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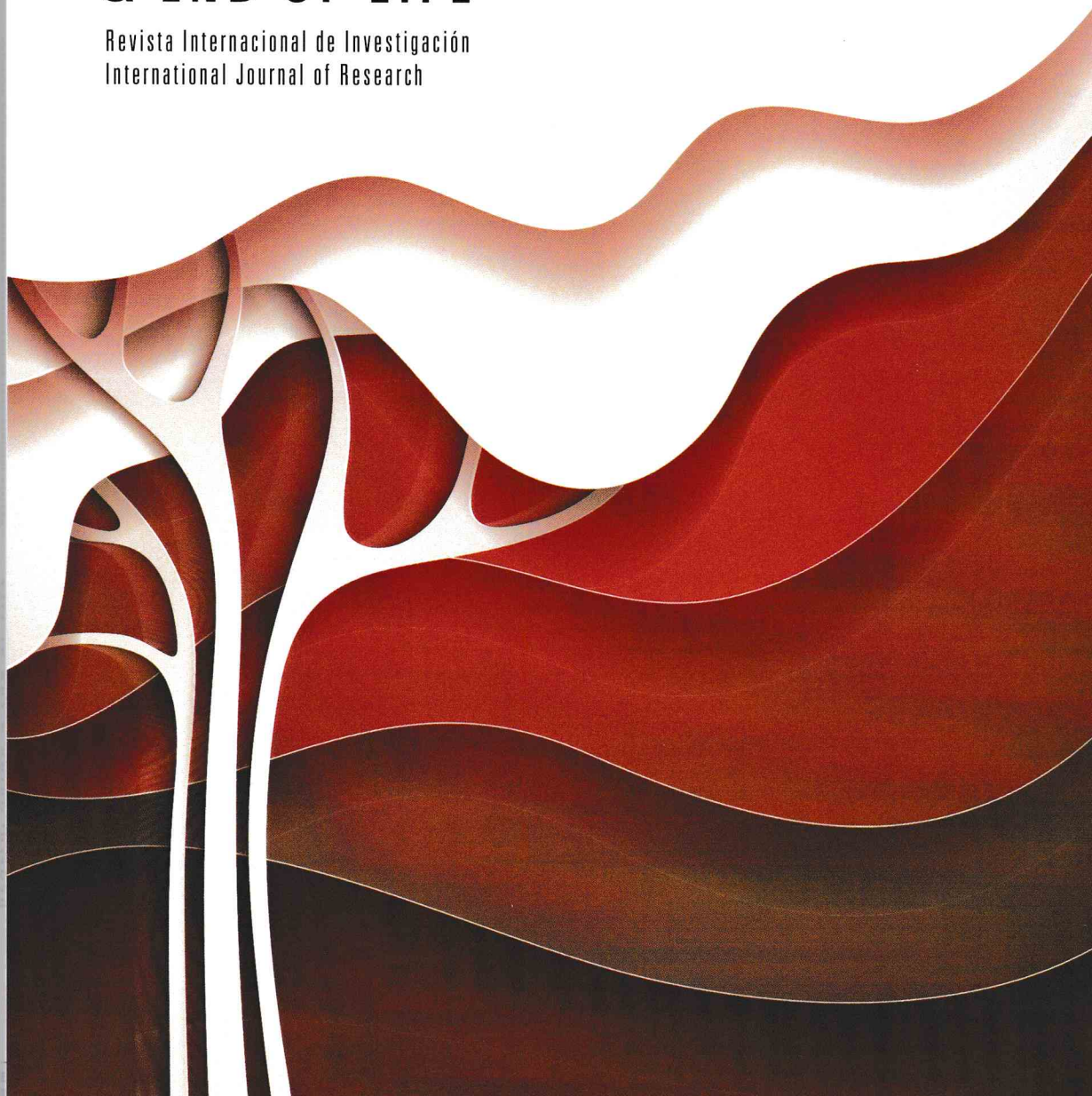
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THE EXPERIENCE OF BOREDOM IN OLDER ADULTS: A SYSTEMATIC REVIEW

LA EXPERIENCIA DEL ABURRIMIENTO EN ADULTOS MAYORES: UNA REVISIÓN
SISTEMÁTICA

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Abstract

Background and Objectives: Studies addressing boredom in older adults are scattered and scarce. The lack of a conceptual map on the the state of affairs makes it difficult to achieve an authentic understanding of the issue and the proposal of interventions. The objective is to identify and examine existing literature on boredom in older adults to explore what is known so far the provide an accurate state of affairs.

Research Design and Methods: A scoping, integrative literature review of international, mixed research studies and grey literature. Eight electronic databases were searched for eligible studies to August 2020. This systematic review was reported according to the PRISMA up to guidelines. A narrative synthesis was conducted to consolidate and synthesize matters.

Results: 9748 studies were identified. Forty-nine studies met the inclusion criteria. Eight key matters were discovered inductively in the data: (1) Boredom experience and boredom tendencies, (2) Boredom, housing, and institutionalization, (3) Boredom and retirement, (4) Boredom and mental diseases, (5) Boredom and mental disorders, (6) Boredom, loneliness, and helplessness, (7) Boredom and reminiscence, and (8) Boredom and leisure.

Discussion and Implications: Boredom is a risk factor for older adults that needs to be addressed immediately. This systematic review showed that (1) current scientific literature on boredom and ageing is scarce and scattered and does not lead to comprehensively address boredom in older adults; (2) more empirical research needs to be conducted; (3) research needs to be focused on boredom specifically

and not as a correlated phenomenon; (4) boredom-focused prevention models should be developed, applied, and evaluated in different settings shortly.

Key words: *Ageing, Boredom, Loneliness, Person-centered Care, Retirement, Well-being.*

Resumen

Antecedentes y objetivos: Los trabajos centrados en el estudio del aburrimiento en los mayores son escasos y dispersos. La falta de un mapa conceptual sobre el estado de la cuestión dificulta en la actualidad la comprensión de este fenómeno y la propuesta de intervenciones. El objetivo de este artículo es identificar y examinar la literatura existente sobre el aburrimiento en los adultos mayores para explorar lo que se conoce hasta ahora sobre este par de conceptos y proporcionar un estado de la situación preciso.

