial abuse only had significant interaction terms in coping assertively with risk and in defending interests and opinions. The results show that at high levels of assertiveness, there is no relationship between harm/care and financial abuse ($b = -.406$, $t(56) = -.544$, $p = .589$). However, at medium levels, there is an effect ($b = .933$, $t(56) = 2.239$, $p = .029$) that more than doubles at low levels of assertiveness ($b = 2.271$, $t(56) = 3.812$, $p < .001$), meaning that for the less assertive participants, one more point of importance given to the protection from harm is associated with reporting two more financially abusive behaviors. Similarly, but with an effect on the opposite direction, at high levels of assertiveness ($b = .629$, $t(56) = .991$, $p = .326$) and at medium levels of assertiveness ($b = -.604$, $t(56) = -1.670$, $p = .100$), there was no relationship between authority/respect and financial abuse. However, at low levels of assertiveness, every point of importance given to respect for authority is associated with reporting nearly two fewer financially abusive behaviors ($b = -1.836$, $t(56) = -3.883$, $p < .001$).

Regarding the skill defending interests and opinions, at low ($b = -.660$, $t(56) = -.774$, $p = .442$) and medium levels ($b = .635$, $t(56) = 1.419$, $p = .162$), there is no relationship between harm/care and financial abuse. However, at high levels of defending interests and opinions, for every point of importance given to protecting from harm, almost two more emotionally abusive behaviors are reported ($b = 1.930$, $t(56) = 3.396$, $p = .001$). Likewise, at low levels ($b = .309$, $t(56) = .578$, $p = .565$) and at medium levels of defending interests and opinions ($b = -.584$, $t(56) = -1.583$, $p = .119$), there is no relationship between authority/respect and financial abuse. However, at high levels of defending interests and opinions, for every two points of importance given to authority, three fewer financially abusive behaviors are reported ($b = -1.477$, $t(56) = -3.204$, $p = .002$).

Denial of rights has the highest number of interactions. Only self-expression of positive affect did not interfere with the relationship between moral intuitions and denial of rights. A few patterns emerge when looking at the results. There were significant interaction effects between harm/care and denial of rights at medium levels of the skills conversation and social confidence ($b = .685$, $t(56) = 2.873$, $p = .006$), easiness of self-exposure ($b = .934$, $t(56) = 3.982$, $p < .001$), coping assertively with risk ($b = .652$, $t(56) = 3.028$, $p = .004$), defending interests and opinions ($b = .473$, $t(56) = 2.012$, $p = .049$) and giving and receiving praise ($b = .859$, $t(56) = 3.514$, $p = .001$). Likewise, there were significant interaction effects between authority/respect and denial of rights at medium levels of conversation and social confidence ($b = -.709$, $t(56) = -3.589$, $p = .001$), easiness of self-exposure ($b = -1.046$, $t(56) = -5.046$, $p < .001$), coping assertively with risk ($b = -.568$, $t(56) = -3.041$, $p = .004$), defending interests and opinions

(b = -.607, t(56) = -3.132, p = .003) and giving and receiving praise (b = -.748, t(56) = -3.739, p < .001). There was no effect of harm/care on denial of rights in lower levels of conversation and social confidence (b = -.098, t(56) = -.236, p = .814), easiness of self-exposure (b = .263, t(56) = .773, p = .443), defending interests and opinions (b = -.490, t(56) = -1.093, p = .279) and giving and receiving praise (b = .339, t(56) = 1.121, p = .267). At lower levels of coping assertively with risk, there was a positive association between harm/care and denial of rights (b = 1.720, t(56) = 5.587, p < .001). The same pattern can be found for the relationship between authority/respect and denial of rights, with no association found at lower levels of conversation and social confidence (b = -.077, t(56) = -.235, p = .815), easiness of self-exposure (b = -.272, t(56) = -1.009, p = .317), defending interests and opinions (b = .146, t(56) = .521, p = .605) and giving and receiving praise (b = -.266, t(56) = -.929, p = .357) but with a negative association between authority/respect and denial of rights at lower levels of coping assertively with risk (b = -1.196, t(56) = -6.357, p < .001). These results, thus far, mean that at lower levels of assertiveness, giving importance to care and protection from harm is associated with reporting more behaviors that constitute denial of rights, while giving importance to authority and respect of traditions is associated with reporting fewer behaviors that constitute denial of rights.

Now looking at the social skills at their highest levels, the first result is that at high levels of coping assertively with risk, there is no relationship between denial of rights and harm/care (b = -.417, t(56) = -1.079, p = .285) or between denial of rights and authority/respect (b = .418, t(56) = 1.274, p = .208). The second result is that, for the other social skills, there were positive and significant associations between harm/care and denial of rights at high levels of conversation and social confidence (b = 1.468, t(56) = 4.617, p < .001), easiness of self-exposure (b = 1.702, t(56) = 4.729, p < .001), defending interests and opinions (b = 1.437, t(56) = 4.810, p < .001) and giving and receiving praise (b = 1.282, t(56) = 3.967, p < .001); there were negative associations between authority/respect and denial of rights at high levels of conversation and social confidence (b = -1.341, t(56) = -4.874, p < .001), easiness of self-exposure (b = -1.932, t(56) = -4.707, p < .001), defending interests and opinions (b = -1.361, t(56) = -5.618, p < .001) and giving and receiving praise (b = -1.141, t(56) = -4.748, p < .001). These results mean that at higher levels of conversation and social confidence, easiness of self-exposure, defending interests and opinions and giving and receiving praise, giving importance to care and protection from harm is associated with reporting more behaviors that comprise denial of rights, whereas giving importance to authority and respect is associated with reporting fewer behaviors of denial of rights.

Discussion

The present study intended to contribute to the theoretical development in the field of elder abuse. The study was designed to test some of the predictions of social exchange theory, and we present results that help further elaborate on this theory. In this theory, abuse is conceptualized as a dysfunctional exchange; lack of resources leads to abuse by changing the power dynamics in a relationship. We related moral intuitions and emotional recognition (variables that determine what resources we use in an exchange) with abuse. We studied how this relation is moderated by functionality and social skills (indicators of power/dependence).

A first result that is important to discuss is the frequency of abusive behaviors reported by the participants of this study. Nearly one-third of the participants reported being the target of at least one abusive behavior, and only one participant reported physical abuse. These numbers are congruent with previous prevalence studies in Portugal (Santos et al., 2011). Denial of rights is usually not considered in the more frequently used typologies of abuse. However, behaviors that constitute a denial of rights are abusive behaviors, considering the general definition of the World Health Organization (2002). With the inclusion of moral intuitions in this study, variables related to perceptions of individual and group rights (Haidt & Joseph, 2004), finding a relationship between moral intuitions and denial of rights as a form of abuse is not surprising. With other variables as indicators of resources, this form of abuse might not produce as many results of interest.

The Relevance of a Psychological Approach to Elder Abuse

The current study contributed to developing a social exchange view of abuse by testing new variables that determine the resources used in exchanges. First, we need to mention the absence of a relationship between emotion recognition and abuse. As a variable that influences interpersonal relationships, we expected a relationship between abuse and emotion recognition. It could provide more space for an empathic relationship and more awareness of hostile relationships or behaviors. However, we found no result supporting that hypothesis. We found, however, that moral intuitions do play some role in vulnerability and protection from abuse. The main results indicate that greater concerns with harm/care increase the risk of emotional abuse, financial abuse, and denial of rights. According to moral foundations' theory, the harm/care intuition is related to an innate feeling of care for others and the ability to dislike and feel pain in others (Haidt & Joseph, 2004). The found relationship could be explained if we consider that people concerned with care can easily detect the transactions that put care at risk. This concern might lead to confrontations when older adults consider they are not being cared for as they

wish, resulting in more abuse. Thus, the harm/care intuition could act in two ways on a social exchange-conceptualized abuse. First, it can lower the threshold of what exchanges are considered abusive by violating an ethical perspective oriented for taking care of oneself and others. Second, it can stimulate confrontations regarding the appropriate care method, which may be abusive. We also found that higher importance given to authority/respect decreases the risk of emotional abuse, financial abuse, and denial of rights. Moral foundations theory states that our history of hierarchical social relationships, where traditions and legitimate authority are respected, is the base of the moral intuition authority/respect (Haidt & Joseph, 2004). Looking at this result in light of social exchange theory, we can extrapolate that the more powerful agent in a relationship can be viewed as an authority figure. Persons who give higher importance to authority figures might avoid confrontations, maintaining a stable power balance to prevent abusive exchanges. It is interesting that one moral intuition can prevent abuse while another can potentiate it. Social exchange theory has been viewed as based on the lack of resources and dependency. However, these results indicate that persons' core beliefs can also shape exchanges, changing how we can use social exchange theory to conceptualize abuse. Perhaps, instead of a deficit view, it would be more appropriate to think about patterns of general functioning, leaving room for a variety of psychological variables that change the selection and availability of resources for trade and not necessarily impair it.

Is Neglect a Special Type of Elder Abuse?

One of our main findings was the absence of relations between any of our variables and neglect. Neglect is a very particular form of abuse; for example, unlike the other forms, it implies disengaging from the relationship with harmful consequences. We can understand neglect through the social exchange as not engaging in exchanges when the dependent person has a need. Disengagement from exchanges perceived as unfair can avoid further losses. Therefore, neglect is conceptualized as not performing a set of exchanges, while in other forms of abuse, exchanges are carried on but have abusive outcomes. As neglect consists in denying essential exchanges, it is not easy to relate it with resources because a resource only exists in the context of an exchange. Sometimes in neglect, the older adult can feel that denying his or her needs is a display of disrespect or contempt, which means that exchange occurs as the older adult is "receiving" something. However, through this conceptualization, we would see two forms of abuse: (1) neglect with the denial of the exchange of the needed resource and (2) psychological abuse with the resource that was actually traded. Perpetrating more than one form of abuse is common. Through social exchange, different mechanics can be hypothesized for different forms of abuse, even if they are simultaneous.

A previous study found relationships between deficits in specific cognitive structures and neglect (Fundinho & Ferreira-Alves, 2021). However, cognitive functioning and moral intuitions have crucial differences: cognitive functioning might change with time, but moral intuitions are conceptualized as stable. On the other hand, the emergence of neglect depends on change, specifically the emergence of needs that go unanswered. Moral intuitions (as indicators of resources) might not change enough to be possible to establish a relationship between them and neglect (that depends on change) in long-term relationships. Detecting a relationship between exchange resources and neglect might depend on the type of resource.

The Importance of Balance in the Relationship: the Case of Dependence and Social Skills

The inclusion of functionality in the relationship between moral intuitions and abuse supports a social exchange view of elder abuse. Some previous researches have found a relationship between functionality and abuse (e.g., Lachs et al., 1997; Vilar-Compte et al., 2017), while others did not (e.g., Luo & Waite, 2011; Shugarman et al., 2003). Despite the contradictory results, when introducing the functionality of older persons in a social exchange framework, the results obtained make sense. We found that different forms of physical dependency act differently depending on the type of abuse considered. For example, functionality did not alter the relationships between moral intuitions and emotional abuse. However, higher levels of dependency for movement and lower levels of dependence on hygiene potentiated the effects of moral intuitions on denial of rights. The moral intuition authority/respect only influenced financial abuse on lower levels of dependency for hygiene. These results support the basic idea of social exchange theory that the relationship between resources is regulated by the power/dependence balance because more dependence increases the effects of the resources. On hygiene, only low levels of dependency interfere in the previously found relationships. It might be the case that medium and high dependency for hygiene tasks cause such a disruption in the power balance that nullifies the effect of any other variable. It is crucial to note that functionality does not nullify the protective properties of authority/respect, nor does it deny the increased risk of harm/care. However, it allows the identification of groups that seem to be more susceptible to these effects.

The moderating role of social skills in the relationship between moral intuitions and elder abuse also provided exciting results. We found that only self-expression of positive affect had no moderating effect between moral intuitions and abuse. Additionally, different forms of abuse were moderated by different social skills. The only constants were coping assertively with risk and defending interests and opinions. The relationship between moral intuitions and abuse was only present at lower levels of coping

assertively with risk, meaning that moral intuitions have no role in predicting abuse for the more assertive participants. In the case of defending interests and opinions, the effect of moral intuitions on abuse was found in the higher levels of the skill. These were the two primary social skills affecting the relationship with emotional and financial abuse, and their combination is fascinating.

On the one hand, high scores in defending interests and opinions could mean the defense of oneself. However, low assertiveness could mean doing it in a confrontational, perhaps even aggressive or passive manner. These forms of interaction could decrease what is described in social exchange theory as the social value of the interaction (Dowd, 1975). Then, we have denial of rights, with the larger number of interactions between social skills and moral intuitions. We may interpret this result in two ways. First, given that the independent variable was moral intuitions and the defense of human rights has an ethical facet, these two variables are expected to be closely related. Second, it is also possible that denial of rights as a form of abuse may include many different behaviors, easily affected by confounding variables. Further conceptual work on this form of abuse would be beneficial.

Limitations, Implications, and Future Research

This study has limitations. The principal limitation is related to assessing the concepts proposed by social exchange theory. The concepts of resources and power/dependence cannot be measured directly. Instead, we opted to measure variables that might affect the selection of resources. Likewise, we chose to account for three types of physical dependence and social skills that we thought would act indirectly on the power/dependency balance by making an older adult a more (or less) attractive person to interact with. Nevertheless, this study expands our understanding of a social exchange view of elder abuse, using a new paradigm to approach an untested theory. A second limitation is our small sample size. Estimating a sample size is challenging when working on previously unexplored terrain. However, this sample size was enough to ground a first look into how these variables fit the tested theory.

This work has several implications for theory, research and practice. In general, this study supports a social exchange theory explanation for elder abuse. These results suggest that the social exchange explanation for elder abuse should be expanded beyond a view focused on the deficit of resources to a perspective focused on patterns of behavior, determined, among others, by moral intuitions, social skills, and functionality. It is not necessarily a deficit that leads to abuse. The results found with social skills indicate that competence in some areas might also lead to abuse. Therefore, a way to proceed can be by focusing on behavior in general and not only on deficits.

Regarding implications for research, this study opens a field of new possibilities. It is necessary

to continue studying social exchange as an explanation for elder abuse by checking more variables that determine social behavior and their relation to abuse and studying the effects of other variables that affect the power balance in a relationship. Plus, relationships work both ways. Social exchange theory can also be used to understand the abusive caregiver's perspective. In this study, we focused on the older adult's perspective and role in the relationship with the caregiver. Future research could explore the caregiver's perspective.

Our study alone is not enough to warrant changes in practice, but it indicates that we can take steps to expand and improve risk assessment. On the one hand, there is an indication that multiple variables shape human behavior and function as risk or protective factors. A thorough risk assessment could include these variables. On the other hand, there is the role of power/dependency. Factors that contribute to multiple forms of dependence that make interacting with someone more or less attractive should be considered in risk assessment since they regulate the effects of the risk and protective factors previously mentioned. These factors could, perhaps, contribute to a more accurate system to assess risk.

Conclusion

To conclude, this study further elaborates how social exchange theory can be used as an explanatory theory for elder abuse. We also explored some previously unknown predictors of elder abuse. Further research is needed to confirm these findings and take social exchange further. This theoretical view has important implications for the detection, risk assessment, and definition of elder abuse. The study of the resources for "trade" within a relationship reminds us how central it is to the elder abuse field to understand how psychological variables of the older person contribute to increased risk or protection from abuse.

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Chapter VI

General discussion and conclusions

The main objective of this thesis was to test some of the predictions of social exchange theory when applied to elder abuse. Multiple authors consider social exchange theory when theorising about elder abuse (Abolfathi Momtaz et al., 2013; Burnight & Mosqueda, 2011; Mathew & Nair, 2017; Moore, 2019; Wilber & McNeilly, 2001), but the theory is often superficially conceptualised and tested. Thus, gathering evidence regarding this theory's predictions allows us to estimate the theory's potential to explain elder abuse.

Social exchange theory is one of many theories used to explain elder abuse. We started this work by systematically analysing the literature to determine the support of several theories, thus determining if the social exchange theory would merit further study. Then, by analysing the basic principles of social exchange theory, we developed an operationalisation based on the concepts of resources and power/dependency, allowing hypothesis formation and test. We then explored the role of six indicators of resources in the prediction of elder abuse: perceptual speed, episodic memory, executive function, verbal fluency, emotion recognition and moral intuitions. We then studied to what extent the relationship between these indicators of resources and elder abuse was affected by two indicators of power/dependence, namely functional dependence and social skills.

