Articles

Socio-Demographic Predictors of Loneliness Across the Adult Life Span in Portugal

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Abstract

Loneliness, a complex phenomenon, is experienced differently by people under diverse conditions. The factors influencing loneliness are numerous and may vary between cultures. The purpose of this study was to show socio-demographic factors contributing to loneliness in Portugal. The sample consisted of 3,144 participants with a mean age of 46.90 (SD = 22.56) and a range between 15 and 92 years. Loneliness was evaluated with the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). Age and marital status were significant predictors of loneliness. Loneliness increased with age, and divorced or windowed participants reported higher loneliness than single or married people. As expected, gender did not significantly contribute to loneliness. This work identified vulnerable people who are experiencing a perceived dissatisfaction with their social interactions that needs special attention. These vulnerable groups include the old, divorced and widowed. In particular, policy makers and other experts who work with old persons should promote interventions according to their needs.

Keywords: age, gender, loneliness, marital status, Portugal

Existing research directs our attention to the pervasive and detrimental effects of loneliness (Rokach & Neto, 2005). Most definitions of loneliness place stress on perceived deficits in relationships. For example, Asher and Paquette (2003, p. 75) define loneliness as "the cognitive awareness of a deficiency in one's social and personal relationships, and ensuring affective reactions of sadness, emptiness, or longing".

Psychologists have increasingly emphasized the subjective experience of loneliness. Loneliness and objective isolation are not interchangeable. As Peplau and Perlman (1982, p. 3) point out "people can be alone without being lonely, or lonely in a crowd". Loneliness indicates dissatisfaction with one's relationships and is not synonymous with solitude or any particular form of relational status (e.g., married vs. single).

The prevalence of loneliness is relatively high in individualistic Western countries. For example, Andersson (1998) estimated that 25% reported constantly or fairly often experiencing loneliness. It is important to understand the factors contributing to the loneliness for a diversity of reasons, including its links with low levels of physical activity (Hawkley, Thisted, & Cacioppo, 2009), physical illness and mental health problems (Cornwell & Waite, 2009; Thurston & Kubzansky, 2009). For example, a relationship between loneliness and depression and suicidal ideation was reported (Heinrich & Gullone, 2006).

Loneliness, a complex phenomenon, is experienced differently by people under diverse conditions. The factors influencing loneliness are numerous and may vary between cultures (Rokach & Neto, 2005). The purpose of this study was to show socio-demographic factors contributing to loneliness in Portugal.

One way to identify those who experience loneliness is to examine common socio-demographic factors, such as age, gender, marital status, and level of education. Andersson (1998) observed (p. 267) that to analyze the effects of these factors "the empirical data has mostly been based on single-item measures of the expressions of loneliness". These previous studies have used mostly one item (e.g., Do you ever feel very lonely?") to assess the loneliness. A major concern with a single question for evaluating a construct as loneliness is that the reliability of a person's view on the issue at that time cannot be estimated (Luanaigh & Lawlor, 2008; Victor & Yang, 2012). In this study we use a multi-item scale to assess loneliness, the most frequently utilized measure of loneliness, the Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980). It was designed to reveal variations in loneliness in daily life. It was conceptualized as unidimensional in its structure, evaluating satisfaction with social relationships.

In this paper we examine loneliness among adults aged 15 years and older in Portugal living in the community using multi-items scale to evaluate loneliness. We first examine loneliness among the adult people to scrutinize whether loneliness in this country is simply a problem of old age. According to Victor and Yang (2012, p. 89) "there are very few studies looking at loneliness across the whole range of adult age groups". We then focus upon the relationship between loneliness and gender, marital status and level of education.

Previous investigation has shown that age (Luanaigh & Lawlor, 2008), and marital status (Neto, 2014; Victor & Yang, 2012) are significant factors related to loneliness, while other studies showed that gender (Borys & Perlman, 1985) and level of education (Sundström, Fransson, Malmberg, & Davey, 2009) were not substantial contributors to loneliness. This means that there is no agreement on socio-demographic determinants of loneliness.

Previous research is not consistent about the relations between loneliness and *age* (Savikko, Routasalo, Tilvis, Strandberg, & Pitkälä, 2005; Victor & Yang, 2012).Yang and Victor (2011) suggested that there are two models of the relationship between loneliness and age. For one hand, they advance a linear age-related trend. For the other hand, they hypothesized a nonlinear U- shaped distribution with high rates of loneliness in young adults and old adults and low rates in the middle adult years. Our expectation was that the effect of age on the loneliness in the present study supports the first model. This is because, as convincingly illustrated by Paiva et al. (2009), given the very bad conditions in which some old people live in Portugal, multiple life domains satisfaction decreases, particularly financial resources and social relationships, as well as a decrease in overall satisfaction as function of age were found. Thus our expectation was that we would find a growth in loneliness in old age.