Diseño y metodología: Se llevó a cabo una revisión exhaustiva e integradora de estudios de investigación sobre la cuestión a nivel internacional, cubriendo la no convencional. Se realizaron búsquedas de trabajos elegibles en ocho bases de datos electrónicas hasta agosto de 2020. Esta revisión sistemática siguió la metodología PRISMA. Se realizó una síntesis narrativa para presentar los temas resultantes.

Resultados: Se identificaron un total de 9748 estudios. 49 de ellos cumplieron con los criterios de inclusión en el estudio. 8 temas clave fueron identificados inductivamente: (1) Experiencia del aburrimiento y propensión al aburrimiento; (2) Aburrimiento, vivienda e institucionalización; (3) Aburrimiento y jubilación; (4) Aburrimiento y enfermedades mentales; (5) Aburrimiento y trastornos mentales; (6) Aburrimiento, soledad, sensación de inutilidad; (7) Aburrimiento y reminiscencia y (8) Aburrimiento y ocio.

Discusión e implicaciones: El aburrimiento es un factor de riesgo para los adultos mayores que debe abordarse de inmediato. Esta revisión sistemática mostró que: (1) la literatura científica actual sobre el aburrimiento y el envejecimiento es escasa y dispersa y no permite abordar de manera integral el aburrimiento en los adultos mayores; (2) es necesario realizar más investigaciones empíricas en torno a este fenómeno; (3) la investigación debe centrarse específicamente en el aburri-

miento y no tratarlo como un fenómeno correlacionado; (4) los modelos de prevención centrados en el aburrimiento deben desarrollarse, aplicarse y evaluarse de inmediato en diferentes entornos.

Palabras clave: *envejecimiento, aburrimiento, soledad, atención centrada en la persona, jubilación, bienestar.*

Background and Objectives

In the last decades, researchers have stated that “boredom is a salient feature of ageing” (El Haj & Antoine, 2016, p. 221), one of the highest challenges that older adults face today (Yu et al., 2015). It has come to be described as “a psychosocial disease [that] constitutes the main problem of ageing” (Still, 1957, p. 557). But what is boredom when it comes to gerontology and geriatrics? Rasquinha and Bantwal (2016, p. 434) tried one of the most comprehensive definitions in this regard:

Boredom can be viewed as a lived experience, an aversive state that is characterised by feelings of dissatisfaction, weariness and restlessness. It can also be viewed as the unfulfilled desire for satisfying activity; it can occur in anyone who has too much time and too little meaning or purpose in their life.

Boredom is caused in older adults by various kinds of personal (e.g., physical or mental impairment, psychological frailty, economy) and environmental reasons (e.g., settings, institutional opportunities). Whatever endogenous or exogenous, or a mixture of both, boredom in older adults has caught the attention of researchers worldwide due to the consequences of suffering from it:

Chronic boredom can lead to restlessness, feelings of worthlessness, and even a belief that life is no longer worth living, and emerging evidence suggests that it puts people at greater risk for depression. It is seen to be something that is both negative and unpleasant in nature. When an individual is bored, they may experience a host of emotional states like being angry, anxious, irritable, and frustrated. Not all experience all of it, but it definitely to some degree adds up to the emotional experience of boredom (Rasquinha & Bantwal, 2016, pp. 434-435).

It is easy to see that those living institutionalized or alone are the most vulnerable to boredom, as well as people living with dementia and reduced mobility. Boredom in older adults is a risk factor that should concern all of us who are interested in the well-being of older adults and in ensuring that the ageing process is successful and dignified.

Studies addressing boredom in older adults are scattered in terms of dating, geographic scope, design and subject, not to mention their scarcity. The lack of a comprehensive conceptual map on the state of affairs makes it difficult to achieve an authentic understanding of the matter and the proposal of interventions capable of mitigating this risk factor in different care settings.

To make this problem visible and find solutions, the first necessary step is to conduct a systematic literature review to explore what is known about this phenomenon so far and provide an accurate conceptual map from which to start building up. Such a research has not been conducted yet. Therefore, this review is a valuable and important addition to (1) better knowing and synthesizing what has been said on the pair ‘boredom’ and ‘older adults’, (2) providing a broad overview and map major themes underpinning this phenomenon, and (3) helping to determine future research needs and gaps of knowledge.

Research Design and Methods

Design

A scoping, integrative literature review of international, peer-reviewed mixed research studies and grey literature was conducted. The systematic review and its procedures were reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Liberati et al., 2009; Moher et al., 2009; Moher et al., 2015). The literature search aimed to find published studies (peer-reviewed and grey literature) with diverse designs (deductive and inductive) to synthesize data and results and provide a holistic and deeper understanding.

Search strategy

A literature search was conducted in eight electronic databases (PubMed, SCOPUS, Web of Science, Cochrane Library, APA PsycINFO – ProQuest, PMC, CINAHL, Google Scholar) up till August 2020. The search strategy included keywords for ‘boredom,’ ‘ageing,’ ‘elderly,’ ‘old-people,’ ‘old-age,’ ‘retiree,’ ‘nurs-

ing-home,' 'geriatrics,' and 'gerontology' ("boredom*" AND ("ageing*" OR "elderly*" OR "old-age*" OR "old-people*" OR "retiree*" OR "nursing-home*" OR "geriatrics*" OR "gerontology*")). Keywords, subject headings, and combinations were further revised to optimize the search results for each database. Lastly, the bibliographies of relevant articles were hand-searched for potential studies that may have been excluded. Searches were not restricted by publication date, but only included papers in English, Spanish, French, Portuguese, and Italian. The detailed search strategy can be found in Supplementary Material 1. Zotero was used to import sources, create the bibliographical database, remove duplicates, and manage references.