From our systematic review of the literature (Chapter II), we realised that most theories of elder abuse have supporting evidence. We found more evidence in favour than against the caregiver stress theory, social exchange theory, bidirectional theory, dyadic discord theory and psychopathology of the caregiver. Social learning theory had the same number of articles showing supporting evidence as it had showing evidence against it. These results were unexpected but not surprising and led to a central question: can all theories be correct? To a certain extent, yes, they can. The six theories included in this study have different focuses. The caregiver stress and psychopathology of the caregiver approaches focus on individual factors, specifically, individual factors of the caregiver, although frequently attributed to the caregiving situation (Moore, 2019). Bidirectional theory and dyadic discord focus on relational factors (Burnight & Mosqueda, 2011). Social learning is concerned with acquiring behaviours (Burnight & Mosqueda, 2011), and social exchange concerns itself with individual factors, relational factors and their interaction (Moore, 2019). Each theory is focused on a different set of subprocesses that underlie elder abuse. That focus is hinted at in studies that include variables relevant to more than one theory and find interesting mediation or moderation effects. For instance, stress (Serra et al., 2018) and psychopathology of the caregiver (MacNeil et al., 2010) mediate the effect of other variables in the prediction of abuse, suggesting that other variables determine their effect. We consider each known theory of elder abuse to

represent a fragment of our knowledge about the issue. Then, to better understand the mechanics of elder abuse, we need to consider these various subprocesses and how they interact with each other.

Chapter II of this thesis made us realise in a very concrete way the need to search for an explanation for elder abuse in theories that have the potential to integrate various of the subprocesses proposed by the previously explored theories. Social exchange theory seems suitable for integrating the other theories into a more complex and understanding framework, as its explanation includes both individual and relational factors of elder abuse. However, as mentioned, social exchange theory is frequently oversimplified and was never operationalised and tested in the context of elder abuse. This oversimplification can often lead to a misinterpretation of the basic principles of the theory. It is not uncommon to read in the literature on theories of elder abuse that, according to social exchange theory, physical or economic dependence leads to abuse (e.g., Abolfathi Momtaz et al., 2013). Other authors go further by including the concepts of rewards (Moore, 2019) or mentioning but not going into detail about the power dynamics (Burnight & Mosqueda, 2011). This theory is incredibly complex. Not wanting to oversimplify social exchange theory, we invested in the complex task that became the backbone of this thesis: understanding the theory's basic principles and operationalising it, allowing the test of its predictions. We went beyond what scholars in the field of elder abuse say about social exchange theory and went back to the more influential authors of the theory referred to in the introduction. We studied the basic principles of social exchange theory, as presented by these authors (e.g., Blau, 1964; Emerson, 1962; Homans, 1961).

Upon these, we reforged the social exchange theory of elder abuse into a more complex framework than previously available. From this refreshed perspective, it was possible to operationalise the theory, make testable hypotheses and test if this contribution found any empirical support. This operationalisation, described in detail in the introduction and tested in Chapters IV and V, differs significantly from previous approaches to elder abuse in several ways, but one was particularly challenging. Age research tends to focus on losses and decline (Onyx & Wexler, 2017). Research on elder abuse, in particular, greatly focuses on how the older adults' dependence and poor performance relate to abuse (e.g., Dong, 2017; Serra et al., 2018) and gives little concern for the role of normal (or even good) performance. Through the adopted operationalisation of social exchange theory, we needed a variable that assessed social competence to use as an indicator of power. We thought that social skills would be one of the more obvious candidates. However, we lacked the means to measure this variable. Thus enters Chapter III, where we made a cultural adaptation of a measure of social skills, the social skills inventory – Del Prette (Del Prette & Del Prette, 2001), that could be used for all adults, including

older adults. At first glance, Chapter III may seem a bit out of focus given the thesis objectives, but it is instrumental in achieving them. Without the measure adapted and validated in Chapter III, we could not start to introduce into this work variables that better illustrate the strengths of the older adults in relationships.

The narrative developed in this thesis climaxes in Chapters IV and V, where we test the predictions of our social exchange-based view of elder abuse. We start Chapter IV by framing previous findings of the relationship between cognition and elder abuse on a social exchange paradigm. These previous findings indicated that poor cognitive performance was a risk indicator for elder abuse (Serra et al., 2018). Framing the relationship between cognition and elder abuse implies that we consider cognitive functioning an indicator of the availability or selection of resources for exchange. It also means that this relationship is conditioned by dependence and power; thus, we added the variables functionality and social skills. Plus, from social exchange theory, we can expect that not all resources require the same abilities to be produced. Thus, unlike previous studies (e.g., Orfila et al., 2018; Serra et al., 2018), we approached cognition not as a unitary variable but as a combination of different cognitive processes and structures. Based on the findings of Dong and collaborators (2011), who, besides a unitary measure of cognitive performance, also used measures of the performance of perceptual speed and episodic memory, we decided to include these two dimensions of cognition and add verbal fluency and executive function. The results of Chapter IV are exciting and allow us to put elder abuse under a different lens. Our main findings indicated four essential points: 1) not every cognitive structure is relevant to predicting elder abuse; 2) different cognitive structures help in predicting different forms of abuse; 3) dependence and social skills influence the relationship between elder abuse and cognitions and; 4) poor performance, high dependence or low social skill does not necessarily increase abuse, it can decrease it, depending on the skill, cognitive structure and type of abuse. These results strongly support the complexity of elder abuse expected from our conceptualisation. To take it another step forward, we proceeded into Chapter V, where we followed the same paradigm but explored different indicators of resources. We explored how developmental variables, which we expected to determine our resource selection process, would relate to elder abuse. In Chapter V, these variables were emotion recognition and morality. Although we did not find a relationship between emotion recognition and elder abuse, we did find that some dimensions of morality are better at predicting abuse than others. Plus, morality dimensions could not be used to predict all types of abuse, only emotional, financial and denial of rights.

Moreover, we found that giving more importance to the morality dimension harm/care could be used to predict higher rates of abuse, but giving more importance to the dimension authority/respect

would protect from abuse. Like in Chapter IV, we found that functionality and social skills interfere in the relationship between morality and abuse, reinforcing their role as determinants of dependence and power. However, we must add that in Chapter V, the social skills that altered the relationship between morality and abuse were not the same that altered the relationship between cognition and abuse. This difference supports our theoretical idea that different resources could be affected by different forms of power/dependence. The morality variable studied in Chapter V also helps us break the association of bad performance with elder abuse. In morality, based on moral foundations theory (Graham et al., 2011), there is no bad performance, just different priorities. These results support our social exchange-based explanation for elder abuse and extend the potential of this theory beyond indicators typically associated with a deficit or poor performance into a broader conception of the human, relational and ageing experience. In a way, this conceptualisation moves beyond the association of decline with elder abuse. It considers that dispositional variables, not only of the caregiver but also of the older adult, have a role to play in determining risk. We merely added a theoretical basis for this potentiality, which allowed us to frame our results of Chapter V and previous findings showing an association between older adults' personality (neuroticism) and elder abuse (Li et al., 2020).

All of the articles that compose this thesis have the potential to initiate interesting discussions. In each chapter, there is a discussion of the results that broaches many relevant subjects for further developing social exchange theory applied to elder abuse. However, as this is, after all, the conclusion of the thesis, we are going to focus on one particular subject, the main questions that guided this work: does social exchange theory provide a valid explanation for elder abuse? Can we find empirical support for our theoretical claims (Chapter I)? These questions will be the central part of this conclusion, and later we will also explore the implications that we can find to support a social exchange view of elder abuse.

Is Social Exchange Theory a Good Choice to Explain Elder Abuse?

After all this work, this is the central question to answer. However, before going into social exchange theory, we must compare it with the other theoretical approaches to elder abuse. After all, one theory is only good until we find a better alternative. For this comparison, we can lean on the results from the systematic review presented in Chapter II. In the systematic review, we found that all abuse theories have more evidence in favour than against them. Can we say all theories are correct if all theories have favourable evidence? As the theories included in the systematic review are not mutually exclusive, we concluded that each theory of abuse is likely to focus on subprocesses of abuse. That would mean that all theories make valuable predictions. However, they fail to provide a broader understanding of elder

abuse. A broader theory could be used to frame the different facets of abuse that are the focus of each theory, thus providing an integrative theory of elder abuse. Social exchange theory has the potential to be that framework. As we saw in Chapter II, social exchange theory also has favourable evidence and became our choice for theoretical development.

Social exchange theory is not a single theory but a family of theories sharing some basic principles (Molm, 2006). The results from this thesis can not speak for all possible conceptualisations of elder abuse based on the social exchange theory, only for our own. It is possible to conceptualise elder abuse differently, even starting from the same premises we did.

It is essential also to compare our conceptualisation of a social exchange theory of elder abuse with the favourable evidence found in the systematic review. The studies included in the systematic review only focused on either resources or dependence. We did not find studies that included power indicators or combined them with resources. Thus, our conceptualisation and the studies that tested hypotheses formed from it tried to fill these two gaps: studying the effect of combining resources with dependence and power on older abuse and also including indicators of the power of the older adult.

As a broader framework, social exchange theory allows for the inclusion of variables related to normal ageing, expecting a good performance to act as a protective factor. Through this theoretical lens, we could expect successful ageing to be the ultimate protector from abuse. Thus, we felt the need and responsibility to include in our studies a variable that could be used to indicate the competence of the older adult. This inclusion is consistent with the consideration that ageing is a process of gains and losses, not just decline (Baltes, 1987). Therefore, we decided to use social skills as a power indicator for older adults. To this end, we adapted and validated a measure of social skills that could be used for all adulthood (Chapter III). At the very least, Chapter III can be used to show that older adults also have social skills, and we are not trapped in a "just decline" view of ageing.

Now that all tools are displayed, we can focus on the meaning of the results of Chapters IV and V. These two studies were designed to test the predictions of our conceptualisation of a social exchange theory of elder abuse. If our results stand for anything, it is for the complexity of elder abuse. Nevertheless, our results can help to understand a small part of this complexity. Our results show unequivocally that each type of abuse has its own predictors. These results are not a novelty; several studies (e.g., Burnes et al., 2015; Garre-Olmo et al., 2009) have found that their variables predict one or another abuse type, but not all. Sometimes this result is explained as accidental or a consequence of the sampling method. However, when we factor in a social exchange perspective, it clearly suggests that each type of abuse probably emerges from different relational histories. Our results also made it very clear that there is an

interaction between resources and dependence/power. These are results that support the theoretical hypothesis. Plus, these results indicate that knowing the older adult's resources without knowing his/her level of dependence/power, or vice-versa, provides a very limited understanding of elder abuse. Both need to be considered in interaction with each other to provide a clearer picture of the risk of elder abuse.

There were some unexpected results, particularly in Chapter IV, when we realised that competence in verbal fluency could increase the number of abusive behaviours reported. At first, this result seemed opposite to our conceptualisation of a social exchange theory of elder abuse. However, we realised that the basic principles of the theory do not force us to think of decline as risk and competence as protection. The results of Chapter V reinforced this idea. The variable morality does not express decline or competence; it simply expresses a general way of approaching life's moral dilemmas. These results indicate that certain competencies or specific ways of behaving can increase the risk of abuse, while others can protect from abuse. This idea becomes more potent when we look at the results that bring social skills into the equation.

We found that the frequent use of particular skills, for instance, assertiveness, would potentiate certain types of abuse. So, we worry so much about the effects of cognitive or physical decline, but it seems that, under certain circumstances, competence can be a curse and potentiate abuse. Our results support a social exchange perspective of elder abuse but do not support the idea that competence is associated with protection and deficit associated with risk. Our results support the notion of elder abuse as a complex phenomenon with multiple representations. Each representation can be potentiated by a combination of resources and dependence/power, notwithstanding the level of resources or dependence/power. What seems to matter more than deficit or competence is the potential behavioural effect of the availability of certain resources or the frequency of use of some abilities. Though these ideas contradict some of our initial hypotheses, they do not contradict our conceptualisation of elder abuse. They support it. So, when it comes down to whether we could find support for our conceptualisation of elder abuse as a social exchange, the answer is yes, we could and did. Nevertheless, the results revealed elder abuse to be a phenomenon of higher complexity than initially anticipated. Of course, our evidence alone is insufficient to suggest a blind adoption of this theory. However, it is enough to suggest that this may be a viable path to explore as far as explanations for elder abuse go.

So, we found supporting evidence for a social exchange theory of elder abuse, but is this theory a good choice to approach elder abuse? Can we benefit from adopting this approach? To answer that question, we need to go beyond empirical support and compare the advantages and disadvantages of basing a theory of elder abuse on social exchange theory.

Several factors make social exchange theory an appealing explanation for elder abuse. First is its focus. As the general theory was designed to look at human interactions, looking at elder abuse through this lens means looking at relational experience. In this way, this theory is advantageous by focusing on the relationship and avoiding an overly judicial view of abuse and preconceptions about victims and perpetrators. It can also provide relation-centred solutions; as a relational theory, any proposed solution must include all involved in an active role. Some authors have been proposing relational-centred approaches to elder abuse, for example, based on communication dynamics (Lin & Giles, 2013). The social exchange allows us to add other facets of human relationships to understanding this complex phenomenon.

One of the greatest advantages of social exchange theory over the other explanations for elder abuse is the proposition that each type of abuse has a different "ontogeny". In elder abuse, treating the phenomenon as monolithic is frequently criticised (Jackson & Hafemeister, 2016), but most of the theoretical explanations available fall into this trap. However, we must do justice to some authors who have tackled this problem arriving at several type-specific theories of elder abuse (e.g., Jackson & Hafemeister, 2011, 2016). The benefit of social exchange theory over these approaches is that the general theory is the same for all types of abuse. However, the mechanism is type-specific, giving the social exchange explanation an insightful and productive narrative.

The last advantage of a social exchange theory of elder abuse may not seem evident at first sight. Although social exchange theory may not be a developmental theory in its classical sense, it allows us to look at elder abuse with developmental perspectives in mind. A theory based on the principles of social exchange theory considers the history of past exchanges (Homans, 1961). Some exchanges may change across the lifespan as developmental needs change, which can be reflected in the history of past exchanges. Likewise, as changes in resources or power/dependence occur across the lifespan, exchanges change as well, influenced by the available resources and changes in social status that determine power within the relationship (Bengtson & Dowd, 1981; Dowd, 1975) and by the adoption of compensatory mechanisms. Social exchange theory might not be a developmental theory; however, since it includes the role of lifespan changes in relationships, it allows the formulation of hypotheses that include developmental mechanisms. Consequently, this theory might be instrumental in looking at elder abuse as a developmental issue.

Some of these advantages have clear implications at several levels. These implications are discussed in further detail in the next section. However, for now, it is important to compare these

advantages with some criticisms that can be made to a conceptualisation of elder abuse based on social exchange theory.

Social exchange theory is the target of several criticisms. Social exchange theory is typically presented in a very abstract way. An abundance of theory-specific terms and nomenclature make its comprehension difficult. Additionally, some of the theory's concepts (e.g., costs, profit, power) are so subjective, culturally, or case-dependent that they turn nearly impossible the construction of an objective measure (Bengtson & Dowd, 1981).

The main criticism of social exchange theory is its simplification of human interaction into a series of economic tradeoffs (Zafirovski, 2005). It can be argued that it is a way of understanding a large-scale phenomenon by studying it in small parts (Stolte et al., 2001). Plus, other authors point out that social exchange is based on the premise that the assessment of each interaction is based on a rational process (Zafirovski, 2005). However, rationalism is not accepted by all theorists. Some advocate that rational choice is not present in all exchanges, opening the door for non-self-centred motivations, such as altruism (Zafirovski, 2005). The classical economic and rational view of social exchange theory can be seen as "cold" and calculatingly cynical. However, the subjective nature of concepts such as cost, benefits or profit, among others adopted by this theory, leaves room for interactions that are not necessarily "cold". Our profit on an exchange could simply be being part of an interesting conversation or having a sense of belonging from interacting with another. We could help another person because it feels good to do it, which would be our profit. Just because this theory adopts economic terms does not mean it needs to be unemotional. For example, the term profit is quickly associated with receiving an external reward. In this theory, it can be internal, like feeling good about myself because I performed some action. Plus, this criticism is mostly valid for some social exchange theory conceptualisations, but not all. Some authors have begun to explore the role of emotions in social exchanges and other variables such as relational cohesion and solidarity (Cook et al., 2013).

