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EFFECTS OF EDUCATIONAL LEVEL AND LEISURE ON ELDERLY MENTAL HEALTH IN PORTUGAL

Doctoral Dissertation

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ABBREVIATIONS AND ACRONYMS

- Instituto Nacional de Estadística (INE)
- Leisure Attitude Scale (LAS)
- Mental Health Inventory (MHI)
- Organización Mundial de Salud (OMS)
- Organización de Naciones Unidas (ONU)
- Selección, Optimización y Compensación (SOC)
- Standard Deviation (SD)
- Statistical Package for Social Sciences (SPSS)
- World Health Organization (WHO)

ABSTRACT

With the ageing of the population, several problems associated with health arise. Increased human longevity has been attributed to technological and medical advances, as well as improved hygiene and nutritional conditions, access to health care, changes in eating habits and cognitive development strategies (Osorio, 2007).
Globally, there is a great difficulty in determining what changes are typical and what are the processes that differ from natural ageing (Lima, 2010). Pocinho et al. (2013) showed that ageing is a complex, dynamic, and idiosyncratic process, in which individuals do not get age identically. In the study of Lima (2010) it was assumed that ageing goes beyond chronological age, so we must also consider biological age, associated with physical growth and health status; psychological age, related to cognitive, emotional, and motivational dimensions, as well as adaptability and learning; social age, associated with status and expected functions; and functional age, related to the person's competence to carry out specific tasks (Belo, Pocinho, & Navarro-Pardo, 2017; Lima, 2010).

Ageing only began to be studied systematically in the 20th century, due to the increase of the elderly population (Pocinho et al., 2013). As in other countries, Portugal underwent the transition from a demographic model based on high fertility rates to a model characterized by low levels of births. Hence the inversion of the population pyramid is derived, considering the reduction of its base due to the decrease in the young population and the extension of its upper part, that is, the increase in the elderly population (Pocinho, 2014). At the beginning of the 21st century, the demographic pyramid suffered a decrease in the young population and a growth in the number of people at the top of the graph appeared, with the increase in the older population. Over time, a decrease in youth is evident at the base of the pyramid and in terms of gender, there has been an increase in the female sex in the age section of the oldest, between 80-99 years. In our society, the ageing of the population is an increasingly evident and, on the other hand, inevitable reality. The phenomenon of ageing is a positive occurrence for individuals and for societies that takes place because of economic and socio-biomedical progress. In this context, ageing can be studied through various perspectives and theories. The process is universal and experienced by everybody, however in different ways (Fernández-

Ballesteros, 2008; Hawkins, Foose, & Binkley, 2004; Korten et al., 1999; Schneider & Irigaray, 2008). This step of the life cycle can be a time of new achievements and continued development, both in the social, cognitive, and cultural fields (Belo, Pocinho, & Navarro-Pardo, 2016; Pocinho, Belo, & Sánchez, 2016). Seems crucial and of high relevance the study of ageing as a specific stage of life. For Belo, Pocinho and Navarro-Pardo (2016) this implicates an active and continuous balance enduring its impressiveness in the interaction between maturation, learning and senescence. A new idea about ageing emerged and a new design reflects the positive aspects of the third age, where is possible to explore the potential of actions and quality of life.

Ageing is characterized by a biological and psychosocial dynamic process. The development that the individual makes throughout his life confirms the process of its evolution, characterizing itself as a singular and individual process. The context for older people is generally characterized by physical limitations, restricted activities, and new routines. The study of Lorem et al. (2017) showed that ageing had a negative impact on self-report health. It is important to accept the changes caused by the passage of time, such as body transformations or family structure changes; however, there is currently a social rejection of ageing and its effects, which implies social difficulties in several areas, including the possibilities of enjoying leisure and its effects on well-being and health.

The involvement and information learned throughout life can be improved at this time. As a result, leisure plays an essential part in the process, once is perceived as a value for seniors and society (Brown, McGuire, & Voelkl, 2008). Chodzko-Zajko et al. (2009) bared that participation in leisure activities overtime protects against chronic and degenerative diseases contributing for well-being, while the inactive leisure, related to a sedentary lifestyle increases the risk for such health outcomes. Besides, the perception that individuals have about past, present and future is a descriptor of their psychological well-being (Cohen, 2000).

How people spend their leisure time is a key factor in preserving psychological health. A physical activity (of leisure) is associated with decreased mortality from many physical illnesses and decreased risk of mental disorders, associated with an increase in life expectancy, but psychological distress may decrease the likelihood of engaging in leisure-

time physical activities. Some outdoor leisure activities and physical activity were significantly correlated (negative association) with psychological distress (Toyoshima, Kaneno, & Motohashi, 2016). Hawkins, Foose, and Binkley (2004) revealed that a high involvement, or participation, in leisure actions is related with life satisfaction. It seems to have an important implication in promoting and increasing well-being in old age (Belo, Pocinho, & Navarro-Pardo, 2016). Leisure activities frequently take place in contexts of social relations, also providing benefits in health promotion.

So, participation in leisure activities affects the relationship between positive social relations, physical and psychological well-being (Belo, Pocinho, & Navarro-Pardo, 2017). People who regularly does outdoor leisure activities are significantly less likely to be psychologically distressed. Women who regularly engaged in physical activity were significantly less likely to be psychologically distressed (Toyoshima, Kaneno, & Motohashi, 2016). Shah, Wadoo, and Latoo (2010) reported that psychological distress has a significant impact not only on the person, but also on families.

Mental disorders have a considerable impact on family members and can lead to a reduction in social activities, producing sometimes isolation. This can lead to the development of leisure new activities with the main objective of avoid negative impacts on life quality of older adults. For leisure, these aspects are reflected not only on the level of knowledge of the socio-cognitive processes but also in the intervention, in the definition of strategies of involvement in leisure activities and in adherence to opportunities structured and offered by the community (Freire & Fonte, 2007).

Objectives

This study aims to analyse the effect of leisure practice on distress and psychological well-being; analyse the mediation role of leisure attitude in the relationship between mental health and the education level in elderly people and analyse the associations between self-rated health and psychological well-being and leisure attitude. Regarding the central object of the study, we have tried to examine the attitude to do leisure activities, as well as to analyse their mental health. It was purpose to understand how the leisure attitude is related with mental health. So, regarding mental health, the existence of distress

and psychological well-being were studied. The perception of their state of health has also been analysed.

Methodology

Therefore, we have tried to characterize a sample of older people who live, or frequent, residential institutions for the elderly, as well as the motivations that lead them to participate in leisure activities. In more detail, the population has been characterized in relation to different sociodemographic variables, such as gender, age, level of education, marital status, and the geographical area where they live. Other variables have been considered, such as their perception of health, or if they do leisure activities and what kind of activity. The sample of the present study was compiled in several residential institutions for the elderly at the Portuguese national level, trying to represent the North and Centre regions. The information gathering process was carried out in accordance with the criteria aimed at good research practices. The general objectives of this study were explained to the participants, also guaranteeing the confidentiality and anonymity of all the data provided. The sample was collected from a convenience sampling in which subjects were at least 50 years old (Power et al., 2016) and retired. The participants were asked to answer the questionnaire by the institution director and a multidisciplinary team. It was our intention to spend the least amount of time possible in data collection, due to the physical and psychological characteristics of participants.

Each questionnaire included standard instructions and participants were asked to respond to the option they felt was the most relevant to them. It was clear that there were no right and wrong answers.

Participants completed the questionnaire composed by three sections: a sociodemographic data questionnaire, the Mental Health Inventory - MHI (Ribeiro, 2001) and the Leisure Attitude Scale - LAS (Freire & Fonte, 2007). Each questionnaire had standard instructions, and participants were asked to respond according to the option they considered most relevant to them.

Demographic variables included age, gender (M / F), educational level, marital status, religion, area of residence (City / Rural), self-rated health (Excellent, Good, Not good or

bad, Bad, Very bad), perception of health state (dependent / independent) and questions about leisure practice of the subjects (Y / N).

The Mental Health Inventory (Ribeiro, 2001) is a questionnaire used for evaluating mental health issues as anxiety, depression, behavioural control, positive affect, and general distress. The Mental Health Inventory includes 38 items in which the participant uses a 5 or 6-point Likert-style response (ex. item 9: “During the last month have you felt depressed?”; item 33: “During the last month have you felt anxious or worried?”; item 34: “During the last month have you felt happy?”). The 38 items are distributed among five scales (Anxiety with 10 items; Depression, with 5 items; Loss of Emotional / Behavioural Control, with 9 items; Positive Affect, with 11 items; Emotional Ties, with 3 items). In turn, these five subscales are grouped into two major sub-scales or dimensions that respectively measure distress and psychological well-being (Distress results from the grouping of the sub-scales of Anxiety, Depression, and Loss of Emotional / Behavioural Control; while Psychological Well-Being results from the combination of sub-scales Positive Affect and Emotional Ties). The total score is the sum of the values of the items that make up each sub-scale. There are some items with reverse quote. This instrument helps measuring overall emotional functioning. Research has shown the existence of a positive (psychological well-being, positive mental health status) and another negative construct (psychological distress, negative mental health status). This type of measurement is important when the objective is to evaluate health in general, or in the context of epidemiological studies (e.g., epidemiology of health), or in the evaluation of health outcomes.

The Leisure Attitude Scale (Freire & Fonte, 2007) is composed of 36 items divided into three subscales for the three components of attitude - cognitive, affective, and behavioural (ex. item 1: “Engaging in leisure activities is a good choice to spend time”; item 2: “Leisure activities bring benefits to people and society”; item 9: “Leisure activities help people to relax”). Each subscale contains 12 items, all directed to the positive direction of attitude. Likert is the response system used, which has five levels of related responses to express agreement and disagreement, in which 1 reveals an unfavourable or negative extreme attitude ("disagree") and 5 is associated to a favourable or positive extreme

attitude ("totally agree"). Point 3 corresponds to a neutral level on the direction of the attitude ("neither disagree nor agree"). Higher values (above the neutral point) show more positive attitudes and, on the contrary, lower values (below the neutral point) indicate more negative attitudes towards leisure. Thus, if the concept of attitude based on the three components is of relevance for the study of attitudes in general, it is also relevant in the specific study of attitudes towards leisure since it contributes to the investigation of psycho-social and socio-cognitive aspects of leisure, and to know better and understand the degree and type of involvement of the subjects, and also the forms and processes that underlie the change of attitudes towards leisure and quality of life, in specific groups or contexts. Thus, for each sub-scale the minimum possible total value is 12 and the maximum is 60 (neutral point located at 36). Concerning the total scale, the minimum possible value is 36 and the maximum is 180 (neutral point in the value 108).

The main findings of the present study are that old-aged people with higher education levels show a better psychological well-being and a more positive leisure attitude, probably because of an indirect effect on the first variable. Participants in leisure activities presented high level of well-being and attitude for leisure ($p<0.05$). Seniors that present big levels of distress indicated an intention to participate in activities of leisure that aided to decrease that symptom. Results showed that seniors health perception influenced the practice of a leisure activity [Hotelling's Trace = 0.077; $F_{(3, 341)} = 8.733$; $p= 0.00$]. Also, psychological well-being is associated with a positive leisure attitude, which underlines the need for leisure interventions in old age. An important target in leisure attitude seems to be self-rated health, which proved to be an important mechanism linking leisure and mental health among old people. Gender does not appear to have effects on these relations. The leisure attitude mediated the association between education and well-being. In addition, higher levels of distress were found in participants with higher levels of education. Old-aged people with high education and a more positive leisure attitude have a better psychological adjustment concerning well-being. Also, a high level of education can lead to a better perception of ageing changes (physical, life, profession).

For the first objective, the significant sociodemographic variables (covariates), the multivariate analysis of covariance (MANCOVA) was used to examine the differences

between the groups (Netter, Wasserman, & Kutner, 1990). Differences between groups were examined by controlling the influence of possible confusing variables (covariates). The post-hoc test (Bonferroni adjustment for multiple comparisons) was also used.

Also, it was an objective to explore the influence of education on the mental health of old people and the mediating role of a leisure attitude in this relationship. A quantitative research was used instead of a qualitative analysis because its purpose was to report data through the statistical analysis of the facts reported about the leisure attitude role in mediation models. Data were evaluated using the Statistical Package for Social Sciences (IBM - SPSS) software, version 24. Mediation models were tested through PROCESS, a computational tool for path analysis-based mediation analysis and moderation (Hayes, 2012). To identify possible covariates that should be introduced into the mediation model, correlations between sociodemographic variables (age and gender) and the mediator and dependent variables were also computed. Parametric tests were used to study the relationship between the variables (R Pearson statistic test). Cohen's (1988) guidelines were used to describe and interpret the effect sizes of correlations (i.e., weak for correlations close to 0.10, moderate for those near 0.30, and strong for correlations at 0.50 or higher). To examine the indirect effects, a bootstrap procedure was used to evaluate unconditional indirect effects (PROCESS assumes 5.000 "resamples") at a confidence level of 0.05 (Cohen, 1988; Hayes, 2012).

Additionally, it intends to explore whether the association between psychological well-being and leisure attitude are mediated by self-rated health as well as the moderating role of gender in this association. To examine whether the hypothesized indirect effects of leisure attitude on psychological well-being through self-rated health evaluation, moderated by gender, a conditional analysis was conducted. In the model estimation, the variables used in the diagram were mean centred, to make the regression coefficients easily perceived. The nonappearance of significant interactions in one or more relations promotes the removal of the variable. Gender was tested as a moderator variable in the relation between leisure attitude and self-rated health evaluation, and in the relation between self-rated health evaluation and psychological well-being. However, this

variable was removed from the estimated model because no significant interaction was found.

Conclusions

Results found are in line with the findings in other studies. When we observe the relation between the level of education and the age of the participants, we can observe that, as the age range increases, education decreases, a characteristic that defines the Portuguese population, as seen in the study by Pocinho (2014). Leisure activities provide pleasure and satisfaction with life, as well as, feeling good with themselves, a sensation of being valued, respected, and socially integrated, all benefits that can promote a successful ageing. For Pocinho (2014), having quality of life is the optimal level of functioning, not only physical and social, but also mental, which therefore involves the integration of multiple dimensions of people's lives such as social relationships, the perception of his health, or a good mental state. It is important in older age to fight against stereotypes and prejudices related to ageing. Social contact goes through the promotion of self-esteem, always considering these variables as the result of successful ageing (Pocinho, et al., 2013).

This research sustains the importance to consider leisure as an income of aiding psychological well-being, avoiding distress among aged people. The attitude for leisure is also high levelled in subjects that have habitual activities of time-out and relaxation. Research supported the importance of screening and distress control in seniors. The psychosocial activity of leisure is considered an essential part in providing quality health. This may be even more visible in the case of subjects with high levels of distress, due to the lack of studies that demonstrate its impact on psychosocial well-being. If the life of subjects in our study could be guided by an active participation in leisure activities, it will allow them to understand others and, subsequently, improve positive feelings and behaviours, which can develop well-being and decrease distress. Leisure activities play a leading role in intellectual development because it allows the finding of new knowledge, developing their critical opinion, joining new interpersonal relationships, allowing a time to appreciate yourself, others, and other cultures, expand their self-concept and still improve their quality of life. Leisure stimulates patterns of satisfaction and pleasure,

becoming a positive life experience, and a valuable indicator of quality of life (Freire, 2000). Positive experiences appeared to be a crucial aspect for leisure, once the activities promote a belief of time quality and wellbeing (Han, & Patterson, 2007). Castro and Carreira (2015) studied the role of leisure events in institutionalized elderly population. The results showed that bestowing a positive attitude toward leisure probably is influenced by past experiences and determine the construction of beliefs and feelings. Multiple studies with seniors point out an evidence of a robust association (positive) between the involvement in activities of leisure and health (Ra, Na, & Rhee, 2013; Belo, Pocinho, & Navarro-Pardo, 2017).

Ageing represents the culmination of a long process of deliberation and discussion with contributions from various perspectives and scientific domains (Fernández-Ballesteros et al., 2004). It must be assumed like a positive experience, a new stage of life that is accompanied by changes and new routines. However, it is assumed that aged people have a significant ongoing decline in physical capacities and cognitive function (Thomas et al., 2016). This worsening prompts their feelings of decreasing leisure autonomy competence as the range of their practically attainable achievements becomes limited in leisure activities (Chang & Yu, 2013). As showed by Lee et al. (2018), it is the way how individuals understand leisure and their beliefs about their ability to engage in leisure activities, that influence their orientation and attitude towards life.

The present study provides new information to understand the benefits of a positive leisure attitude in old adults. As the educational level is a variable that cannot be manipulated, leisure intervention programs shall consider the importance of a leisure attitude and contemplate strategies for stress reduction. An important finding was detected in our study which is not in line with standard results: the highest level of distress was found in participants with the highest level of education; maybe a high level of education can lead to a better perception of all ageing changes (body, life, profession, etc.). In this sense, the transition to a new life-stage brings several readjustments within the family and may disturb family functioning. This could enable people to perceive themselves as generally incapable of dealing with it and transform that incapacity into a stressor. Old-aged people have the need to adopt a positive leisure attitude to perceive themselves as

useful, and this feeling may contribute to nullify a stressful moment. Thus, they recognize that a new life stage is coming, and they have a good perception of personal and social changes as an essential aspect and consider that a positive leisure attitude could be of extreme importance when preparing for retirement, as pointed out by Lee et al. (2018). Furthermore, it is important to evaluate needs, interests, and expectations (Tsai et al., 2014), according to the different educational level of older adults. A greater involvement in leisure activities in older age is associated with a better health condition (Alwin & Wray, 2005; Carruthers & Hood, 2004; Chang, Wray, & Lin, 2014; Fave et al., 2018; Hutchinson & Nimrod, 2012). Moreover, the active participation in leisure activities has been considered effective in reducing depression and increasing psychological well-being (Haworth & Lewis, 2005). The levels of satisfaction are related to the seniors' life view and their state of health, and this determines the participation in activities (Stolar, Macentee, & Hill, 1992). In addition, leisure time involvement contributes to a positive self-rated health (Confortin et al., 2015; Lima-Costa, Firmo, & Uchôa, 2005; Lucumi et al., 2013), and the studies about the relation between leisure engagement and well-being indicate a positive effect on health outcomes of old people (Silverstein & Parker, 2002; Windle et al., 2010). Life expectancy is greater for women in virtually every country on earth, in every age (Idler, 2003; Zajacova, Huzurbazar, & Todd, 2017). Previous studies show that women's rate of self-rated health is poorer than men's self-rated health (Bath, 2003; Deeg & Kriegsman, 2003; Fernández, Bixby, & Honkanen, 2016; Idler, 2003; Lu & Zhang, 2019; Zajacova, Huzurbazar, & Todd, 2017), because women understand better the disease and have a tendency to evaluate worse their health condition (Idler, 2003). A negative attitude towards ageing in terms of daily changes (physical, social, cognitive) is associated with dissatisfaction concerning health (Kotala, 2015).