Selection criteria

The criteria applied in the selection process are described below:

Inclusion criteria:

- English, Spanish, French, Portuguese, and Italian studies without time restrictions.
- Primary studies, reviews, discussion papers, books, and dissertations.
- Empirical and theoretical.
- Focus on boredom in older adults (totally focused) or significantly addressing boredom in older adults, among other matters (partially focused).

Definitions:

- *Boredom*: State-boredom is a negative state "experienced when people feel either unable or unwilling to cognitively engage with their current activity" (Westgate & Wilson, 2018, p. 693), wanting, however, "to engage in satisfying activity" (Eastwood et al., 2012, p. 483). Simplifying, it is a propensity to frequently experience boredom.
- *Older adult*: 60 or 65 years of age or older adults.

Exclusion criteria:

- Works not in English, Spanish, French, Portuguese, and Italian, due to authors' language limitations.
- Works not focused totally or partially on boredom in older adults.

Quality appraisal

The Critical Appraisal Skills Programme tool (CASP, 2018a, 2018b) is known by the authors, but we did not exclude articles based on their quality appraisal score as the main goal of this review was to consolidate all available evidence on boredom in older adults, and critical appraisal is not a compulsory measure (Peters et al., 2015).

Selection process

According to PRISMA guidelines, after duplicate removal, titles and abstracts were screened by the authors and an independent reviewer for eligibility. Those meeting the inclusion criteria were included in the next stage. Any disagreement was resolved by mutual agreement. We retrieved the full texts of the selected abstracts and assessed them. When full texts were unavailable via online access, the articles were requested via inter-library loan service and author request. Lastly, studies that met the inclusion criteria were included for data extraction.

Data extraction and synthesis

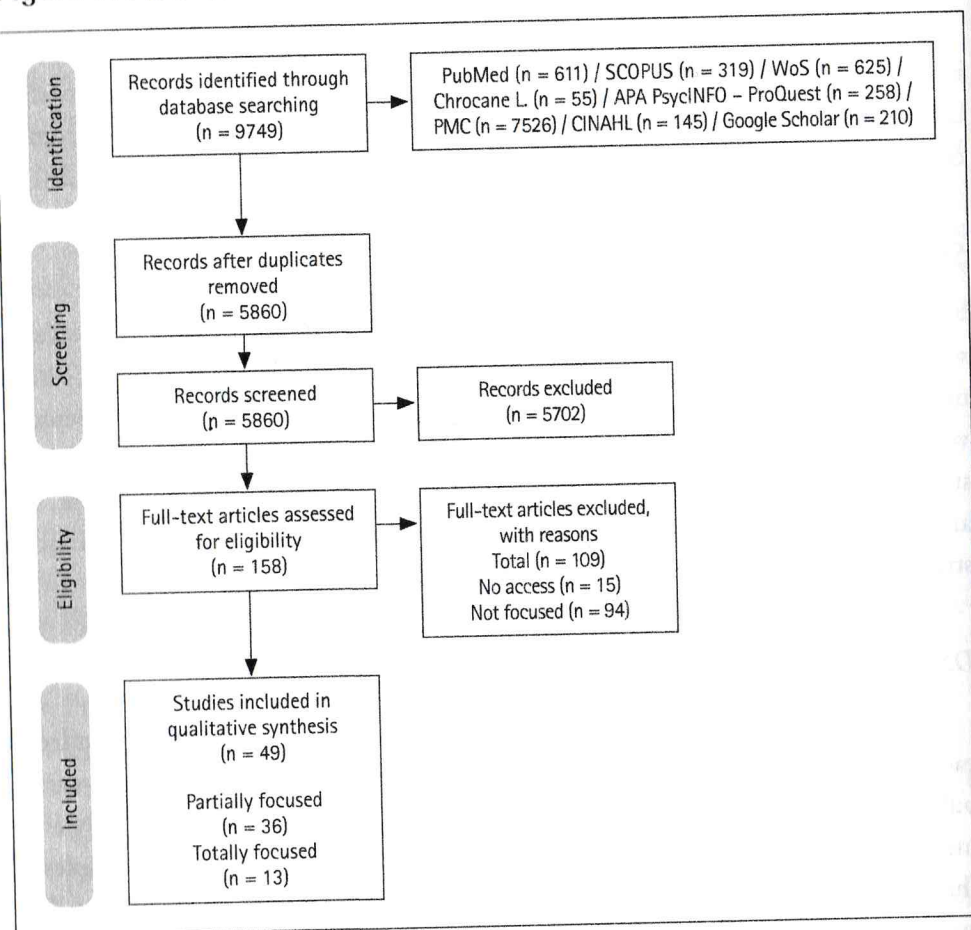
A designed and structured form was used to extract pertinent information from each included article according to the study details (e.g., primary author, year of publication, country, language, type) and descriptive data (e.g., design, study aim, methodology, outcome measures, setting, findings, and subjects). The principles of the Noticing, Collecting, Thinking (NCT) inductive model of qualitative data analysis were used to analyse and synthesize the key matters (Friese, 2019). A narrative approach was used to present a thematic synthesis.

Results

Literature search

A PRISMA flow chart was used for reporting the results of the research (Figure 1). The search strategy yielded 9748 results. After duplicate removal, 5860 studies were included for titles and abstracts review. Only 158 studies were eligible for full-text assessment. One hundred and nine were excluded, 15 of them due to inac-

Figure 1. Flow Chart



cessibility and 94 for not being focused on boredom and older adults totally or partially. Finally, 49 studies were included for review; 13 were totally focused on boredom and older adults, and 36 were only partially focused.