Finally, particularly in elder abuse, this theory can be interpreted in dangerous ways. Like other theories of elder abuse (see an example in Brandl & Raymond, 2012) for the case of caregiver stress theory), social exchange theory can be used to justify a perpetrator's actions or blame the victim for the abuse. These types of interpretations are an example of how to pervert a theory. First of all, a theory is a group of propositions whose sole aim is to explain a phenomenon. A theory does not arrest anyone, nor should it serve as a decision criteria to determine eligibility for assistance. However, it provides an explanation and can be used to orient prevention. Second, and in the particular case of a social exchange theory of elder abuse, saying that the theory can be used to justify a perpetrator's actions is a bit

shortsighted. It is true that in our conceptualisation of the theory, abusive behaviours emerge as an attempt to balance exchanges. However, as we defended across this thesis, it is not the only way. If anything, using abusive behaviours to balance exchanges shows a lack of behavioural strategies. It is a sign that the caregiver does not have enough skills to provide care and also needs help. This form of criticism assumes a moral polarisation in violence: the victims are the good guys, and the perpetrators are the bad guys. We suppose it is easier to think like this, but we can use social exchange theory to go beyond this dichotomic view. All involved are suffering in their own way and need help. We believe this to be a more compassionate way of looking at elder abuse than solely focusing on one side of the story. Explaining the other side does not justify it or give it credibility.

Theoretical, Conceptual and Practical Implications

Empirical support for a social exchange approach to elder abuse can have multiple implications, namely for theoretical development, for the conceptualisation of abuse in old age, and for the prevention and intervention in this field. Some of these implications may vary depending on what principles of social exchange were adopted in the conceptualisation.

The more obvious implications of the work presented in this thesis are related to theoretical development. As our results support a social exchange-based explanation for elder abuse, we can propose a discussion about some of the current theorisations of elder abuse.

When applied to elder abuse, the generally used formulation of social exchange theory supposes that abuse emerges from the availability of few resources within a dyadic relationship. We also made that assumption when formulating our hypothesis. However, the results of Chapter IV indicate that, in the case of verbal fluency, it is not a poor performance that is associated with elder abuse but, on the contrary, a good performance. These results indicated that abuse is not simply a matter of deficit. Perhaps we should consider that good performance can also increase the risk of abuse (as discussed in Chapter IV). If we move beyond a view of poor performance as an indicator of risk, we can consider that other determinants of behaviour that are not based on performance can also determine risk or protection from abuse. This idea was reinforced in Chapter V, where we found the association between morality and elder abuse. Likewise, exploring the role of social skills also contributed to this conclusion, when results indicated that the frequent use of certain social skills, which we intuitively would assume to be a good thing, was actually associated with the report of more abusive behaviours. Chapters IV's and V's results suggest that using the explored resources and skills is associated with an increase in the probability of abusive exchanges. Therefore, we can expect them to increase the risk of abuse. These results lead us to conclude that, when

framing elder abuse with social exchange theory, we should move from a perspective of "few resources increase the risk of abuse" to a perspective of "certain resources increase the risk of abuse".

Support for social exchange theory has another important implication. As seen in Chapter II, the more frequently used theories of elder abuse are typically focused on the perpetrator's characteristics or the relationship between victim and perpetrator. Social exchange theory also has a relational focus. However, it implies that to understand elder abuse is necessary to understand the needs and characteristics of both individuals and the characteristics of the relationship together in a complex relational system. In our opinion, this is an advancement compared to other theories. Through this view, the older adult is as active and influential to the relationship as the caregiver, while, in other theoretical views, the older adult assumes a passive role. In this view, the older adult can actively find strategies to decrease the impact or the risk of abuse, a scenario that is not considered in most theories. For this reason, we tend to consider social exchange theory as an explanation of elder abuse that is more friendly with the perspective of empowering the older adult.

A social exchange theory of elder abuse also tackles another challenge that emerges in the literature. As discussed in Chapter II, sometimes research results support the explanation provided by a particular theoretical perspective only for one or two types of abuse (e.g., Burnes et al., 2015; Garre-Olmo et al., 2009). As previously mentioned, some authors made impressive efforts to build theories explaining only one type of abuse or the concomitant appearance of more than one type of abuse (Jackson & Hafemeister, 2011, 2016). Having one explanation for each type of mistreatment seems logical. However, when we consider all possible forms of mistreatment, known and unknown, and various possibilities of their cooccurrence, having one explanation for each type of mistreatment turns theoretical analysis into case analysis; each case requires a theory of its own. Social exchange theory can help solve this problem. As discussed in the introduction, social exchange theory considers the variability in human interaction. Despite that variability, we can cluster together exchanges, namely, exchanges with similar outcomes, i.e. the types of abuse. As we previously described (Chapter I), through a social exchange framework of elder abuse, we can hypothesise different exchange-based mechanisms to explain each form of abuse. The results presented in Chapters IV and V are supportive of this conceptualisation. Thus, social exchange theory has the potential to explain each type of abuse without abandoning a common theoretical umbrella that lies subjacent to each explanation.

Adding to the potential to provide unique mechanisms that follow the same principles to explain different types of abuse, social exchange theory also allows us to conciliate other theories of abuse under the same principles. We can say that, in this sense, social exchange theory is a metatheory. The more

frequently mentioned theories of elder abuse tend to focus on the caregiver's characteristics or the characteristics of the relationship. For example, the key to caregiver stress theory is the feeling of burden and the ability to deal with stressful situations. From a social exchange perspective, the caregiver burden can be conceptualised as a power imbalance that occurs when the needs of the older adult require frequent exchanges with the caregiver, thus leading to the exhaustion of the caregiver's resources. Plus, the caregiver's ability to cope with stressful situations can also be conceptualised as a determinant of resource selection in exchanges the caregiver perceives as stressful. Most, if not all, theoretical perspectives on elder abuse can be included in a social exchange framework. In the psychopathology of the perpetrator, mental health issues can be interpreted as imposing a bias on selection or a limitation on the availability of resources for exchange. Dyadic discord and bidirectional theory focus on exchanges of violent or conflictual behaviours between the two persons in the relationship. Even though the classical social exchange theory principles rely on operant conditioning (Blau, 1964; Cook et al., 2013; Homans, 1961), social learning theory can be understood as an alternative mechanism to learn and acquire behaviours that will be used as resources in future exchanges. The compatibility between this approach and others, more frequently adopted in this field, is not only interesting but is also of great importance. It indicates that social exchange can be used as a basic framework to produce an integrative model. This approach has the potential to join all other approaches and attempt to find a theoretical consensus. Such theoretical consensus is something that deserves exploration.

Beyond theoretical implications, support for social exchange theory also has conceptual implications that can be observed at least at three levels: first, at the level of the definition of elder abuse, second, at the level of analysis of the cases and third at the level of the adopted nomenclature in the field.

As discussed in the introduction of this thesis, the definition of elder abuse has changed significantly across time, although always remaining somewhat atheoretical (Mysyuk et al., 2013). Understandably, definitions such as the one proposed by the WHO (2002) aim for conciseness to improve dissemination. However, a lack of detail increases the sense that the field is atheoretical and leaves a wide margin for interpretation, which is not ideal for research. The need to improve the definition of elder abuse has been widely discussed but has drawn less attention in recent years. It seems that finding a good, precise and consensual definition of elder abuse has been branded a lost cause. The shortcomings of the current definitions of elder abuse seem closely tied to the lack of investment in developing a theoretical grounding for elder abuse. Basing a definition of elder abuse on theory can help provide a more precise definition while also hinting about the mechanics behind the abuse. Social exchange theory

can be used to such an end. However, as social exchange theory focuses on social interaction, such a definition would differ substantially from the current definitions.

Under the principles explored in this thesis introduction, which come from the classical conceptualisations of social exchange, a definition of elder abuse based on a social exchange theory of elder abuse would: a) acknowledge that abuse happens in a relationship with history; b) consider abuse an inadequate strategy to balance an exchange; c) acknowledge the wide variability that abusive behaviour can adopt and d) acknowledge that both victim and perpetrator have an active role in the relationship, experiencing consequences resulting from abuse (not necessarily equally severe).

An attempt at a first crude draft of such kind of definition can look something like this:

> Elder abuse is something that happens in the context of a relationship with a history of past interactions. Elder abuse is a set of inadequate relational strategies used by the more powerful member of the relationship to balance his/her perception of loss in previous interactions. This can be made in case-specific ways that, ultimately, try to 1) reduce investment or effort in the relationship or 2) decrease the profit of the older adult. Both can result in poorer quality of care, harm or distress in older adults, and distress in the person who commits these actions, resulting in poorer relational quality.

This definition tries to solve the "expectation of trust" problem of the WHO definition by including the history of past exchanges considered in social exchange theory, assuming that trust emerges from past exchanges. It also highlights the consequences of abuse, expanding the view that the consequences are only one-sided and opening the possibility of consequences for the perpetrator. This definition removes focus from the forms of abuse, allocating it to the objective of abuse. The focus on the objective of the abusive exchange allows us to include atypical, rare or non-consensual forms of abuse under this definition, so long as they share the same objective. Additionally, we can find the basic mechanism of classical social exchange in this definition, giving it more theoretical power. Of course, this work alone is not enough to fundament or strongly recommend adopting this or other similar definition, but it is a start. It provides us with something more to be explored in research, tested, supported or contradicted based on data, rather than a merely political or judicial approach. It is also important to reiterate that this definition proposal derives from a conceptualisation of elder abuse based on the principles of social exchange adopted in this thesis. Other works, based on more contemporary approaches to social exchange theory or based on different authors, can arrive at a different proposal.

In our view, the more important consequences of such a definition are:

1) it makes clear that abuse occurs within the context of a unique relationship that has a history;

2) it has consequences not only for the victim but also for the perpetrator and their relationship.

These points lead us to another conceptual implication of social exchange theory. Elder abuse is frequently seen as something someone did. Social exchange theory encourages us to consider abuse as something that may happen in a relationship. The result is a focus on the relationship. Consequently, finding abuse is not just a matter of knowing if some action took place. It is also a matter of knowing what actions were practised, understanding how those actions were received, and how they fit in the previous relational history. This approach is more holistic and shares some similarities with conceptual models of elder abuse as a problem of dysfunctional family communication (Lin & Giles, 2013). Nevertheless, it is worth mentioning that some abusive actions may be qualified as universally abusive, even though their ultimate significance can depend on the meaning-making activity of the involved actors and context. The relational focus accepted by social exchange theory allows for a more intervention-based approach to elder abuse than a punitive-based approach, not to mention that it faces prevention from a more hopeful perspective.

The third conceptual implication of adopting the social exchange theory is that it encourages change in the usual nomenclature adopted in elder abuse. Any current exchange, including the violent ones, are the latest link in a long chain of exchanges that began at the start of the relationship. When we determine a certain action as abusive, we are unaware of its relational context and history. Therefore, identifying a victim and a perpetrator is constrained to a moment/assessment in time. The dynamics proposed by classical social exchange imply reciprocity, a back-and-forth of behaviours, some of which might be violent and others not, resulting in the volatility of the attribution of a label of victim and a label of the perpetrator. The current victim may have been a perpetrator in past exchanges and may become a perpetrator in future exchanges; the same can be said for the current perpetrator. As such, from a social exchange point of view, the terms victim and perpetrator are not very informative beyond specific moments in time analysed out of the context of a sequence of relational exchanges. They are momentary and do not inform about the past, thus being preferable to talk about abusive relationships than victims and perpetrators.

When accounting for past exchanges, we may find other violent exchanges which may be bidirectional. As misplaced as it may be, an abusive exchange may have been, at the moment it happened, justified in the eyes of the perpetrator as an answer to some perceived grievance. The perpetrator may see him/herself as the victim, thus responding violently (not necessarily in the same

degree of severity). This does not excuse in any way the use of violence in relationships. It would indicate a poor relational repertoire that shows an inability to find alternative ways to deal with unbalanced exchanges.

Finally, adopting social exchange theory as an explanation for elder abuse also has considerable practical implications, specifically for intervention and prevention.

The implications of social exchange theory for intervention in elder abuse are related to its promotion of a relational perspective. Intervening in elder abuse from a social exchange base would necessarily mean intervening in a relationship. Working with both caregivers and older adults would be essential for the success of any intervention. Many things can be speculated about how an intervention based on social exchange theory would work, but that is not the point of this work. From the standpoint of classical social exchange theory, exchanges are conducted on the expectation of reciprocity (Blau, 1964; Homans, 1961; Molm, 2006). From this framework, where we based our conceptualisation of a social exchange theory of elder abuse, a hypothetical intervention could focus on reframing exchanges perceived as unfair or promoting non-abusive strategies to balance unbalanced exchanges. Family counselling would be a positive way to intervene. Other approaches to social exchange theory focus on what some authors call negotiated transactions (Molm, 2006). The main difference between this approach and the reciprocity approach is that both persons engage in explicit negotiations, making decisions conjointly. Counselling could be used to turn the implicit expectation of reciprocity into a negotiated transaction, facilitating negotiations, such as promoting the division of caregiving tasks, thus avoiding dependence on a single caregiver. Family counselling or therapy can also be a powerful tool as it works at the family system level, showing a perfect fit with this theoretical approach.

The potential of a social exchange view of elder abuse for prevention is enormous. If risk increases from an unfavourable combination of resources and power/dependence, we can promote favourable combinations of these constructs to decrease risk. We can work on risk reduction in multiple ways. One approach would be to avoid dependence on a single caregiver by promoting the use of assistance services or the division of tasks within the familial environment. We could also work on promoting the power of the older adult within relationships. At the individual level, that can be done by helping older adults develop skills. At a societal level, that can be done, for example, by combating ageism. We can also work on developing the resources that both older adults and caregivers use in their exchanges. Strategies from selective optimisation with compensation theory can be used to promote more resourceful older adults in the sense that they require fewer exchanges to fulfil their instrumental needs. Spending less effort and time fulfilling instrumental needs could mean more time and resources to dedicate to pleasant or fulfilling

exchanges with caregivers or family members. Developing resources with caregivers could mean training and teaching caregiving skills. Also, a caregiver that utilises abusive exchanges is a caregiver that does not possess the resources to produce alternative ways to balance the exchange. We can also work with caregivers to promote these resources, including social skills, empathy and other basic relational skills.

In summary, social exchange theory seems to have a strong potential to influence the field of elder abuse at theoretical, conceptual and practical levels.

Strengths and Limitations

This thesis has both strengths and limitations. At the level of its strengths, we can consider the products of this thesis. First is the systematic review of Chapter II, which summarises the evidence for six theories of elder abuse. As far as we know, this was the first attempt to compile evidence for multiple theories of elder abuse using a systematic methodology. This review provides a base of comparison between theories and gives information regarding the support for each theory, contributing to more theoretically-informed future research. Second is the adaptation and validation of a measure of social skills presented in Chapter III. Beyond the availability of a new measure for all adult populations, Chapter III also enables the possibility of including social skills in elder abuse, a field in which variables that express competence are not very frequent. The third is the conceptual and theoretical work that made possible the operationalisation of a social exchange theory of elder abuse possible. In our view, this operationalisation represents the main strength of this thesis. Previous interpretations of social exchange theory applied to elder abuse lacked the theoretical robustness achieved in our conceptualisation. Furthermore, the subjective nature of some of the concepts of the theory made it very difficult to test. Our operationalisation allowed the creation of a new paradigm to test elder abuse-related predictions based on this theory. This fresh way of interpreting elder abuse based on a social exchange perspective and a viable way to test it makes possible the creation and test of further hypotheses. It represents a considerable potential for the development of the field. The final strengths are the supporting results for this theoretical perspective (Chapters IV and V). These studies not only support the theoretical perspective adopted but, by including variables such as social skills and morality, also expand the range of relevant variables to look after when exploring elder abuse.

This thesis also has several limitations. Some of these limitations arise from the definition of elder abuse and the concepts that underline social exchange theory. Other limitations are methodological and emerge from the execution of this project.