A positive leisure attitude can improve the way how old people perceive their health (Ferrari et al., 2016). If a positive leisure attitude is displayed, it can improve psychological well-being among old people which will contribute to a good self-rated health evaluation. Adopting a positive attitude towards leisure helps old people in the transition to adjust life to their abilities regarding a positive psychological well-being (Ferrari et al., 2016; Kotala, 2015). Some people can experience a loss of functional behaviour which has an impact on their leisure perception (Ferrari et al., 2016; Kotala,

2015). A leisure attitude can be interpreted as a variable which can boost the person to obtain life satisfaction, maximized by psychological well-being (Argan, Argan, & Dursun, 2018; Castro & Carreira, 2015) and decrease health risks (Castro & Carreira, 2015).

The present study not only showed that leisure has a positive impact on the lives of the elderly, but these have both a high quality of life and a better attitude to continue participating in leisure activities. In addition, these are spaces of socialization that avoid social isolation, an occurrence presents in the old population and which inversely correlate with optimal ageing. Leisure has a positive impact for psychological well-being, promotes interpersonal relationships, and cultural knowledge. Activities that raise more longevity and a better physical action should consequently get more attention during the cycle of life. In short, the participation of older adults in this type of activities could be defined as a commitment for a positive experience. For Han and Patterson (2007), the relation found by leisure, health, and well-being has an enduring connection. Feeling a satisfying attitude through leisure participation (time spent reading, contact with nature, spend time visit other people, eating in the company and participation in religious groups) are defined as one of the most important benefits of leisure, and has been exposed to contribute to improve the quality of life (Belo, Pocinho, & Navarro-Pardo, 2017). Leisure attitude has a positive impact for psychological well-being, promotes interpersonal relationships, and cultural knowledge. Activities that raise more longevity and a better physical action should consequently get more attention in the cycle of life. In short, the participation of older adults in this type of activities could be defined as a commitment for a positive experience (Belo, Navarro-Pardo, Pocinho, Carrana, & Margarido, 2020).

This study allowed us to understand how personal characteristics can influence leisure attitude, so it will be useful for multidisciplinary teams to anticipate difficulties and try to prepare an action plan so that the attitude towards leisure is positive so that it can increase their quality of life and mental well-being.

Keywords: Ageing, Leisure attitude, Education, Self-perceived Health, Psychological Well-being.

RESUMEN

Con el envejecimiento de la población aparecen varios problemas asociados a la salud. El aumento de la longevidad humana se ha atribuido a los avances tecnológicos y médicos, así como a la mejora de las condiciones de higiene y nutrición, el acceso a la atención médica, los cambios en los hábitos alimentarios y las estrategias de desarrollo cognitivo (Osorio, 2007).
Globalmente, existe una gran dificultad para determinar qué cambios son típicos y cuáles serían los procesos que se diferencian del envejecimiento natural (Lima, 2010). Pocinho et al. (2013) mostraron que el envejecimiento es un proceso complejo, dinámico e idiosincrásico, en el que los individuos no envejecen de manera idéntica. En el estudio de Lima (2010), se asumió que el envejecimiento va más allá de la edad cronológica, por lo que también debemos considerar la edad biológica, asociada al crecimiento físico y al estado de salud; la edad psicológica, relacionada con las dimensiones cognitiva, emocional y motivacional, así como con la adaptabilidad y el aprendizaje; la edad social, asociada con el estatus y las funciones esperadas; y la edad funcional, relacionada con la competencia de la persona para realizar tareas específicas (Belo, Pocinho, & Navarro-Pardo, 2017; Lima, 2010).

El envejecimiento solo comenzó a estudiarse de forma sistemática a partir del siglo XX, debido al aumento de la población mayor (Pocinho et al., 2013). Como en otros países, Portugal atravesó la transición de un modelo demográfico basado en altas tasas de fecundidad a un modelo caracterizado por bajos niveles de natalidad. De ahí se deriva la inversión de la pirámide poblacional, considerando la reducción de su base por la disminución de la población joven y la extensión de su parte superior, es decir, el aumento de la población anciana (Pocinho, 2014). A principios del siglo XXI, la pirámide demográfica sufrió una disminución de la población joven y apareció un crecimiento en el número de personas en la parte superior del gráfico, con el aumento de la población de mayor edad. Con el tiempo, se evidencia una disminución de la juventud en la base de la pirámide y en términos de género, se ha producido un aumento del sexo femenino en el tramo de edad de los más mayores, entre 80-99 años. En nuestra sociedad, el envejecimiento de la población es una realidad cada vez más evidente y, por otro lado,

inevitable. El fenómeno del envejecimiento es un hecho positivo para los individuos y las sociedades que se produce debido al progreso económico y socio-biomédico. En este contexto, el envejecimiento se puede estudiar a través de diversas perspectivas y teorías. El proceso es universal y todas las personas lo viven, pero de diferentes formas (Fernández-Ballesteros, 2008; Hawkins, Foose, & Binkley, 2004; Korten et al., 1999; Schneider & Irigaray, 2008). Esta etapa del ciclo vital puede ser una fase de nuevos logros y desarrollo continuo, tanto en el ámbito social, cognitivo como cultural (Belo, Pocinho, & Navarro-Pardo, 2016). Parece crucial y de gran relevancia el estudio del envejecimiento como una etapa específica de la vida. Para Belo, Pocinho y Navarro-Pardo (2016), esto implica un equilibrio activo y continuo que mantiene su importancia en la interacción entre maduración, aprendizaje y senescencia. De hecho, surge una nueva idea sobre el envejecimiento y un nuevo diseño refleja los aspectos positivos de la tercera edad, donde es posible explorar el potencial de las acciones y la calidad de vida.

El envejecimiento se caracteriza por ser un proceso dinámico biológico y psicosocial. El desarrollo que el individuo realiza a lo largo de su vida confirma el proceso de su evolución, caracterizándose como un proceso singular e individual. El contexto de las personas mayores se caracteriza generalmente por limitaciones físicas, actividades restringidas y nuevas rutinas. El estudio de Lorem et al. (2017) mostró que el envejecimiento tiene un impacto negativo en la salud autoinformada. Es importante aceptar los cambios provocados por el paso del tiempo, como las transformaciones corporales o cambios en la estructura familiar; sin embargo, en la actualidad existe un rechazo social al envejecimiento y sus efectos, lo que implica dificultades sociales en varios ámbitos, entre ellos las posibilidades de disfrutar del ocio y sus efectos sobre el bienestar y la salud.

La participación y la información aprendidas a lo largo de la vida se pueden mejorar en este momento. Como resultado, el ocio juega un papel esencial en el proceso, una vez que se percibe como un valor para las personas mayores y la sociedad (Brown, McGuire, & Voelkl, 2008). Chodzko-Zajko et al. (2009) descubrieron que la participación en horas adicionales de actividades de ocio durante protege contra enfermedades crónicas y degenerativas y contribuye al bienestar, mientras que el ocio inactivo, relacionado con un

estilo de vida sedentario, aumenta el riesgo de tales resultados negativos de salud. Además, la percepción que los individuos tienen sobre el pasado, el presente y el futuro es un descriptor de su bienestar psicológico (Cohen, 2000).

La forma en que las personas pasan su tiempo libre es un factor clave para preservar la salud psicológica. Una actividad física (de ocio) se asocia con una menor mortalidad por muchas enfermedades físicas y un menor riesgo de trastornos mentales, asociado con un aumento en la esperanza de vida, pero la angustia psicológica puede reducir la probabilidad de realizar actividades físicas en el tiempo libre. Algunas actividades de ocio al aire libre y la actividad física se correlacionaron significativamente (asociación negativa) con el malestar psicológico (Toyoshima, Kaneno, & Motohashi, 2016). Hawkins, Foose y Binkley (2004) revelaron que una alta implicación, o participación, en acciones de ocio está relacionada con la satisfacción con la vida. Parece tener una implicación importante en la promoción e incremento del bienestar en la vejez (Belo, Pocinho, & Navarro-Pardo, 2016). Las actividades de ocio suelen tener lugar en contextos de relaciones sociales, lo que también aporta beneficios en la promoción de la salud.

Así, la participación en actividades de ocio incide en la relación entre las relaciones sociales positivas, el bienestar físico y el psicológico (Belo, Pocinho, & Navarro-Pardo, 2017).

Las personas que realizan actividades de ocio al aire libre con regularidad tienen menos probabilidades de sufrir angustia psicológica (Toyoshima, Kaneno, & Motohashi, 2016). Shah, Wadoo y Latoo (2010) informaron que la angustia psicológica tiene un impacto significativo no solo en la persona, sino también en las familias.

Los trastornos mentales tienen un impacto considerable en los miembros de la familia y pueden conducir a una reducción de las actividades sociales, produciendo en ocasiones aislamiento. Esto puede conducir al desarrollo de nuevas actividades de ocio con el objetivo principal de evitar impactos negativos en la calidad de vida de los adultos mayores. Para el ocio, estos aspectos se reflejan no solo en el nivel de conocimiento de los procesos sociocognitivos sino también en la intervención, en la definición de

estrategias de implicación en las actividades de ocio y en la adherencia a las oportunidades estructuradas y ofrecidas por la comunidad (Freire & Fonte, 2007).

Objetivos

Este estudio tiene como objetivo analizar el efecto de la práctica del ocio sobre la angustia y el bienestar psicológico; analizar el papel mediador de la actitud de ocio en la relación entre la salud mental y el nivel educativo de las personas mayores y analizar las asociaciones entre la salud autoevaluada y el bienestar psicológico y la actitud de ocio. En cuanto al objeto central del estudio, hemos intentado examinar la actitud para realizar actividades de ocio, así como analizar la salud mental. Se pretendía comprender cómo se relaciona la actitud de ocio con la salud mental. Entonces, en cuanto a la salud mental, se estudió la existencia de angustia y bienestar psicológico. También se ha analizado la percepción de su estado de salud.

Metodología

Por tanto, hemos intentado caracterizar una muestra de personas mayores que viven, o frecuentan, instituciones residenciales para personas mayores, así como las motivaciones que llevan a participar en actividades de ocio. Más detalladamente, se ha caracterizado a la población con relación a diferentes variables sociodemográficas, como sexo, edad, nivel de estudios, estado civil y zona geográfica donde vive. Se han considerado otras variables, como su percepción de salud, o si realizan actividades de ocio y qué tipo de actividad. La muestra del presente estudio fue seleccionada en varias instituciones residenciales para personas mayores a nivel nacional portugués, tratando de representar las regiones Norte y Centro. El proceso de recolección de información se realizó de acuerdo con los criterios orientados a las buenas prácticas de investigación. Se explicó a los participantes los objetivos generales de este estudio, garantizando además la confidencialidad y el anonimato de todos los datos aportados. La muestra se obtuvo por muestreo de conveniencia en la que los sujetos tenían al menos 50 años (Power et al., 2016) y estaban jubilados. El director de la institución y un equipo multidisciplinar solicitaron a los participantes que respondieran el cuestionario. Nuestra intención era

dedicar la menor cantidad de tiempo posible a la recopilación de datos, debido a las características físicas y psicológicas de los participantes.

Cada cuestionario incluía instrucciones estándar y se pidió a los participantes que respondieran de acuerdo con la opción que consideraran más relevante para ellos. Estaba claro que no había respuestas correctas e incorrectas.

Los participantes completaron el cuestionario compuesto por tres apartados: un cuestionario de datos sociodemográficos, el Inventario de Salud Mental - MHI (Ribeiro, 2001) y la Escala de Actitudes de Ocio - LAS (Freire & Fonte, 2007). Cada cuestionario tenía instrucciones estándar, y se pidió a los participantes que respondieran según la opción que consideraran más relevante para ellos.

Las variables demográficas incluyeron edad, género (H / M), nivel educativo, estado civil, religión, área de residencia (ciudad / rural), salud autoevaluada (excelente, buena, no buena o mala, mala, muy mala), percepción del estado de salud (dependiente / independiente) y preguntas sobre la práctica de ocio de los sujetos (S / N).

El Inventario de Salud Mental (Ribeiro, 2001) es un cuestionario que se utiliza para evaluar problemas de salud mental como ansiedad, depresión, control del comportamiento, afecto positivo y angustia general. El Inventario de Salud Mental incluye 38 ítems en los que el participante usa una respuesta estilo Likert de 5 o 6 puntos (ej. Ítem 9: "¿Durante el último mes te has sentido deprimido?"; Ítem 33: "Durante el último mes ¿Se sintió ansioso o preocupado?"; ítem 34: "¿Durante el último mes se ha sentido feliz?"). Los 38 ítems se distribuyen en cinco escalas (Ansiedad con 10 ítems; Depresión, con 5 ítems; Pérdida de Control Emocional / Conductual, con 9 ítems; Afecto Positivo, con 11 ítems; Vínculos Emocionales, con 3 ítems). A su vez, estas cinco subescalas se agrupan en dos subescalas o dimensiones principales que miden respectivamente la angustia y el bienestar psicológico (la angustia resulta de la agrupación de las subescalas de ansiedad, depresión y pérdida de control emocional / conductual; mientras que el Bienestar Psicológico resulta de la combinación de subescalas de Afecto Positivo y Vínculos Emocionales). La puntuación total es la suma de los valores de los ítems que componen cada subescala. Hay algunos ítems que se valoran inversamente.

Este instrumento ayuda a medir el funcionamiento emocional general. La investigación ha demostrado la existencia de un constructo positivo (bienestar psicológico, estado de salud mental positivo) y otro negativo (malestar psicológico, estado de salud mental negativo). Este tipo de medida es importante cuando el objetivo es evaluar la salud en general o en el contexto de estudios epidemiológicos (por ejemplo, epidemiología de la salud) o en la evaluación de resultados de salud.

La Escala de Actitudes de Ocio (Freire & Fonte, 2007) se compone de 36 ítems divididos en tres subescalas para los tres componentes de la actitud - cognitivo, afectivo y conductual (ej., Ítem 1: "Participar en actividades de ocio es una buena opción para pasar tiempo"; Ítem 2: "Las actividades de ocio aportan beneficios a las personas y la sociedad"; ítem 9: "Las actividades de ocio ayudan a las personas a relajarse"). Cada subescala contiene 12 ítems, todos dirigidos a la dirección positiva de la actitud. Likert es el sistema de respuesta utilizado, el cual tiene cinco niveles de respuestas relacionadas para expresar acuerdo y desacuerdo, en el que 1 revela una actitud extrema desfavorable o negativa ("en desacuerdo") y 5 se asocia a una actitud extrema favorable o positiva ("totalmente de acuerdo "). El punto 3 corresponde a un nivel neutral en la dirección de la actitud ("ni en desacuerdo ni de acuerdo"). Los valores más altos (por encima del punto neutro) muestran actitudes más positivas y, por el contrario, los valores más bajos (por debajo del punto neutro) indican actitudes más negativas hacia el ocio. Así, si el concepto de actitud basado en los tres componentes es de relevancia para el estudio de las actitudes en general, también lo es en el estudio específico de las actitudes hacia el ocio ya que contribuye a la investigación de aspectos psicosociales y sociocognitivos del ocio y a conocer mejor y comprender el grado y tipo de implicación de los sujetos, así como las formas y procesos que subyacen al cambio de actitudes hacia el ocio y la calidad de vida, en colectivos o contextos específicos. Así, para cada subescala el valor total mínimo posible es 12 y el máximo es 60 (punto neutral ubicado en el punto 36). En cuanto a la escala global, el valor mínimo posible es 36 y el máximo 180 (punto neutral en el valor 108).

Los principales hallazgos del presente estudio son que las personas mayores con mayor nivel educativo muestran un mejor bienestar psicológico y una actitud de ocio más positiva, probablemente debido a un efecto indirecto sobre la primera variable. Los

participantes en actividades de ocio presentaron alto nivel de bienestar y actitud para el ocio ($p < 0.05$). Las personas mayores que presentan grandes niveles de angustia manifestaron una intención de participar en actividades de ocio que ayudaran a disminuir ese síntoma. Los resultados mostraron que la percepción de la salud de las personas mayores influyó en la práctica de una actividad de ocio [Hotelling's Trace = 0.077; $F_{(3, 341)} = 8.733$; $p = 0.00$]. Además, el bienestar psicológico se asocia con una actitud de ocio positiva, lo que subraya la necesidad de intervenciones de ocio en la vejez. Un objetivo importante en la actitud de ocio parece ser la autoevaluación de la salud, que demostró ser un mecanismo importante que vincula el ocio y la salud mental entre las personas mayores. El género no parece tener efectos sobre estas relaciones. La actitud de ocio medió la asociación entre educación y bienestar. Además, se encontraron niveles más altos de angustia en los participantes con niveles más altos de educación. Las personas mayores con educación superior y una actitud de ocio más positiva tienen un mejor ajuste psicológico en relación con el bienestar. Además, un alto nivel de educación puede conducir a una mejor percepción de los cambios del envejecimiento (físicos, de vida, profesionales).