Source information

Reviewed studies were conducted from 1954 to 2018, although almost half of them (44.8%) were concentrated between 2012 and 2017. The geographical scope

in which the studies have been carried out is varied, with the United States standing out (34.6%) followed by Spain (8.1%), France (8.1%), the United Kingdom (8.1%), South Africa (6.1%), and Israel (6.1%). Other countries showing less interest in boredom and older adults include Norway, India, Canada, New Zealand, Brazil, Belgium, Cameroon, Japan, Ireland, and Australia. Eighty-five point seven per cent of the works were written in English, 6.1% in Spanish, 6.1% in French, and only 1 study in Portuguese. Studies were primarily scientific papers (79.5%), only 8.1% of the assessed studies were viewpoints, 8.1% were doctoral dissertations, and there were 1 book chapter and 1 report. More than a half (61.2%) have a qualitative design, 26.5% have a quantitative one, and only 12.2% have a mixed design. Studies focused on several settings: nursing homes (38.7%), homes (38.7%), retirement communities (12.2%), daycare centres (4%), hospitals (2%), and rehabilitation centres (2%). Participants in the studies in which data were available were mostly women (61.3%) and the average age was 75.7. Only 26.5% were totally focused on the topic, 73.5% were partially focused on boredom and older adults. The identified key matters were (1) Boredom experience and boredom proneness (16.3%), (2) Boredom, housing, and institutionalization (18.3%), (3) Boredom and retirement (10.2%), (4) Boredom and mental diseases (12.2%), (5) Boredom and mental disorders (14.2%), (6) Boredom, loneliness, and helplessness (10.2%), (7) Boredom and reminiscence (8.1%), and (8) Boredom and leisure (10.2%). In sum, the profile of studies on boredom and older adults corresponds to qualitative scientific papers written in English and published during the last decade, mostly partially focused on the topic, paying special attention to the American paradigm of older adults, overall women over 75 years old, living equally at home and in nursing homes and suffering from boredom because of the setting. A summary of them is presented in Supplementary Material 2.

Narrative summary of key matters

The 8 key matters are presented in a deductive way.

Boredom experience and boredom proneness

The first matter to emerge was the general approach to the experience of boredom in older adults and how prone they are to boredom depending on demographic factors. Cowdry was the first to try a definition of boredom in older adults in 1954 "as a *modern* disease (...) particularly virulent" (p. 112) to which gerontologists must pay attention—one coming from having nothing to do. It has been described as a negative emotion (Hoeyberghs et al., 2018) experienced by two out of three older adults (Pérez Ortiz, 2006). Since boredom directly impacts older adults' mental health, it ranks in the top-10 problems faced by this population group (Bantwal, 2016).

Not every older adult is equally susceptible to boredom, as Cowdry (1954) ventured half a century ago. He estimated that self-aware older adults are more prone to boredom. Pérez Ortiz's study (2006) shows that older adults living in different houses on a rotating basis experience more boredom than those spending all the time in their own home. They are less bored when living as a couple or as a family, and when they act as caregivers of grandchildren or other adults. Concerning gender, boredom in men has to do with leisure, in women with a lack of care opportunities. One study by Gana and Akremi (1998) suggested that women are more prone to boredom than men. Concerning age, Dean (1962) said that people in their '80 and '90 are less prone to boredom. But, in his report, Pérez Ortiz (2006) demonstrated that people after 85 are especially susceptible to boredom.

Some authors claimed that older adults are less prone to boredom than the rest of the people. For example, Dean (1962) thought that boredom is an irritable protest against the social imperative of accommodating others, a consequence of the invasion of one's privacy by others and the interference by others with self-assertion and self-expression. According to his view, interaction with others declines with age, as boredom does as a result. On the other hand, Gana and Akremi (1998) stated that, when ageing, people achieve skills to better control their emotions, manage their time, and decrease their expectancies, which prevents boredom. Finally, Anda (2012) explained that older adults are less prone to boredom because they feel less need for external stimuli and novelty due to changes in their neuronal system. Contrary to this, Conroy et al. (2010) clarified that low levels of

need for cognition and avoidance of situations involving potential life change increased boredom proneness. Dean (1962) even claimed that older adults in her studies deny ever experiencing boredom.

The difference of opinion concerning boredom in older adults makes Bantwal (2016) right in saying that professionals and researchers need to get more familiar with the concept of boredom itself.

Boredom, housing, and institutionalization

An outstanding matter of studies on boredom in older adults is that of how boredom influences the daily lives of older adults depending on the setting. Researchers have paid attention overall to nursing homes (Alves, 2003; Du Toit et al., 2013; Gómez Martínez, 2016; Hikoyeda & Wallace, 2001; Rasquinha & Bantwal, 2016; Roos & Malan, 2012), but also hospitals (Clarke et al., 2017), rehabilitation centres (Clissett, 2001), and retirement communities (Bélanger, 1981).

As Hikoyeda and Wallace (2001) remarked, boredom is "a persistent problem in nearly all facilities regardless of ethnic orientation, capacity, or even the presence of organized activities" (p. 97), but it is even a more complex issue in residential care. Nursing homes induce negative emotional states in the residents including boredom (Alves, 2003; Roos & Malan, 2012). Some causes have been identified in this sense. In some cases, nursing homes do not offer interesting external stimuli, and the chances to engage in meaningful, pleasant, and challenging activities are rare (Alves, 2003; Hikoyeda & Wallace, 2001; Rasquinha & Bantwal, 2016; Roos & Malan, 2012). In other instances, boredom is the result of the residents' reluctance to adhere to such activities (Gómez Martínez, 2016). Lack of companionship and opportunity to care for others is another cause for residents to get bored (Rasquinha & Bantwal, 2016; Roos & Malan, 2012). Finally, repetitive routines and schedules have another part (Rasquinha & Bantwal, 2016). As a result, boredom has a negative impact on the residents' mental health (Alves, 2003; Rasquinha & Bantwal, 2016) and contributes to creating unsafe settings (Roos & Malan, 2012). To overcome boredom in residences, Du Toit et al. (2013) suggest promoting activities of the residents' choice and making nursing homes more homely environments. Three of the articles mentioned (Alves, 2003; Rasquinha & Bantwal, 2016;

Hikoyeda & Wallace, 2001) agree that a change is needed on the part of the staff, managers, policymakers, and families to prevent boredom in nursing homes.