One limitation that shadows this thesis and the vast majority of studies on elder abuse derives from the adoption of a definition of elder abuse. As discussed in the implications section, we might not fully understand the concept of interpersonal violence and, by extension, elder abuse. Any research based on a definition of abuse that provides a limited view of the phenomena will, inherently, be limited, as measures are derived from the adopted definition. In addition, there are limitations derived from the concepts that underlie social exchange theory. The concepts of resources, power and dependence present such a wide range of behavioural representations that measuring them directly is not possible in our current understanding. Listing every possible resource, every form of dependence or every form of power would be an endless task. As such, our approach in this thesis was not to measure these variables directly but indirectly. We chose our variables aiming to assess some domains we believed could most likely determine the availability and selection of resources. Likewise, we assessed some forms of physical dependence as indicators of dependence in the relationship and social skills as variables that could empower the older adult in the exchange. These ideas introduce another limitation that is both theoretical and methodological. The prepositions of social exchange theory are based on a chain of causality: low resources cause dependence and low power, which in turn cause the need to rebalance relationships. These prepositions suggest a specific statistical analysis strategy for the works presented in Chapters IV and V. We should expect the relationship between resources and elder abuse to be mediated by dependence and power. However, as previously discussed, the number of possible resources is too large to be measured, and power/dependence is dependent on personal needs and dispositions. As a result, we can only measure a group of determinants of resources and a group of determinants of power/dependence. We cannot be sure about the relationship between our determinants of resources and our determinants of power/dependence. Can we state that, for example, poor memory causes one specific type of physical dependence? Each of our resource determinants is likely to contribute, at some level, to multiple forms of dependence/power, but, at this point, we could not be sure to which forms and with which magnitude. For this reason, we took a more generalistic approach using moderation analysis. With this statistical choice, we try to understand how power/dependence alters the relationship between resources and abuse, not necessarily as part of a causality chain. It was the best approach we could find to account for the uncertainty that arises from not knowing what resources cause each form of dependence.

Another aspect that can be read as a limitation is the inclusion of only older adults in the studies conducted in Chapters IV and V. Elder abuse through social exchange theory is born of the interaction between the older adult and someone else, frequently the caregiver. The characteristics of both persons,

their compatibility and complementarity are essential to determine the outcome of the exchanges. To better understand elder abuse from a social exchange perspective, we would have to consider all possible exchange partners, including the caregiver, family relations, and the surrounding support system. Focusing on the older adult's perspective may be seen as a limitation, but we see it as the starting point to progressively expand our knowledge about elder abuse.

A final limitation concerns the sample size. The sample size of the studies presented in Chapter III is adequate for the analysis carried on. On the other hand, the sample size of the studies in Chapters IV and V can be considered small. Sample size estimation is challenging when working with previously unexplored relationships and theoretical hypotheses. We considered this sample size to be sufficient for a first look into how these variables fit into the tested theory. Achieving this sample size was considerably challenging. As referred to in Chapters IV and V, participants were recruited from eight social recreational centres for adults. One piece of information not referred to in the Chapters that contain the empirical studies is that the smallest of these centres provided services to thirty older adults, while the largest was eighty. Then why would so few participants be included in the final sample? Due to the use of self-report measures, only older adults without cognitive impairment were eligible to participate in the studies, and the number of older adults who did not meet the eligibility criteria was astounding. We regret not taking a rigorous record of the number of persons not included in the studies for not meeting this eligibility criterion. We did not record this information because it was not remotely connected to our working hypothesis and objectives. We were already at the fourth recreational centre by the time we realised this information would be interesting. Plus, the procedure was considerably long. Data collection took two sessions of sixty minutes. Due to the application of a cognitive impairment screening measure for eligibility and the informed consent in case eligibility was met, an initial session was necessary just for these tasks, which took, on average, another thirty minutes. Although the sample size can be criticised, I am personally proud of that sample size, considering that it was obtained despite all of these difficulties, with the data collected all by myself, without access to funding or reward systems for the participants.

Future research

Considering the limitations of our studies and the implications of their results is possible to suggest a few avenues for future research.

These results need replication to test their stability. Plus, our sample size is pointed out as a limitation. Although, in this case, the sample size was limited by the available resources that allowed the feasibility of the study, future studies should aim for a greater sample size. It would also be interesting to

test if this model holds true with other subgroups of the older adult population. As participants were recruited in social recreational centres, we can assume a certain level of support available. It would be interesting to see if the proposed model holds in older adults without this kind of support. It would also be interesting to see if the model holds with older adults with cognitive deficits. In theory, resource availability would be more compromised in this group, but establishing a way to assess this group would be very challenging.

Our studies also need to be expanded. We realised that different resource indicators have different capacities to predict elder abuse. Some of these resource indicators, such as morality, are not typically included in this field of research. These results need to be expanded by exploring more resource indicators that may have any role in predicting abuse. Likewise, we need to explore the role of other forms of dependence and other sources of power in this relationship. The more variables we explore, the greater capacity we will have to compose a more complex map of predictors, which will consequently be important for the prevention of abuse.

Another research avenue that, besides being interesting, would significantly contribute to establishing a social exchange theory of elder abuse would be studying pairs of caregivers and older adults. That was, in fact, our initial plan, abandoned when we realised it would not be feasible with the available resources. The study of dyads will allow us to see the level of matching between the needs and resources of both persons in the relationship. We could also collect information about both intervenients' perceptions of each other's value for the relationship.

As discussed, social exchange theory predicts different explanatory pathways for different types of elder abuse. In our research, we could not include all types of abuse (physical abuse was excluded due to low frequency). The theory allows us to explain each type of abuse differently. It would be interesting to test it with other types of abuse, including the less conventional types of abuse and the classifications of abuse provided by the older adults themselves.

Finally, as this theory has several implications for intervention and prevention, some of which could be seen as less invasive or more recovery-focused instead of punitive, the test of prevention and intervention programs based on this theory would provide the ultimate seal of approval. Research has argued that theory-based elder abuse interventions do not always perform well. Therefore, testing these interventions and prevention programs would be paramount to determining how useful a social exchange theory of elder abuse is.

Final remarks

This dissertation aimed to establish the current theoretical standpoint of the theoretical development of elder abuse and complement it by reframing and exploring potential support for a social exchange theory of elder abuse.

Overall, we found no consensus concerning theoretical explanations for elder abuse. Thus, from the analysis of the basic principles of social exchange theory and their operationalization, we moved beyond the current social exchange views of elder abuse, and developed a social exchange theory of elder abuse. We developed a paradigm to test some predictions of this theorisation and put it into practice in our studies. Our results supported this new theorisation and allowed us to expand it into a more comprehensive framework for understanding elder abuse.

This new social exchange theory of elder abuse has several potentialities and implications for practice. The strongest among them is the implication that elder abuse is a relational issue and requires relational-oriented solutions. Social exchange theory leads to a reconceptualisation of elder abuse; it becomes a relational issue in which the boundaries between victim and perpetrator become tenuous. It reminds us that, in elder abuse, all involved need help. This theoretical perspective also opens a clear door to introducing human development into the elder abuse agenda. Understanding the ageing process is fundamental to understanding exchanges, and embracing theories and concepts from adult development is essential for preventing and intervening in elder abuse.

In conclusion, a social exchange theory of elder abuse shows excellent promise as an explanatory framework for elder abuse and a potential base for developing an integrative model. The potential to explain such complex behaviours as those that constitute abuse is paramount for prevention. Only by investing in the development of explanatory models can we hope to have any guiding light for the prevention of elder abuse and the promotion of older adults' well-being. Social exchange theory allows precisely that. Social exchange theory is more than a theory of elder abuse; it is a general theory of human behaviour. Its economic metaphor and level of detail allow a unique attempt to explain human relationships. Social exchange theory presents great potential as a framework to interpret human behaviour, and its exploration could benefit psychological science.

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Appendix A

Supplementary material – Chapter II

Table - *Synthesis of the articles selected for review of data supporting or against each theory*

Citation	Sample	Measure of Elder Mistreatment (EM)	Variable(s) of interest	Measure	Main Results
Caregiver Stress Theory					
Aşti and Erdem (2006)	40 Older adults (60+) with dementia; 40 Caregivers (CG)	Scale of Risk of Elder Abuse in the Home (REAH)	CG stress	Stress Assessment Score of the Caregiver (SASC)- included in REAH	Descriptive data show a moderate level of CG stress and a moderate risk of EM
Chokkanathan (2014)	897 older adults (61+)	Conflict Tactics Scale (CTS)	CG burden	1 item: how many persons do your CG cares for	CG burden was significantly associated with EM
Cohen (2008)	667 older adults (70+) and their CGs	Compiled from previous tools; Expanded Indicators for Abuse questionnaire (E-IOA).	CG burden	Objective and subjective caregiving burden (set of items adapted from E-IOA)	CGs of Neglected older adults reported higher subjective (but not objective) burden CGs than non-neglected older adults.
Cooper, Blanchard, *et al.* (2010)	131 CGs of older adults with dementia	Modified Conflict Tactics Scale (MCTS)	CG burden; CG coping	The Brief Coping Orientations to Problems Experienced (Brief COPE); Zarit Burden Interview (ZBI)	EM was not correlated with CG burden or coping strategies.
Cooper *et al.*(2008)	86 older adults with Alzheimer's Disease and their CG	MCTS	CG burden	ZBI	EM correlated with higher burden and was a predictor of CG burden
Cooper, Selwood, *et al.*(2010)	220 CG of older adults with dementia	MCTS	CG burden	ZBI; Brief COPE	EM was correlated with higher CG burden and dysfunctional coping. EM was predicted by spending more hours caring, and higher burden: Coping was not a predictor of EM.

Coyne *et al.* (1993)	342 CGs of older adults with dementia	Compiled from literature	CG burden	ZBI	CGs who reported EM, when compared to the ones who reported no EM, had higher burden.
Gainey and Payne (2006)	751 older adults signaled to Adult Protective Services (APS)	Assessment by APS professionals	CG burden	Interview (APS professionals)	CG burden was higher in neglect cases than in non-neglect. The reverse was found in financial exploitation cases; CG burden was not associated with physical abuse or self-neglect.
Goergen (2001)	80 CG at nursing homes	Compiled from literature	Work stress and burnout	Compiled from literature	EM is associated with higher levels of CG stress and burden.
Hsieh *et al.*(2009)	Intervention study with 100 CGs (50 controls; 50 experimental)	Caregiver Psychological Elder Abuse Behavior Scale (CPEAB)	CG stress	Work Stressors Inventory (WSI)	Intervention diminished psychological EM but not CG stress
Kim *et al.* (2018)	467 pairs of older adults with dementia and their CGs.	MCTS	CG burden	ZBI - Short Form	Risk of EM was predicted by care burden, even after controlling for multiple covariates.
Kurrle *et al.*(1997)	5246 Assessments of Older adults	Identification by Aged Care Assessment Teams	Dependency of the older person/ CG stress	Assessed by Aged Care Assessment Teams	25% of the victims of EM also reported dependency of the older person and CG stress
Lee (2008)	1,000 CGs of older adults with disabilities	6 items from a previous epidemiological study	CG burden	Family Strain Scale (FSS)	Controlling for covariates, CG burden was a predictor of higher risk of EM.
Lee (2009)	279 CGs of older adults with physical or cognitive impairments	Selected items from the Elder Assessment Instrument and Potentially Harmful Behavior (PHB) tool	CG burden	ZBI	Higher CG burden directly predicted impulses to commit EM.
Lee and Kolomer (2005)	481 primary family CGs of older adults with dementia	6 items from a previous study	CG burden	FSS	Controlling for covariates, higher CG burden was a predictor of EM

Neuberg *et al.*(2017)	171 nurses	Compiled from literature	CG Burnout Syndrome	Maslach Burnout Inventory (MBI) for Human Services Survey	Different abusive behaviors are associated with different forms of burnout
Orfila *et al.* (2018)	829 CGs and their care recipients	Caregiver Abuse Screen (CASE)	CG burden	ZBI - Short Form	CG burden is positively associated with higher risk of EM total and with neglect, but not associated with physical/psychological EM.
Ozcan *et al.* (2017)	186 older adults (65+); 136 CGs	Compiled from literature	CG burden	ZBI	CGs who perceived heavier burden were more likely to perpetrate EM.
Pérez-Rojo *et al.* (2009)	45 CGs of older adults with dementia	CASE	Interpersonal burden; CG stress	ZBI; Revised memory and behavior problems checklist (MBCL-B)	CG at high risk of EM showed higher stress related to dependence, aggressive and provocative behaviors by care-recipient and higher interpersonal burden. Burden was one of the best predictors for the risk of EM.
Pillemer and Finkelhor (1989)	46 older adults identified as victims; 212 controls	CTS; Older Americans Resources and Services (OARS)	CG stress	Number of days in the preceding year that illness prevented the usual activities; OARS score; dependence on a relative	Differences in EM were found in all the three measures of CG stress.
Reay and Browne (2001)	19 CGs (9 physically abusive; 10 neglecters)	Sampling plus CTS	CG stress/strain	Machin's Strain Scale (SS)	No significant differences on strain between physically abusive CGs those that committed neglect.
Reay and Browne (2002)	19 CGs	Sampling plus CTS	CG stress/strain	SS	An intervention was applied that significantly reduced CG strain. No differences were found in EM between baseline and follow-up.

Sasaki *et al.* (2007)	412 pairs of older adults and CGs	Checklist of potentially harmful behaviors from previous studies	CG burden	ZBI	Burden differed from CGs who displayed EM and those that did not; CG burden was not a predictor of EM.
Serra *et al.* (2018)	326 CGs	CASE	CG perceived burden	ZBI – short form	A higher burden is a direct predictor of EM. Plus, burden mediates a protective relationship between resilience, social support and EM.
Shinan-Altman and Cohen (2009)	208 nurses	The attitudes to elder abuse questionnaire (Compiled from literature)	CG burnout; Work stressors	MBI; The work stressors questionnaire	Burnout was a predictor of attitudes condoning EM. Work overload was a predictor only when mediated by burden.
Toda *et al.* (2018)	133 older adults with dementia and their CGs	Potentially harmful behavior using a modification of the CTS	CG Burden	ZBI	Higher CG burden was a predictor of PHB
Touza and Prado (2017)	200 older adults and their CGs	Social services assessment	CG burden	Social services assessment	Perceived burden was a predictor of abuse.
Wang (2005)	114 CGs	CPEAB	CG burden	Caregiver's Burden Scale (CBS)	There is a significant positive relationship between the EM and burden
Wang *et al.* (2006)	92 CGs	CPEAB	CG burden	CBS	Psychological EM was positively associated and was a predictor of CG burden
Wang *et al.* (2009)	183 CGs	CPEAB	CG stress	WSI	Work stress was a significant predictor of psychological EM
Yan (2014)	149 CGs	CTS-Revised	CG burnout	MBI	CG burnout was a predictor of both physical and psychological EM
Yan and Kwok (2011)	122 CGs of older adults with dementia	CTS-Revised	CG burden	ZBI	CG burden was a significant predictor of verbal EM but not of physical EM.
Social Exchange Theory					

Abdel Rahman and El Gaafary (2012)	1106 older adults	Questionnaire to elicit elder abuse, Actual abuse and risk of abuse tool	Older adult's working status, pension and functional status	Sociodemographic data and Katz Index	EM significantly higher in non-working older adults, with insufficient pension and lower functional status; Insufficient pension and functional status were predictors of EM.
Acierno *et al.* (2010)	5777 older adults	Compiled from literature (phone interview)	Older adult's working status; Social support; Income; Need for Activity of Daily Living (ADL) assistance	Compiled from literature (phone interview)	Unemployment was a significant predictor of emotional EM but not of neglect; Low social support was a predictor of emotional, physical, sexual and neglect; Low Income was a predictor of emotional and neglect; but was not for physical and sexual EM; Need for ADL assistance was a predictor of emotional and financial EM; but was not for sexual EM and neglect.
Beach *et al.*(2016)	903 older adults	Compiled from a previous study	ADL and Instrumental Activities of Daily Living (IADL) disability; Social network size; Cognitive Function; Perceived social support	6 items for ADL; 6 items for IADL; Social Network Index; Asset and Health Dynamics Among the Oldest Old; Interpersonal Support Evaluation List	IADL disability was associated with financial exploitation, ADL was not; Cognitive status and social network size were not associated financial exploitation; lower perceived social support was associated with higher risk for financial exploitation
Beach *et al.* (2005)	265 CG/older adult dyads	Adapted form of CTS	Cognitive status and ADL/IADL needs and availability of help by CG	Neurobehavioral Cognitive Status Examination; OARS	Older adult's cognitive status does not predict EM but CG's does; Older adults' ADL/IADL needs are predictors of EM but the availability of help is not.