Para el primer objetivo, las variables sociodemográficas significativas (covariables), se utilizó el análisis multivariado de covarianza (MANCOVA) para examinar las diferencias entre los grupos (Netter, Wasserman, & Kutner, 1990). Las diferencias entre grupos se examinaron controlando la influencia de posibles variables confundentes (covariables). También se utilizó la prueba post-hoc (ajuste de Bonferroni para comparaciones múltiples).

Además, un objetivo fue explorar la influencia de la educación en la salud mental de las personas mayores y el papel mediador de la actitud de ocio en esta relación.

Se utilizó una investigación cuantitativa en lugar de un análisis cualitativo porque su propósito era reportar datos a través del análisis estadístico de los hechos reportados sobre el rol de la actitud de ocio en los modelos de mediación. Los datos se evaluaron utilizando el software Statistical Package for Social Sciences (IBM - SPSS), versión 24. Los modelos de mediación se probaron a través de PROCESS, una herramienta computacional para el análisis y la moderación de mediación basada en el análisis de

caminos (Hayes, 2012). Para identificar las posibles covariables que deben introducirse en el modelo de mediación, también se computaron correlaciones entre las variables sociodemográficas (edad y género) y las variables mediadora y dependiente. Se utilizaron pruebas paramétricas para estudiar la relación entre las variables (prueba del estadístico R de Pearson). Se utilizaron las pautas de Cohen (1988) para describir e interpretar los tamaños del efecto de las correlaciones (es decir, débil para correlaciones cercanas a 0.10, moderado para aquellas cercanas a 0.30 y fuerte para correlaciones de 0.50 o más). Para examinar los efectos indirectos, se utilizó un procedimiento bootstrap para evaluar los efectos indirectos incondicionales (PROCESS asume 5.000 "remuestreos") con un nivel de confianza de 0.05 (Cohen, 1988; Hayes, 2012).

Además, se pretende explorar si la asociación entre el bienestar psicológico y la actitud de ocio está mediada por la salud autoevaluada, así como el papel moderador del género en esta asociación. Para examinar los efectos indirectos hipotéticos de la actitud de ocio sobre el bienestar psicológico a través de una evaluación de salud autoevaluada, moderada por género, se realizó un análisis condicional. En la estimación del modelo, las variables utilizadas en el diagrama estaban centradas en la media, para que los coeficientes de regresión se percibieran fácilmente. La no aparición de interacciones significativas en una o más relaciones promueve la eliminación de la variable. Se probó el género como variable moderadora en la relación entre actitud de ocio y autoevaluación de la salud, y en la relación entre la autoevaluación de la salud y el bienestar psicológico. Sin embargo, esta variable se eliminó del modelo estimado porque no se encontró una interacción significativa.

Conclusiones

Los resultados encontrados están en línea con los hallazgos de otros estudios. Cuando observamos la relación entre el nivel de educación y la edad de los participantes, podemos observar que, a medida que aumenta el rango de edad, la educación disminuye, característica que define a la población portuguesa, como se observa en el estudio de Pocinho (2014). Las actividades de ocio brindan placer y satisfacción con la vida, así como el sentirse bien consigo mismo, la sensación de ser valorado, respetado e integrado socialmente, beneficios que pueden promover un envejecimiento exitoso. Para Pocinho

(2014), tener calidad de vida es el nivel óptimo de funcionamiento, no solo físico y social, sino también mental, lo que por tanto implica la integración de múltiples dimensiones de la vida de las personas como las relaciones sociales, la percepción de su salud, o un buen estado mental. En la vejez es importante luchar contra los estereotipos y prejuicios relacionados con el envejecimiento. El contacto social pasa por la promoción de la autoestima, considerando siempre estas variables como resultado de un envejecimiento exitoso (Pocinho, et al., 2013).

Esta investigación sostiene la importancia de considerar el ocio como un ingreso para ayudar al bienestar psicológico, evitando el malestar entre las personas mayores. La actitud para el ocio también es de alto nivel en sujetos que tienen actividades habituales de relajación. La investigación apoyó la importancia de la detección y el control de la angustia en las personas mayores. La actividad psicosocial del ocio se considera parte fundamental para proporcionar una salud de calidad. Esto puede ser aún más visible en el caso de sujetos con altos niveles de angustia, debido a la falta de estudios que demuestren su impacto en el bienestar psicosocial. Si la vida de los sujetos de nuestro estudio pudiera estar guiada por una participación en actividades de ocio, les permitirá comprender a los demás y, posteriormente, mejorar sentimientos y comportamientos positivos, que puedan desarrollar bienestar y disminuir la angustia. Las actividades de ocio juegan un papel protagonista en el desarrollo intelectual porque permiten encontrar nuevos conocimientos, desarrollar su opinión crítica, unir nuevas relaciones interpersonales, dar un tiempo para apreciarse a sí mismos, a los demás y a otras culturas, mejorar su autoconcepto y así mejorar su calidad de vida. El ocio estimula patrones de satisfacción y placer, convirtiéndose en una experiencia de vida positiva y un valioso indicador de la calidad de vida (Freire, 2000). Las experiencias positivas parecían ser un aspecto crucial para el ocio, una vez que las actividades promueven la creencia en la calidad del tiempo y el bienestar (Han, & Patterson, 2007). Castro y Carreira (2015) estudiaron el papel de los eventos de ocio en la población anciana institucionalizada. Los resultados mostraron que presentar una actitud positiva hacia el ocio probablemente esté influenciado por experiencias pasadas y determine la construcción de creencias y sentimientos.

Múltiples estudios con personas mayores señalan evidencia de una asociación robusta (positiva) entre la participación en actividades de ocio y salud (Ra, Na, & Rhee, 2013; Belo, Pocinho, & Navarro-Pardo, 2017).

El envejecimiento representa la culminación de un largo proceso de deliberación y discusión con aportes desde diversas perspectivas y dominios científicos (Fernández-Ballesteros et al., 2004). Debe asumirse como una experiencia positiva, una nueva etapa de la vida que se acompaña de cambios y nuevas rutinas. Sin embargo, se asume que las personas mayores tienen una disminución continua significativa en las capacidades físicas y la función cognitiva (Thomas et al., 2016). Este empeoramiento provoca en ellos sensación de disminución de la competencia de autonomía en el ocio a medida que el rango de sus logros alcanzables en la práctica se vuelve limitado en las actividades de ocio (Chang, & Yu, 2013). Como mostraron Lee et al. (2018), es la forma en que los individuos entienden el ocio y sus creencias sobre su capacidad para realizar actividades de ocio, lo que influye en su orientación y actitud ante la vida.

El presente estudio aporta nueva información para comprender los beneficios de una actitud positiva de ocio en adultos mayores. Dado que el nivel educativo es una variable que no se puede manipular, los programas de intervención en el ocio deberán considerar la importancia de una actitud de ocio y contemplar estrategias para la reducción del estrés. En nuestro estudio se detectó un hallazgo importante que no está en línea con los resultados estándar: el mayor nivel de distress se encontró en los participantes con el mayor nivel de educación (Belo et al., 2020); tal vez un alto nivel de educación pueda conducir a una mejor percepción de todos los cambios del envejecimiento (cuerpo, vida, profesión, etc.). En este sentido, la transición a una nueva etapa de la vida trae varios reajustes dentro de la familia y puede perturbar el funcionamiento familiar. Esto podría permitir que las personas se perciban a sí mismas como generalmente incapaces de lidiar con él y transformar esa incapacidad en un factor de estrés. Las personas mayores tienen la necesidad de adoptar una actitud de ocio positiva para percibirse como útiles y este sentimiento puede contribuir a anular un momento estresante. Así, reconocen que se avecina una nueva etapa de la vida y tienen una buena percepción de los cambios personales y sociales como un aspecto esencial y consideran que una actitud positiva de

ocio podría ser de suma importancia a la hora de prepararse para la jubilación, como apuntan Lee et al. (2018). Además, es importante evaluar las necesidades, intereses y expectativas (Tsai et al., 2014), según el diferente nivel educativo de los adultos mayores. Una mayor participación en actividades de ocio en la vejez se asocia con un mejor estado de salud (Alwin, & Wray, 2005; Carruthers, & Hood, 2004; Chang, Wray, & Lin, 2014; Fave et al., 2018; Hutchinson, & Nimrod, 2012). Además, la participación activa en actividades de ocio se ha considerado eficaz para reducir la depresión y aumentar el bienestar psicológico (Haworth, & Lewis, 2005).

Los niveles de satisfacción están relacionados con la visión de vida de las personas mayores y su estado de salud, y esto determina la participación en las actividades (Stolar, Macentee, & Hill, 1992). Además, la participación en el tiempo libre contribuye a una autoevaluación positiva de la salud (Confortin et al., 2015; Lima-Costa, Firmo, & Uchôa, 2005; Lucumi et al., 2013), y los estudios sobre la relación entre la participación en el tiempo libre y el bienestar indican un efecto positivo en los resultados de salud de las personas mayores (Silverstein, & Parker, 2002; Windle et al., 2010). La esperanza de vida es mayor para las mujeres en prácticamente todos los países del mundo, en todas las épocas (Idler, 2003; Zajacova, Huzurbazar, & Todd, 2017). Estudios anteriores muestran que la tasa de salud autoevaluada de las mujeres es más pobre que la salud autoevaluada de los hombres (Bath, 2003; Deeg, & Kriegsman, 2003; Fernandez, Bixby & Honkanen, 2016; Idler, 2003; Lu, & Zhang, 2019; Zajacova, Huzurbazar, & Todd, 2017), porque las mujeres comprenden mejor la enfermedad y tienen tendencia a evaluar peor su estado de salud (Idler, 2003). Una actitud negativa hacia el envejecimiento en cuanto a los cambios diarios (físicos, sociales, cognitivos) se asocia a la insatisfacción con la salud (Kotala, 2015).

Una actitud de ocio positiva puede mejorar la forma en que las personas mayores perciben su salud (Ferrari et al., 2016). Si se muestra una actitud de ocio positiva, puede mejorar el bienestar psicológico entre las personas mayores, lo que contribuirá a una buena evaluación de la salud autoevaluada. Adoptar una actitud positiva hacia el ocio ayuda a las personas mayores en transición a ajustar la vida a sus capacidades en relación con un bienestar psicológico positivo (Ferrari et al., 2016; Kotala, 2015). Algunas personas

pueden experimentar una pérdida de comportamiento funcional que repercute en su percepción del ocio (Ferrari et al., 2016; Kotala, 2015). La actitud de ocio se puede interpretar como una variable que puede impulsar a la persona a obtener satisfacción con la vida, maximizada por el bienestar psicológico (Argan, Argan, & Dursun, 2018; Castro & Carreira, 2015) y disminuir los riesgos para la salud (Castro & Carreira, 2015).

El presente estudio no solo mostró que el ocio tiene un impacto positivo en la vida de las personas mayores, sino que estas tienen tanto una alta calidad de vida como una mejor actitud para seguir participando en actividades de ocio. Además, se trata de espacios de socialización que evitan el aislamiento social, un hecho presente en la población anciana y que correlaciona inversamente con el envejecimiento óptimo. El ocio tiene un impacto positivo en el bienestar psicológico, promueve las relaciones interpersonales y el conocimiento cultural.

Las actividades que aumentan la longevidad y una mejor acción física deben, en consecuencia, recibir más atención durante el ciclo de la vida. En definitiva, la participación de los adultos mayores en este tipo de actividades podría definirse como un compromiso por una experiencia positiva. Para Han y Patterson (2007), la relación encontrada entre ocio, salud y bienestar tiene una conexión duradera. Sentir una actitud satisfactoria a través de la participación en el ocio (tiempo dedicado a la lectura, contacto con la naturaleza, pasar tiempo visitando a otras personas, comiendo en compañía y participación en grupos religiosos) se define como uno de los beneficios más importantes del ocio, y se ha demostrado que contribuye a mejorar la calidad de vida (Belo, Pocinho, & Navarro-Pardo, 2017). La actitud de ocio tiene un impacto positivo en el bienestar psicológico, promueve las relaciones interpersonales y el conocimiento cultural. Las actividades que aumentan la longevidad y una mejor acción física deberían, en consecuencia, recibir más atención en el ciclo de la vida. Las actividades podrían definirse como un compromiso por una experiencia positiva (Belo, Navarro-Pardo, Pocinho, Carrana, & Margarido, 2020).

Este estudio permitió comprender cómo las características personales pueden influir en la actitud de ocio, por lo que será de utilidad para los equipos multidisciplinares

anticiparse a las dificultades e intentar elaborar un plan de acción para que la actitud hacia el ocio sea positiva para que puedan incrementar su calidad de vida y bienestar mental.

Palabras clave: Envejecimiento, Actitud de ocio, Educación, Salud autopercibida, Bienestar psicológico.

INTRODUCTION

Enclosed in a sociodemographic context guided by the growth of elderly, it is increasingly necessary to study ageing as a universal, dynamic, complex, and idiosyncratic process, being a developmental stage of the life span. Considering this phenomenon as a dynamic and constant balance of gains and losses, results came from the interaction between maturation, learning and senescence (Baltes, 1987; Jesus, 2015).

Ageing should be analysed in terms of two perspectives: person and society. Individual ageing corresponds to the increase in the longevity of people, that is, the average life expectancy (INE, 2001, 2011). This increasing is due to improvement of living conditions and to technological and scientific development, organizing as indicator of social and scientific development. The demographic outlook is characterized by an increase of the elderly proportion to comparing with the young population. Since these changes have been developed so quick, they have caused uncertainty about whether we are facing a crisis or an opportunity (CCE, 2006). However, it can also be interpreted as a challenge that comes because of declining birth rates, due to contraceptive methods, and increasing equality in the distribution of social and labour gender roles. Likewise, the impact on women's access to education and the labour market should be highlighted by modifying the models associated with an increasing demand for quality of life. In addition to decline in birth rate, there is a great interest to highlight the increase in longevity (life expectancy), thanks to technological and medical advances and improved hygiene and nutrition conditions, better access to health care, extension of social protection systems, and changes in eating habits, among other factors (INE, 1999; Osorio, 2007). Therefore, both declining birth rates and increased longevity are two of the main factors that support the continuing rise in the proportion of elderly people (INE, 1999). Average life expectancy has been linked to the development of the country, so that the greater the development, the greater the average life expectancy, although this development has to be understood in a broad sense and not only in an economic sense, since it has been found that many variables of a very different nature are related to health and longevity. These profound changes touch so many countries that allow and require a social approach. Investment in measures for social inclusion and integration of the elderly is therefore

essential. As it is well known, the demographic ageing not only should allow add years to the life, but also life to the years. It is precisely in this line, and in opposition to a negative conception of old age - which attributes to it the conditions of irrevocable dependence, decline, and passivity - that a new, positive, conception of old age emerges (Marchand, 2005). It has, in the last stage of the human development, a primordial purpose of understand his real potential and recognize the conditions of successful and quality ageing (Jesus, 2015; Villar, 2012). This phase of the life span is a time for new achievements and for the continuity of social, cognitive, and cultural development and growth.

According to Fonseca (2004), successful ageing is a mechanism of adaptation to the specific conditions of age and the environment. It is true that this success depends not only on how each person lives and how he or she perceives this process (Rowe & Kahn, 1999), although it is clear that an important factor will depend on individual aspects of the person's ageing.

The experiences and knowledge acquired throughout life can be optimized and used for the benefit of the individual and society. Successful ageing can be defined based on three conditions: absence or reduced risk of disease, maintenance of high cognitive and physical functioning and active involvement and participation in life (Fontaine, 2000).

In this way, leisure proves to be an important role resulting in benefits for both individuals and society. There is a general consent among authors that leisure is in some way related to the free time that the individual has at his disposal, being occupied in a good way (Shivers & Delisle, 1997). Leisure progressively has played an increasing role in the characterization of lifestyles. This kind of activity promotes satisfaction and gratification as it presupposes the performance of freely chosen activities. Consequently, leisure becomes a positive life experience, becoming an indicator of a quality life (Freire, 2001) and promoting the individual mental health.

It is therefore clear that successful and quality-oriented ageing does not depend exclusively on the personal resources that each one has, but also on the resources made available by society (Pocinho et al., 2013).

In this framework, education allows the development of skills, abilities, continuous learning, and several essential psychological resources in promoting health of the individual. In this sense, education reveals a persistent, stable, and long duration protective association in the mental health of the elderly (Zhang, Chen & Feng, 2015). Even so, education can awake certain interests of individuals, as well as different ways of coping with obstacles and difficulties of life. Although education does not have a great influence on subjective well-being, both seem indirectly related, since education is a very powerful tool that can promote other factors that are directly related to this construct. More years of school and more leisure options are protective factors of declined cognitive abilities and people with lower school level have more health problems and less life expectancy (Argimon, Stein, Xavier & Trentini, 2004).

It is important to emphasize the relationship between education and psychological distress. Therefore, older people with higher academic degrees have lower levels of psychological distress. This question is partly explained by the involvement of these individuals in social leisure activities (possibly because they require more social and cognitive skills acquired by education), stimulating physical and cognitive skills, economic conditions, and physical health (Ross & Zhang, 2008; Zhang, Chen & Feng, 2015). In this way, education, regardless of the form it acquires, allows the development of skills, abilities, continuous learning, and several essential psychological resources in promoting health of individuals.

Regarding the structure of this doctoral dissertation, a conceptual framework was developed about the theoretical contextualization regarding to the study subject, as well as the results, finally followed by conclusions.

In the first part of the dissertation (Part I - Background), through three introductory chapters is analysed the state of the art.

The second part of this dissertation (Part II - Empirical Studies), developed in two chapters, is dedicated to the presentation of the research project carried out.

In Chapter 4 (research objectives and methodology), we present the rationale for the accomplishment of the present work, as well as the general objectives of the research.