Other settings apart from nursing homes have caught the attention of researchers. For example, Clarke et al. (2017) explored boredom in older adults admitted to hospitals. As explained in their study, "boredom was the most frequently used word to describe the days" (p. 18). These researchers allude to lack of meaningful activities, dissatisfaction with occupational engagement, hospital routines, and personal limitations as the main causes for boredom. Boredom is thought to lead to mental issues, but also "poorer outcomes such as reduced treatment adherence, longer hospital admissions, increased readmission rates and functional decline" (Clarke et al., 2017, p. 20). Things being so, occupational therapists play an important preventive role to avoid boredom (Clarke et al., 2017).

One another study was on bored older adults in rehabilitation centres (Clissett, 2001). Pérez Ortiz (2006) described that, when impaired, older adults report being bored very often. According to Clissett (2001), boredom is not the consequence of a lack of activity, but loneliness. Boredom affects negatively rehabilitation itself, so it is necessary to implement interaction-based recreational opportunities.

Contrary to these approaches, Bélanger (1981) wrote on retirement communities as a setting in which boredom is less prominent in older adults.

Boredom and retirement

The experience of boredom after retirement and its implications in terms of health was a topic of research from the '60 to the '80. The inability to deal with the boredom of having nothing to do or not knowing what to do after retirement, especially lower-class men (Still, 1961; Strahan, 1980; Van Slambrook, 1968) was understood among as a cause of a shortened life expectancy (Still, 1961), depression (Calvo Melendro, 1971; Strahan, 1980; Van Slambrook, 1968), apathy (Van Slambrook, 1968), and even suicidal ideation (Calvo Melendro, 1971) and death (Still, 1961). A recent study by Hervé et al. (2012) notes that now boredom attacks especially people who retire before the age of 60.

Boredom and mental diseases

Several studies focus on the relationship between boredom and dementia. A first paper on this subject was published in 1998 by Buettner. The author explained that during 63% of the time residents living with dementia were unoccupied, which clearly leads to boredom. Buettner claimed that the teams must be trained to reduce boredom by adapting the environment to the needs of their patients. A decade later, Cohen-Mansfield *et al.* (2011) concluded that boredom leads to upsetting delusions and confabulations in patients with dementia. In 2012, Cohen-Mansfield and Golander correlated boredom with hallucinations in these patients. In 2015, Cohen-Mansfield *et al.* pointed out loneliness as responsible for boredom. Finally, in 2018, Cohen-Mansfield and Jensen called attention to the problematic, agitated behaviour derived from boredom in older adults living with dementia. Sometimes patients are "too ill to [engage] in activities, or [do not want] to be involved in these" (Spencer et al., 2003, p. 3), so it is a responsibility of the centre to involve patients in activities and prevent boredom.

Boredom and mental disorders

Some works state that boredom correlates with mental well-being – cognitive decline (Conroy et al., 2010), psychological frailty (Hoeyberghs et al., 2018), and stress (Alves, 2003). Two mental disorders and two behavioural disorders are at the fore concerning boredom in older adults: depression (Danis, 2012; Ejaz et al., 1997) and anxiety (Losada et al., 2015; Snellgrove et al., 2013), on the one hand, and gambling (Clarke & Clarkson, 2008; Hagen et al., 2005) and suicidal behaviour (de Souza Minayo et al., 2016), on the other.

Boredom, loneliness, and helplessness

Since Dr. Bill Thomas, CEO of The Eden Alternative (TEA) described boredom in 1991 as one of the three plagues of the residential life, together with loneliness and helplessness, some researchers have addressed boredom specifically from the philosophical approach of TEA. According to TEA, boredom is defined as

“the pain felt when an individual’s life lacks variety and spontaneity” (Bergman-Evans, 2004, p. 29; Slama & Bergman-Evans, 2000, p. 39) which adversely affects the quality of life of older adults. Its suffering “causes emotional impairments above and beyond the impact of health problems associated with old age” (Thomas et al., 2014, p. 34). The antidote to boredom proposed by TEA is to ensure older adults’ freedom to choose meaningful activities (Bergman-Evans, 2004), discarding “strict routines, allowing variety and spontaneity based on real-life situations” (Thomas et al., 2014, p. 36), and leaving space for creativity, challenges, and growth for both inmates and caregivers. In line with The Eden Alternative principles, a home-like environment is a key factor to prevent boredom (Thomas et al., 2014).

Two other studies have analysed the relationship between two of the three plagues: boredom and loneliness. Cohen-Mansfield et al. (2016) noted that boredom caused loneliness in older adults and vice versa, and that both states needed to be addressed jointly. Power et al. (2017) supported this conclusion noting that engagement in activities was able to overcome both negative and interconnected feelings at once.

Boredom and reminiscence

Older adults tend to use reminiscence when their environment is under-stimulating and they lack engagement in goal-directed activities (Cully et al., 2001; El Haj & Antoine, 2016). The use of reminiscence to reduce boredom consists of refreshing bitter memories. This is something that happens especially among Alzheimer’s disease (AD) institutionalized patients who complain about monotony, time stagnation, and boredom because of a reduced social network (El Haj & Antoine, 2016). It is also common among individuals with negative psychological functioning (depressed, anxious) (Cully et al., 2001; Hofer et al., 2017) who are unable to achieve self-continuity, social bonding, and guidance (Hofer et al., 2017). Older adults prone to boredom are also prone to use reminiscence in this manner (Mezred et al., 2006). Boredom reduction is a negative function of reminiscence (Hofer et al., 2017) since it usually causes psychological distress and may lead to increase negative psychological functioning (Cully et al., 2001).

Boredom and leisure

The last subject to emerge was boredom, leisure time, and leisure education as a means for older adults to learn how to fill their time with meaningful activities to escape boredom both at home and in institutions.

