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The perspective of different age groups regarding old age and aging in highly aged contexts

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ABSTRACT

The increase in longevity and population aging are the greatest conquest and social challenge that we face in this century, especially in the most developed countries. Spain is, currently, one of the oldest countries in the European Union and it is expected that in 2050 it will be the oldest country in the world, second only to Japan, with the region of Galicia (located in the northwest of this country) being one of the most highly aged contexts, with a rate of people over 65 years old well over 24%.

In the light of this demographic transition, which some see as a threat to the general wellbeing of society, it becomes particularly urgent to study the social representations of aging.

Thus, the main goal of this paper is to assess the attributions, attitudes and knowledge around aging that circulate in highly aged contexts. With this purpose in mind, 445 adults were selected, stratified by age (young people, middle-aged people and older adults) and provided with a selection of tools to assess their knowledge, stereotypes and attributions regarding aging and old age.

The results indicate that attitudes towards aging itself are negative, becoming more negative as we age. In a similar way when analyzing attitudinal biases towards aging, a mostly negative tendency is observed. Besides, the level of knowledge about aging is very low in all participants, especially in younger groups. The findings imply that these result could be used to design, implementation and evaluation of anti-ageist programs.

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1. Introduction

Demographic aging and individual longevity are both the greatest conquest and the greatest challenge we must face this century within developed countries.

We are thus witnessing an unprecedented world phenomenon of demographic aging that not only affects developed countries, but also developing nations and regions, where the increasing number of older adults is also significant (United Nations, 2017). The demographic group over 60 is growing at a rate of approximately 3% per year, with Europe currently being the oldest continent in the world (25%) (United Nations, 2017), and Spain as one of the oldest countries in the European Union (Eurostat, 2018).

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Galicia, on the other hand, is positioned amongst the three regions with the oldest population in Spain (Abellán & Pujol, 2015). In the year 2016, 18.6% of the Spanish population, and 24.3% of the Galician population were 65 or older (Abellán, Ayala, & Pujol, 2017). Furthermore, two of the four provinces of the Galician region, Ourense and Lugo, take the first and third position in the list of Spanish provinces with the highest aging rates – 294.71 and 270.80 respectively – (National Institute of Statistics, 2017), also topping the list of oldest provinces in Europe.

In the light of this demographic transition it becomes necessary to study the social representations regarding aging held by the population. In this new context, where people live longer, and family models and social roles are changing, social discrimination for reasons of age is more likely to become prevalent, which also implies important consequences for the social protection, general wellbeing and access to health care and other public services for older adults, especially in order to ensure the rights of the older adults within our societies.

Usually, the attributions or social representations towards aging reflect a distorted vision of it, emphasizing the aspects that link it to pathology and fragility (De Freitas & Ferreira, 2013), ignoring that, although deficits and changes occur, these can also mean growth, adaptation or maintenance. Thus, for example, although some types of memory decline with age, such as the executive or episodic, others like the sensory hardly change or even others such as semantics can improve (Ballesteros Jimenez, 2017; Mesonero & Fombona, 2013).

Ageism and discrimination for reasons of age are the terms most often used by scholars to define negative attitudes towards people due to their age, whether it is young or old (Kydd & Fleming, 2015). The term "ageism" refers to any age (Castellano & De Miguel, 2010a); although the most ingrained age stereotypes are those directed towards the older adults, some authors claim it is necessary to specify the age group they are referring to (Greenberg, Schimel, & Mertens, 2002). There are also some who understand that ageism refers to the prejudiced and unfavorable attitudes individuals hold towards older adults than 50 (Islam, 2016).

Ageism reinforces a negative image of older adults as frail and dependent, with their cognition and physical state deteriorated (Braithwaite, 2002; De Freitas & Ferreira, 2013), which in turn causes older persons to interiorize the stereotype and perceive their own health, cognition, ability and general wellbeing as worse than it actually is (Kornadt & Rothermund, 2012; Molden & Maxfield, 2016).