Next, the methodology adopted is described, namely the sample and procedure used in the study, as well as the instruments used. Chapter 5 will present the results of the studies developed.

Finally, Conclusions tried to synthesize and integrate the main findings and present some considerations about them. This discussion, by allowing a reflection on the results found in the present study, also disclose some conclusions for future research.

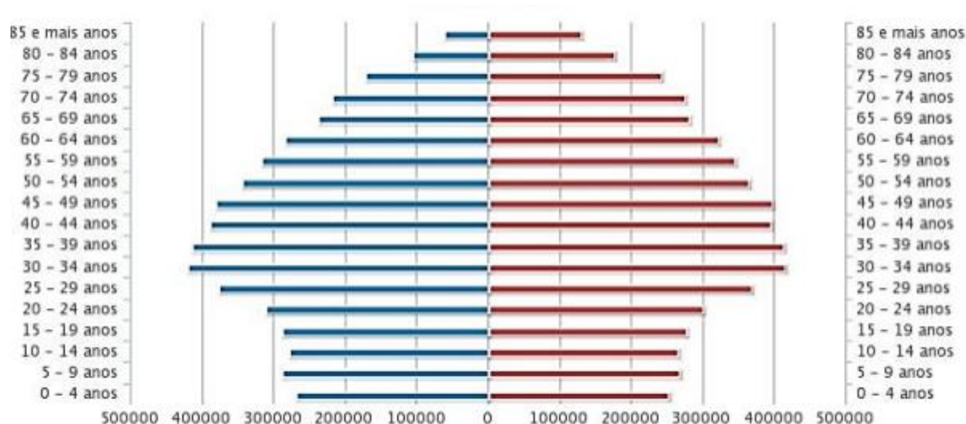
PART I | INTRODUCTION

CHAPTER 1 | DEMOGRAPHIC AGEING

In fact, although ageing is not a contemporary reality, it only began to be studied systematically in the 20th century, due to the increase of the elderly population (Pocinho et al., 2013).

As in other countries, Portugal underwent the transition from a demographic model based on high fertility rates to a model characterized by low levels of births. Hence the inversion of the population pyramid is derived, considering the reduction of its base due to the decrease in the young population and the extension of its upper part, that is, the increase in the elderly population (Pocinho, 2014).

The Portuguese Ageing Index in 2010 was 128, which means that, out of every 100 young people there were 128 elderly people, confirming the trend of an increase in the elderly population and a decrease in the young population, according to the INE (2011). Ageing is a universal, progressive, and irreversible process that begins with birth and ends with death, in which old age is a stage of life (Lima, 2010). Therefore, primary / or normative ageing is characterized by the absence of disease and refers to personal and unalterable changes in the body; secondary ageing is associated with the presence of disease, and is the result of environmental factors, trauma and disease (Jesus, 2015) and tertiary ageing indicates changes that are the immediate cause of death (Birren & Cunningham, 1985; Jesus, 2015).



Graph 1 - Age structure of the Portuguese population in 2010 (INE, 2011).

There is great difficulty in determining what changes are typical and what are the processes that differ from natural ageing (Lima, 2010). For Pocinho et al. (2013), ageing is a complex, dynamic, and idiosyncratic process, in which individuals do not get age identically. Lima (2010) states that ageing goes beyond chronological age, so we must also consider biological age, associated with physical growth and health status; psychological age, related to cognitive, emotional, and motivational dimensions, as well as adaptability and learning; social age, associated with status and expected functions; and functional age, related to the person's competence to carry out specific tasks. From a chronological point of view, the World Health Organization (WHO) indicates the entry into old age at 60-65 years and it may be, in some societies, retirement age the milestone that determines its beginning.
However, at this stage of the life cycle there is a wide variety of characteristics of individuals, because of their different experiences and expectations, but also due to the physical and cognitive component of each one (Lima, 2012).

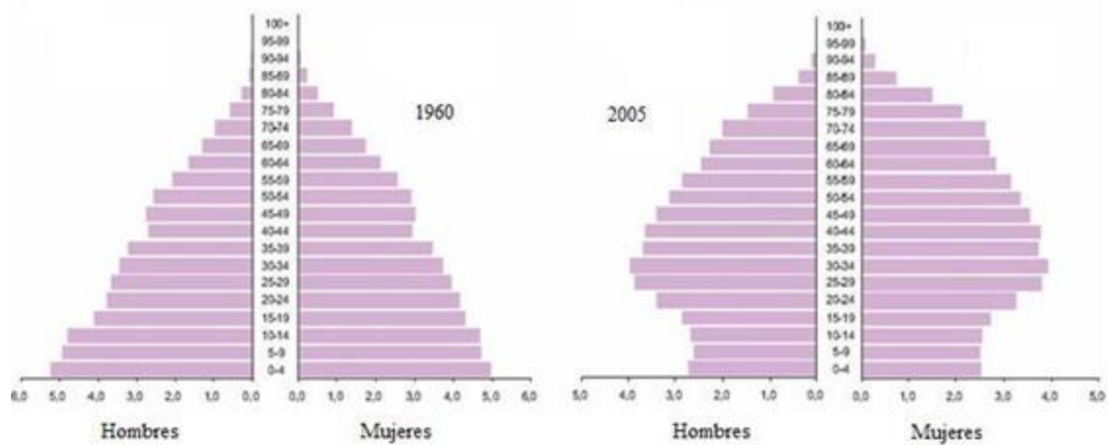
1.1 Societal ageing

It is increasingly important, and necessary, the study of the ageing process of society. In this phase of life, changes occur at the individual, social and economic level, making this phenomenon a global concern. The improvement of socioeconomic conditions, the extension of public health and new technologies have contributed to a greater longevity of the population (INE, 1999; Osorio, 2007; Pocinho, 2014).
The ageing phenomenon goes beyond the individual and collective interests of the elderly, having implications in the family, social, political, and economic areas (Osorio, 2007). According to Pocinho (2014), with the ageing of the Portuguese population, there was an increase in social security expenses due to pension and social assistance. An increasing cost was confirmed in the social security and public spending system given the costs of services that are associated with the elderly. Thus, ageing must be examined both in terms of the perspective of the person and of society.
Increasing the age of older people leads to an increase in average life expectancy (INE, 2000; 2001). This increase in life expectancy is due to better living conditions and greater technological and scientific development, constituting itself an indicator of social

development. For Pocinho (2014), it can be interpreted as a challenge that arises because of the decrease in the birth rate and the increasing equality in the distribution of gender roles. This highlights the importance of women's access to education and work.
It should be borne in mind that the average life expectancy is related to the development of the country and the greater the development of a country, the greater the average life expectancy of its population. But on the other hand, there is also another association that is very important in this phase of the life cycle: the relationship between ageing and vulnerability, dependency, and disease. Ageing is the consequence of a set of factors that characterize the person's lifestyle. Following the European trend, in Portugal there is a constant increase in the elderly population (aged 65 and over) resulting from the mix of low birth rates and increased life expectancy.
On the other hand, various data indicate that the young world population tends to decrease, being that, in 2050, according to data from the WHO, there will be only 21% of young people in the global population (Pocinho, 2014). According to the National Statistics Institute (INE, 2001), the youth population in Portugal decreased in 2001 to a rate of 36%, while the population of older adults increased by 140%. The demographic development of the country in 2009 was characterized by a small increase in population because of a positive migratory balance. In the period 2000-2009, Portugal has experienced an increase in the population of 65 years of age or older, with this demographic group representing 16.5% in 2001 and 17.9% in 2009. Note the increase in the group of 75 or more years, which represented 6.9% in 2001, while it represented 8.4% in 2009 (INE, 2011).

1.2 Portuguese ageing characterization

At the beginning of the 21st century, the demographic pyramid suffered a decrease in the young population and a growth in the number of people at the top of the graph appeared, with the increase in the older population. Graph 2 shows the comparative ageing between 1960 and 2005. Over time, a decrease in youth is evident at the base of the pyramid. In terms of gender, there has been an increase in the female sex in the age section of the oldest, between 80-99 years.



Graph 2 - Age of the Portuguese population in 1960 and 2005 (INE, 2007).

Analysing Table 1, an increase is observed in the section of the elderly, in both genders. Women show the highest average life expectancy.

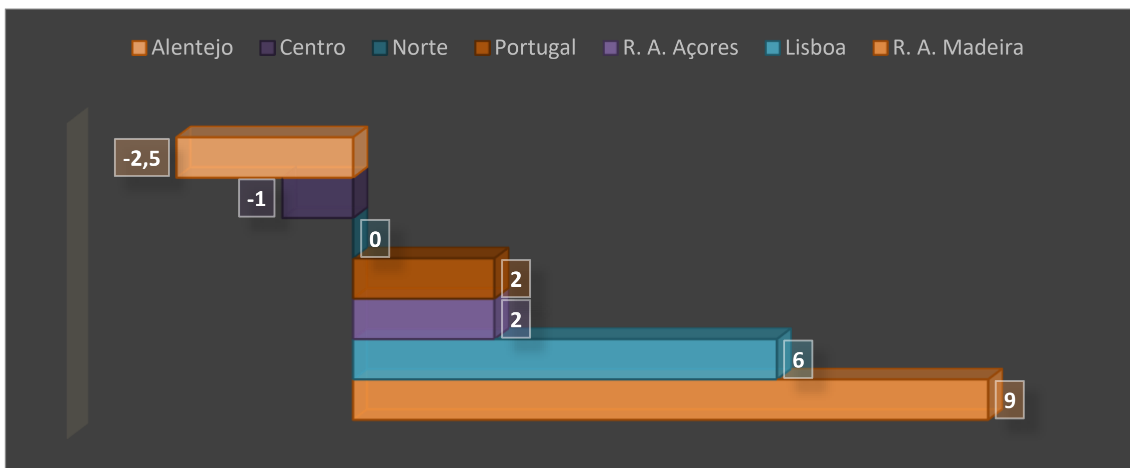
Table 1 - Residents according to age and sex in the years 1981, 1991, 2001, and 2011 (INE, 2011).

years	0 - 14			15 - 24			25 - 64			> = 65		
%	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
1981	25.5	27.0	24.1	16.6	17.3	15.9	46.5	46.1	46.9	11.4	9.6	13.1
1991	20.0	21.2	18.9	16.3	17.1	15.6	50.1	49.9	50.2	13.6	11.7	15.4
2001	16.0	17.0	15.1	14.3	15.0	13.6	53.3	53.7	52.9	16.4	14.3	18.4
2011	14.9	15.9	13.9	10.8	11.5	10.2	55.1	55.7	54.5	19.1	16.8	21.3

Source: Census 2011 (INE, 2011).

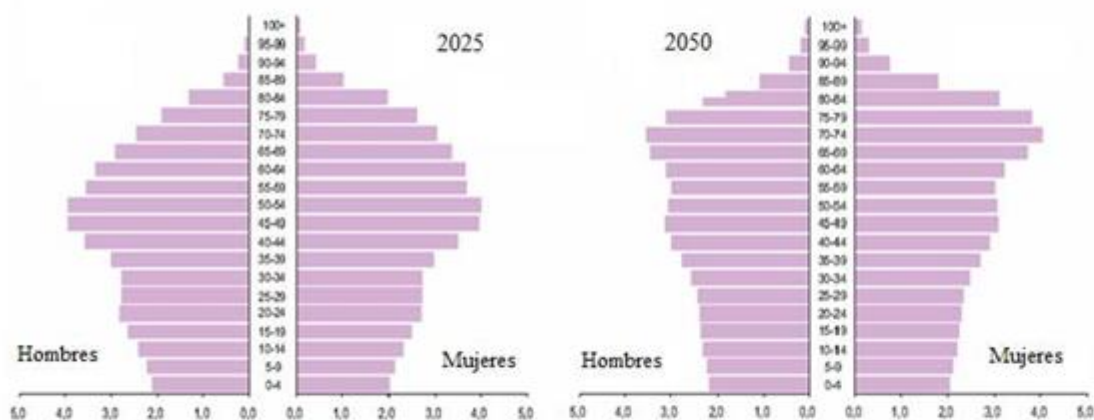
Demographic characterization is not the same in all the territorial areas of Portugal. Asymmetries that express a model of socioeconomic development of coastal areas and urban concentration in cosmopolitan areas are highlighted (Pocinho, 2014). According to INE data (2011), the regions of Portugal that have suffered negative demographic changes are the Alentejo region and Central region of Portugal. The Alentejo region suffered a reduction of its resident population of 2.5% compared to 2001. The Central region showed

a lighter decrease, with a drop of 1% towards 2001. The North area of the country shows great stability in these years, while the remaining regions show an increase in the resident population, specifically the Algarve and the island of Madeira (see Graph 3). The country has a high density of young and adult population in the coastal areas while, on the contrary, the interior areas are inhabited by the elderly.



Graph 3 - Deviation of the Portuguese resident population in the period 2001-2011 (INE, 2011).

Peixoto (2013) argues that the ageing of the Portuguese population will change its characterization in the coming years. Projections for the year 2050 foresee an increase in the elderly population by 1.1% each year for the cluster of the population aged 65 and over (Graph 4); For the population cluster aged 85 or over, this increase can reach 2.2%.



Graph 4 - Age pyramids of the population in Portugal in the years 2025 and 2050 (INE, 2007).

In our society, the ageing of the population is an increasingly evident and, on the other hand, inevitable reality. According to United Nations Organization (ONU) is estimated, by 2050, people aged 80 or over will represent 3.4% of the total world population; 10.6% of them will be concentrated in southern Europe and 10.1% in Western Europe. This age group is the fastest growing and represents the transition from old age to fourth age (Paúl, 2007). A greater social focus in the countries would be necessary given that the data is alarming, and an investment in actions aimed at the inclusion and integration of the elderly is considered essential.

CHAPTER 2 | AGEING AND ELDER PEOPLE

2.1 Ageing: definitions and characteristics

Ageing can be understood as a concept that has a double meaning; it includes the process of senescence, as an expression of the evolution of biological time, and the advance of age, as the expansion of chronological time (Henrard, 1997; Pocinho, 2014). Generally ageing is defined as a natural and multidimensional phenomenon, constituting a process of changes that occur gradually in each person. It is also characterized by a wide set of physiological, psychological, and social factors (Agree & Freedmann, 2001; Faria & Marinho, 2003; Poirier, 1995; Teixeira, 2004). The biological alterations of the person are characterized by a decrease in functional abilities and the ability to adapt and self-regulate, increasing the vulnerability of the elderly. These changes refer to the person's psychological capacity for adaptation to the environment around him. Regarding social changes, they are characterized by the alterations experienced in social roles and habits that previously developed in society (Brink, 2001; Sousa & Figueiredo, 2003; Teixeira, 2004). Ageing is seen as a bio-psycho-social process (Lima, 2010; Pocinho, 2014).

Diversity is the criteria for making divisions in human development. The most used criterion is the temporal (age), assuming as older people those who have reached 65 years. This subdivision of human life is defended by several authors. An example is Neugarten (1968) order, which established two categories of elderly people: youngest-old, aged between 65 and 74 years and the old-old, in this case, 75 or more years old. Other classifications have been formed based on Neugarten (1968) categories, but all advance that the chronological age is a social construction based on a division of the life cycle. However, ageing is a unique and individual process, where not only does age have an influence. Other variables are related to the ageing process, such as gender, lifestyle, social class, educational level, and the area where the person lives.

As a biological phenomenon, ageing causes a decline in the physical condition of the elderly person, where the efficiency of the organic and functional systems is reduced, causing a progressive decrease in the capacity for maintaining homeostatic balance. For Zinberg and Kaufman (1987), the reproduction of cells decreases very early, from the age

of twenty, because of the lack of enough nutrients, the increase in the number of dysfunctional cells and the consequent reduction in their functionality.

But there are also extrinsic factors such as, for example, the environment in which the individual develops. For some authors (Pocinho, 2014; Saiz, 2001) the individual presents, with age, a decrease in the ability to adapt to her environment, allied to a general decrease in health, even in metabolic performance. Thus, biological ageing is described by the deterioration of the different systems of the human body, at the level of their structural efficiency (metabolic, cellular level) and at the functional level (structural changes).

Biological ageing distinguishes between primary and secondary ageing (Birren, & Cunningham, 1985). Primary ageing is the normal ageing process, while secondary ageing coincides with diseases associated with the natural ageing process, primary ageing. It is secondary ageing that explains the multiplicity of various trajectories of human ageing. For Spar and Rue (2005), one can also speak of tertiary ageing, or terminal decline, which includes sudden changes in various cognitive and functional capacities, with deterioration in the levels associated with ageing.

As Pocinho (2014) indicates, there are several theories that can be found in the literature in order to try to explain ageing and the various mechanisms associated with it, but none of them is comprehensive enough to separately provide a satisfactory explanation. Together, these theories are usually grouped into two broad categories: biological theories, which analyse ageing as a phase of life where a degeneration of the function and structure of organic systems is manifested, and psychosocial theories.

Biological Theories of Ageing

Biological theories define ageing as a multidimensional phenomenon that arises from the action of various processes:

a) dysfunction of the immune system;

b) genetic programming;

c) cell injuries;

d) modifications at the level of the DNA molecule; and

e) surveillance of neuro-endocrine-genetic activity (Berger, 1995; Pocinho, 2014; Poirier, 1995).

The current biological perspective is organized in two main currents (Aiken, 1995; Pocinho, 2014; Stuart-Hamilton, 2002): genetic theories and stochastic theories.

Theories of Psychosocial Ageing

At the psychosocial level, the elderly assist in the modification of their social roles within the family (death), at work (retirement), in leisure occupations (physical deterioration), as well as in relationships social and lifestyle habits. An adaptation to new living conditions is required (Figueiredo, 2007).

From a psychological point of view, these changes refer to the person's ability to adapt to the transition for a stage of life. According to Pocinho (2014), this adaptation refers to intelligence, learning, emotions, and feelings that adjust behaviour to new social roles, to organic, affective, and social losses. A good adjustment to losses is more frequent in individuals with a positive self-image and who identify with their age, who are active and optimistic about the future.