Previous research concerning the effect of *gender* on loneliness is mixed (Pinquart & Sörensen, 2001). On the one hand, in general, when it is used a direct evaluation of loneliness, as in the studies reviewed by Victor and Yang (2012) levels of loneliness are higher for females than for males and this picture is consistent across age groups. However, loneliness was found higher for men in several studies (Hawkley et al., 2008; Koc, 2012; Wang et al., 2011). On the other hand, Russell et al. (1980, p. 474) asserted, "Research has not indicated any sex difference in loneliness". These mixed findings can be explained as a function of the kind of measure utilized to evaluate loneliness (Borys & Perlman, 1985). In the UCLA Loneliness Scale the word "loneliness" never is used. Loneliness is assessed indirectly. Borys and Perlman (1985) argued that when loneliness is assessed indirectly,

in general, gender differences are not found. It was expected that we would not find gender differences as we will assess loneliness indirectly.

Feelings of loneliness may vary according to *marital status*. Victor and Yang (2012) found that being married was a protective factor of loneliness. Loneliness research has demonstrated increased risks of loneliness for divorced and widowed men and women (Dykstra & Fokkema, 2007; Savikko et al., 2005). Similarly according to Andersson (1998) the non-married report loneliness to a higher extent than the married. Our expectation was that we would find the highest loneliness level among divorced and widowed.

Victor and Yang (2012) found that tertiary education was a protective factor of loneliness (i.e., linked with decreased levels of loneliness). Similarly, in other studies the average loneliness score was higher for lower education (Koc, 2012; Savikko et al., 2005; Wang et al., 2011; Zhang & Liu, 2007). However, this association is not perfect and many exceptions do occur (Sundström et al., 2009). Our expectation was that we would find that individuals who have low education backgrounds would show higher loneliness level than those with high education backgrounds.

Method

Sample

The sample consisted of 3,144 participants. The mean ages were 46.90 years (SD = 22.56); ages ranged from 15 to 92 years. Concerning gender distribution 1,118 of participants were males and 2,026 respondents were females. Relatively to marital status, 39% reported being single, 45% married or partnership, 16% divorced or widowed and 0.4% have not reported their marital status. Forty four per cent have completed the secondary level or less, and 53% have attended or completed the college and 3% have not reported their level of education.

Material

The participants were assessed utilizing two distinct questionnaires. The first questionnaire was the Portuguese adaptation of the *Revised UCLA Loneliness Scale* by Russell et al., 1980 (Neto, 1992). This is an 18-item questionnaire in which nine of the questions were reverse scored. Participants are asked to rate on a scale ranging from 1 (*never*) to 4 (*often*) how often they feel the way described in each item. An example of an item is, "I am unhappy being so withdrawn". Possible scores range from 18 to 72, with higher scores indicating greater loneliness. The reliability and the validity of this scale have been demonstrated for a Portuguese population (Neto, 1989, 1992).

The second questionnaire was about socio-demographic characteristics: age, gender, marital status and level of education (see Table 1).

Procedure

Recruitment and test of the participants were conducted by trained psychology students between 2011 and 2013. This sample was not used on other studies; thus, it does not rely on published reports. All participants were living in the north of the country in urban areas. The sample was recruited at a range of venues, including study and work places, shopping centers, community groups of this region's main cities: Porto, Espinho, Matosinhos, Póvoa de Varzim, Vila do Conde, and Vila Nova de Gaia. Sixty two percent of the people contacted accepted to participate in the study. The total time required to complete the questionnaire was usually less than 10 minutes. The study

was conducted in accordance with the current legal and ethical norms in the country. All participants were unpaid volunteers.

Results

Cronbach's standardized alpha of the *Revised UCLA Loneliness Scale* was .90, above the recommended cut-off of .70 (Cicchetti, 1994). The mean score of loneliness for all the sample was 34.56 (SD = 9.12). Analyses of variance were used to reveal potential socio-demographic effects. The approach treated each socio-demographic variable as an independent variable, using participants' sum score on loneliness as depend variable. Table 1 exhibits the scores of loneliness by the socio-demographic factors: age, gender, marital status, and level of education.