There is proof that ageism implies clear discriminatory behavior towards older adults in multiple contexts, including the social, the economic, the health care, the cultural and even the quality of the care (Gibney, Moran, Ward, & Shannon, 2017; Rippon, Keneale, De Oliveira, Demakakos, & Steptoe, 2014; Rippon, Zaninotto, & Steptoe, 2015; Robertson & Weiss, 2017; Rogers, Thraser, Miao, Boscardin, & Smith, 2015). Older adults also suffer discrimination with regards to getting promoted at work (Abrams, Swift, & Drury, 2016; Stypinska & Turek, 2017; Topgul, 2016), as well as in the media, where they are underrepresented and portrayed under a negative light (Ozmen, 2013). In addition, aged individuals also feel discriminated for aesthetic reasons, fearing their loss of physical attractiveness and youth (Hummert, 1994; Jesmin, 2014; Richards, Warren, & Gott, 2012), and having to suffer from elderspeak – an abusive, patronizing form of communication – from the institutions and healthcare professionals (Cammer-Paris & Breznay, 2011; Schroyen et al., 2018), which also employ an ageist language, engrained both in explicit behaviors and implicit attitudes (Gendron, Welleford, Inker, & White, 2016).

Nevertheless, although information is not a unique and sufficient condition, it seems that an adequate level of knowledge about aging is associated with a better understanding of this phenomenon, as well as with more favorable attitudes towards older adults (Suh, Choi, Lee, Cha, & Jo, 2012). In addition, in the case of older adults, the fact of having more knowledge is related to higher levels of satisfaction with life (Jeon & Shin, 2009). However, studies consistently indicate that the level of knowledge of the population about aging is poor (Darling, 2016; Gable, Searl, & Fulk, 2003).

Research on these topics was particularly important during the 1960s and 1970s; however, this interest decreased until recent years, where it has peaked again (Castellano & De Miguel, 2010b; De Paul & Larrion, 2005). We searched the term "ageism" (search in title of the document) in the Web of Science database and we found 595 results between 1969 and 2017, with a significant increase in the number of publications from the year 2000 onward (442 results). These promising results are still much behind the scholarly interest devoted to sexism (1372 results) or racism (5873). Despite the increasing interest of researchers on the topic, there are still very few studies conducted in Spain, and virtually none that address ageism from the perspective of different age groups. On the basis of this state of the art, the main goal of this paper was to assess the attributions, attitudes and knowledge around aging held by different age groups within highly aged contexts.

2. Method

2.1. Participants

The target population of this study comprises every person over 18 residing in Galicia. Through a multistage sampling scheme, stratified by province, town, sex and age group, a sample integrating 455 participants was selected. For the primary sample units (the provinces) we opted for a random procedure; for the secondary units (towns), we combined both random and intentional procedures, and for individuals we chose a snowball sampling approach with sex and age quotas.

For the selection of primary unit samples, Lugo and Ourense were randomly chosen amongst the four provinces in Galicia. The towns studied were also selected at random, considering, however, that it was necessary to intentionally include the capitals of the provinces of Lugo and Ourense due to the size of their population and their statistic representativeness, while trying to build a comparable sample with both small and bigger towns, including rural and urban municipalities.

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Table 1
Average age of participants by age group.

	n	Percentage	Average	Sx
Young people (18–35)	145	32.60%	25.23	4.60
Middle-aged people (36–64)	154	34.60%	47.63	7.29
Older adults (65 or older)	146	32.80%	74.20	7.18
Total sample	445	100%	49.05	20.88

Source: Municipal census (2017).

For the definition of the three age groups we followed the prevalent criteria employed in sociological research, which classifies adults in young, middle-aged and older adults stemming from generational approaches (Lüscher, Liegle, & Lange, 2009). For the purpose of this study, we defined young people as those between 18 and 35 years old, following demographic studies with sociological tendencies (Galais, 2012); for the definition of the group of older adults we used the criteria of social age, integrating individuals who were 65 or older (García Férez, 2003). Finally, for the category middle-aged we followed age criteria which included individuals between 36 and 64 years old.

The category of young participants represented 32.6% of the total with 145 individuals; middle-aged, 34.6% with 154 subjects; and older adults amounted 32.8% of the total with 146 individuals (see Table 1). With regards to sex, 42.4% were men and 57.6% of women, with a majority of women in all age groups.