Concerning the first setting, increased leisure time (Still, 1957) and difficulties in balancing and managing such a time (Stanley *et al.*, 2017) have made researchers think that there is not enough leisure education for older adults to know how to engage in activities. Still (1957) claimed more than half a century ago that “people must be educated in creative activities in art, science, and education” not to be victims of “the new psychosocial disease of boredom” (p. 557). Sixty years later, Stanley et al. (2017) were still claiming the same. If boredom is a health issue, “society must provide stimulus and opportunities for creative, purposeful living” (Still, 1957, p. 557), as well as leisure education (Stanley et al., 2017). However, this is easier said than done. Individual-centred interventions are key to overcome boredom and promote successful ageing, as Bantwal (2016) said, but how to put this into practice is still in its infancy.

The problem is extendable to institutionalized older adults. To design a leisure program capable of preventing boredom and engaging people in activities is a challenging task. It must consider residents’ “abilities and skills, the heterogeneity of interests, available resources, and the mission of the facilities themselves” (Hikoyeda & Wallace, 2001, p. 102). Two studies have delved into this issue. Searle et al. (1995) tested an experimental program to demonstrate that leisure boredom in older adults could be reduced by a leisure education program to assess residents’ interests, obstacles, and constraints, and determine adaptations as necessary to ensure continued participation in activities. Some years later, Dr. Thomas et al. (2013) stated that leisure activities in residential institutions have proved to be the best antidote to boredom, especially when the staff, managers, doctors, family, and friends are completely involved. A good program, they suggested, should include solitary and social activities.

Currently, Artificial Intelligence (AI) has become a promise to help detect emotions and provide reliable services to older adults based on their states. Yu et al. (2015) are the first to explore this possibility with boredom. They published a

study explaining that Brain Computer Interfaces (BCI) and the AWARE system they have developed will be able to address the problem of boredom in older adults through an Entertainment module that reduces boredom by playing the user's favourite music, connecting Skype, or displaying videos when technology detects the subject is bored. This might be the perfect complement to *traditional* leisure programs and education.

Discussion and Implications

Summary of principal findings

This scoping review was conducted to explore literature reporting the problem of boredom in older adults. It aimed to provide researchers a comprehensive conceptual map on the state of studies on boredom and ageing from which to start designing boredom-focused prevention plans, offering a narrative disclosure of subjects on which research on boredom in older adults have focused the attention so far, and identifying current knowledge gaps regarding the issue based on the analysed literature. To our knowledge, this is the first literature review to assess the extent of evidence around this topic.

This systematic review identified 49 works assessing the issue of boredom in older adults, 13 of them totally focused on this topic, and the rest only partially focused. Within the literature reviewed, differences in dating, geographical scope, focus, design, and subject were identified, which indicates a heterogeneous body of literature across disciplines, countries, and years. However, the main profile of studies on boredom and older adults was identified. It corresponds to qualitative scientific papers written in English and published during the last decade, mostly partially focused on the topic, paying special attention to the American paradigm of older adults, overall women over 75 years old, living equally at home and in nursing homes and suffering from boredom as a consequence of the setting conditions.

Studies reviewed represent an expansion of knowledge across several themes during the last 60 years: (1) Boredom experience and boredom proneness, (2) Boredom, housing, and institutionalization, (3) Boredom and retirement, (4) Bore-

dom and mental diseases, (5) Boredom and mental disorders, (6) Boredom, loneliness, and helplessness, (7) Boredom and reminiscence, and (8) Boredom and leisure.

Some trends are worth highlighting. For example, the works published in the last century (1954–1998) show a researcher's preference for the couple boredom and retirement (3). At the beginning of the new millennium, the outstanding subjects were (2), (5), (6), and (7), and retirement stopped being important for the researchers. During the last decade, all subjects have caught the attention of researchers, but (1), (2), (4), and (5) predominate. This shows an increasing interest in the phenomenon of boredom itself and its experience and how it affects people living in different settings, especially regarding its correlation to mental diseases and mental disorders. Boredom has just started to be taken seriously as a risk factor for older adults' well-being.

Furthermore, although the predominance of interest in this issue has always been in United States, from 2001 to 2010 other European countries such as the United Kingdom (at the time), France, and Spain started paying attention to the importance of boredom in older adults, as well as Japan in Asia, New Zealand in Oceania, and Israel in the Middle East. During the last decades, many other countries are in the spotlight, standing out South Africa. Among the above-mentioned countries in which studies on boredom and older adults have been carried out in an outstanding way, the interest in the different topics is distributed as follows: countries such as Norway and Belgium paid attention to the general experience of boredom and boredom proneness (1); this was also important for Israel, France, Spain, and India; South Africa and the United Kingdom conducted research mainly on boredom, housing, and institutionalization (2), as well as Japan, India, and Canada; however, Canada focused more on leisure (8), as Australia did; reminiscence (7) caught the attention of Cameroon and overall France, but the latter also studied boredom after retirement (3), together with Spain; this last country recently turned its gaze to the relationship between boredom and mental disorders (5), as the United Kingdom, Brazil, and New Zealand; researchers in the United Kingdom and Ireland also studied the correlation between boredom and mental diseases (4); South Africa and Israel took over from the Americans to study the three plagues that are boredom, loneliness, and helplessness (6). Of course, as most of

the works come from the United States, all these themes have been explored from American settings once and again.

Despite the variety of countries, dates, and focuses, the emergence of common claims evidence there is a general, shared concern about the consequences of being bored and how to prevent or avoid it. Except for three studies (Anda, 2012; Dean, 1962; Gana & Akremi, 1998), all works remarked that state-boredom and boredom proneness are risky for older adults. In the 1950s, it was understood as a psychosocial disease (Cowdry, 1954; Still, 1957) and, more recently, it is widely accepted as a negative emotion (Hoeyberghs et al., 2018) that affects around 60% of older adults (Pérez Ortiz, 2006), ranking number seven in the top-10 of the most important setbacks, according to a HelpAge India report (Bantwal, 2016).