The participants were classified into five age groups: youngsters (15-18 years old, *N* = 326), young adults (19-30 years old, *N* = 787), adults (31-59 years old, *N* = 767), old adults (60-74 years old, *N* = 326), and very old adults (75-92 years old, *N* = 392). The effect of age on loneliness was significant, $F(4, 3132) = 19.36$, $p < .001$. Scheffe *post hoc* comparisons showed that the two oldest groups (60-74 years and 75-92 years) scored higher on loneliness than the three youngest groups (15-18 years; 19-25 years and 31-59 years).

Table 1

Loneliness According to Socio-Demographic Factors (N = 3,144)

	N	*M*	*SD*
Age			
15 - 18 years	326	33.90[a]	8.19
19 - 30 years	787	32.87[a]	7.35
31 - 59 years	767	33.85[a]	7.66
60 - 74 years	865	36.05[b]	10.92
75 - 92 years	392	36.51[b]	10.47
Gender			
Men	1118	34.61	9.29
Women	2026	34.54	9.03
Marital status			
Single	1229	33.78[a]	8.12
Married/partnership	1404	34.14[a]	9.51
Divorced/widowed	499	37.58[b]	9.75
Level of education			
Secondary or below	1392	35.40[a]	10.11
Tertiary	1674	33.80[b]	8.26

Note. Means could vary from 18.0 to 72.0. The greater the mean, the greater was loneliness score. Within each column, for each variable, means with no superscripts in common differed at the 0.05 level, either by *F* test directly for a pair of means or by Scheffe test for three or more means.

As expected, the effect of gender was not significant, $F(4, 3142) = .04$, $p = .84$. Men (*M* = 34.61, *SD* = 9.29) and women (*M* = 34.54, *SD* = 9.03) showed similar levels of loneliness.

We examined the effect of the marital status. The category "married" includes both legal marriage and partnership. "Divorced" describes a general situation of separation from the spouse, including both legal divorce and separation from the partner; similarly "widowed" refers to the death of either a legal spouse or a partner. There was a signi-

ficant effect of marital status on loneliness, $F(2, 3129) = 33.90$, $p < .001$. Scheffe *post hoc* comparisons of the three groups indicated that divorced and widowed participants ($M = 37.58$, $SD = 9.75$) obtained a higher level of loneliness than single ($M = 33.78$, $SD = 8.12$) and married or partnership ($M = 34.14$, $SD = 9.51$).

Finally, the level of education was evaluated by grade school education: secondary school or less and above secondary school. The effect of the level of education was significant, $F(1, 3064) = 23.25$, $p < .001$. Participants who have completed the secondary level and those who have not completed it ($M = 35.40$, $SD = 10.1$) showed higher loneliness score than those who attended or completed the college ($M = 33.80$, $SD = 8.26$).

The main goal of the present investigation was to show socio-demographic predictors of loneliness. A multiple regression analysis utilizing entered method was used to identify socio-demographic factors that best predict loneliness. In Table 2 we can observe the results of this analysis. The VIF values were all well below 10 and the tolerance statistics all well above .20; therefore, we can conclude that there is no strong collinearity within our sets of possible predictors.

Table 2

Results of Multiple Regression Analysis to Predict Loneliness by Socio-Demographic Factors

					Collinearity statistics	
Variable	*B*	*SE*	ß	*t*	Tolerance	VIF
Age	.05	.01	.11	4.96***	.64	1.56
Gender	.25	.34	-.01	.74	.98	1.02
Marital status	2.51	.49	.10	5.12***	.83	1.21
Level of education	-.20	.38	-.01	-.53	.73	1.37

Findings from multiple regression analysis revealed a significant model, $F(4, 3053) = 25.99$, $p < .001$) with age (ß = .11, $p < .001$) and marital status (ß = .10, $p < .001$) as socio-demographic significant predictors of loneliness. However, gender, and level of education were not found to be significant predictors of loneliness.

Discussion

In this investigation, we have approached the level of loneliness among people of differing ages within a single country, Portugal, which may be characterized as a country whose prevalence rate of loneliness is "intermediate" according to the typology of Yang and Victor (2011). A large sample of 3,144 Portuguese participants living in the community allowed identifying significant socio-demographic predictors of loneliness. Although this study included a large sample, it was a convenience sample, and so it was not representative of the Portuguese population. For example, according to the last census in 2011 adults aged 65 or more constituted 19% of the total population, women 52.2%, and 85% have not completed tertiary education. Thus in our sample older adults, women, and tertiary education were overrepresented. However, concerning marital status our sample reflects relatively well the national population: single (40%), married/partnership (47%), and divorced/widowed (13%).