2.2. Instruments

For data gathering participants were provided with an integrated questionnaire which assessed attributions, the cognitive component of attitudes (stereotypes) and knowledge about aging. Several questions about the demographics of the participants were also included. The aforementioned evaluation tool included the following instruments:

- *Reasons why a person has reached their old age (REV)*; It is an item adapted from the study CIS n° 2.758, Barómetro de marzo de 2008, (Centro de Investigaciones Sociológicas, 2008). Individuals must signal, choosing a maximum of two answers in five, the reasons why they consider a person has reached their old years. This tool allows us to determine the attributions or diagnostic features which are utilized to categorize an older adults.

- *Attitudes Towards Own Aging Subscale (AHPE-PGCMS)*. Taken from the Philadelphia Geriatric Center Moral Scale (Lawton, 1975), it has been used in previous research projects (Levy, Slade, Kunkel, & Kasl, 2002; Liang & Bollen, 1983) to measure the perception of aging well. It comprises five items: the first four with dichotomous reply options and the fifth with three possible answers. The total score vary between 0 and 5; the higher the score, the better the perceptions around aging.

Questionnaire of negative attributes of old age and positive potential in old age (*AN- PP*; Morgan & Bengtson, 1976), Spanish version by Castellano and De Miguel (2010b). Participants must express their level of agreement or disagreement with the fourteen statements that integrate the questionnaire, following a Likert-type scale of four points (completely disagree = 0, slightly disagree = 1, slightly agree = 2 and completely agree = 3).

This instrument evaluates the stereotypes towards aging (cognitive component of attitudes). The exploratory factor analyzes (by main components with first order oblimin rotation) made by Castellano and De Miguel (2010b) confirm a bifactorial structure of the test, already indicated by Morgan and Bengtson (1976). The first factor, formed by 10 elements, was named by the authors positive Potential and positive personal characteristics of older adults, and the second, negative social characteristics of old age.

- *The facts on aging Quiz-1* in a multiple-choice format (FAQ-1; Palmore, 1998). The questionnaire comprises twenty- five multiple choice questions with 4 possible answers, which allow us to obtain 4 measures: one to determine the level of knowledge, and 3 of attitudes. Each item has a correct option and three incorrect, oscillating its score between 0 and 25 points, the higher the score, the higher the knowledge. The incorrect options include a mixture of negative (anti-age), positive (pro-age), and neutral responses. Its analysis allows us to obtain three additional measures: the positive attitudinal bias, the negative and the net attitudinal tendency. A positive bias score was calculated by adding the number of items answered positively (instead of correctly) to the total number of items that had positive-attitude response options (13 items). A negative bias score was calculated by adding the number of items answered negatively to the total number of items containing negative-attitude response options (18 items). For the calculation of the net attitudinal trend, the positive and negative items are subtracted. A further description of the proofreading and interpretation process can be seen in Palmore (1998).

- In addition, to measure self-perceived knowledge a question was included with three response options (1 = low, 2 = medium and 3 = high).

- Sociodemographic data: this section gathers information regarding age, sex, family status, cohabitation with and care of aged people, work status, political views, beliefs and religious practices, and self-perceived knowledge regarding old age and aging.

2.3. Procedure

The field work took place between September 2016 and April 2017 and it was conducted by a research team of people with higher education and a healthcare background, specifically trained to conduct the field study. Afterwards, the team of researchers went to the municipal stratum unit where socio-health professionals from the area were contacted, who provided them with a list of key informants and in turn they nominated and proposed other individuals from the population under study.

All participants were provided with the same questionnaires, which were completed individually. In addition, the principles of APA's ethics in research with human participants were taken into account (Baltes, Reese, & Nesselroade, 1981), so all subjects were informed about the nature of the research and asked for their consent and truthful collaboration, letting them know that all informa-

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tion gathered would be dealt with in a confidential manner. Only 2% of the people selected for the study refused to participate.

2.4. Design

It is a cross-sectional descriptive design. These designs are widely used in research and aim to describe variables in a group of participants for a period of time (usually short), without including control groups (Manterola & Otzen, 2014). As dependent variables the own procedures of the questionnaires were used, and as an independent variable we utilized the stratification by age group: young, middle-aged and older adults.