Many triggers for boredom in older adults have been stated in the literature reviewed. Boredom proneness is one of them (Conroy et al., 2010), but also demographic factors (Pérez Ortiz, 2006) and especially the environmental ones. The setting appeared as truly important to understand the experience of boredom. Residential life has been identified as one of the major determinants of boredom (Alves, 2003; Du Toit et al., 2013; Gómez Martínez, 2016; Hikoyeda & Wallace, 2001; Rasquinha & Bantwal, 2016; Roos & Malan, 2012), although it is also a problem for those hospitalized (Clarke et al., 2017), attending rehabilitation centres (Clissett, 2001), and even living at their own homes. The latter especially due to loneliness (Clissett, 2001; Rasquinha & Bantwal, 2016; Roos & Malan, 2012) and lack of activity after retirement (Hervé et al., 2012; Still, 1961; Strahan, 1980; Van Slambrook, 1968)—except for those living in retirement communities (Bélanger, 1981). However, loneliness was also a problem in the rest of the mentioned facilities (Bergman-Evans, 2004; Cohen-Mansfield et al., 2016; Power et al., 2017; Slama & Bergman-Evans, 2000; Thomas et al., 2014).

The root of the problem is in the lack of meaningful activities (Alves, 2003; Clarke et al., 2017; Hikoyeda & Wallace, 2001; Rasquinha & Bantwal, 2016; Roos & Malan, 2012), the absence of variety and spontaneity (Bergman-Evans, 2004; Clarke et al., 2017; Rasquinha & Bantwal, 2016; Slama & Bergman-Evans, 2000; Thomas et al., 2014), and the lack of companionship (Clissett, 2001; Rasquinha & Bantwal, 2016; Roos & Malan, 2012). This also applied to people living with dementia in different kinds of institutions (Buettner, 1998; Cohen-Mansfield

et al., 2011; Cohen-Mansfield & Golander, 2012; Cohen-Mansfield et al., 2015; Cohen-Mansfield & Jensen, 2018; Spencer et al., 2003).

The majority of researchers agreed that boredom has a negative impact on the older adults' mental health (Alves, 2003; Calvo Melendro, 1971; Clarke & Clarkson, 2008; Conroy et al., 2010; Danis, 2012; de Souza Minayo et al., 2016; Ejaz et al., 1997; Hagen et al., 2005; Hoeyberghs et al., 2018; Losada et al., 2015; Rasquinha & Bantwal, 2016; Snellgrove et al., 2013; Still, 1961; Strahan, 1980; Van Slambrook, 1968), physical well-being (Still, 1961), and contributes to creating unsafe settings (Clarke et al., 2017; Roos & Malan, 2012; Snellgrove et al., 2013). In sum, boredom adversely affects the quality of life of older adults.

Many studies included in this review highlighted the importance of investing in leisure education (Stanley et al., 2017; Still, 1957) and leisure programs (Hikoyeda & Wallace, 2001; Searle et al., 1995; Thomas et al., 2013) to fight against boredom inside and outside the residences, pointing out that activities must be always of the older adults' choice and preferences (Bergman-Evans, 2004; Du Toit et al., 2013; Slama & Bergman-Evans, 2000; Thomas et al., 2014) and that everybody surrounding the older adult must be committed on them (Alves, 2003; Rasquinha & Bantwal, 2016; Hikoyeda & Wallace, 2001). Some studies observed that for this to happen it is necessary a move beyond a task-focused orientation (traditional, biomedical model of care) to a person-centred focus where older adults direct their own care needs as leaders (Bantwal, 2016; Thomas et al., 2014), as proposed by 'The Eden Alternative philosophy. This is perhaps so difficult to achieve that one study preferred to trust technology to offer the activities that AI presumes are going to help to escape boredom (Yu et al., 2015). This will always be better than avoiding boredom through the reminiscence of bitter memories, which some studies agree that causes psychological distress and may lead to increase negative psychological functioning (Cully et al., 2001; El Haj & Antoine, 2016; Hofer et al., 2017; Mezred et al., 2006).

Although some common lines run through a large part of the studies analysed, this systematic review showed that current scientific literature on boredom and ageing is scarce and scattered and does not allow to comprehensively understand and address boredom in older adults depending on the particular circumstance. More empirical research needs to be conducted in different countries and settings

to better understand the experience of boredom in older adults, its causes and consequences, and older adults' self-perception of boredom. Likewise, research needs to be focused on boredom specifically and not as a correlated phenomenon. Very few studies focus totally on boredom and ageing, and, among them, the majority are old theoretical viewpoints. This is something that needs to be addressed in the coming years so that we can work on boredom-focused prevention models to be applied and evaluated in different settings and situations.

Strengths and weaknesses

The main strength of this review is the exhaustive nature of the literature research. It included studies in five different languages without type and time restrictions. It is quite unusual for systematic reviews to include articles over such a long period as the relevance of this literature might become debatable. The most relevant bibliographic databases for biomedical research were searched. Additionally, searches were performed in specific grey literature sites. I utilized a broad search strategy with an extensive list of contexts and domains related to boredom in older adults screening to include all relevant studies. The titles, abstracts, and articles were independently assessed by two different reviewers, and inclusion was based on the consensus of both reviewers. Together, we were able to identify, appraise, and examine the existing literature on boredom in older adults to explore what is known about this complex phenomenon so far and provide an accurate state of affairs to pave the way for future research.

As regards weaknesses, it is important to acknowledge that it was not possible to access some works even after having been included for full assessment. They seemed to be relevant, but the date of publication ('70-'80) made at times impossible for the inter-library loan service to get the copies. Furthermore, this review did not identify the sources of unpublished works. Also, studies reported in other languages than English, Spanish, Portuguese, French, and Italian were excluded due to authors' language limitations. Not included were personal narratives, government documents, review books, or policy papers that reported on older adults' experiences of boredom. Finally, several sources were not peer-reviewed, thereby threatening the internal validity of the findings. While the review was broad, some

relevant studies may have been omitted. Despite these limitations, the review does provide important insight on the state of studies on boredom and ageing.