2.2. Ageing: which are the benefits?

As already discussed, there is a wide range of different theories. According to Lima (2004), there are perspectives that claim this phase as a period of losses, others describe it as a positive step characterized by stability. Also are a group that assume an intermediate position, which proposes a concomitant phase characterized by losses and gains. For Jesus (2015, p. 3) an example of the ultimate theoretical design is the extensive life span development model, "*which suggests not only that development involves constant equilibrium gains and losses, but also that it takes place during life course. It is multidimensional and multidirectional and can take different shapes and directions depending on life conditions and experiences. It has great plasticity and is dependent on multiple contexts and normative influences related to age and the historical period. It is considered as a multidisciplinary area and in its study and understanding the contributions of various disciplines are considered*". Schulz and Heckhausen (1996) argued that throughout life, primary and secondary control are organized together to optimize the development of the organism through selection and compensation processes. In Figure 1, motivation for primary control is a fundamental driving force, but other forces

also motivate human behaviour, such as the need for autonomy or relationship. The Schulz and Heckhausen (1996) model show how motivation is a response control and provides the impetus for the regulation of the individual's interactions with the environment. Person-environment interaction is motivated by and guided by selection processes, while selection processes are in turn regulated by the individual's competencies and motivational resources (Schulz & Heckhausen, 1996).

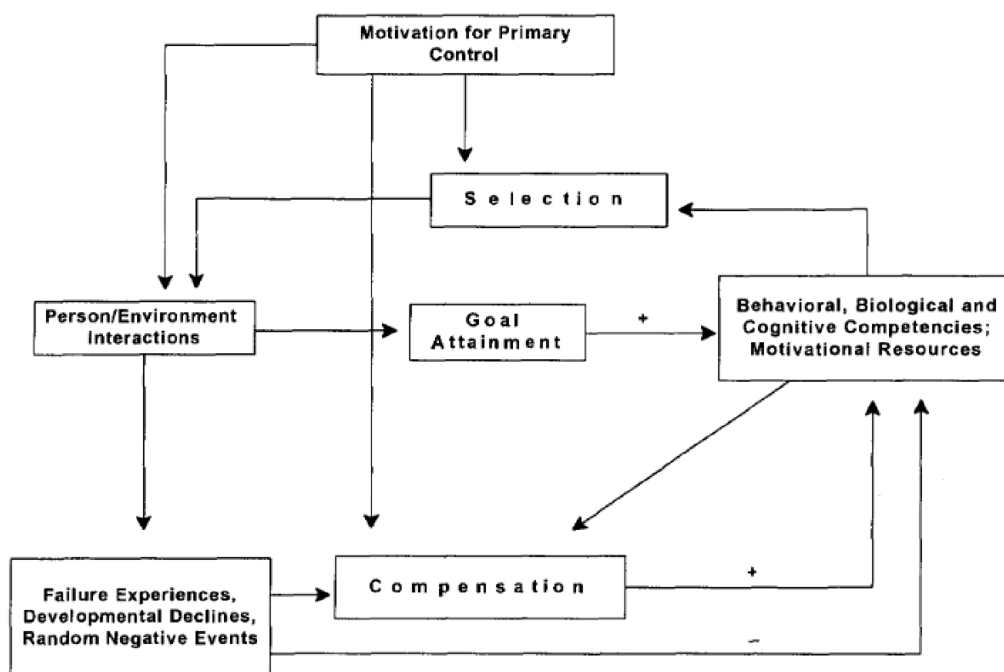


Figure 1 - The Life Span Model of successful development (Schulz & Heckhausen, 1996, p. 710).

For most individuals, genetic potential is not a major limitation due to age-related changes in individuals' physical ability and limitations imposed by society. Diversity is important throughout life for optimal development (Adelman, 1994). Some physiological changes are associated with the old age: decrease in bone mass, the atrophy of skeletal muscles, the decrease in the acuity of some sense organs and the decrease gradual functions of certain important organs (Jesus, 2015; Santos, et al., 2013). This can also lead to changes at the social level, such as less social participation (Jesus, 2015; Pocinho, et al., 2013), changes at the psychological level, with decreased vitality and openness to experience, leading the elderly to prefer simpler activities (Jesus, 2015; Santos et al., 2013). However, Szanton et al. (2015), with an important sample, point out that older adults prefer active

events, such as walking and playing sports, rather than watching television, joining religious services, or traveling.

Changes are also perceived at the cognitive level (Barros, 2004), such as "*the worsening of perceptual and spatial functions, the reduction of the reasoning capacity and the decrease in fluid intelligence, as well as with respect to the set of basic abilities of the human biological and physiological nature*" (Jesus, 2015, p. 4).

During adulthood, transformations take place towards a stage of thought called post-formal, which is characterized by the ability to understand and integrate contradictory points of view in a logic of tempering between logical reasoning and emotional aspects (Jesus, 2015; Lima, 2013). Kensinger, College, and Hill (2009) show that, at 60 years old the capacity for emotional regulation seems to increase, and it result in the reduction of depressive states. There is a predisposition for older people to focus on the positive aspects of society and to choose activities that satisfy them emotionally, for example, time with friends or family (Barros, 2008; Jesus, 2015). These are unique conditions that help older people to develop a healthier critical judgment, within different perspectives, and a higher global vision of events and a deeper knowledge level among emotional intelligence or social skills (Cohen, 2005; Jesus, 2015).

Therefore, life span brings with the ageing gains and losses, which can lead to the appearance of new capacities, but also to the loss of existing skills (Baltes, 1987; Jesus, 2015). Ageing is not just cognitive decline and physical dependence (Jesus, 2015), sometimes brings the idea of social stigma (Jesus, 2015; Lima, 2010). This stereotype, as indicated by Ferreira-Alves (2010), has a consequence, the loss of confidence to face the physical and social interaction, as well as decreases the psychological well-being (Jesus, 2015; Lima, 2010). For these reasons, it is essential to have the perspective of old age as a new lifetime of development and not only a simple end point of previous development and knowledge (Ferreira-Alves, 2010; Jesus, 2015; Lima, 2010).

2.2.1 Successful ageing

For a long time, studies on ageing have focused on the losses that accompany it, and on

the influence that these have on health and well-being, but in recent years, the field of social sciences has been describing a vision alternative and more optimistic of the process, trying to study the factors underlying successful ageing.

In the study of Jesus (2015), successful ageing is based on three conditions: risk of disease, good cognitive and physical functioning, and commitment or participation in society (Fontaine, 2000). This success implies not only maintaining a high physical and mental level, so that the elderly can live independently, but also establishing and maintaining social relationships and participating in productive activities with personal meaning (Jesus, 2015; Simões, 2005).

For Jesus (2015), based on the model proposed by Baltes and Baltes (1990), "*SOC (Selection, Optimization and Compensation) demonstrates that successful ageing aims to preserve a high level of performance (profit), the avoidance of losses involved and the dynamic interaction of three processes: the selection of aspects capable of circumventing physical and / or cognitive limitations, the optimization of them, in order to maximize loss compensation through the use of appropriate strategies. It should be taken in mind that a definition of optimal ageing fully agreed by the scientific community has not yet been reached*" (Jesus, 2015, p. 5).

Retirement appears as a transition in which multiple situations occur that contribute to the normative tension inherent in the last phase of the life cycle and pose challenges for successful ageing (García & Maya, 2014). This may represent a milestone for entry into old age, which determines the loss of active social roles and, consequently, the loss of social status (Jesus, 2015; Sousa, Figueiredo, & Cerqueira, 2006), but it can also be an opportunity for liberation and the renewal that allows creating new objectives, investing in leisure and personal training, and establishing and maintaining social contacts (Jesus, 2015; Fonseca, 2006).

Preparing for the transition from working life to a retirement stage and promoting social participation - either through the development of leisure activities or through access to cultural spaces, facilities, and activities - occur as two of the great tests of ageing

(Fragoso, 2012; Jesus, 2015). So, successful ageing does not depend exclusively on the personal, but also the societal condition has a high influence (Jesus, 2015; Pocinho, et al., 2013).

2.3 Stereotypes about ageing

Today, old age is considered a disease, as an inevitable decline whose purpose is failure. It is a social position that reaches a dimension of prejudice and that has various associated myths (Mulley, 1997). Socially, and in the case of older people, the assessment of stereotypes about age shows a social representation that contributes to the negative image they have of themselves, since they deny the process of their own development (Santos, 2002).

However, stereotypes can also be positive (e.g., healthy, and wise) or neutral and change continuously over time and across contexts (Dionigi, 2015; Kornadt, & Rothermund, 2011). Here are generalizations about how older people should behave and what they are likely to experience, regardless of individual differences (Dionigi, 2015). In fact, events and losses are considered part of healthy ageing in adulthood. For some authors (Dionigi, 2015; Jolanki, 2014) the stereotype of ageing (positive or negative) has the potential to reinforce ageing because they position poor health at older ages as undesirable and do not recognize the great diversity among older adults (Dionigi, 2015).

It is not just the physical and cognitive declines that emerge in adulthood, psychosocial and sociocultural factors also play a key role in this process. Some authors (Dionigi, 2015; Wheeler & DeMarree, 2009) have demonstrated the effects of ageing stereotypes on the health of older people. Researchers have identified numerous theories about how stereotypes of ageing affect older adults, primarily the internalization of stereotypes, the threat of routines, and social resistance (Bennett & Gaines, 2010). Experimental studies involving stereotype activation have shown that both implicit (subconscious) and explicit (conscious) negative stereotypes can have similar detrimental effects on the performance of older people in physical and mental tasks (Bennet & Gaines, 2010; Dionigi, 2015). Explicit positive ageing stereotypes can have limited but beneficial effects on the health

attitudes and behaviours of older people and can override negative ageing stereotypes, which can have favourable effects, such as feelings of personal empowerment and associated health benefits (Bennet & Gaines, 2010; Dionigi, 2015). In this sense, studies of the effects of stereotypes on health of older people generally define health in old age in terms of biomedical and psychosocial models of successful ageing, with indicators of good health also include low levels of illness and related disability, with the disease, high levels of physical and cognitive functioning, continuous social and active commitment in life and general satisfaction, mental health, and the ability to adapt to changes (Dionigi, 2015; Horton et al., 2008; Mulley, 2007).

Stereotypes of ageing are pervasive in our culture and have been found to influence how older adults view themselves (Dionigi, 2015; Kotter-Gruhn & Hess, 2002); how older adults see other older adults (social comparison) (Dionigi, 2015; Horton et al., 2008; Kotter-Gruhn & Hess, 2002); cognitive and physical performance of older adults (Dionigi, 2015; Horton et al., 2008; Horton et al., 2008, Levy & Leifheit-Limson, 2009); the ability of older adults to recover from the disease (Dionigi, 2015; Levy et al., 2006); and health behaviours of older adults as well as how older adults are treated by others and by society as a whole (Dionigi et al., 2011; Horton et al., 2008; Levy et al., 2006).

CHAPTER 3 | MENTAL HEALTH, SELF-RATED HEALTH, LEISURE ATTITUDE AND EDUCATION

3.1 The leisure attitude

One of the determining factors of participation in leisure activities is attitudes towards it (Freire & Fonte, 2007). The concept of attitude has undergone several changes over the years, resulting in different definitions and operationalisations, based on models and theoretical approaches. The attitude is developed according to the context and the individual experience, where people acquire feelings and beliefs (Castro & Carreira, 2015; Silva et al., 2012). Furthermore, an attitude is not static and can change over the years, according to knowledge, health, thoughts, and the individual concept of life (Rodrigues, Assmar & Jablonski, 2007; Silva et al., 2012). Leisure is an important issue to characterize lifestyle. The activities of leisure stimulate patterns of satisfaction and pleasure, becoming a positive life experience, and a valuable indicator of quality of life (Freire, 2000).

Attitude is operationalized in three components: cognitive, affective, and behavioural (Castro & Carreira, 2015; Freire & Fonte, 2007). The cognitive component refers to beliefs, knowledge, information, and opinions, whether conscious or unconscious, through which the attitude is expressed. In turn, the affective refers to the feelings and physiological responses expressed in the attitude. Behaviour refers to the processes that allow the structuring of a behavioural intention and prepare the individual to act in a certain way (Freire & Fonte, 2007).

For Freire and Fonte (2007), positive attitudes tend to be related to greater participation in leisure activities. The components of attitudes towards leisure can be referred as: the cognitive component refers to the individual's knowledge and general beliefs about leisure, the affective component is related to the individual's feelings regarding their leisure, the degree that likes or dislikes leisure activities and experiences, and the behavioural component, which is related to the past, the present and the individual's intentions towards leisure activities and experiences. Positive experiences appeared to be

a crucial aspect for leisure, once the activities promote a belief of time quality and well-being (Han & Patterson, 2011). Castro and Carreira (2015) studied the role of leisure events in institutionalized elderly population. The results showed that bestowing a positive attitude toward leisure is probably influenced by past experiences and determine the construction of beliefs and feelings. Multiple studies with seniors point out an evidence of a robust and positive association between the involvement in activities of leisure and health (Ra, Na, & Rhee, 2013; Westland, 1991).

Hawkins, Foose and Binkley (2004) revealed that a high involvement, or participation, in leisure actions is related with life satisfaction. It seems to have an important implication in promoting and increasing well-being in old age (Belo, Pocinho, Navarro-Pardo, 2016; Heo et al., 2013; Ra, Na, & Rhee, 2013). Leisure activities frequently take place in contexts of social relations, also providing benefits in health promotion. So, participation in leisure activities affects the relationship between positive social relations, physical and psychological well-being (Chang, Wray, & Lin, 2014). The study of Cheung et al. (2009) with a sample of 269 participants with 65 years or more showed that high levels of participation in social and cognitive activities have an association with a higher quality of life (particular focus on physical and mental functioning, mental health, and physical function). Glass et al. (1999) presented that both, participation in social activities and productive activities, are related with a low risk of mortality in aged population (Belo et al., 2020; Belo, Pocinho, & Navarro-Pardo, 2016). For Han and Patterson (2007), the relation found by health, leisure and well-being has an enduring connection. Feeling satisfying attitude through leisure participation (time spent reading, contact with nature, spend time alone, and also to visit other people, eating in the company and participation in religious groups) are defined as one of the most important benefits of leisure, and has been exposed to contribute to improve the quality of life (Han & Patterson, 2007).

3.2. Mental health in old people

Globally, the population is ageing rapidly and around 2050 the proportion of people over 60 will be close to 22% (WHO, 2016). With the ageing of the population, several

problems associated with health arise. There is great public health concern among older people worldwide. Mental health means a subjective experience of mental balance (Vuorisalmi, 2007) and today, in this regard, more than 20% of older adults, over 60 years of age, suffer from a mental disorder, and 6.6% of all disabilities has its origin in a mental disorder (WHO, 2017).

Regarding anxiety disorders, the prevalence is 3.8% and, unfortunately, mental health problems are not identified by health professionals. Additionally, mental health stigma contributes to reluctance to seek help (WHO, 2017). Society should assume that old age is an inevitable stage of life (Yaghoobzadeh et al., 2018) and that ageing is accompanied by a high risk of disease and a loss of mental health. Lorem et al. (2017) suggested a correlation between mental health symptoms and many specific medical conditions. The study of Parkar (2015) showed that symptoms related with depression and anxiety are common in older age and half of the old age people with disease had significant depressive and anxiety indicators. Also, Lorem et al. (2017) showed that comorbid strain was higher with advanced age, and older people had a high risk of experiencing anxiety and depression; and mental health symptoms related to physical disease consequently was directed to lower self-rated health. For Skoog (2011), depression symptoms had a higher possibility to appear during the 10 years before retirement age (+/- 65 years). If the prevalence of depression does not increase with old age, the incidence of depressive symptoms is continually reported to increase at late state of life (Blazer et al., 1988; Bowling, 1990; Skoog, 2011). For Skoog (2011), there are three factors that may influence the frequency how mental disorders increases with age: comorbidity, cognitive decline, and clinical manifestations. Skoog (2011) explained that comorbidity between depression and anxiety disorders is very high in old age with reported comorbidity of 50% - 90%. Also, the possibility of people with anxiety disorders have a depressive disorder increased with age. In old age, clinical manifestations of mental disorders, generally, are different, compared with young age groups. A find in the study of Skoog (2011) was that is difficult in separating symptoms of mental disorders from those present at normal ageing, as loss of appetite, tiredness, and sleep disturbances. At old age, it is evident the increase of a cognitive decline, and are the people with manifest depression are those exhibiting most signs of cognitive decline (Skoog, 2011). Sun and Liu (2006) also show the relation presented in a sample of people aged 80 years or more, analysing the

relationship of three types of daily activities: social, active lonely and solitary sedentary. The results of the study propose that activities of solitary sedentary type are negative, but actions that need some physical effort or social relations are favourable to the individual, having impact on welfare, mental health, and survival of the elderly (Sun & Liu, 2006).

3.2.1 Mental health and education

Higher levels of education show a positive relationship with better general physical and mental health care (Leitner & Leitner, 2012). For Netz (1989), the elderly who had more years of education seem to have a more optimistic attitude towards life. This variable refers to the appropriate healthy and positive interactions between the elderly (Villar, Serrat & Celdrán, 2016). The impact of mental health education at an older age has been explored and measured by years of formal schooling and serves as a predictor in most studies of ageing (Kavé et al., 2012). Education could be considered in various areas of research, such as satisfaction with life, once the educational level shows a positive relationship with cognitive variables (Foverskov et al., 2018). Furthermore, it is assumed that the influence of education it is a central factor in enabling older people to appreciate positive well-being as they age (Weiss, 2005). Thygesen et al. (2009) found that rates of mental health disorders decline with age while psychological distress was related to higher levels of education.