Burnes *et al.* (2015)	4156 older adults	CTS	Functional capacity (ADL/IADL)	OARS	Lower functionality associated with higher emotional and physical EM, but not with neglect
Conner *et al.* (2011)	1002 persons responsible for an older adult in long-term care; 769 older adults (65+) in long-term care	Compiled from literature	Cognitive impairment; Physical impairment	Compiled from literature	Physical impairment has a direct effect on vulnerability to EM; Cognitive impairment has no direct effect on EM but has an indirect effect via physical impairment and behavioural problems.
Cooper *et al.* (2006)	3881 older adults receiving health or social services	Minimum Dataset for Homecare Assessment (MDS-HC)	ADL and IADL impairments; Vision and hearing impairments; Cognitive function; Social functioning	Subscales of the MDS-HC	Suspected EM had higher rates of physical and cognitive impairment; on social functioning, suspected EM were more frequently not at ease to interact with others and report familial conflict; no differences were found regarding loneliness
Dong (2017)	3158 older adults (60+)	Vulnerability to Abuse Screening Scale (VASS)	Self-reported Physical function and observed Physical function	Katz Index; Rosow– Breslau index of mobility; Short Physical Performance Battery;	Adjusting for cofounders, greater self-reported ADL impairment is associated with lower EM. Greater observed physical function, with exception of the chair test, was associated with lower EM
Dong and Simon (2010)	412 older adults (60+)	VASS	ADL; IADL	Katz Index; IADL measure compiled from literature	ADL was associated with an increased EM, but the effect disappeared after controlling for other variables (income, social support, etc.); IADL was not associated with EM
Dong *et al.* (2012a)	8932 older adults (65+) -	Social services agencies reports (data match)	Physical Function	Physical performance tests; Katz Index; Index of mobility of Rosow and Breslau;	Lower levels of physical function were associated with higher risk of abuse for every measure of physical function

Dong *et al.* (2012b)	143 older adults (65+) with reported EM	Social services agencies reports (data match)	Physical Function	Index of basic physical activities of Nagi; Physical performance tests; Katz Index; Rosow and Breslau Index; Nagi Index;	Lower levels of physical function were associated with higher risk of abuse for every measure of physical function
Dong *et al.* (2014)	6159 older adults (65+)	Social services agencies reports (data match)	Cognitive status; Episodic memory; perceptual speed and attention	The Mini-Mental State Examination (MMSE); East Boston Memory Test; Symbol Digit Modalities Test	Lower levels of cognitive performance in all indicators measured were associated with higher risk of EM
El-Khawaga et al. (2018)	272 older adults (60+) from clinics and health-care centers	Compiled from literature	Income	Demographic Data	Income was not associated with EM
Garre-Olmo *et al.* (2009)	676 older adults (75+)	American Medical Association (AMA) Screen for Various Types of Abuse or Neglect	Cognitive function; Functionality; Social isolation	MMSE; World Health Organization Disability Assessment Schedule II (WHODAS- II); interview 1 item: access to a trusted person?	Not having access to a trusted person was a predictor of psychophysical and financial EM. Low cognitive function was a predictor only for financial EM. Functionality was not a significant predictor.
Godkin *et al.* (1989)	59 identified victims; 49 controls (all users of Elder Home Care Services)	Assessment by specialists in a Home care agency	Cognitive functioning; IADL; Social isolation	Case Assessment Form (own measure)	All indicators of cognitive function were significant lower in the EM group; All indicators of IADL were significant lower in the EM group; EM group had significant fewer social networks.

Heydrich *et al.* (2012)	203 older adults	Measure compiled for a large study (MIDUS II)	Social isolation;	MIDUS II	Social isolation of the older adult was a strong predictor of physical EM
Kong and Jeon (2018)	9691 older adults	Compiled from literature	Functionality; Social Support	2 items (frequency of contact with friends/neighbors; frequency of participation in social activities)	Social support had no effect on emotional EM; Functionality only had effect on emotional EM when mediated by other variables (family cohesion, self-esteem and receiving help from family)
Lachs *et al.* (1997)	2812 older adults (65+)	Confirmed by Connecticut's Ombudsman on Aging	Physical function; Cognitive disability; Social Ties	Rosow and Breslau Index; Nagi Index; Mental Status Questionnaire (MSQ);	EM group was more likely to have lower functionality, cognitive status and fewer social ties;
Lee (2008)	1,000 CGs of older adults with disabilities	Compiled from a previous study	Physical functionality; Cognitive status; Social Support	Katz index; Korean Elder's Cognitive Ability Scale; number of secondary CGs	Lower physical function and cognitive status were predictors of an increase in EM; Increased social support was a predictor of increased risk of EM.
Leung *et al.* (2017)	3435 older adults (60+) who applied for the long-term care	Compiled from literature	Physical functionality; Cognitive status; social support	MDS Cognitive Performance Scale (MDS-CPS);	Cognitive function, social support and ADL had no effect on EM; IADL need for help was associated with higher EM.
Litwin and Zoabi (2004)	120 older adults identified with EM; 120 controls	Assessment on a social welfare center	Dependency (ADL); Social Support; income	National Insurance Institute in Israel ADL scale; Norbeck Social Support Questionnaire (NSSQ);	Lower income, lower functionality and lower social support were predictors of EM
Luo and Waite (2011)	2744 older adults (57–85)	Compiled from previous screening tools	Social support; Physical impairment; Cognitive impairment	Own questions compiled from previous studies;	Physical and cognitive impairments had no effect; positive social support was associated with lower risk of EM

				Short Portable Mental Status Questionnaire (SPMSQ)	
Naughton *et al.* (2012)	2021 older adults (65+)	Compiled from previous tools	Income; Social support	Oslo-3 Social Support Scale (OSS-3)	Lower income and lower social support associated with greater risk of EM
Orfila *et al.* (2018)	829 CGs and their care recipients	CASE	Dependency; Cognitive status;	Barthel index; SPMSQ;	Moderate dependency was associated with EM (more than severe or total dependency); Cognitive impairment was only associated with lower risk of neglect.
Pérez-Cárceles *et al.* (2009)	460 older adults (+65) in health centers	Compiled from international guidelines	Income; Functional disability;	Katz Index	Functional disability and lower income associated with higher risk of EM
Pérez-Rojo *et al.* (2009)	45 CGs of older adults with dementia	CASE	Functional status	Selection of items from MCBL-B	Functional status of older adult did not differ between abusive and non-abusive CG
Sasaki *et al.* (2007)	412 pairs of older adults and CGs	Checklist of potentially harmful behaviors from previous studies	Memory impairment; Dementia; Physical impairment; hearing or vision impairments	Short Memory Questionnaire; Severity of dementia and physical impairment assessed by criteria of the Ministry of Health and Welfare	Cognitive impairment, severity of dementia and vision impairments were not related to PHB; The higher the severity of physical impairment the more likely a PHB; Hearing impairments were more frequent in the PHB group.
Serra *et al.* (2018)	326 CGs	CASE	Cognitive status; Social Support	Neuropsychiatric Inventory (NPI); Duke-Unc Social Support Questionnaire	Cognitive impairment positively associated with EM score; Social support predicts EM (but is fully mediated by CG burden)
Shugarman *et al.* (2003)	701 older adults (60+) seeking home and community-based services	MDS-HC	Cognitive, physical and social functioning and support	MDS-CPS; interview	Physical function had no effect; Short-term memory problems were strongly associated with EM; All social functioning

					and support indicators were strongly associated with EM
Steinmetz (1990)	104 CGs	Interview	Dependency	Compiled from literature	Grooming/health, financial and mobility dependency were positively associated with EM
Tobiasz-Adamczyk *et al.* (2014)	518 older adults (65+)	Compiled from literature	Social support	Social Support List 12 – Interactions Scale	Participants with lower support were more likely to experience EM;
Vida *et al.* (2002)	126 older adults in a Geriatric Psychiatry division	Referrals from other services	Social isolation; Cognitive disorders; Delirium	Psychiatric assessment; MMSE; DSM-III-R psychiatric diagnosis	Being socially isolated was associated with EM; Having chronic cognitive disorders or delirium was not associated with EM
Vilar-Compte *et al.* (2017)	526 older women (65+) attending community centres	Geriatric Mistreatment Scale (GMS)	Perceived social support; functionality	OSS-3; Katz Index and Lawton index	Higher social support acts as a protective factor for EM; IADL impairment is a predictor of EM; ADL had no effect
Wang (2006)	195 older adults (60+) partially dependent	Psychological Elder Abuse Scale (PEAS)	Cognitive status; Functionality; Socioeconomic status	SPMSQ; Barthel's Index	Cognitive impairment, higher dependency and lower socioeconomic status were associated with increased psychological EM
Zhang *et al.* (2011)	414 family members of older adults (65+) living in a nursing home	Interview based on a previous study	ADL limitations; memory problems; Social Support	Interview based on a previous study	ADL limitations were predictors of neglect; memory problems and social support had no effect
Social Learning Theory					
Dong *et al.* (2017)	548 CGs	CASE	Childhood abuse	Hurt–Insult–Threaten–Scream (HITS)	After adjusting for covariates, Childhood abuse was a predictor of committing EM.
Grunfeld *et al.* (1996)	4 older women, victims of EM	Qualitative interview	History of family violence	Qualitative interview	Victims experiencing violence now had experienced violence in childhood
Jackson and Hafemeister (2011)	Database with 2142 cases of EM plus 71 older adults identified by APS	Cases identified by APS	History of family violence	Interviews with APS caseworkers and victims	Financial exploitation victims were not likely to have experienced childhood family violence; victims of physical abuse and neglect were more likely than expected to

					have experienced childhood family violence
Kong and Easton (2018)	5967 older adults	Abusive Behaviour Inventory	History of family violence	Compiled from other measures	Controlling for covariates, childhood emotional abuse and childhood sexual abuse were predictors of EM; Childhood physical abuse and neglect had no effect
Korbin *et al.* (2005)	23 adult children who committed EM	CTS	History of violence of the perpetrators of EM	CTS	One-fourth of perpetrators of EM were subjected to abuse as children
McDonald and Thomas (2013)	267 older adults (+55)	Compiled from previous measures	History of family violence	Compiled from previous measures	Having experienced abuse in all three life stages (childhood, young adulthood, and adulthood) was associated with a heightened risk of EM.
Reay and Browne (2001)	19 CGs identified abusers	Sampling plus CTS	History of maltreatment earlier in life	Adapted from previous studies	Abusive CGs were more likely to have been maltreated as children
Stöckl *et al.* (2012)	2809 older women (50+) in an intimate relationship	MCTS	History of family violence	Compiled from literature	Witnessing parental violence initiated by the father, physical punishment and sexual abuse in childhood were significantly associated with suffering EM.
Wuest *et al.* (2010)	16 women CGs to parents who had abused them as children	Qualitative Interview	Child maltreatment	Qualitative Interview	One of the themes from grounded analysis pointed for caregiving as an opportunity for reconciliation
Yan and Tang (2003)	464 participants (18-70)	Revised CTS	Intergenerational transmission of violence	Modified Revised CTS to measure proclivity to commit EM	Previous experiences of abuse were associated with proclivity to commit EM
Bidirectional theory					
Comijs *et al.* (1999)	217 EM victims and a matched control group	Identified in a previous study	Hostility	Buss-Durkee Hostility Inventory	Victims of physical EM were more likely to be directly aggressive while victims of

					financial EM were more likely to be indirectly aggressive than controls.
Compton *et al.* (1997)	38 carer/ dependent pairs	Gilleard's Problem Checklist plus interview	Problem behaviors	Gilleard's Problem Checklist	Problem behaviors were more frequent and more severe in the dependents of abusers
Conner *et al.* (2011)	1002 persons responsible for an older adult in long-term care; 769 older adults (65+) in long-term care	Compiled from literature	Behavior problems	Person in care being abusive physically or verbally and actively resisting care (own survey)	Behavior problems is a direct predictor of susceptibility of EM
Cooney and Mortimer (1995)	67 CGs	Compiled from definitions of EM	Behavior problems	Open-ended questions	CGs who admitted to verbal EM were more likely to be verbally abused; CGs who admitted to physical EM were more likely to be physically abused
Cooper, Blanchard, *et al.* (2010)	131 CGs for older adults with dementia	MCTS	Abusive behaviors	Modified CTS to include abusive behavior towards CG	No association between EM and abuse towards CG
Cooper *et al.*(2008)	86 older adults with Alzheimer's Disease and their CGs	MCTS	Care-receiver irritability	NPI - irritability score	Clinically significant irritability of the care-receiver predicted EM
Goodridge *et al.* (1996)	126 nursing assistances in long term care facilities	Compiled from previous studies	Conflict between nursing assistants and care-receivers	Compiled from previous studies	Conflict was significantly related to higher aggressiveness towards staff
Heydrich *et al.* (2012)	203 older adults	Measure compiled for a large study (MIDUS II)	Behavior problems	MIDUS II	Older adult behavioral problems were not a statistically significant predictor of physical EM
Ogioni *et al.* (2007)	4630 older adults (65+) receiving home care	MDS-HC	Behavioral symptoms	MDS-HC	All behavior symptoms were positively associated with EM

Orfila *et al.* (2018)	829 CGs and their care recipients	CASE	CGs' perception of aggressive behavior in the care recipient	Compiled from literature	Aggressive behavior from the care recipient was a predictor of EM
Ozcan *et al.* (2017)	186 older adults (65+); 136 CGs	Compiled from literature	Abuse of CG by care-receiver	extension of the EM measure	Psychological and financial violence were mutual; financial abuse by the older adult was associated with most forms of violence from the CG; CG negligence was associated with physical violence by the older adult
Pérez-Rojo *et al.* (2009)	45 CGs of older adults with dementia	CASE	Provocative and aggressive behaviors	selection of items from MBCL-B	EM group reported higher frequency of provocative and aggressive behaviors
Phillips *et al.* (2001)	93 CGs (55+)	Negative Strategies subscale of the Caregiving Management Strategies Scale	Abuse towards the CG	CTS	EM was not related to abuse of CGs
Post *et al.* (2010)	816 older adults	Compiled from literature	Behavior problems	Compiled from literature	EM was significantly higher for those with behavior problems than for those without (except for material and physical)
Rabold and Goergen (2013)	503 professional CGs	Compiled from literature	Aggressive behavior of the older adult	Compiled from literature	Physical violence, verbal violence and sexual harassment from the older adult were predictors EM
Shugarman *et al.* (2003)	701 older adults (60+) seeking home and community-based services	MDS-HC	Behavioral Problems	Selected questions from MDS-HC	All measured behavioral problems were significantly higher in the EM group
VandeWeerd and Paveza (2006)	254 CGs	Verbal aggression subscale of CTS	Violence and verbal aggressiveness	CTS	CG's use of verbal aggressiveness was a predictor of older adult's use of verbal aggressiveness

Wiglesworth *et al.* (2010)	129 older adults with dementia and their CGs	Revised CTS and expert panel	Care-receiver aggressive behaviors	CTS	Older adults victims of EM were more likely to present violent behaviors
Dyadic Discord Theory					
Cohen *et al.* (2006)	108 older adults (65+) and their CG	Compiled from instruments used in hospital settings	Behavior problems (CG and elder)	Selected items of E-IOA	A blaming behavioral pattern and behavioral problems by the older adults were significant indicators of EM.
Compton *et al.* (1997)	38 carer/dependent pairs	Gilleard's Problem Checklist plus interview	Relationship quality.	Gilleard Pre-Morbid Relationship Rating Scale	EM perpetrator group had a significantly worse pre-morbid relationship with their dependents
Cooper, Selwood, *et al.*(2010)	220 CGs to older adults with dementia	MCTS	Relationship quality	4 item measure from previous studies	EM correlated with fewer rewards from past relationship.
Jackson and Hafemeister (2011)	Database with 2142 cases of EM plus 71 older adults identified by APS	Cases identified by APS	Relationship quality	Semi structured Interview	Financial EM victims were less likely than physical EM victims to rate the quality of their relationship with their abusers as poor.
Pillemer and Finkelhor (1989)	46 older adults identified as victims; 212 controls	CTS; OARS	Relational conflict	Own measure	EM group presented higher rates of relational conflict than the control
Reay and Browne (2001)	19 CGs identified as abusers	Sampling plus CTS	Relationship Conflict	Adapted from previous studies	Relationship conflict is significantly and positively associated with EM.
Shugarman *et al.* (2003)	701 older adults (60+) seeking home and community-based services	MDS-HC	Conflict or anger with family/friends	Selected items from MDS-HC	Expressing conflict with family/friends was positively associated with EM
Psychopathology of the Caregiver					
Bristowe and Collins (1989)	66 older adults and their CGs	Reports from home support services	CG Confusion, depression and alcohol consumption	Reports from home support services	Reported EM had higher % of CG confusion and alcohol consumption than appropriate care. No differences regarding depression.