2.5. Data analysis

In order to analyze the data gathered we opted for a univariate descriptive analysis – both statistical measures of central tendency and dispersion (averages and standard deviations), analysis, frequencies and percentages –, and analytical contrasts through analysis of variance (ANOVA), t student, chi-squared and Pearson correlation coefficient; for the contrasts a posteriori we chose Tukey's method. For all of that we used SPSS statistical package for the social sciences in its 19th version for Windows.

3. Results

3.1. Socio-demographic characteristics by age

As explained before, for the purpose of empirical verification, the independent variable "age" was classified in three age groups. Based on this variable, as Table 2 shows, no statistically significant difference was detected regarding sex and level of self-perceived knowledge about aging. On the contrary, statistically significant associations were found in the socio-demographic variables that follow, some foreseeable or even expected in relation to participant's belonging to a certain age group, such as the level of education ($X^2{}_2 = 184.85$; $p = .000$), the family status ($X^2{}_2 = 322.83$; $p = .000$) and the work status ($X^2{}_2 = 408.10$; $p = .000$). In this sense, young people have higher levels of training, while older people respond mostly to a profile of married or widowed and retired.

In addition, we found statistically significant differences regarding: cohabitation ($X^2{}_2 = 11.72$; $p = .020$) and care of people aged 65 or older ($X^2{}_2 = 19.72$; $p = .001$); political views ($X^2{}_2 = 33.45$; $p = .000$), religious beliefs ($X^2{}_2 = 112.36$; $p = .000$) and religious practice ($X^2{}_2 = 87.71$; $p = .000$).

3.2. Attributions: reasons that indicate a person has reached their old age

As shown in Fig. 1, all three age groups signal age as one of the main indicators that a person has reached their old age, followed by health deterioration. In addition, intellectual deterioration, physical appearance, being retired or lifestyle were reasons given by all groups to consider somebody has entered their old age. Nevertheless, no statistically significant differences were observed between the various age groups regarding any of the studied features. The indicator groups least associated with aging was people's way of being and/or thinking (see Table 3).

If we analyze this information by age group, we observe a similar tendency with slight differences: for older adults, the main reasons signaled were age (74.1%), health deterioration (53.4%) and physical appearance (52.7%); for middle-aged people, age (64.3%), health deterioration (51.9%) and intellectual deterioration (50.6%); and the reasons given by young people were age (64.1%), health deterioration (43.4%), physical appearance (42.8%) and being retired (42.8%).

3.3. Attitudes towards aging

In this section we will analyze, on the one hand, the attitudes towards aging itself (on oneself) and, on the other hand, attitudes, the attitudinal bias and the net attitudinal tendency towards aging in general.

In relation to attitudes towards aging itself (see Table 4), statistically significant differences were detected regarding attitudes towards own aging, PGCMS scale ($F_{2,444} = 61.03$; $p = .000$) between all three age groups. The post hoc contrasts (Tukey's methods), indicated differences between older adults and young people ($p = .000$), older adults and middle-aged people ($p = .000$) and between young and middle-aged people ($p = .000$). The group of older adults proved to hold a more negative perception of their own personal aging than young people, while young people also have a more positive perception than the middle-aged group.

On the other hand, in relation to attitudes towards aging (questionnaire AN_PP), the scores of the subscale "Negative attributes of old age" presented statistically significant differences between all three age groups ($F_{2,444} = 3.79$, $p = .023$). The post hoc analysis proved that said difference pertained to the groups of young and middle-aged participants ($p = .017$).

To deepen the attitudes towards aging, from the analysis of the response options given to the FAQ-1 questionnaire, the attitudinal bias – positive and negative – and the net attitudinal tendency were determined (see Table 4 for means and standard deviations of groups). In this sense, statistically significant differences were detected between the groups ($F_{2,444} = 6.65$, $p = .001$) with regards to negative attitudinal biases; post hoc analysis showed the existence of differences between the older group and the other two; young ($p = .002$) and middle-aged ($p = .016$). These results indicate the existence of biases or mistakes about cognitive related to facts about aging which lead to a negative view of this life process, greater within younger groups.

Finally, we analyzed attitudinal tendencies, which explain the negative or positive general orientation of attitudes towards aging. In this case, the tendency was negative in all three age groups, and we detected statistically significant differences between them ($F_{2,444} = 2.97$, $p = .049$). Post hoc analysis showed that young participants hold a more negative attitudinal tendency towards aging and its associated processes than older adults ($p = .041$).