3.3 Self-perceived health

Ageing is, perhaps, the most relevant factor for self-rated health (Lorem et al., 2017). Self-perceived health has been described as an important available health outcome (Confortin et al., 2015; Ocampo, 2010; Rohrer et al., 2007; Vuorisalmi, 2007) and is one of the recommended health indicators with respect to health monitoring (de Bruin et al., 1996). Mossey and Shapiro (1982) presented a result where an older person's assessment of their own health was shown to be a significant predictor of survival, and healthier older people tend to assess positive health (Confortin et al., 2015). For Confortin et al. (2015), self-rated health is an important dial to analyse health status, once it relates physical, cognitive, and emotional components. People's subjective assessment of their own health

status is a value factor that must be considered in relation to well-being (Borim et al., 2014; Galenkamp et al., 2013; Leinonen et al., 2001). Furthermore, well-being follows a curvilinear pattern and declines near the end of life (Kusumastuti et al., 2016; Viglund et al., 2014). Lorem et al. (2017) indicated that self-reported health is formed by a cognitive process, subjective and contextual, and the basis is the biological and physiological state. In the study of Confortin et al. (2015), self-rated health stands a relation regarding fundamental health issues, such as falls, physical capacity, depressive symptoms, or disease. Harschel et al. (2015), found that worse perceived physical mobility was significantly related with worse self-rated health. Viglund et al. (2014) indicated that mental health affects the health experience. The level of perceived stress is important as a factor associated with poorer self-rated health. Disease has a great impact on self-rated health and affect old people's experience of health. Perception of health could be reached apart a disease and could be disrupted in absence of it (Viglund et al., 2014).

Self-rated health can be used as indicator to help develop health policies (Confortin et al., 2015). A preventive measure and focus on health care could lead to reach a better condition (Harschel et al., 2015).

3.4 Demographic variables

Individual characteristics as age (yes/no), gender (male/female), education level and perception of health state (dependent/independent), generally are related with the cognitive decline of old people and are variables used in research about ageing. These are also characteristics used to plot psychological symptoms to characterize old people among population (Ferreira, Tavares & Rodrigues, 2011; Miranda et al., 2012).

Also, the residence area can influence the way like the person get aged. The differences between a rural area and a city are very important, not only because the lifestyle is different, but also the stress level and quality of life may suggest differences (Aneshensel, Ko, Chodosh, & Wight, 2011).

Other personal characteristics like relationship status, or religion, can be related with

some social beliefs. Religiosities are very popular among old people and may affect the way they perceive life, the difficulties and the expectations concerning ageing (Pocinho, 2013).

PART II | EMPIRICAL STUDIES

CHAPTER 4 | METHODOLOGY

4.1 Method

The participants were collected from a convenience sample where the subjects had at least 50 years old (Hirve, 2013; Power et al., 2016) retired, and involved in two types of institutions (institutions where the elders only spend some hours by day and institutions where they were living), located in the North and Central Region of Portugal. The sample was simple random, so each member of the institution had the same probability of being chosen (Gravetter, & Forzano, 2011). The Boards of Directors of all the institutions approved the questionnaire and the data collection. Participants who were willing to participate signed a consent form and received information about the research objectives (PhD study) before answering the questionnaire. They had the option to leave the study at any time without explanation. The data was treated as confidential and anonymous. Each questionnaire had standard instructions and participants were asked to respond under the option they considered most relevant to them; it was stressed that there were no right and wrong answers. After completing the set of questions, they were asked to return the questionnaire. The administration of the questionnaire lasted 25 minutes (on average).

Analysis Plan

A quantitative research was used instead of qualitative analysis because its purpose was to report data through the statistical analysis of facts reported about the leisure attitude role in mediation models. Data were evaluated using the Statistical Package for Social Sciences (IBM - SPSS) software, version 24. Mediation models were tested through PROCESS, a computational tool for path analysis-based mediation analysis and moderation (Hayes, 2012). Parametric tests were used to study the relationship between variables (R Pearson statistic test). To examine the indirect effects, a bootstrap procedure was used to evaluate unconditional indirect effects (PROCESS assumes 5,000 "resamples") at a confidence level of 0.05 (Cohen, 1988; Hayes, 2012).

4.2 Evaluation instruments

Participants completed the questionnaire composed by three sections: a sociodemographic data questionnaire, the Mental Health Inventory - MHI (Ribeiro, 2001) and the Leisure Attitude Scale - LAS (Freire & Fonte, 2007). Each questionnaire had standard instructions, and participants were asked to respond according to the option they considered most relevant to them.

INSTRUMENTS	INFORMATION
Sociodemographic Data	- Age - Gender - Education level - Marital status - Religion - Residence area - Self-Rated Health - Health State Perception. - Leisure practice
MHI	Major sub-scales: *Distress* (Anxiety; Depression; Loss of Emotional/ Behavioural Control dimensions) and *Psychological Well-Being* (Positive affect; Emotional Ties dimensions)
LAS	Cognitive, Affective and Behavioural dimensions

Sociodemographic data

Demographic variables included age, gender (M / F), educational level, marital status, religion, area of residence (City / Rural), self-rated health (Excellent, Good, Not good or bad, Bad, Very bad), perception of health state (dependent / independent) and questions about leisure practice of the subjects (Y / N).

MHI - Mental Health Inventory

The Mental Health Inventory (Ribeiro, 2001) is a questionnaire used for evaluating mental health issues as anxiety, depression, behavioural control, positive affect, and general distress. The Mental Health Inventory includes 38 items in which the participant uses a 5 or 6-point Likert-style response (ex. item 9: "During the last month have you felt depressed?"; item 33: "During the last month have you felt anxious or worried?"; item 34: "During the last month have you felt happy?"). The 38 items are distributed among five scales (Anxiety with 10 items; Depression, with 5 items; Loss of Emotional / Behavioural Control, with 9 items; Positive Affect, with 11 items; Emotional Ties, with 3 items). In turn, these five subscales are grouped into two major sub-scales or dimensions that respectively measure Distress and Psychological Well-Being (Distress results from the grouping of the sub-scales of Anxiety, Depression, and Loss of Emotional / Behavioural Control; while Psychological Well-Being results from the combination of sub-scales Positive Affect and Emotional Ties). The total score is the sum of the values of the items that make up each sub-scale. There are some items with reverse quote. This instrument helps measuring overall emotional functioning. Research has shown the existence of a positive (psychological well-being, positive mental health status) and another negative construct (psychological distress, negative mental health status). This type of measure is important when the objective is to evaluate health in general, or in the context of epidemiological studies (e.g., epidemiology of health), or in the evaluation of health outcomes.

LAS - Leisure Attitude Scale (Portuguese version)

The Leisure Attitude Scale (Freire & Fonte, 2007) is composed of 36 items divided into three subscales for the three components of attitude - cognitive, affective, and behavioural (ex. item 1: "Engaging in leisure activities is a good choice to spend time"; item 2: "Leisure activities bring benefits to people and society"; item 9: "Leisure activities help people to relax"). Each subscale contains 12 items, all directed to the positive direction of attitude. Likert is the response system used, which has five levels of related responses

to express agreement and disagreement, in which 1 reveals an unfavourable or negative extreme attitude ("disagree") and 5 is associated to a favourable or positive extreme attitude ("totally agree"). Point 3 corresponds to a neutral level on the direction of the attitude ("neither disagree nor agree"). Higher values (above the neutral point) show more positive attitudes and, on the contrary, lower values (below the neutral point) indicate more negative attitudes towards leisure. Thus, if the concept of attitude based on the three components is of relevance for the study of attitudes in general, it is also relevant in the specific study of attitudes towards leisure since it contributes to the investigation of psycho-social and socio-cognitive aspects of leisure, and to know better and understand the degree and type of involvement of the subjects, and also the forms and processes that underlie the change of attitudes towards leisure and quality of life, in specific groups or contexts. Thus, for each sub-scale the minimum possible total value is 12 and the maximum is 60 (neutral point located at 36). Concerning the total scale, the minimum possible value is 36 and the maximum is 180 (neutral point in the value 108).

4.3 The sample

This study included 403 participants (valid responses from a total of 620 questionnaires), between 53 and 93 years old, with an average age of 72.9 years (SD = 8.43). Data included 150 men (37.2%) and 253 women (62.8%). Participants living in a rural area were 216 (54.5%), while participants from urban areas were 180 (45.5%). In the study, 356 participants indicated that they practiced leisure activities (88.3%), while 47 subjects did not (11.7%). The type of leisure activities was social (n=94; 42.7%), physical (n=82; 37.3%) and cognitive (n=44; 20%). Regarding the state of health perception, 332 subjects considered themselves as independent (82.6%), while 70 participants considered themselves dependent (17.4%), as shown in Table 2.

Table 2 - Sociodemographic data (N = 403).

Age		Gender		Area		Health (perception)		Leisure (practice)	
M (SD)		**M**	**W**	**Rural**	**City**	**Ind.**	**Dep.**	**Y**	**N**
72,9 (8,43)	*N*=	150	253	216	180	332	70	356	47

Most of the participants were married (n = 191; 47.6%) or widowed (n = 144; 35.9%), as presented in Table 3.

Table 3 - Marital status of participants.

	N	%
Married	191	47.6
Divorced	39	9.7
Single	27	6.7
Widowed	144	35.9
Total	401	100.0

Regarding educational level (Table 4), 153 participants had a primary school level (38.4%), 70 had a higher degree (17.6%) and 66 participants were illiterate (16.6%).

Table 4 - Education level of participants.

	N	%
Illiterate	66	16.6
Primary School	153	38.4
6º	26	6,5
9º	37	9,3

12º	46	11,6
High degree	70	17,6
Total	398	100,0

Most of the participants lived in their own homes (n = 357; 88.6%), but 46 subjects were institutionalized (11.4%), as shown in Table 5.

Table 5 - Institutionalized vs. Day centre participants.

	N	%
Institutionalized	46	11.4
Day centre	357	88.6
Total	404	100.0

When asked about their health status, 43.2% (n = 174) indicated that "neither good nor bad", but 40.7% (n = 164) rated it as "good" (Table 6).

Table 6 - Self-rated health evaluation in the sample.

	Excellent	**Good**	**Neither good, nor bad**	**Bad**	**Very Bad**
	N=11	N=164	N=174	N=46	N=8
Self-rated Health (%)	2.7%	40.7%	43.2%	11.4%	2%

4.4 Ethical considerations

The Declaration of Helsinki of the year 2000 stated that research with human beings should be carried out whenever their well-being is safeguarded above any other interest and objective. This statement was initially aimed at research in medical centres, but it is also recognised the importance of researchers from other scientific areas applying the proposed ethical principles in conducting studies with human participants. These ethical principles are also part of the proposals of the American Psychological Association (2010) and the Official College of Portuguese Psychologists (Regulation No. 258/2011, of April 20, 2011).

In the development and implementation of this research project, we have followed the ethical principles in scientific research with human beings, in the Declaration of Helsinki and the proposals of the European Commission (Pauwels & European Commission, 2007), respecting the following steps:

- The protection and confidentiality of the personal data of the participants was guaranteed.
- It was ensured that participation in the investigation was totally voluntary, describing the general objectives of the research, the role of the participants and the role of researchers, including ensuring the use of data for research purposes. Only when the subjects understood the purpose of the research, the procedure to be followed and their role as participants, was their collaboration requested.
- In the publication of the results, an attempt was made to publish the results with precision and objectivity, without hiding data.

4.5 Aims

This research has focus on three main objectives:

1- *Analysis of the effect of leisure practice on distress and psychological well-being*

By highlighting the significant sociodemographic variables (covariates), the multivariate analysis of covariance (MANCOVA) was used to examine the differences between the groups (Netter, Wasserman, & Kutner, 1990). Differences between groups were examined by controlling the influence of possible parasitic variables (covariates). The post-hoc test (Bonferroni adjustment for multiple comparisons) was also used (Belo, Pocinho, & Navarro-Pardo, 2017).

2- *Analysis of the mediation role of leisure attitude in the relationship between mental health and the education level in elderly people*

It was an objective to explore the influence of education on the mental health of old people and the mediating role of a leisure attitude in this relationship (Belo et al., 2020).
A quantitative research was used instead of a qualitative analysis because its purpose was to report data through the statistical analysis of the facts reported about the leisure attitude role in mediation models. Data were evaluated using the Statistical Package for Social Sciences (IBM - SPSS) software, version 24. Mediation models were tested through PROCESS, a computational tool for path analysis-based mediation analysis and moderation (Hayes, 2012). To identify possible covariates that should be introduced into the mediation model, correlations between sociodemographic variables (age and gender) and the mediator and dependent variables were also computed. Parametric tests were used to study the relationship between the variables (R Pearson statistic test). Cohen's (1988) guidelines were used to describe and interpret the effect sizes of correlations (i.e., weak for correlations close to 0.10, moderate for those near 0.30, and strong for correlations at 0.50 or higher). To examine the indirect effects, a bootstrap procedure was used to evaluate unconditional indirect effects (PROCESS assumes 5,000 "resamples") at a confidence level of 0.05 (Cohen, 1988; Hayes, 2012).

3- *Analysis of the associations between self-rated health and psychological well-being and leisure attitude*

It intends to explore whether the association between psychological well-being and leisure attitude are mediated by self-rated health as well as the moderating role of gender

in this association. To examine whether the hypothesized indirect effects of leisure attitude on psychological well-being through self-rated health evaluation, moderated by gender, a conditional analysis was conducted. In the model estimation, the variables used in the diagram were mean centred, to make the regression coefficients easily perceived. The nonappearance of significant interactions in one or more relations promotes the removal of the variable. Gender was tested as a moderator variable in the relation between leisure attitude and self-rated health evaluation (path a), and in the relation between self-rated health evaluation and psychological well-being (path b). However, this variable was removed from the estimated model because no significant interaction was found.

CHAPTER 5 | RESULTS

In this chapter, the results obtained in the sample are presented, considering the characterization of the participants, as also, the results to validate the aims present before in Chapter 4.

5.1 MHI - Mental Health Inventory

The participants obtained the mean value of 98.9 (SD=16.49) for the major sub-scale of distress and had the value of 46.29 (SD=12.49) at psychological well-being (Table 7).

Table 7 - Mean values of the two major sub-scales of the Mental Health Inventory.

MHI	N	Min	Max	Mean	SD
Distress	384	42	124	98.90	16.49
Psych. Well-being	390	17	79	46.29	12.49

5.2 LAS - Leisure Attitude Scale

Concerning the values obtained at Leisure Attitude Scale, the participants had a higher result then the neutral point for the three subscales and the total. The cognitive sub-scale had a value of 51.97 (SD=9.99), the affective sub-scale obtained a value of 50.61 (SD=11.44) and the behaviour sub-scale had the value 43.38 (SD=12.42). The total result of the sample for the LAS was 145.61 (SD= 31.46), as shown in Table 8.

Table 8 - Mean values of Leisure Attitude Scale in the sample.

LAS	N	Min	Max	Mean	SD	Neutral point
Cognitive	404	12	60	51.97	9.99	36
Affective	407	12	60	50.61	11.44	36
Behaviour	400	12	60	43.38	12.42	36
Total	393	36	180	145.61	31.46	108

5.3 Gender differences at MHI and LAS

MHI and gender

In the sample, men obtained a value of 101.27 (SD=15.76) for distress, and a value of 45.93 (SD= 12.26) for psychological well-being. For distress, women had a value of 97.61 (SD=16.77) and concerning psychological well-being, the value was 46.51 (SD=12.76), as indicated in Table 9.

Table 9 - Mean value of MHI by gender.

MHI	Gender	N	Mean	SD
Distress	Men	138	101.27	15.76
	Women	240	97.61	16.77
Psych. Well-being	Men	149	45.93	12.26
	Women	237	46.51	12.76

It was found a significant difference at sub-scale of distress (t= 2.09; p=.04), so women had less distress than men in the sample (Table 10).

Table 10 - Significant difference at MHI Sub-scale of distress by gender.

MHI	Gender	N	Mean	SD	t
Distress	Men	138	101.27	15.758	2.09*
	Women	240	97.61	16.770	

*p<0,05

LAS and gender

In the sample, men obtained a value of 50.43 (SD=10.56) for cognitive sub-scale, a value of 49.09 (SD= 11.64) for affective sub-scale, and 42.99 (SD=11.92) for behaviour sub-scale. For cognitive sub-scale, women had a value of 52.81 (SD=9.60), for affective sub-scale obtained a value of 51.48 (SD=11.32); concerning behaviour sub-scale, the value was 43.60 (SD=12.82), as indicated in Table 11. The total punctuation obtained by men were 142.62 (SD=32.36), and by women were 147.31 (SD=31.05), as shown in Table 11.

Table 11 - Mean Value of LAS by gender.

LAS	Gender	N	Mean	SD
Cognitive	Men	148	50.43	10.56
	Women	250	52.81	9.60
Affective	Men	149	49.09	11.64
	Women	252	51.48	11.32
Behaviour	Men	149	42.99	11.92
	Women	245	43.60	12.82
Total	Men	146	142.62	32.36
	Women	241	147.31	31.05

It was found a significant difference at cognitive sub-scale (t= -2.31; p=0.02) and affective sub-scale (t= -2.02; p=0.04), so women had better leisure attitude in these two subscales then men in the sample (Table 12).

Table 12 - Significant difference at LAS Sub-scales by gender.

MHI	Gender	N	Mean	SD	t
Cognitive	Men	148	50.43	10.56	-2.31*
	Women	250	52.81	9.60	
Affective	Men	149	49.09	11.64	-2.02*
	Women	252	51.48	11.32	

*p<0,05

5.4 Residence area differences at MHI and LAS

MHI and residence area

In the sample, urban participants obtained a value of 101.17 (SD = 15.60) for distress, and a value of 43.37 (SD = 11.94) for psychological well-being. For distress, rural participants had a value of 97.64 (SD = 16.87) and concerning psychological well-being, the value was 48.50 (SD = 12.67), as indicated in Table 13.