Chokkanathan (2014)	902 older adults (61+)	CTS	Alcohol abuse	1 item from AUDIT scale	CG Alcohol use was a predictor for elevated the risk for EM.
Compton *et al.* (1997)	38 carer/dependent pairs	Gilleard's Problem Checklist plus interview	CG Anxiety; CG alcohol consumption	General Health Questionnaire (GHQ-28); Practitioners guidelines for low-risk drinking	CG Alcohol consumption was not associated with EM; Abusers were more likely to have higher anxiety.
Conrad *et al.* (2016)	948 alleged victims; 323 alleged perpetrators	Elder Abuse Decision Support System (EADSS)	Substance Abuse	EADSS	Substance abuse by perpetrators was associated with financial, physical and emotional EM, but not neglect.
Cooney *et al.* (2006)	82 CGs of older adults with dementia	CTS	Mental health; Alcohol abuse.	Shortened Beck Depression Inventory (BDI); CAGE questionnaire of alcohol abuse	CGs in EM group did not differ in history of mental illness, alcohol consumption or depression.
Coyne *et al.* (1993)	342 CGs of older adults with dementia	Compiled from literature	CG depression	Zung Self-Rating Depression Scale	CGs in EM group had higher depression scores.
Homer and Gilleard (1990)	51 CGs and 43 of their care-receivers	Compiled from literature	alcohol consumption; mental health	GHQ-28; interview	CG with severe depression were more likely to commit physical and verbal EM; CG alcohol consumption was one of the main factors associated with EM.
Kurrle *et al.*(1997)	5246 Assessments of Older adults	Identification by Aged Care Assessment Teams	CG mental health	Assessment by Aged Care Assessment Teams	54% of abusive CGs were assessed as having dementia, psychiatric disorders, or abusing drugs and alcohol
Leung *et al.* (2017)	3435 older adults (60+) who applied for the long-term care	Compiled from literature	CG mental health	MDS-HC version 2	Poor CGs mental health associated with increased risk of psychological and physical EM but not neglect
MacNeil *et al.* (2010)	417 CGs	PHB compiled from CTS	CG depression; CG anxiety	Centre for Epidemiologic Studies Depression Scale (CES-D); Spielberger's State-	Positive significative association between PHB and CGs anxiety and depression. Plus, both have a moderation role on the relationship between anger and PHB

				Trait Anxiety Inventory (STAI)	
Pillemer (1985)	42 older adults with physical EM; 42 controls	CTS	CG mental health	Interview	EM group more likely to identify their CG as having mental problems
Pillemer and Finkelhor (1989)	46 older adults identified as victims; 212 controls	CTS; OARS	CG mental health; CG drug consumption	Interview	EM group more likely to identify a CG with emotional problems, psychiatric hospitalisation, alcohol and drug misuse.
Reay and Browne (2001)	19 CGs (9 physically abusive and 10 neglecters)	Sampling plus CTS	CG depression; CG anxiety; Alcohol consumption	BDI; Beck Anxiety Inventory;	Physical EM group had higher alcohol use and depression than neglect group, that had higher anxiety
Wiglesworth *et al.* (2010)	129 older adults with dementia and their CGs	Revised CTS and expert panel	CG anxiety and depression	CES-D; STAI	CG who perpetrated EM presented higher rates of depression and anxiety.
Williamson *et al.* (2001)	142 CGs	PHB measure adapted from previous studies	CG depression	CES-D	Depression is a direct predictor of PHB, but also mediates for other variables

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Appendix B

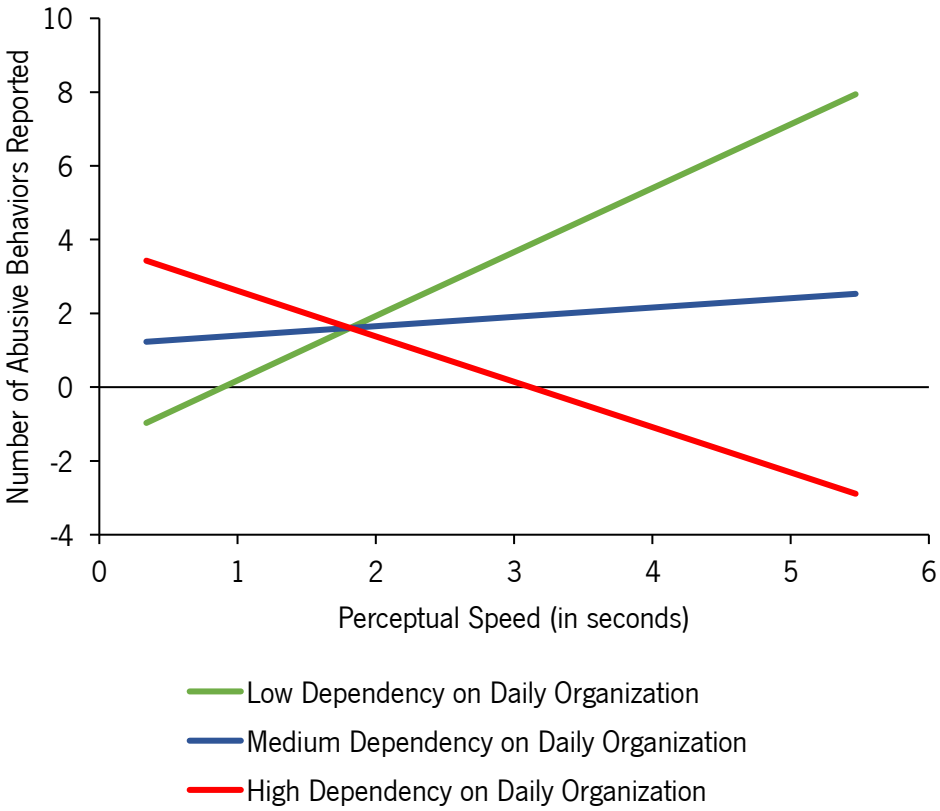
Supplementary material – Chapter IV

Suplementary Material

Graphical representation of the moderation effects of dependency on movement, hygiene, and daily organization (Figures 1 - 9) and the moderation effects of social skills (Figures 10 – 15).

Figure 1

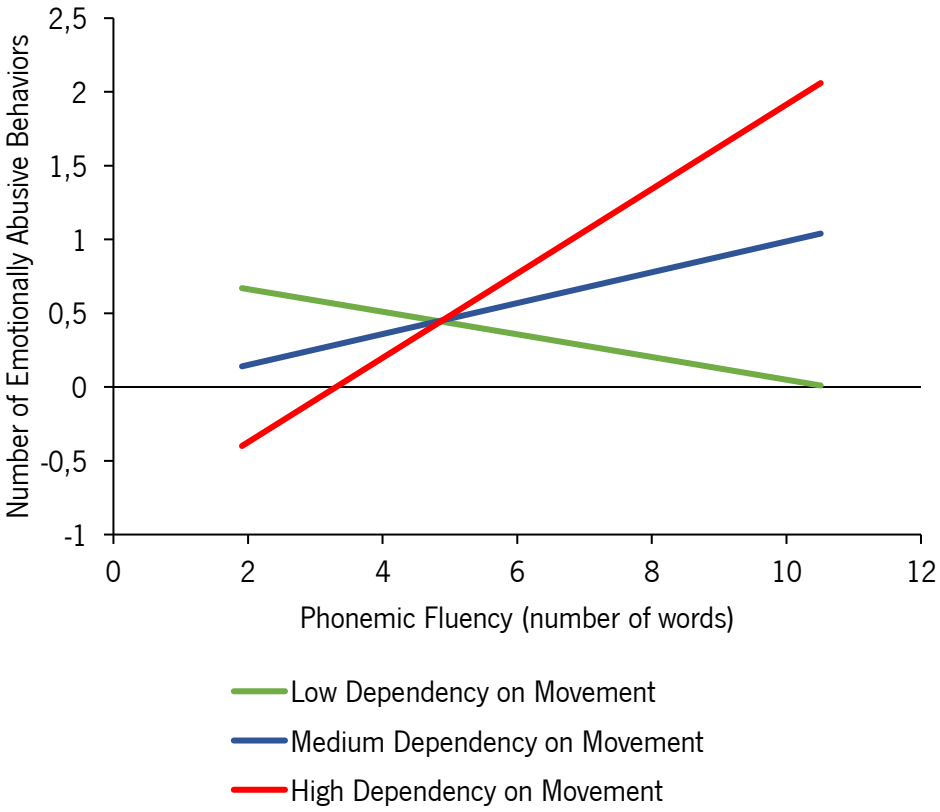
Conditional effect of perceptual speed on the total number of abusive behaviors at fixed values of dependency on daily organization tasks



Note. At low levels of dependency for daily organization, perceptual speed has a positive and significant effect on the number of abusive behaviors reported ($b = 1.736$, $t(54) = 5.191$, $p < .001$). At medium levels of dependency for daily organization, there is no relationship between perceptual speed and abusive behaviors ($b = .253$, $t(54) = 1.022$, $p = .311$). At high levels of dependency on daily organization, perceptual speed has a negative and significant effect on the number of abusive behaviors reported ($b = -1.230$, $t(54) = -4.130$, $p < .001$).

Figure 2

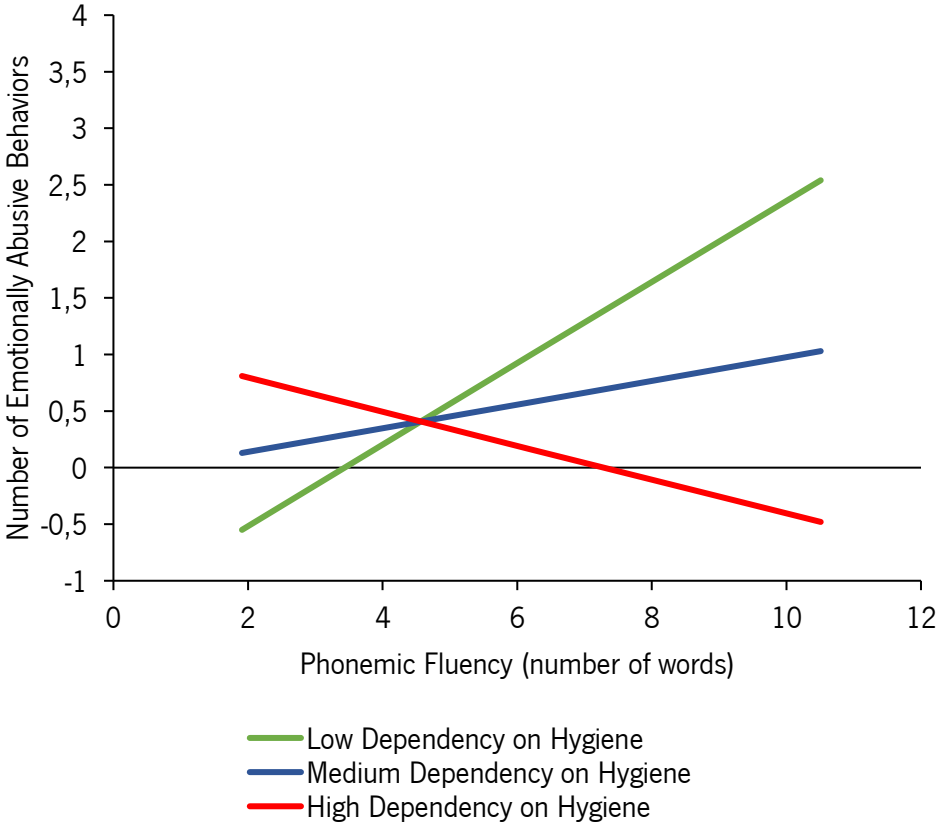
Conditional effect of phonemic fluency on the number of emotionally abusive behaviors reported at fixed values of dependency on movement tasks



Note. Neither at low levels of dependency for movement (b = -.077, $t(50)$ = -.861, p = .393), nor at medium levels of dependency for movement (b = .105, $t(50)$ = 1.989, p = .052), phonemic fluency has a significant effect on the number of emotionally abusive behaviors reported. At high levels of dependency for movement, phonemic fluency has a positive and significant effect on the number of emotionally abusive behaviors reported (b = .286, $t(50)$ = 2.888, p = .006).

Figure 3

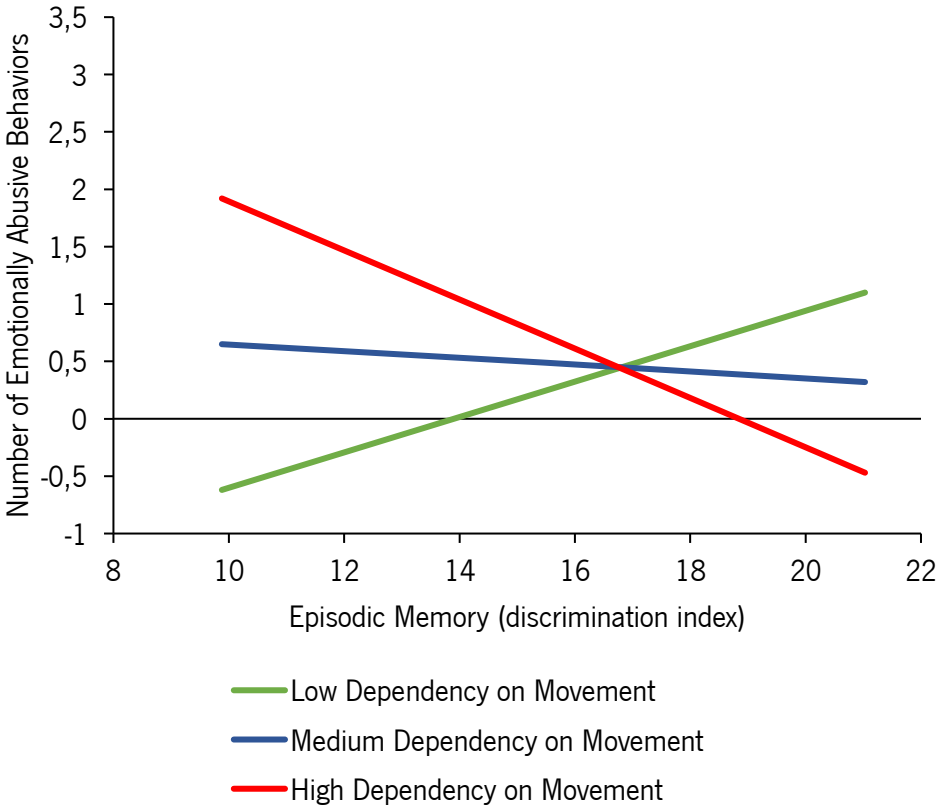
Conditional effect of phonemic fluency on the number of emotionally abusive behaviors reported at fixed values of dependency on hygiene tasks



Note. At low levels of dependency on hygiene, phonemic fluency has a positive and significant effect on the number of emotionally abusive behaviors reported (b = .359, t(50) = 3.597, p = .001). Neither at medium levels of dependency for hygiene (b = .105, t(50) = 1.989, p = .052) nor at high levels of dependency for hygiene (b = -.150, t(50) = -1.322, p = .192), phonemic fluency significantly affects the number of emotionally abusive behaviors reported.

Figure 4

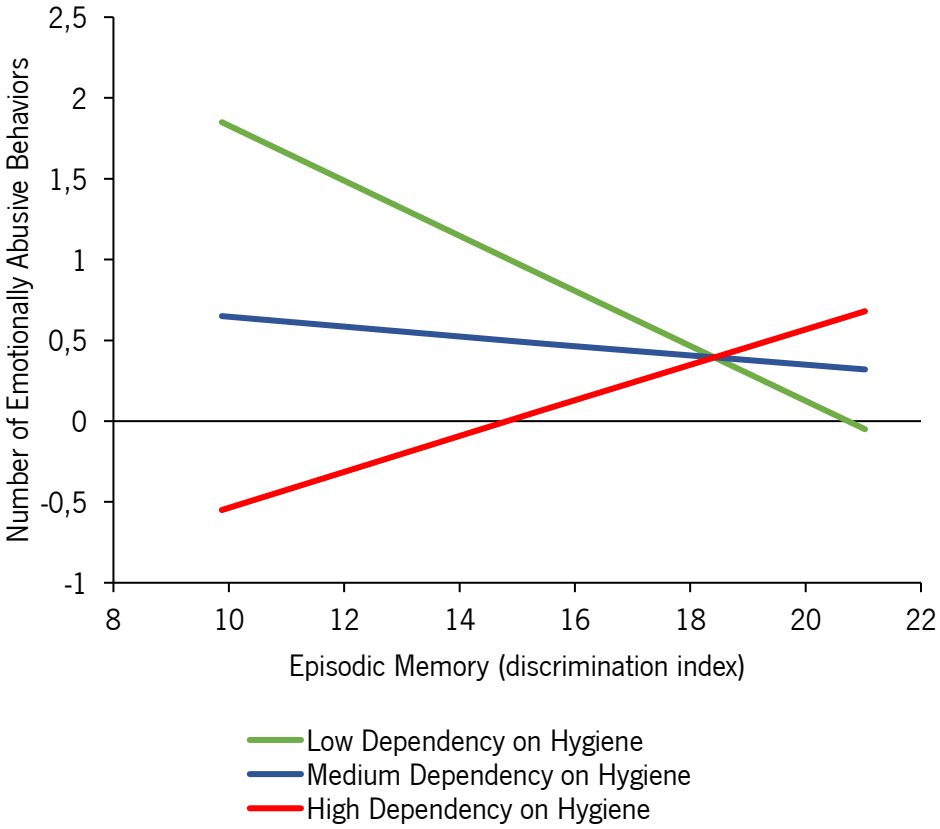
Conditional effect of episodic memory on the number of emotionally abusive behaviors reported at fixed values of dependency on movement tasks



Note. Neither at low levels of dependency for movement (b = .154, $t(50)$ = 1.907, p = .062), nor at medium levels of dependency for movement (b = -.030, $t(50)$ = -.809, p = .422), episodic memory has a significant effect on the number of emotionally abusive behaviors reported. At high levels of dependency for movement, episodic memory has a negative and significant effect on the number of emotionally abusive behaviors reported (b = -.214, $t(50)$ = -3.339, p = .002).