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Table 2
Sociodemographic data and questions regarding aging.

	Age 18–35 (n = 145)	Age 36–64 (n = 154)	Age >65 (n = 146)	X^2	Sig.
Sex					
Male	40.00%	46.80%	40.40%	1.77	.412
Female	60.00%	53.20%	59.60%		
Level of education					
Elementary	11.70%	44.20%	87.70%	184.85	.000
Secondary	39.30%	37.00%	9.60%		
Higher education	49.00%	18.80%	2.70%		
Family status					
Single	87.60%	13.60%	9.60%		
Married	11.00%	72.70%	53.40%	322.83	.000
Divorced	.70%	11.70%	3.40%		
Widow/er	.70%	1.90%	33.60%		
Has lived together with someone aged 65 or older	65.50%	79.20%	78.80%	11.72	.020
Has taken care of someone aged 65 or older	40.00%	50.60%	63.70%	19.72	.001
Employment status					
Studies and does not work	34.50%	1.90%	.00%		
Works and does not study	29.00%	66.20%	7.50%	408.1	.000
Studies and works	30.30%	13.60%	.00%		
Neither studies nor works	6.20%	18.20%	43.20%		
Retired	.00%	.00%	49.30%		
Political views					
Right wing	9.10%	18.20%	34.50%	33.45	.000
Center	34.70%	38.60%	38.90%		
Left wing	56.20%	43.20%	26.50%		
Believer	36.60%	68.20%	95.20%	112.36	.000
Practicing					
Practicing believer	16.30%	29.30%	71.70%	87.71	.000
Perceived knowledge					
Low	17.20%	15.60%	13.70%		
Medium	71.00%	75.30%	68.50%	5.73	.220
High	11.70%	9.10%	17.80%		

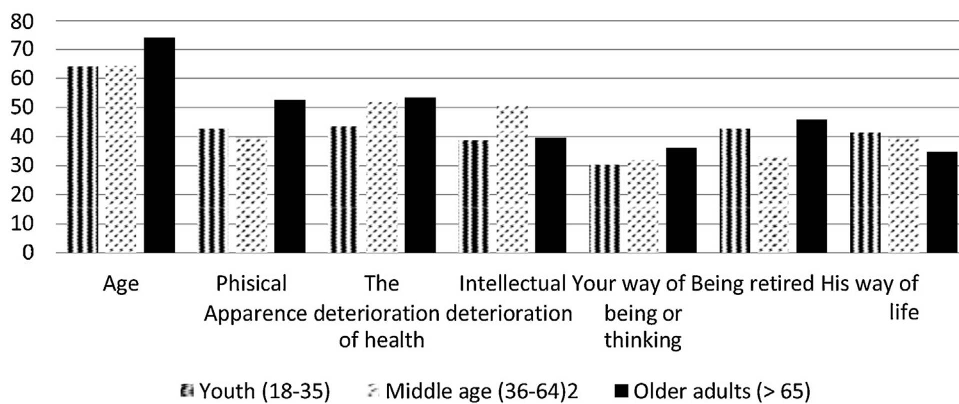

Fig. 1. Reasons why they consider a person has reached their old age.

Table 3
Reasons that indicate a person has reached their old age by age group.

	Global (n = 445)	Age 18–35 (n = 145)	Age 36–64 (n = 154)	Age >65 (n = 146)	X^2	Sig.
Age	67.4%	64.1%	64.3%	74.0%	8.08	.089
Phisical apparence	44.9%	42.8%	39.6%	52.7%	5.64	.060
The deterioration of health	49.7%	43.4%	51.9%	53.4%	3.39	.184
Intellectual deterioration	43.1%	38.6%	50.6%	39.7%	5.44	.066
Your way of being or thinking	32.8%	30.3%	31.8%	36.3%	1.28	.528
Being retired	40.4%	42.8%	33.1%	45.9%	5.55	.062
This way of life	38.7%	41.4%	39.6%	34.9%	1.37	.505

Table 4
Global results, questionnaires PGCMS, CNV and FAQ-1 by age group.