Table 13 - Mean value of MHI by residence area.

MHI	Area	N	Mean	SD
Distress	Urban	168	101.17	15.60
	Rural	204	97.64	16.87
Psychological Well-being	Urban	171	43.37	11.94
	Rural	208	48.50	12.67

A significant difference was found at major sub-scales of distress ($t = 2.08$; $p = 0.03$) and psychological well-being ($t = -4.05$; $p = 0.00$). Rural residents had a high value at psychological well-being ($p<0.00$), and urban participants had a high value at distress ($p<0.05$), as presented in Table 14.

Table 14 - Significant differences at LAS Sub-scales by residence area.

MHI	Area	N	Mean	SD	t
Distress	Urban	168	101.17	15.60	2.08*
	Rural	204	97.64	16.87	
Psychological	Urban	171	43.37	11.94	-4.05**
Well-being	Rural	208	48.50	12.67	

**p<0,00 *p<0,05

LAS and residence area

In the sample, urban participants obtained a value of 54.24 (SD = 8.06) for cognitive sub-scale, a value of 53.48 (SD = 9.20) for affective sub-scale, and 46.59 (SD = 11.12) for behaviour sub-scale. For cognitive sub-scale, rural residents had a value of 50.63 (SD = 10.49), for affective sub-scale obtained a value of 48.78 (SD = 12.22), and concerning behaviour sub-scale, the value was 41.10 (SD = 12.81), as indicated in Table 15. The total value obtained by urban participants were 153.94 (SD = 26.11), and by rural participants were 140.26 (SD = 32.87), as shown in Table 15.

Table 15 - Mean Value of LAS by residence area.

LAS	Area	N	Mean	SD
Cognitive	Urban	177	54.24	8.06
	Rural	214	50.63	10.49
Affective	Urban	179	53.48	9.20
	Rural	215	48.78	12.22
Behaviour	Urban	176	46.59	11.12
	Rural	211	41.10	12.81
Total	Urban	172	153.94	26.11
	Rural	208	140.26	32.87

A significant difference was found at the three sub-scales and at total value of LAS. Urban participants had higher values in cognitive sub-scale (t = 3.85; p = 0.00), affective sub-scale (t= 4.35; p = 0.00), behaviour sub-scale (t = 4.51; p = 0.00) and total value (4.52; p = 0.00), as presented in Table 16.

Table 16 - Significant differences at LAS Sub-scales by residence area.

MHI	Area	N	Mean	SD	t
Cognitive	Urban	177	54.24	8.06	3.85*
	Rural	214	50.63	10.49	
Affective	Urban	179	53.48	9.20	4.35*
	Rural	215	48.78	12.22	
Behaviour	Urban	176	46.59	11.12	4.51*
	Rural	211	41.10	12.81	
Total	Urban	172	153.94	26.11	4.52*
	Rural	208	140.26	32.87	

*p<0,00

5.5 Education level differences at MHI and LAS

MHI and education level

In the sample, a difference between education levels at distress sub-scale (Kruskal-Wallis = 23.97; p = 0.00) was found, as indicated in Table 17.

Table 17 - Significant differences at distress sub-scale by education level.

	Distress
Kruskal-Wallis	23.97**
Gl	5

**p<0,00

The differences between education levels found for distress are presented in Table 18.

Table 18 - Significant differences at MHI Sub-scales between education levels.

	Education Levels difference	
Distress	Illiterate < 12º	-11.03*
	Illiterate < High degree	-11.04*
	4º < High degree	-7.44*
	6º < 12º	-12.0
	6º < High degree	-12.01

*p<0,05

LAS and education level

A significant difference between education levels at behaviour sub-scale (Kruskal-Wallis = 25.02; p = 0.00), and total scale (Kruskal-Wallis = 12.83; p = 0.025) was found, as indicated in Table 19.

Table 19 - Significant differences at total and behaviour sub-scale by education levels.

	Total	LAS Behaviour
Kruskal-Wallis	12.83	25.02**
Gl	5	5

**p<0,00, *p<0,05

The differences between education levels found for total and behaviour sub-scale are presented in Table 20.

Table 20 - Significant differences at LAS between education levels.

	Education Levels difference	
Total	Illiterate < 9º	-20.43*
LAS Behaviour	Illiterate < 9º	-11.42*
	Illiterate < 12	-8.98*
	Illiterate < High degree	-7.91*

*p<0,05

5.6 Relation between LAS sub-scales and MHI major sub-scales in the sample

As presented in Table 21, a positive and significant association was found between distress and cognitive sub-scale (r = 0.225; p = 0.00), affective sub-scale (r = 0.244; p = 0.00), behaviour sub-scale (r=0.124; p=0.016) and LAS total value (r = 0.212; p = 0.00). A negative and significant relation between psychological well-being and cognitive sub-scale (r = -0.340; p = 0.00), affective sub-scale (r = -0.376; p = 0.00), behaviour sub-scale (r = -0.348; p = 0.00) and LAS total value (r = -0.382; p = 0.00) was found.

Table 21 - MHI and LAS correlations.

		LAS Cognitive	LAS Affective	LAS Behaviour	LAS Total
Distress	R Pearson	.225**	.244**	.124*	.212**
	P	.000	.000	.016	.000
	N	379	382	375	368
Psychological	R Pearson	-.340**	-.376**	-.348**	-.382**
Well-being	P	.000	.000	.000	.000
	N	385	389	383	377

**p<0,01, *p<0,05

5.7 Aim 1: Analysis of the effect of leisure practice on distress and psychological well-being

The sample was divided in two sub-samples, group of participants with leisure activities and group of participants without leisure activities. It was tested the difference between the two sub-samples (leisure vs. without leisure) in distress, attitude for leisure (LAS total) and psychological well-being (Table 22).

Table 22 - Differences between subjects with activities of leisure vs. no leisure (distress, attitude for leisure and psychological well-being).

	Groups				
	Leisure (*N*=351)		**Without leisure** (*N*=46)		***t***
	Mean	**(SD)**	**Mean**	**(SD)**	
LAS Total	152.49	(23.84)	94.7	(35.65)	10.679*
Distress	4.48	(0.875)	3.68	(0.986)	5.654*
Psychol. Well-being	3.92	(0.952)	3.09	(0.934)	5.672*

* *p*<0.01

The sub-group that had leisure activities, presented high level of attitude for leisure ($t = 10.679$; $p < 0.01$) and psychological well-being ($t = 5.674$; $p < 0.01$). The subjects with high level of distress ($t = 5.654$; $p < 0.01$) are involved in leisure activities. These subjects had found on leisure activities one method to decrease it.

Group effect on the levels of distress, psychological well-being, and attitude for leisure (MANCOVA)

Directly above are presented the results for the effect of the variable *type of group* in distress, psychological well-being, and attitude for leisure, controlling the influence of health perception (co-variable). For the type of group (Table 23), it was tested a multivariate effect with statistical significance [*Hotelling's Trace = 0.515; $F_{(3, 341)} = 58.516$; $p = 0.00$*].

Table 23 - The Effect of Group in distress, psychological well-being, and attitude for leisure (MANCOVA).

	Groups					
	1. Leisure (*N*=302)		**2. Without leisure** (*N*=44)		***F*[a]**	***Post-Hoc*[b]**
	Mean	**(SD)**	**Mean**	**(SD)**		
Distress	4.47	(0.88)	3.71	(0.98)	17.055**	1>2
Psych. Well-being	3.92	(0.95)	3.12	(0.94)	17.437**	1>2
LAS Total	151.76	(24.05)	94.73	(34.26)	171.583**	1>2

Hoteling's Trace = 0.515; $F_{(3, 341)} = 58.516$; p=0.00

[a] Group Univariate Effect

[b] Bonferroni *Adj*s

Estimated means

**p*<0.05; ***p*<0.01

Also a multivariate analysis of covariance (MANCOVA) revealed a significant effect of the co-variable health perception (*Hotelling's Trace = 0.077; $F_{(3, 341)} = 8.733$; $p = 0.00$).*

Testing a multivariate analysis of covariance (MANCOVA), the variable health perception was introduced as a covariate. The univariate analysis showed significant differences in distress [$F_{(3, 341)} = 17.055$; $p < 0.01$], psychological well-being [$F_{(3, 341)} = 17.437$; $p < 0.01$], and attitude for leisure [$F_{(3, 341)} = 171.583$; $p < 0.01$]. More specifically, there were significant differences among the scales used. Participants without activities of leisure had poorer punctuation on psychological well-being sub-scale. Those participants also had worse scores on attitude for leisure.

Discussion

Results showed that people who were engaged in leisure activities have a more positive attitude towards the same. Higher results of well-being were registered between people that are engaged with the leisure. This result is supported by the study of Heo et al. (2013) that compared the emotional adjustment at different stages.

Participants who register an independent health perception and high level of distress were involved in one leisure activity. The outcome is on the way of the work presented by Argimon et al. (2004). This result is also related with the study of Toyoshima, Kaneno and Motohashi (2016) that revealed that the higher engagement in outdoor leisure activity was significantly related with a lower probability of psychological distress.

It was found that seniors who get involved in activities, shown higher level of distress. This result is in the line of the approach of Chang et al. (2014).

Psychological distress is higher when initiating a leisure activity at any stage of life, and the participation in leisure activities will help to decrease distress, promote a positive leisure attitude and psychological well-being (Belo, Pocinho, & Navarro-Pardo, 2017).

Concerning the analysis of the multivariate effect, it was statistically significant ($p < 0.01$) with a significant univariate effect of the type of group in attitude for leisure, psychological well-being, and distress ($p < 0.01$).

In our view, these results prove to be consistent as opposed to a conservative style of life without leisure activities (Belo, Pocinho, & Navarro-Pardo, 2017).

5.8 Aim 2: Analysis of the mediation role of leisure attitude in the relationship between mental health and the education level in elderly people

Education was significantly correlated with psychological well-being ($R = 0.19$; $p < 0.001$) and weakly correlated with distress ($R = 0.26$; $p < 0.001$). Additionally, a negative association between age and distress ($R = -0.11$; $p < 0.05$) was observed. It was found a positive moderate correlation between cognitive leisure activity and psychological well-being ($R = 0.31$; $p < 0.05$). Also, a significant relation between gender and distress ($R = 0.11$; $p < 0.05$) was found. Therefore, age and gender were introduced as covariates into the regression models predicting psychological well-being and distress (Table 24).

The effect of the independent variable on the proposed mediator (Path a), the effect of the mediator on the dependent variable partialising out the effect of the independent variable (Path b) and the direct effect of the independent variable on the dependent variable (Path c') are presented in both models (Belo et al., 2020).

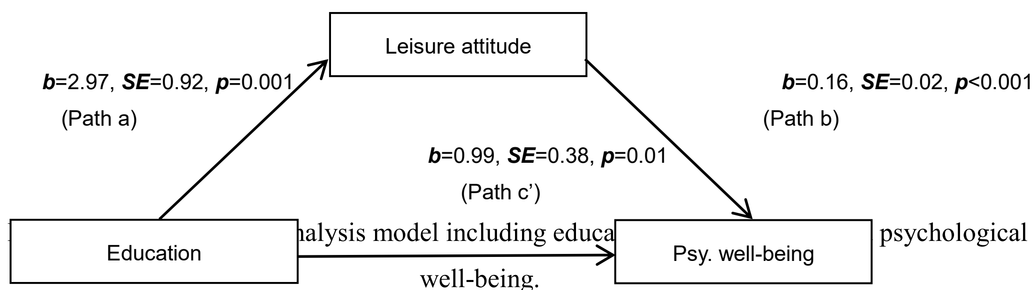
Table 24 - Model coefficients for the conditional process models presented in Figure 2 and Figure 3.

	Direct effect (c’)		Indirect effect (a*b)		R	R-sq	MSE	F
	b (SE)	*p*	*b* (SE)	95% Bias-corrected bootstrap CI (LLCI; ULCI)				
Model 1	0.99 (0.38)	0.01	0.49 (0.16)	0.20 to 0.84	0.41	0.1684	162,0407	36.96*
Model 2	1.7 (0.48)	0.00	0.32 (0.14)	0.09 to 0.63	0.31	0.09	250,8681	12.14*

*$p < 0.001$ SE standard error; CI confidence interval, LLCI lower-limit confidence interval, ULCI upper-limit confidence interval. All coefficients are unstandardized. *95% BCa, CI* 95% bias-corrected and accelerated confidence interval.

Mediation Model 1

To examine whether a leisure attitude explained the association between education and psychological well-being, a mediation model was tested using a Process macro - model 4 (Preacher & Hayes, 2004). Age and gender did not covariate at any path, so they were removed and was considered a simple mediation model. Leisure attitude mediated the association between education and psychological well-being. The results indicated that the indirect effect was significant (point estimate = 0.49; 95% BCa CI [0.20; 0.84]) as presented in Figure 2.



alysis model including educa psychological well-being.

Education explained 2.76% of the variance of leisure attitude [$F_{(1, 366)}=10.37$; $p=0.002$]. Education and a leisure attitude explained 16.84% of the variance of the psychological well-being [$F_{(2, 365)}=36.96$; $p<0.001$], as shown in Table 24.

Mediation Model 2

To analyse whether a leisure attitude explained the association between education and distress, a second mediation model was tested using a Process macro - model 4 (Preacher & Hayes, 2004). At this Mediation Model only gender was considered as a covariate variable once this variable influenced the mediator variable. As presented in Figure 3, leisure attitude mediated the association between education and distress.

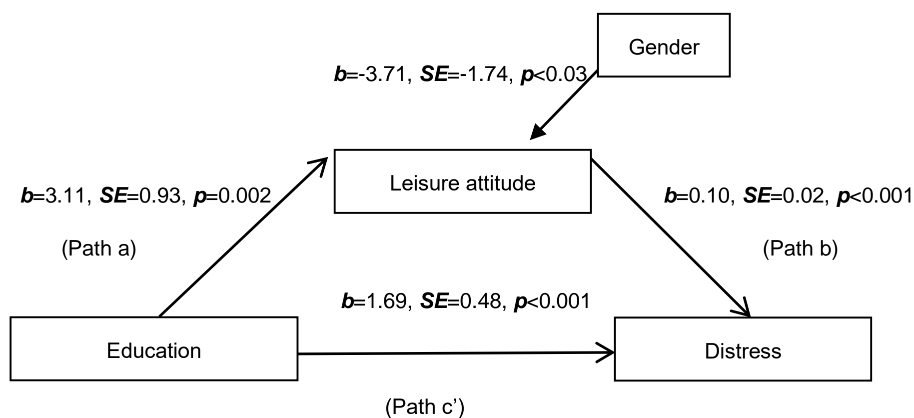


Figure 3 - The mediation analysis model including education, leisure attitude and distress.

The results indicated that the indirect effect was significant (point estimate=0.32; 95% BCa CI [0.09;0.63]). Education explained 3.5% of the variance of a leisure attitude [$F_{(2, 353)}$=6.40; p=0.002]. Education and a leisure attitude explained 9.00% of the variance of distress [$F_{(3, 352)}$=12.14; p<0.001], as presented in Table 24.

Discussion

The results support the evidence that a positive leisure attitude is associated with higher positive psychological well-being (Adams et al., 2011). Lampinen et al. (2006) confirmed that mental well-being, in later life, is linked with leisure activities, as our results revealed.

The main findings of the present study are that old-aged people with higher education levels show a better psychological well-being and a more positive leisure attitude, probably because of an indirect effect on the first variable (Belo et al., 2020). This outcome is in line with the results found by Tsai et al. (2014). They showed a significant relation between leisure attitude and mental health management. In addition, our findings are in accordance with the study of Chang et al. (2014), which showed that a positive attitude of involvement in leisure activities is associated with better health in older age. The results are consistent with the conclusions of other studies, once it was demonstrated that a positive attitude towards leisure activities helps to decrease the risk of mental health diseases (Morita et al., 2007; Rodríguez-Rodríguez et al., 2018; Teychenne et al., 2008). The reached results confirmed that a leisure attitude mediated the association between education and psychological well-being in this age group, as expected (Belo et al., 2020). Concerning the relation between distress and education, international research confirmed that a high level of education was associated with lower levels of distress (Amagasa et al., 2017; Bossé et al., 1987; Ross and Zhang, 2008; Zhang et al., 2015). In this sense, a better mental health, understood as a combination of better psychological well-being and a lower distress level, was related with a higher education level in our sample. In addition, the study of Rosness et al. (2016) concluded that distress is higher in old people with less

education. The same result was observed in Shivakumar et al. (2017) where illiteracy was considered a factor of distress in the sample studied.

5.9 Aim 3: Analysis of the associations between self-rated health and psychological well-being and leisure attitude.

Self-rated health was significantly correlated with psychological well-being (R = 0.417; p < 0.001) and weakly correlated with leisure attitude (R = 0.247; p < 0.001), as shown in Table 25.

Table 25 - Relation between self-rated health evaluation, psychological well-being, and leisure attitude in the sample.

	Psychological Well-being		**Leisure Attitude**	
	R	*N*	R	*N*
Self-Rated Health evaluation	0.417*	385	0.247*	387

**p*<0.001

Mediation Model

To analyse whether self-rated health explained the association between leisure attitude and psychological well-being, a mediation model was tested using a Process macro - model 4 (Preacher & Hayes, 2004). The results indicated that the indirect effect was significant (point estimate=0.037; 95% BCa CI [0.021;0.06]), that is, self-rated health mediated the association between leisure attitude and psychological well-being. The effect of the independent variable on the proposed mediator (Path a), the effect of the mediator on the dependent variable partialising out the effect of the independent variable

(Path b) and the direct effect of the independent variable on the dependent variable (Path c') are presented in Figure 4.