Figure 5

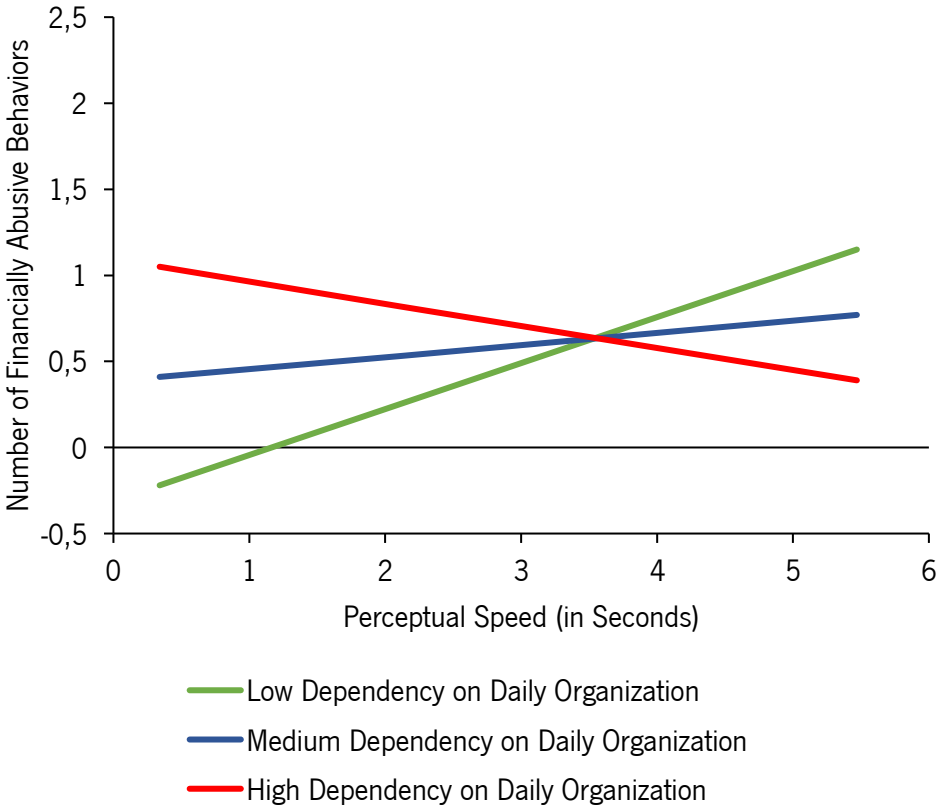
Conditional effect of episodic memory on the number of emotionally abusive behaviors reported at fixed values of dependency on hygiene tasks



Note. At low levels of dependency on hygiene, episodic memory has a negative and significant effect on the number of emotionally abusive behaviors reported (b = -.170, t(50) = -2.886, p = .006). Neither at medium levels of dependency for hygiene (b = -.030, t(50) = -.809, p = .422) nor at high levels of dependency for hygiene (b = .110, t(50) = 1.377, p = .175), episodic memory significantly affects the number of emotionally abusive behaviors reported.

Figure 6

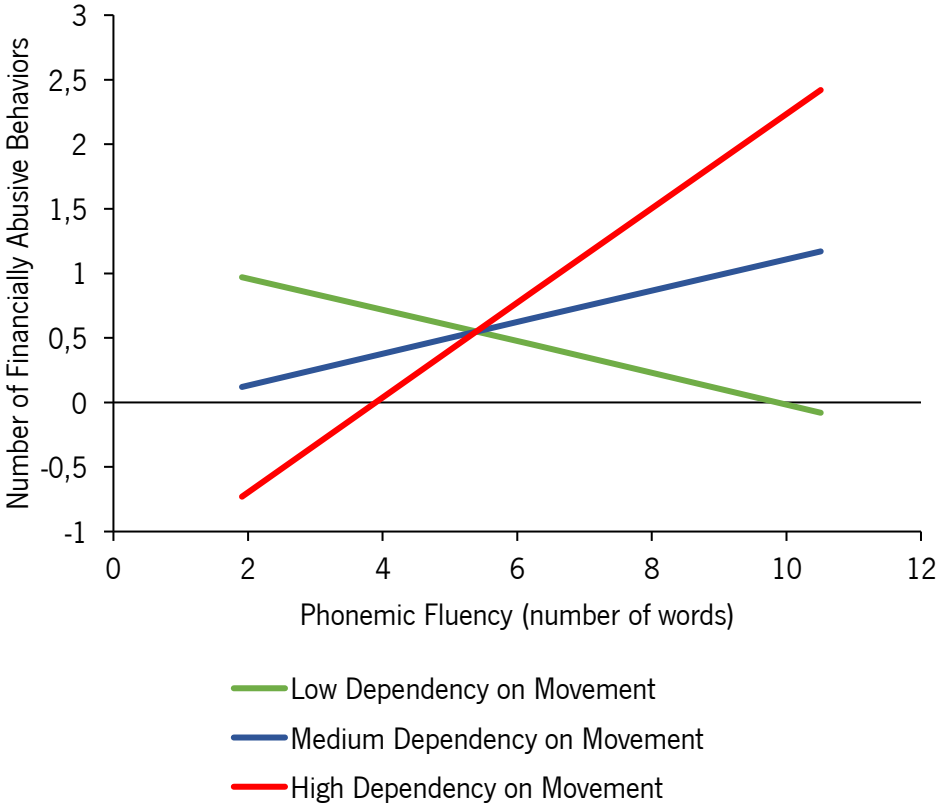
Conditional effect of perceptual speed on the total number of financially abusive behaviors at fixed values of dependency on daily organization tasks



Note. At low levels of dependency on daily organization tasks, perceptual speed has a positive and significant effect on the number of financially abusive behaviors reported (b = .267, t(50) = 2.105, p = .040). Neither at medium levels of dependency on daily organization tasks (b = .070, t(50) = .764, p = .449) nor at high levels of dependency on daily organization tasks (b = -.127, t(50) = -1.191, p = .239), perceptual speed significantly affects the number of financially abusive behaviors reported.

Figure 7

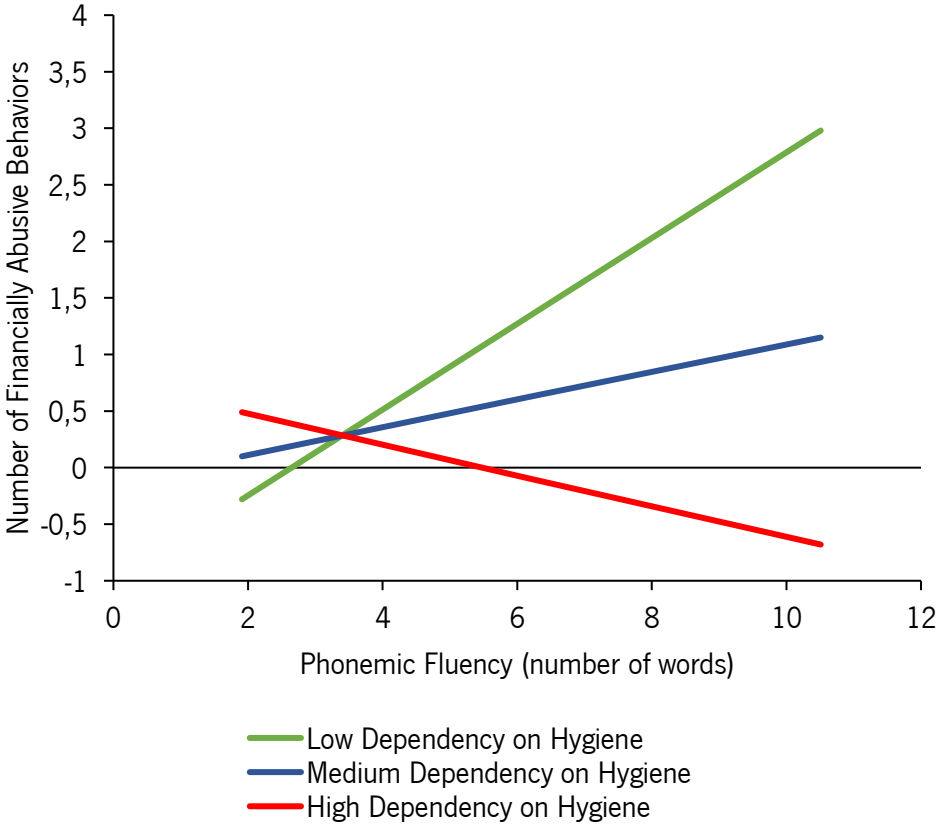
Conditional effect of phonemic fluency on the number of financially abusive behaviors reported at fixed values of dependency on movement tasks



Note. At low levels of dependency on movement tasks, phonemic fluency has no effect on the number of financially abusive behaviors reported (b = -.122, t(50) = -1.209, p = .232). At medium levels of dependency for movement (b = .122, t(50) = 2.364, p = .022) and at high levels of dependency for movement (b = .366, t(50) = 3.384, p = .001) phonemic fluency has a significant and positive effect on the number of financially abusive behaviors reported.

Figure 8

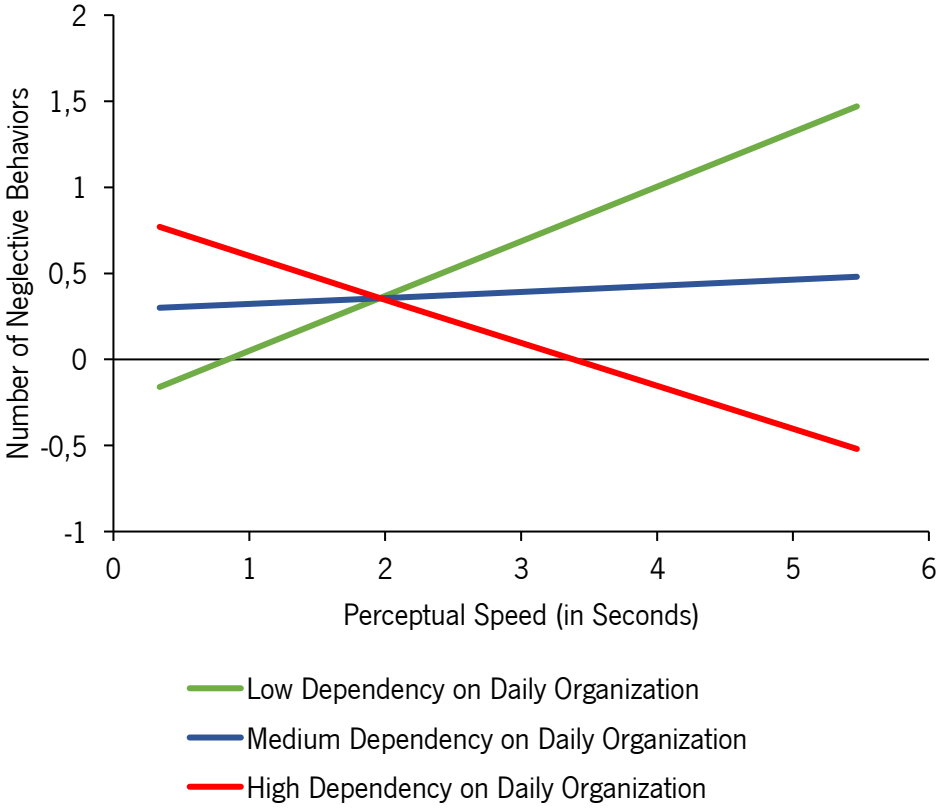
Conditional effect of phonemic fluency on the number of financially abusive behaviors reported at fixed values of dependency on hygiene tasks



Note. At low levels of dependency on hygiene tasks (b = .380, $t(50)$ = 3.634, p = .001) and medium levels of dependency on hygiene tasks (b = .122, $t(50)$ = 2.364, p = .022), phonemic fluency has a positive and significant effect on the number of financially abusive behaviors reported. At high levels of dependency on hygiene tasks, phonemic fluency does not affect the number of financially abusive behaviors reported (b = -.135, $t(50)$ = -1.201, p = .235).

Figure 9

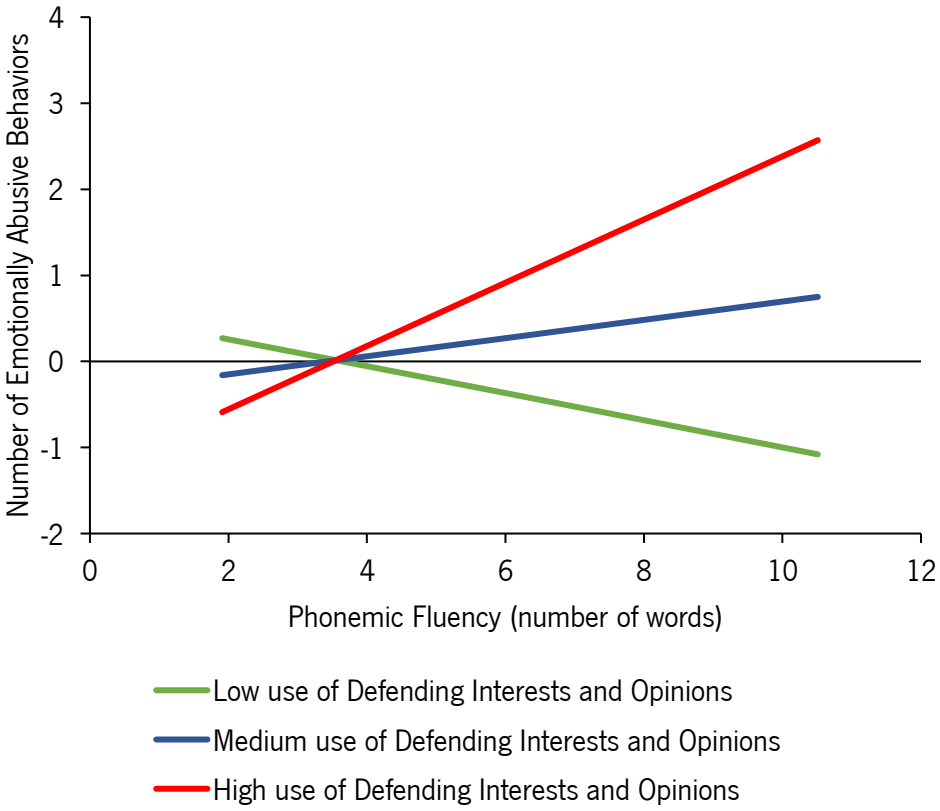
Conditional effect of perceptual speed on the total number of behaviors that constitute neglect at fixed values of dependency on daily organization tasks



Note. At low levels of dependency for daily organization, perceptual speed has a positive and significant effect on the number of neglective behaviors reported (b = .318, $t(54)$ = 4.119, p < .001). At medium levels of dependency for daily organization, there is no relationship between perceptual speed and neglect (b = .034, $t(54)$ = .595, p = .554). At high levels of dependency on daily organization, perceptual speed has a negative and significant effect on the number of neglective behaviors reported (b = -.250, $t(54)$ = -3.637, p = .001).