	Global average (n = 445) (Sx)	Age 18–35 (n = 145) (Sx)	Age 36–64 (n = 154) (Sx)	Age >65 (n = 146) (Sx)	F	Sig.
PGCMS total	2.68 (1.63)	3.61 (1.22)	2.69 (1.58)	1.72 (1.50)	61.03	.000
AN-PP_Positive	25.95 (3.74)	25.74 (3.75)	25.73 (3.67)	26.39 (3.79)	1.51	.223
AN-PP_Negative	12.71 (2.21)	13.07 (2.09)	12.37 (2.18)	12.71 (2.30)	3.79	.023
Positive attitudinal bias	3.55 (1.71)	3.47 (1.71)	3.70 (1.70)	3.46 (1.72)	.94	.390
Negative attitudinal bias	9.92 (2.58)	10.33 (2.69)	10.12 (2.40)	9.30 (2.55)	6.65	.001
Attitudinal tendency	−6.37 (3.57)	−6.85 (3.64)	−6.41 (3.53)	−5.84 (3.50)	2.97	.050
Knowledge – FAQ1	9.61 (2.54)	9.38 (2.73)	9.16 (2.16)	10.32 (2.59)	9.02	.000

3.4. *Knowledge of aging*

The evaluation of knowledge about aging, measured by FAQ 1, shows that all three age groups presented low results, showing a general unawareness of aging and its associated processes (see Table 4). Nevertheless, the results showed the existence of statistically significant differences between the groups ($F_{2,444} = 9.02$, $p = .000$). A posteriori analysis proved that these differences happened between the group of older adults ($p = .000$) and the other two – middle-aged and young ($p = .004$) –, the group of older adults being the one with the most knowledge regarding aging.

These data contrast, with the self-perception of their knowledge towards aging, which they regard as medium-high.

3.4.1. *Relation with self-perceived knowledge, assessed knowledge and attitudes towards aging*

As shown in Table 5, we did not find significant correlation between the levels of self-perceived knowledge and the results of the evaluation of knowledge provided by questionnaire FAQ-1 ($r = .042$).

On the other hand, we did find correlations between several of the attitudinal subscales. Specifically, we found statistically significant negative correlations between the subscale of questionnaire AN-PP "Negative attributes of old age and positive potential in old age" with the negative bias ($r = -.390$) and the net attitudinal tendency ($r = -.369$), both determined by questionnaire FAQ-1. On the contrary, we detected significant positive correlations between the subscale of questionnaire AN-PP "Negative attributes of old age and positive potential in old age" with the negative bias ($r = .243$) and the net attitudinal tendency ($r = .211$). In addition, the correlation between the net attitudinal tendency and the negative bias was positive and significant ($r = .895$).

4. Discussion

Demographic aging is a global, progressive phenomenon without precedent that is particularly affecting the European Region (European Commision, 2014). This phenomenon entails a renewed interest in the study of aging as a whole and, specifically, in the social representations of older adults (Informe Investigación General CESIF, 2016).

Research undertaken in Spain and other countries suggests that the presence of stereotypes is transcultural, but also linked to sociocultural contexts and to the moment the studies take place, due to the social influence of this phenomenon. However, young, middle-aged and older adults have been shown to share the same stereotypes regarding older adults (Bustillos López, 2010; Chasteen, Schwartz, & Park, 2002), which indicates that stereotypes do not change as people age, and that different age groups share similar mental representations of old age. In this study, we have found several data that contradict, partially, the aforementioned hypotheses, as will be described in the following paragraphs.

With regards to the attributions or reasons why individuals consider a person has reached old age, although we did not find significant differences between age groups, all agreed to point out age and health deterioration as the main reasons. Our results coincide with those reported in previous studies (Centro de Investigaciones Sociológicas, 2008; Fernández-Ballesteros, Bustillos & Huici, 2012, 2015), which bring together a high level of stereotypical categorization with regards to these factors when identifying typical features of aging – aspects that are shared by the whole population, including the group aged 65 or older. Data gathered in this study partially agrees as well with studies coming from different sociocultural contexts and temporal moments (Bustillos López, 2010), which highlights the idea that ageist stereotypes are, to a great extent, transculturally shared (Chasteen et al., 2002).