As mentioned above, two socio-demographic factors, including age and marital status, emerged as significant predictors of loneliness. Victor and Yang (2012) observed that there is no consensus on the classification of ages into specific categories and those authors have used three age groupings: the young (under 30), the middle-aged

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(30-59 years), and the old (60 years and above). As our sample was large, within the "young" and "the old" we generated two age groups.

Results showed that with increasing age, loneliness increased. Scholars have claimed that adolescents are prone to loneliness. For example, Brennan (1982) argued that separation from parents, identity diffusion, and excessive rejection contribute to youth's loneliness. Our findings don't portray this picture. Future research is needed to replicate and explain this finding.

Some authors argue that loneliness increases in the very old adults (Dykstra, 2009; Luanaigh & Lawlor, 2008). Our data don't confirm this expectation as significant differences in loneliness between the two oldest groups (60-74 years and 75-92 years) were not found. These findings are consistent with those obtained by another line of research, an analysis of online personal ads (Alterovitz & Mendelsohn, 2013). Loneliness was one of the six themes examined through content analysis by the authors. The results showed that the proportion of mentioned loneliness was higher in the two older groups, that is, the old (age 60-74) and the very old adults (age 75 +) than in the middle-aged (age 40-54). The loneliness expressed in the written responses was not significantly different in the two older groups.

The present results do not seem to support the emotional constraint hypothesis (Dean, 1962). Dean (1962, p. 440) observed that "the capacity to feel emotion declines with age." Having considered loneliness as an emotion, the author argued that persons would become less lonely as they got older. Our results are more consonant with scholars arguing that the declining social ties of older adults make them prone to loneliness (Perlman, 1990). In this vein, older adults seem to be particularly vulnerable in the actual context of economic crisis in Portugal. Current findings are consistent with what has been previously observed about quality of life (Arun & Çevik, 2011) and life domain satisfaction in Portugal (Paiva et al., 2009). For example, Paiva et al. (2009) point out that many elderly persons in Portugal were financially very deprived without resources to consecrate to leisure, and tend to experience loneliness. However, another possible type of explanation for age trends in loneliness, methodological artefacts, should be mentioned. For example, Perlman (1990) refers the possibility of differential volunteering rates.

In this study we also found that marital status emerged as an important predictor of loneliness. Consistent with previous research (Luanaigh & Lawlor, 2008; Savikko et al., 2005; Victor & Yang, 2012) divorced or widowed individuals reported higher loneliness than single or married people. This finding would appear to indicate that the loss of an attachment figure, such as a spouse, can increase the risk of loneliness.

As expected, gender did not significantly impact on loneliness in the current investigation. This finding is in agreement with the analysis presented by Borys and Perlman (1985) and also with other previous results (Green, Richardson, Lago, & Schatten-Jones, 2001; Hacihasanoğlu, Yildirim, & Karakurt, 2012; Neto, 2002). As we have previously stated the UCLA Scale avoids direct mention of loneliness. Gender differences in loneliness seem to be higher when loneliness is assessed in a direct way than when it is measured indirectly. This suggests that disclosing loneliness may be more socially accepted in women than in men (Lau & Kong, 1999).

Even if the level of education appeared as having a significant effect on loneliness at a bivariate level, it did not emerge as an independent predictor of loneliness in multivariate regression analysis. This suggests that some variables, such as age and marital status can alter effects of the level of education on loneliness. This result is in agreement with some previous studies (Sundström et al., 2009) that did not show consistent evidence for the impact of education on loneliness.

This research has several limitations. First, data were cross-sectional and causal implications cannot be drawn. As Perlman (1990, p. 4) has observed "in all cross sectional research, age trends may be confounded with cohort effects". Future longitudinal or experimental works will facilitate more causal evaluations. More specifically, concerning old people all participants were living in the community. Thus the results are not generalizable to old people living in nursing homes. A third limitation of this research was the exclusive use of certain socio-demographic factors. Savikko et al. (2005, p. 231) pointed out "perceived quality of relationships may explain even more that feeling ". In this vein, future research should also look into other socio-demographic and psychological predictors of different types of loneliness. Despite these limitations, this work identified vulnerable people who are experiencing a perceived dissatisfaction with their social interactions that needs special attention. These vulnerable groups include the old, divorced and widowed. In particular, policy makers and other experts who work with old persons should promote interventions according to their needs.

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