Figure 10

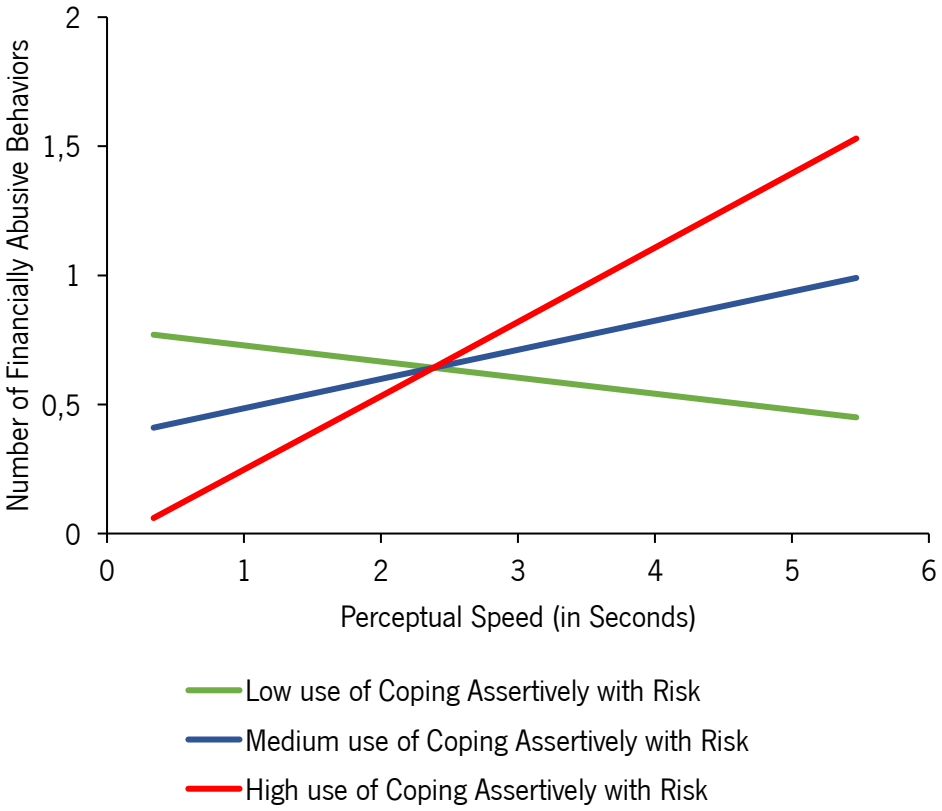
Conditional effect of phonemic fluency on the number of emotionally abusive behaviors at fixed values of the social skill defending interests and opinions



Note. Neither at low use of defending interests and opinions (b = -.156, $t(56)$ = -1.490, p = .142), nor at medium use of defending interests and opinions (b = .106, $t(56)$ = 1.928, p = .059), phonemic fluency has a significant effect on the number of emotionally abusive behaviors reported. At high levels of use of defending interests and opinions, phonemic fluency has a positive and significant effect on the number of emotionally abusive behaviors reported (b = .367, $t(56)$ = 5.887, p < .001).

Figure 11

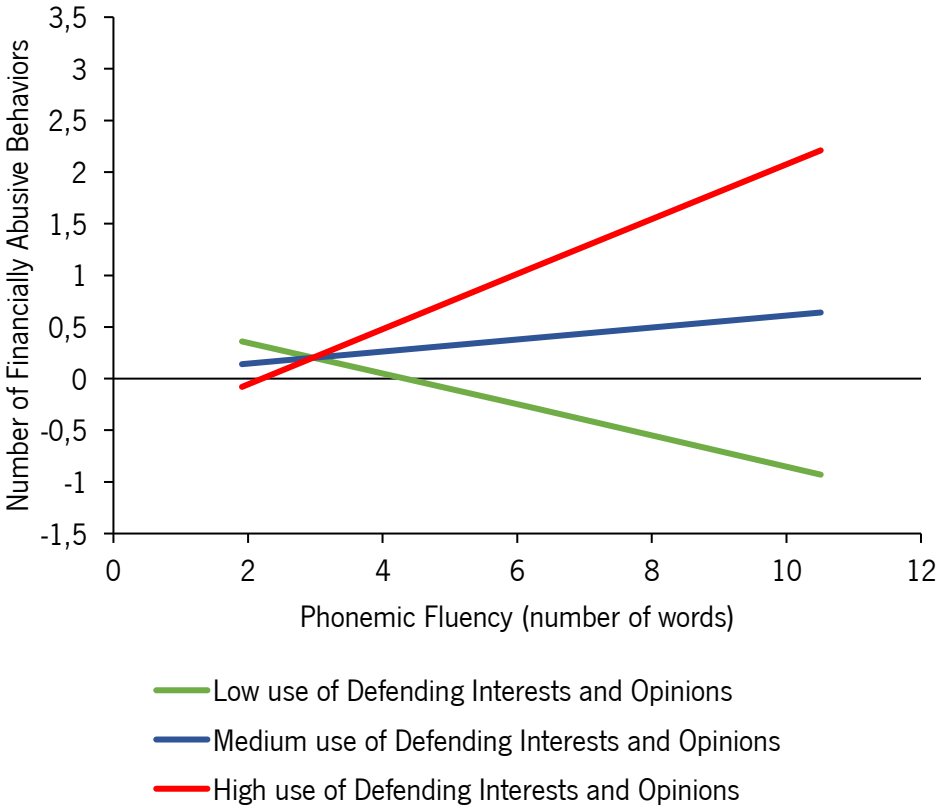
Conditional effect of perceptual speed on the number of financially abusive behaviors at fixed values of the social skill coping assertively with risk



Note. Neither at low use of coping assertively with risk (b = -.063, $t(56)$ = -.578, p = .566), nor at medium use of coping assertively with risk (b = .112, $t(56)$ = 1.659, p = .103), perceptual speed has a significant effect on the number of emotionally abusive behaviors reported. At high levels of use of coping assertively with risk, perceptual speed has a positive and significant effect on the number of emotionally abusive behaviors reported (b = .287, $t(56)$ = 2.646, p = .011).

Figure 12

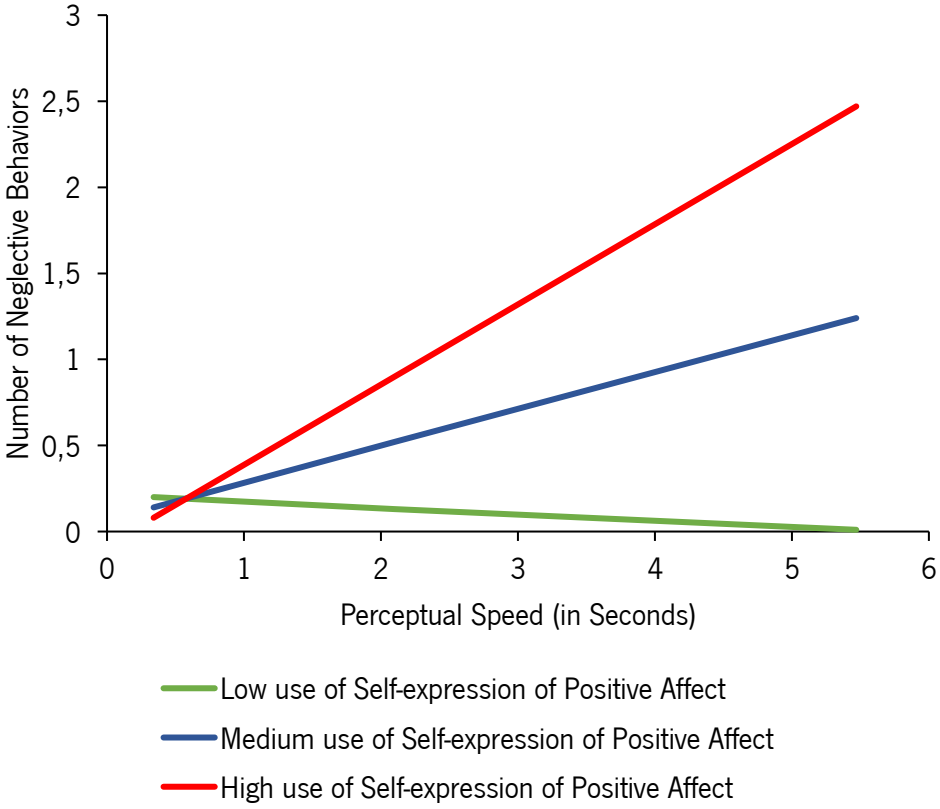
Conditional effect of phonemic fluency on the number of financially abusive behaviors at fixed values of the social skill defending interests and opinions



Note. Neither at low use of defending interests and opinions (b = -.150, $t(56)$ = -1.409, p = .164), nor at medium use of defending interests and opinions (b = .058, $t(56)$ = 1.004, p = .319), phonemic fluency has a significant effect on the number of financially abusive behaviors reported. At high levels of use of defending interests and opinions, phonemic fluency has a positive and significant effect on the number of financially abusive behaviors reported (b = .266, $t(56)$ = 4.060, p < .001).

Figure 13

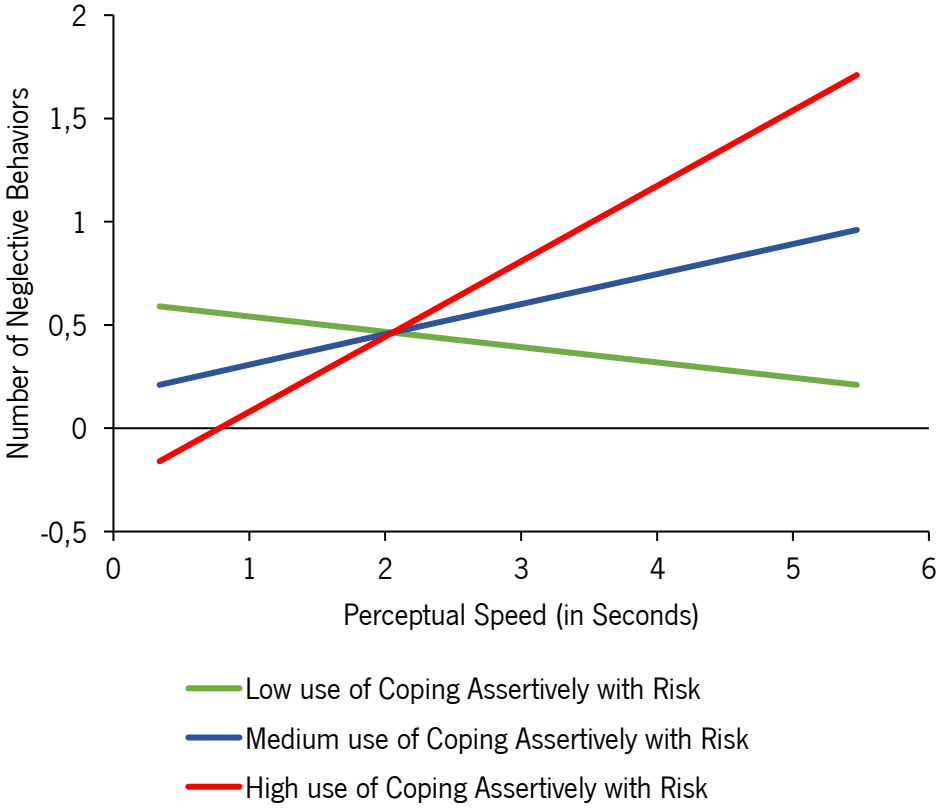
Conditional effect of perceptual speed on the total number of behaviors that constitute neglect at fixed values of the social skill self-expression of positive affect



Note. At low levels of use of self-expression of positive affect, perceptual speed has no effect on the number of neglective behaviors reported (b = -.038, $t(58)$ = -.629, p = .532). At medium levels of use of self-expression of positive affect (b = .214, $t(58)$ = 4.586, p < .001) and at high levels of use of self-expression of positive affect (b = .465, $t(58)$ = 6.162, p < .001), perceptual speed has a significant and positive effect the number of neglective behaviors reported.

Figure 14

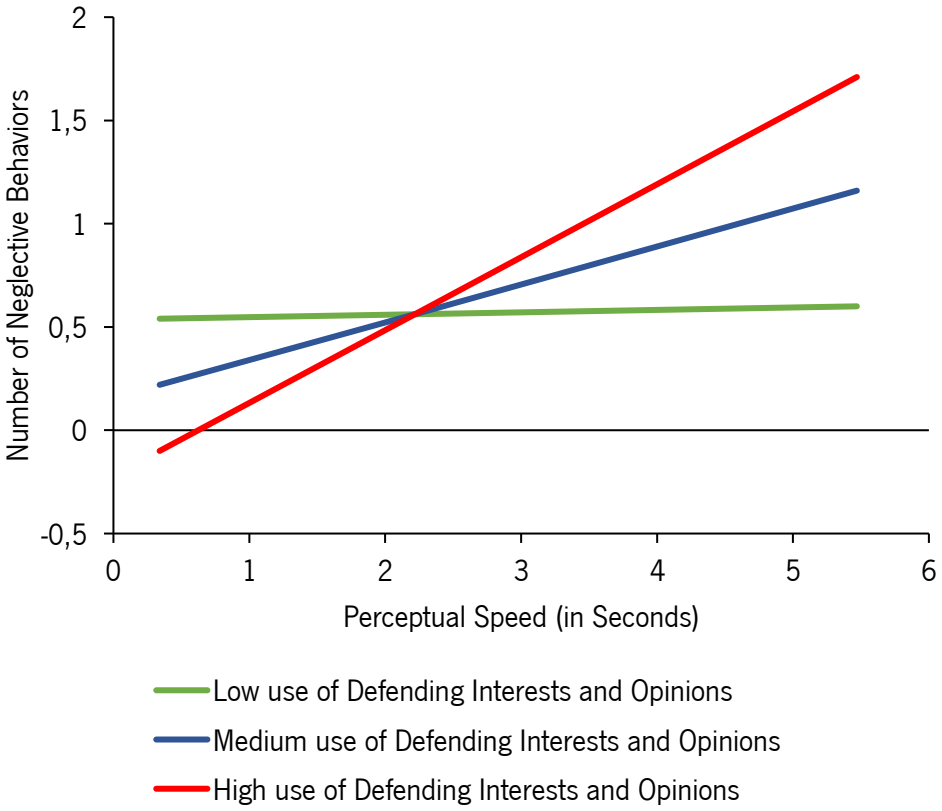
Conditional effect of perceptual speed on the total number of behaviors that constitute neglect at fixed values of the social skill coping assertively with risk



Note. At low levels of use of coping assertively with risk, perceptual speed has no effect on the number of neglective behaviors reported (b = -.703, $t(58)$ = -.861, p = .393). At medium levels of use of coping assertively with risk (b = .143, $t(58)$ = 2.876, p = .006) and at high levels of use of coping assertively with risk (b = .365, $t(58)$ = 4.497, p < .001), perceptual speed has a significant and positive effect the number of neglective behaviors reported.

Figure 15

Conditional effect of perceptual speed on the total number of behaviors that constitute neglect at fixed values of the social skill defending interests and opinions



Note. At low levels of use of defending interests and opinions, perceptual speed has no effect on the number of neglective behaviors reported ($b = .012$, $t(58) = .190$, $p = .850$). At medium levels of use of defending interests and opinions ($b = .183$, $t(58) = 3.575$, $p = .001$) and at high levels of use of defending interests and opinions ($b = .353$, $t(58) = 4.772$, $p < .001$), perceptual speed has a significant and positive effect the number of neglective behaviors reported.

Appendix C

Approval by the Ethics Committee for Social and Human Sciences of the University of Minho

Universidade do Minho

SECSH

Subcomissão de Ética para as Ciências Sociais e Humanas

Identificação do documento: SECSH 024/2016

Título do projeto: *Socio-cognitive functioning and risk of elder abuse*

Investigador(a) responsável: João Fundinho, Escola de Psicologia, Universidade do Minho.

Outros investigadores: José Ferreira-Alves, Escola de Psicologia, Universidade do Minho

Subunidade orgânica: Escola de Psicologia, Universidade do Minho

PARECER

A Subcomissão de Ética para as Ciências Sociais e Humanas (SECSH) analisou o processo relativo ao projeto intitulado *"Socio-cognitive functioning and risk of elder abuse".*

Os documentos apresentados revelam que o projeto obedece aos requisitos exigidos para as boas práticas na investigação com humanos, em conformidade com as normas nacionais e internacionais que regulam a investigação em Ciências Sociais e Humanas.

Face ao exposto, a SECSH nada tem a opor à realização do projeto.

Braga, 07 de novembro de 2016.

O Presidente

Digitally signed by PAULO MANUEL PINTO PEREIRA ALMEIDA MACHADO
Date: 2016.11.13 20:03:49 Z

Paulo Manuel Pinto Pereira Almeida Machado