The fact that chronological age is seen as the main reason or cause to determine a person has reached an old age is quite remarkable, since it assimilates the stereotype which contemplates old age and aging as a homogeneous process, independent from other biological, physiological, genetic or psychosocial factors. Nevertheless, it has been proved that chronological age is not a good predictor of the level of biological or physical aging. If that were the case, all individuals the same age would share identical levels of cellular, genetic or functional aging, and only lived years would determine potential longevity, with no reason or cause to explain why some people younger than 60 present degenerative diseases while others aged 80 or even 100 have aged organic systems, but no clinical manifestations of disease (Ribera Casado, 1995; Hayflick, 1999) – although this last group of people does present chronic conditions, primary care consultations and intake of medicines (Ramos & Pinto, 2015).

Something similar happens as well with regards to health; the association between fragility and older adults is quite frequent (Arnold-Cathalifaud, Thumala, Urquiza, &

Table 5
Correlations between knowledge and perceptions regarding aging.

	1	2	3	4	5	6	7	8
1. Perceived knowledge	1							
2. Attitudes towards own aging	.063	1						
3. AN-PP_Positive component	.028	.035	1					
4. AN-PP_Negative component	.038	.069	.287*	1				
5. Knowledge FAQ-1	.042	−.018	.308*	.210*	1			
6. Positive attitudinal bias	−.031	.085	.183*	.073	−.278*	1		
7. Negative attitudinal bias	−.010	−.014	−.390*	.243*	−.744*	−.360*	1	
8. Net attitudinal tendency	−.008	.050	−.369*	.211*	.404*	.739*	.895*	1

* The correlation is significant at level .001 (billateral).

Ojeda, 2008; Musaiger & D'Souza, 2009). The World Report on Aging and Health (WHO, 2015) notes that old age does not imply dependence, and that aging per se does not influence health-care expenditure as much as other factors. There is no such thing as a "typical" old person, since we reach old age through a combination of biology and biography; thus, old age does not equal disease nor dependence. This stereotype is particularly damaging and leads to self-stereotyping which, on it turn, leads to self-fulfilled prophecies that negatively influence the physical and psychical wellbeing of older adults, as well as their quality of life (Levy & Banaji, 2002; Wurm & Benyamini, 2014). This autoesterotyping process is also reflected in our study when we found that internalized ageism was higher among older participants.

On the other hand, stereotypes also have negative effects on healthcare professionals, which fail to detect disease processes in older patients since they naturally link age with frailty and weakness (Mello, Souza, Chacara, Narita, & Chiminazo, 2018). Thus, less clinical evaluations, less preventive care and more deficient treatments are offered to older adults in comparison with the general population, demonstrating the existence of negative implicit attitudes (Nash, Stuart-Hamilton, & Mayer, 2014). In this sense, some papers note that age can be used as an indicator to explain behavior, varying diagnoses and recommendations for the treatment of older adults in comparison with younger adults (Musaiger & D'Souza, 2009). Therefore, this phenomenon generates important difficulties to access healthcare services for older adults, diminishing their social rights in a way that should not be overlooked.

With regards to attitudes towards the own aging, data shows how, as age increases, attitudes become more negative. It has thus become necessary to allocate resources for the design and implementation of educational strategies to encourage an active aging approach which can promote a change in older adultś attitudes, fostering a more positive perspective of this stage of life (European Innovation Partnership on Active and Healthy Ageing, 2015). The Risks of Ageism Model acknowledges how ageism and negative attitudes regarding aging can hinder the much-desired active aging approach (Swift, Abrams, Lamont, & Drury, 2017). In this sense, evidence shows how older adults with positive perceptions of aging are more competent in the use of strategies for facing and adapting to negative stressful life events; they also proved to be more satisfied with life in general (Wurm, Tomasick, & Tesch-Römer 2008), and to be more long-lived (Hill & Turiano, 2014; Steptoe, Deaton, & Stone, 2015). Having positive self-perceptions on aging processes is an excellent medicine, with many beneficial consequences, such as an increase on functional health, longevity or a greater resistance to cardiovascular problems (North & Fiske, 2012). In addition, this approach should be oriented towards reducing the negative vision of aging held by other age groups, and towards demolishing the existing stereotypes around the older adults (Horton, Baker, & Deakin, 2007). In this sense, our data notes that middle-aged and young groups hold negative views surrounding their own aging processes, and that age increases their negative attitudes, something pointed out in some study (Levy et al., 2002). Intergenerational programs could be an effective policy designed to reduce ageist attitudes amongst the youth. Recent research (Smith et al., 2017; Teater & Chonody, 2017) suggests that a greater interaction and contact between young and older adults contributes to attitudes about aging and older people.