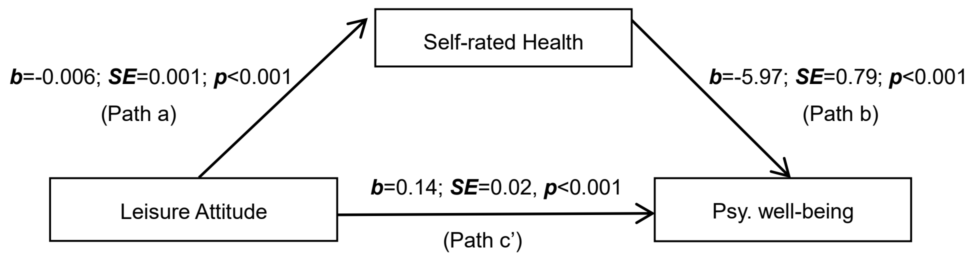


Figure 4 - The mediation analysis model including leisure attitude, self-rated health and psychological well-being.

Leisure attitude explained 6% of the variance of self-rated health [$F_{(1, 370)}=24$; $p<0.001$]. Leisure attitude and self-rated health explained 26.54% of the variance of the psychological well-being [$F_{(2, 369)}=66.67$; $p<0.001$], as presented in Table 26.

Table 26 - Model coefficients for the conditional process model presented in Figure 4.

	Direct effect (c')		Indirect effect (a*b)					
	b (SE)	*p*	*b* (SE)	95% Bias-corrected bootstrap CI (LLCI; ULCI)	**R**	**R-sq**	**MSE**	**F**
Model	0.135 (0.02)	0.001	0.04 (0.01)	0.02 to 0.06	0.52	0.2654	142.732	66.67*

*$p < 0.001$ SE standard error; CI confidence interval, LLCI lower-limit confidence interval, ULCI upper-limit confidence interval. All coefficients are unstandardised.

No significant effect of gender in the relation between a leisure attitude and self-rated health evaluation was identified in the study (Figure 5). A similar result was reached in the study of Lima-Costa, Firmo and Uchôa (2005).

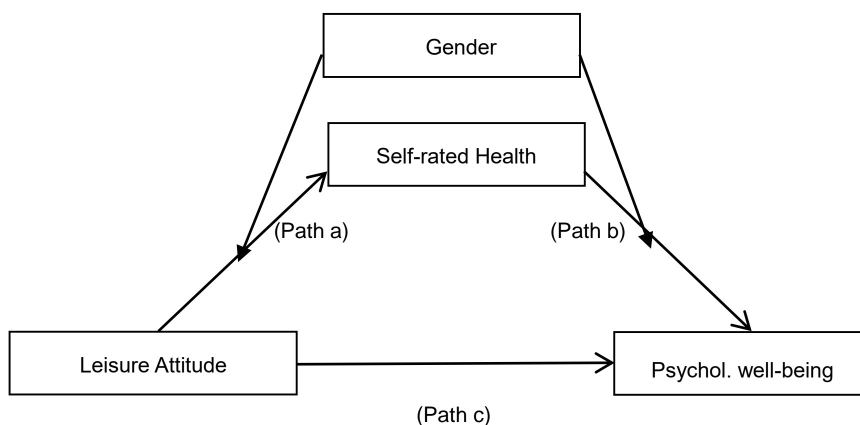


Figure 5 - Conceptual diagram of the moderated mediating model under study.

The results of the present study suggest that a positive leisure attitude has an impact on self-rated health. In general, old people with a poor leisure attitude show a weak self-rated health, as seen in the correlation between the variables. Also, a relation was found between psychological well-being and self-rated health. The results indicated that a better self-rated health is associated with a better psychological well-being (positive and significant association). These data are consistent with the findings of several studies about self-rated health and mental health in general (Bowling, 2005; Hill, Ross, & Angel, 2005; Hirve, 2013; Karpansalo et al., 2004; Kekalainen et al., 2019; Ocampo, 2010; Ogunyemi, Olatona, & Odeyemi, 2018; Schnittker, 2005). The positive impact of leisure attitude on psychological well-being can be increased by a good self-rated health, thus the onset of psychological well-being may be a product of a mechanism involving these two variables. Hence, subjective variables as self-rated health should be considered in health screening and health policies (Beck & Dozois, 2011; Reyes-Fernández et al., 2015).

CHAPTER 6 | CONCLUSIONS

The main objective of the present work is to explore the association between self-rated health, education, psychological well-being, and leisure attitude. Therefore, we have tried to characterize a sample of older people who live, or frequent, residential institutions for the elderly, as well as the motivations that lead them to participate in leisure activities. In more detail, the population has been characterized in relation to different sociodemographic variables, such as gender, age, level of education, marital status, and the geographical area where they reside. Other variables have been considered, such as their perception of health, or if they do leisure activities and what type of activity. Regarding the central object of the study, we have tried to examine the attitude to do leisure activities, as well as to analyse their mental health. It was purpose to understand and analyse how the leisure attitude is related with mental health. So, regarding mental health, the existence of distress and psychological well-being were studied. The perception of their state of health has also been analysed.

The sample of the present study was compiled in several residential institutions for the elderly at the Portuguese national level, trying to represent the North and Centre regions. The information gathering process was carried out in accordance with the criteria aimed at good research practices. The general objectives of this study were explained to the participants, also guaranteeing the confidentiality and anonymity of all the data provided. Likewise, voluntary participation was considered, and no participant was financially compensated for their participation. Participants received information about the research aims (doctoral study) before giving their consent to answer the questionnaire; they were also informed that they had the option to drop out the study at any time without giving any explanation. The sample was collected from a convenience sampling in which subjects were at least 50 years old (Power et al., 2016) and retired. The participants (residents or day centre participants in institutions) were asked to answer the questionnaire by the institution director and a multidisciplinary team. It was our intention to spend the least amount of time possible in data collection, due to the physical and psychological characteristics of participants.

Each questionnaire included standard instructions and participants were asked to respond according to the option they felt was the most relevant to them. It was clear that there were no right and wrong answers. After completing the set of questions, they were asked to return the questionnaire. The administration of the questionnaire lasted, on average, 25 minutes.

When we observe the relation between the level of education and the age of the participants, we can observe that, as the age range increases, education decreases, a characteristic that defines the Portuguese population, as seen in the study by Pocinho (2014). Leisure activities provide pleasure and satisfaction with life, as well as feeling good with themselves, a sensation of being valued, respected, and socially integrated, all benefits that can promote a successful ageing. For Pocinho (2014), having quality of life is the optimal level of functioning, not only physical and social, but also mental, which therefore involves the integration of multiple dimensions of people's lives such as social relationships, the perception of his health, or a good mental state. The elderlies who present a successful ageing are, therefore, proactive subjects, who take care of their physical health and that are concerned with their mental health (Pocinho, 2014). It is important in older age to fight against stereotypes and prejudices related to ageing. Social contact goes through the promotion of self-esteem, always considering these variables as the final result of successful ageing (Pocinho, et al., 2013).

The phenomenon of ageing is a positive occurrence for individuals and for societies that takes place because of economic and socio-biomedical progress. In this context, ageing can be studied through various perspectives and theories. The process is universal and experienced by everybody, however in different ways (Fernández-Ballesteros, 2008; Hawkins, Foose, & Binkley, 2004; Korten et al., 1999; Schneider & Irigaray, 2008).

This step of the life cycle can be a time of new achievements and continued development, both in the social, cognitive, and cultural fields (Belo, Pocinho, & Navarro-Pardo, 2016; Pocinho, Belo, & Sanchez, 2016). Seems crucial and of high relevance the study of ageing as a specific stage of life. For Belo, Pocinho and Navarro-Pardo (2016) this implicates an active and continuous balance enduring its impressiveness in the interaction between maturation, learning and senescence. A new idea about ageing emerged and a new design

reflects the positive aspects of the third age, where is possible to explore the potential of actions and quality of life.

Ageing is characterized by a biological and psychosocial dynamic process. The development that the individual makes throughout his life confirms the process of its evolution, characterizing itself as a singular and individual process. The context for older people is generally characterized by physical limitations, restricted activities, and new routines. The study of Lorem et al. (2017) showed that ageing had a negative impact on self-report health. It is important to accept the changes caused by the passage of time, such as body transformations or family structure changes; however, there is currently a social rejection of ageing and its effects, which implies social difficulties in several areas, including the possibilities of enjoying leisure and its effects on well-being and health.

The involvement and information learned throughout life can be improved at this time. As a result, leisure plays an essential part in the process, once is perceived as a value for seniors and society (Brown, McGuire, & Voelkl, 2008). Chodzko-Zajko et al. (2009) bared that participation in leisure activities overtime protects against chronic and degenerative diseases contributing for well-being, while the inactive leisure, related to a sedentary lifestyle increases the risk for such health outcomes. Besides, the perception that individuals have about past, present and future is a descriptor of their psychological well-being (Cohen, 2000).

How people spend their leisure time is a key factor in preserving psychological health. A physical activity (of leisure) is associated with decreased mortality from many physical illnesses and decreased risk of mental disorders, associated with an increase in life expectancy, but psychological distress may decrease the likelihood of engaging in leisure-time physical activities. Some outdoor leisure activities and physical activity were significantly correlated (negative association) with psychological distress (Toyoshima, Kaneno, & Motohashi, 2016). People who regularly does outdoor leisure activities are significantly less likely to be psychologically distressed. Women who regularly engaged in physical activity were significantly less likely to be psychologically distressed (Toyoshima, Kaneno, & Motohashi, 2016). Shah, Wadoo and Latoo (2010) reported that psychological distress has a significant impact not only on the person, but also on families.

Mental disorders have a considerable impact on family members and can lead to a reduction in social activities, producing sometimes isolation. This can lead to the development of leisure new activities with the main objective of avoid negative impacts on life quality of older adults. For leisure, these aspects are reflected not only on the level of knowledge of the socio-cognitive processes but also in the intervention, in the definition of strategies of involvement in leisure activities and in adherence to opportunities structured and offered by the community (Freire & Fonte, 2007).
This research sustains the importance to consider leisure as an income of aiding psychological well-being, avoiding distress among aged people (Belo et al., 2020). The attitude for leisure is also high levelled in subjects that have habitual activities of time-out and relaxation. Research supported the importance of screening and distress control in seniors. The psychosocial activity of leisure is considered an essential part in providing quality health. This may be even more visible in the case of subjects with high levels of distress, due to the lack of studies that demonstrate its impact on psychosocial well-being. If the life of subjects in our study could be guided by an active participation in leisure activities, it will allow them to understand others and, subsequently, improve positive feelings and behaviours, which can develop well-being and decrease distress.
Adjustment to leisure, and the attitude for it, is a complex process that involves the participation in activities, and it is important in all groups. It becomes even more important in old age and should provide to the seniors the opportunity to actively engage in an activity that provides their personal and social development. Leisure activities play a leading role in intellectual development because it allows the finding of new knowledge, developing their critical opinion, joining new interpersonal relationships, allowing a time to appreciate yourself, others, and other cultures, expand their self-concept and still improve their quality of life (Belo, Pocinho, & Navarro-Pardo, 2017).

Recent studies about the relation between leisure engagement and well-being indicate a positive effect on health outcomes of older adults (Windle et al., 2010). Indeed, it is commonly accepted that spending leisure time is important to upturn the quality of mental health (Silverstein & Parker, 2002). Ageing is, very often, a life period associated with stressful events (de Frias & Whyne, 2015; Kao & Chang, 2017; Vasunilashorn et al.,

2013). As main stressors in later life, we must consider the death of a significant person (Kao & Chang, 2017), health related concerns (Tak, 2006) or disability and chronic disease (Kao & Chang, 2017; Norris & Murrell, 1990). Leisure helps to promote health and has a positive impact on life quality (Lambrini et al., 2018; Liu and Lou, 2016; Winterbotham and du Preez, 2016). As stated by Strain et al. (2002), leisure engagement in later life awakens an individual's desire to strive for familiar forms of activity. At this stage, it improves well-being by giving people a sense of purpose, enlightening physiological efficiency through auxiliary exercise, promoting cognitive ability, and increasing social integration (Adams et al., 2010; Dupuis and Alzheimer, 2008; Gow et al., 2014; Havighurst, 1961; Mannell, 2007; Silverstein and Parker, 2002; Windle et al., 2010).

Ageing represents the culmination of a long process of deliberation and discussion with contributions from various perspectives and scientific domains (Fernández-Ballesteros et al., 2004). It must be assumed like a positive experience, a new stage of life that is accompanied by changes and new routines. However, it is assumed that aged people have a significant ongoing decline in physical capacities and cognitive function (Thomas et al., 2016). This worsening prompts their feelings of decreasing leisure autonomy competence as the range of their practically attainable achievements becomes limited in leisure activities (Chang, & Yu, 2013). As showed by Lee et al. (2018), it is the way how individuals understand leisure and their beliefs about their ability to engage in leisure activities, that influence their orientation and attitude towards life.

The present study provides new information to understand the benefits of a positive leisure attitude in old adults (Belo et al., 2020). As the educational level is a variable that cannot be manipulated, leisure intervention programs shall consider the importance of a leisure attitude and contemplate strategies for stress reduction. An important finding was detected in our study which is not in line with standard results: the highest level of distress was found in participants with the highest level of education; maybe a high level of education can lead to a better perception of all ageing changes (body, life, profession, etc.). In this sense, the transition to a new life-stage brings several readjustments within

the family and may disturb family functioning. This could enable people to perceive themselves as generally incapable of dealing with it and transform that incapacity into a stressor. Old-aged people have the need to adopt a positive leisure attitude to perceive themselves as useful, and this feeling may contribute to nullify a stressful moment. Thus, they recognize that a new life stage is coming, and they have a good perception of personal and social changes as an essential aspect and consider that a positive leisure attitude could be of extreme importance when preparing for retirement, as pointed out by Lee et al. (2018). Furthermore, it is important to evaluate needs, interests, and expectations (Tsai et al., 2014), according to the different educational level of older adults.

A greater involvement in leisure activities in older age is associated with a better health condition (Alwin & Wray, 2005; Carruthers & Hood, 2004; Chang, Wray, & Lin, 2014; Fave et al., 2018; Hutchinson & Nimrod, 2012). Moreover, the active participation in leisure activities has been considered effective in reducing depression and increasing psychological well-being (Haworth & Lewis, 2005). The levels of satisfaction are related to the seniors' life view and their state of health, and this determines the participation in activities (Stolar, Macentee, & Hill, 1992). In addition, leisure time involvement contributes to a positive self-rated health (Confortin et al., 2015; Lima-Costa, Firmo, & Uchôa, 2005; Lucumi et al., 2013), and the studies about the relation between leisure engagement and well-being indicate a positive effect on health outcomes of old people (Silverstein & Parker, 2002; Windle et al., 2010). Life expectancy is greater for women in virtually every country on earth, in every age (Idler, 2003; Zajacova, Huzurbazar, & Todd, 2017). Previous studies show that women's rate of self-rated health is poorer than men's self-rated health (Bath, 2003; Deeg & Kriegsman, 2003; Fernandez, Bixby, & Honkanen, 2016; Idler, 2003; Lu & Zhang, 2019; Zajacova, Huzurbazar, & Todd, 2017), because women understand better the disease and have a tendency to evaluate worse their health condition (Idler, 2003). A negative attitude towards ageing in terms of daily changes (physical, social, cognitive) is associated with dissatisfaction concerning health (Kotala, 2015).

A positive leisure attitude can improve the way how old people perceive their health (Belo

et al., 2020; Ferrari et al., 2016). If a positive leisure attitude is displayed, it can improve psychological well-being among old people which will contribute to a good self-rated health evaluation. Adopting a positive attitude towards leisure helps old people in the transition to adjust life to their incapacities regarding a positive psychological well-being (Ferrari et al., 2016; Kotala, 2015). Some people can experience a loss of functional behaviour which has an impact on their leisure perception (Ferrari et al., 2016; Kotala, 2015). A leisure attitude can be interpreted as a variable which can boost the person to obtain life satisfaction, maximized by psychological well-being (Argan, Argan, & Dursun, 2018; Castro & Carreira, 2015) and decrease health risks (Castro & Carreira, 2015).

Future research

In future studies it will be important to examine specific contexts of influence of leisure in distress and psychological well-being. Longitudinal investigations (cohort) that assess stability or change in participation in leisure activities will also be important. It could be useful to study the relationships between social actions and quality of life in some different clusters of old age people to describe the impact in each. New research can consider the indirect effect of gender as a moderated variable in the relation between education and mental health and mediated by leisure attitude. According to some authors, it is necessary to analyse leisure attitude in order to lead people into a reflective construct through educational actions, helping old people to stun functional barriers (Ferreira, Santos, & Maia, 2012; Li, Hsu, & Lin, 2019). Contexts like ethnicity, social and health condition also can be considered. In addition, future research might consider a measure of different types of leisure activities to determine which ones influence more psychological well-being.

In our daily experience with the elderly, we can see that it is not always easy to involve them in leisure activities. With the perspective of keeping them active and providing them better quality of life at this stage, it is relevant to encourage them to participate in a social way in leisure activities. That is why it is important to work on the leisure attitude of this population.

This study allowed us to understand how personal characteristics can influence this attitude, so it will be useful for multidisciplinary teams to anticipate difficulties and try to prepare an action plan so that the attitude towards leisure is positive so that it can increase their quality of life and mental well-being.

At time of diagnosis, high levels of distress could be predictive for future high levels of attitude for leisure and psychological well-being. In terms of psychological benefits, these could improve the self-esteem, the image, the social contact, and the feeling of pleasure with the life. The present study not only showed that leisure has a positive impact on the lives of the elderly, but these have both a high quality of life and a better attitude to continue participating in leisure activities. In addition, these are spaces of socialization that avoid social isolation, an occurrence presents in the old population and which inversely correlate with optimal ageing. Leisure has a positive impact for psychological well-being, promotes interpersonal relationships, and cultural knowledge. Activities that raise more longevity and a better physical action should consequently get more attention during the cycle of life. In short, the participation of older adults in this type of activities could be defined as a commitment for a positive experience.

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