Implication for practice and research

By discussing the key subjects identified within this review, useful implications for practice and patient care may be gained. Healthcare professionals, especially primary care nurses, are in key positions to identify and help people at increased risk of getting chronically bored. Rigorous study designs are needed to verify and evaluate the real experience of boredom reported by older adults themselves living in different settings and under a variety of conditions. Researchers must consider boredom in an isolated manner when designing their studies to help healthcare professionals with providing necessary therapeutic support.

Conclusion

One of the main goals of the civil society is to ensure the physical and mental well-being of older adults. In the past, ageing used to be perceived as a state of illness or abnormality due to the biological deterioration that accompanies it and was treated according to purely medical criteria. The new ecological view of ageing shows that physical and cognitive decline in older adults can also be attributed to environmental conditions. Researchers have shown that loneliness and helplessness are two of those contextual factors that play against optimal ageing. Is boredom also a risk factor? The answer is yes, but perhaps research conducted on boredom and ageing is scarce and scattered because, for many healthcare professionals and researchers, boredom is not considered a serious issue yet.

In a private conversation with Josep de Martí, CEO and Director of *inforesidencias.com*, the largest search engine for residences in Spain, he told me that the first time he had heard that boredom was a problem in older adults being studied by some researchers, he thought it must be a joke. For better or worse, the COVID-19 pandemics has placed older adults in the sights of everybody, revealing that boredom is a serious problem that most of them face daily. This has become a good time to promote boredom studies in the gerontological and geriatric fields,

and we should pursue this destination since this review has highlighted the limited research conducted in the area.

In other words, as this review demonstrated, after so many decades we can state, without any fear of being mistaken, that we know almost nothing about boredom in older adults. This scoping review provides a comprehensive summary of the state that will allow us and others to define new research areas, e.g., boredom in older adults' caregivers. The next step for us will be to conduct the first empirical study to determine how is boredom experienced and addressed in older adults living in Spain.

Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Supplementary Material 1. Search Strategy

PubMed		
	(Boredom*) AND (Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*)	611
S1	(Boredom*) AND (Aging* OR Ageing*)	65
S2	(Boredom*) AND (Elderly*)	480
S3	(Boredom*) AND (Old age*)	2
S4	(Boredom*) AND (Old people*)	1
S5	(Boredom*) AND (Retiree*)	2
S6	(Boredom*) AND (Nursing-home*)	45
S7	(Boredom*) AND (Geriatrics*)	36
S8	(Boredom*) AND (Gerontology*)	13

SCOPUS		
	(TITLE-ABS-KEY [Boredom*]) AND (TITLE-ABS-KEY [Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*])	319
S1	(Boredom*) AND (Aging* OR Ageing*)	81
S2	(Boredom*) AND (Elderly*)	105
S3	(Boredom*) AND (Old age*)	32
S4	(Boredom*) AND (Old people*)	27
S5	(Boredom*) AND (Retiree*)	5
S6	(Boredom*) AND (Nursing-home*)	54
S7	(Boredom*) AND (Geriatrics*)	12
S8	(Boredom*) AND (Gerontology*)	2

WoS		
	SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH (Boredom*) AND (Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*)	625
S1	(Boredom*) AND (Aging* OR Ageing*)	534
S2	(Boredom*) AND (Elderly*)	30
S3	(Boredom*) AND (Old age*)	20
S4	(Boredom*) AND (Old people*)	18
S5	(Boredom*) AND (Retiree*)	2
S6	(Boredom*) AND (Nursing-home*)	19
S7	(Boredom*) AND (Geriatrics*)	0
S8	(Boredom*) AND (Gerontology*)	2

Cochrane Library		
	(mp = title, short title, abstract, full text, keywords, caption text [Boredom*]) AND (mp = title, short title, abstract, full text, keywords, caption text [Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*])	55
S1	(Boredom*) AND (Aging* OR Ageing*)	48
S2	(Boredom*) AND (Elderly*)	4
S3	(Boredom*) AND (Old age*)	0
S4	(Boredom*) AND (Old people*)	0
S5	(Boredom*) AND (Retiree*)	0
S6	(Boredom*) AND (Nursing-home*)	1
S7	(Boredom*) AND (Geriatrics*)	2
S8	(Boredom*) AND (Gerontology*)	0

APA PsycINFO - ProQuest		
	(All fields [Boredom*]) AND (All fields [Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*])	258
S1	(Boredom*) AND (Aging* OR Ageing*)	95
S2	(Boredom*) AND (Elderly*)	54
S3	(Boredom*) AND (Old age*)	11
S4	(Boredom*) AND (Old people*)	0
S5	(Boredom*) AND (Retiree*)	5
S6	(Boredom*) AND (Nursing-home*)	21
S7	(Boredom*) AND (Geriatrics*)	18
S8	(Boredom*) AND (Gerontology*)	54

PMC		
	(All fields [Boredom*]) AND (All fields [Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*])	7526
S1	(Boredom*) AND (Aging* OR Ageing*)	1124
S2	(Boredom*) AND (Elderly*)	4205
S3	(Boredom*) AND (Old age*)	449
S4	(Boredom*) AND (Old people*)	141
S5	(Boredom*) AND (Retiree*)	23
S6	(Boredom*) AND (Nursing-home*)	1106
S7	(Boredom*) AND (Geriatrics*)	200
S8	(Boredom*) AND (Gerontology*)	279

CINAHL		
	(All fields [Boredom*]) AND (All fields [Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*])	145
S1	(Boredom*) AND (Aging* OR Ageing*)	18
S2	(Boredom*) AND (Elderly*)	16
S3	(Boredom*) AND (Old age*)	46
S4	(Boredom*) AND (Old people*)	1
S5	(Boredom*) AND (Retiree*)	1
S6	(Boredom*) AND (Nursing-home*)	36
S7	(Boredom*) AND (Geriatrics*)	25
S8	(Boredom*) AND (Gerontology*)	2

Google Scholar		
	(Boredom*) AND (Aging* OR Ageing* OR Elderly* OR Old-age* OR Old-people* OR Retiree* OR Nursing-home* OR Geriatrics* OR Gerontology*) [Manually added by TITLE-PREVIEW]	210