On the other hand, just as other "isms" such as racism or sexism hold ambivalent stereotype content (Glick & Fiske, 1996), ageist stereotypes also offer ambivalent stereotype content, it involves both feelings of benevolence and hostility toward older adults (Cary, Chasteen, & Remedios, 2017). Therefore, the perception of old age includes positive connotations (Cuddy & Fiske, 2002), like wisdom or experience. However, the main content is essentially linked to negative characteristics (Cary et al., 2017; Castellano & De Miguel, 2010b): physical and/or mental disease, disability, lack of interests and life motivations, social isolation, frailty and uselessness (Dionigi, 2015; Horton et al., 2007; Molden & Maxfield, 2016).

Our study interestingly reflected how the positive attitudes associated with aging (evaluated both with the AN-PP questionnaire and with the FAQ 1) do not seem to change with age. On the contrary, we did find statistically significant differences between age groups regarding the negative component of attitudes (evaluated both with the AN-PP and with FAQ 1) presenting greater negativity in the younger group coinciding with previous studies (Allen, 2006; Darling, 2016). We acknowledge the fact that some variables can interact with the independent variable "age", such as the education level or the cohabitation with older adults, so interpretation requires a more in-depth analysis.

Undoubtedly, one aspect that may influence ageist attitudes is the level of information regarding aging held by the population (Helmes & Pachana, 2016). In this sense, the difference between the perceive level of knowledge (medium-high) and the actual level of knowledge objec-

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tively assessed with FAQ-1 (which reveals low levels of awareness around aging) is quite remarkable. Furthermore, the results reflect significant differences between three age groups, with older adults constituting the most informed group despite their results remaining quite low. These results are consistent with numerous studies which show low levels of knowledge surrounding aging in different social groups (Darling, 2016; Gable et al., 2003).

With the intention of dwelling deeper into our analysis, we explored the relations knowledge and attitudes. Generally speaking, the results reflect the absence of correlation between these two variables; however, we must note that the negative bias (determined through FAQ-1) negatively correlated with the AN-PP subscale of positive potential in a significant manner, while it correlated positively with the AN-PP subscale of negative attributes, proving a certain coincidence within the contents evaluated by both tools. In addition, no significant correlations were found between self-perceived and evaluated knowledge, which suggests that there is no correspondence between the knowledge around aging individuals claim to possess and their actual understanding of aging and its processes.

Finally, we want to point out certain limitations present in this study. Firstly, although the size of the sample is relatively big, it could be extended to broader contexts with different aging rates and using probabilistic sampling. On the other hand, we calculated the attitudinal average with questionnaires, which are not devoid of various biases, such as social inability. For future research it is advisable to combine measurements of explicit attitudes with measurements of implicit attitudes, although it is true that tools that can reliably measure implicit ageist attitudes are still scarce and hardly available. Nevertheless, the main strength of this study relies on its uniqueness as one of the few studies undertaken in Spain with the purpose of analyzing ageist stereotypes in different age groups, and in one of the most aged contexts in the world.

To conclude, we verified the existence of low levels of knowledge regarding aging as well as the presence of negative stereotypes in all age groups. It is young and middle-aged people who present the lowest levels of knowledge and the most negative attitudes towards aging. However, older adults have the most negative attitudes towards their own aging. The findings have some interesting implications for the creation and implementation of anti-ageist programs. As well the findings imply that these measures could be used to design good practices and policies regarding aging, already adopted in different places, which Rodríguez and Rubiera (2016) group to create adapted environments – cities and infrastructures –, interventions and policies targeting the older adults, as well as actions towards economic and family dynamization.

More specifically, and in light of our results, it is necessary to propose actions aimed at (i) increasing knowledge about aging in the entire population, with special attention to younger groups; (ii) eradicating negative biases and attitudes towards older individuals, present from an early age; and (iii) proposing in older groups, following Palmore (2017) initiatives aimed at improving the understanding of the aging phenomenon to learn to age healthily, so as to develop more positive attitudes towards their own aging.

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