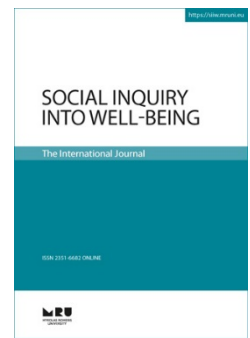




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Socio-demographic and Subjective Well-being Predictors of Social and Emotional Loneliness

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Abstract

This research examined the relationship between loneliness and psychosocial variables among people from Portugal across the adult life span. The study examined, besides socio-demographic predictors, subjective well-being predictors of social and emotional loneliness. The sample was constituted by 1,209 participants with a mean age of 38.12 ($SD = 17.49$) and a range between 18 and 90 years. Social, family and romantic loneliness were measured (DiTommaso, Brannen, & Best, 2004). Overall, social, family and romantic loneliness were significantly associated with the indicators of subjective well-being. Subjective well-being factors accounted also for a larger proportion of the explained variance in social, family and romantic loneliness scores than socio-demographic factors. Limitations of the research are discussed.

Keywords: Age, emotional loneliness, social loneliness, subjective well-being

1. Introduction

Loneliness is experienced at all ages. However, as Victor and Yang (2012, p. 89) observed “there are very few studies looking at loneliness across the whole sample of the adult age groups”. In this paper we examine loneliness across the adult life span.

Existing research directs our attention to the pervasive and baneful effects of loneliness (Rokach & Neto, 2005). The prevalence of loneliness is relatively high in the population, affecting both young people and older adults (West, Kellner, & Moore-West, 1986). For example, Andersson (1998) estimated that 25% of people have experienced loneliness constantly or fairly often. Lauder, Mummery, and Sharkey (2006) found that 35% people reported being lonely. For these authors this high prevalence of loneliness points to its relevance in public health practice. It is relevant to know the factors contributing to the loneliness for a diversity of reasons, including its links with low levels of physical activity (Hawkey, Thisted, & Caccioppo, 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). A recent meta-analysis showed that loneliness results in higher likelihood of mortality (Holt-Lunstad et al., 2015).

Most definitions of loneliness emphasize the perceived deficits that may prevail in relationships. For example, Ascher 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”.

Two types of loneliness, social loneliness and emotional loneliness, were identified by Weiss (1973). They can co-exist or occur independently. “Emotional loneliness results from the loss or lack of a truly intimate tie (usually with spouse, lover, parent or child), whereas social loneliness results from the lack of a network of social relationships with peers” (Green, Richardson, Lago, & Schatten-Jones, 2001, p. 281). Weiss (1998) argued that different kinds of relationships are necessary for alleviating each type of loneliness. Previous findings have emphasized the importance of maintaining the distinction between these two

types of loneliness (Russell et al., 1984; Green et al., 2001). They are not synonymous constructs.

Empirical research about the experience of loneliness requires that it be adequately understood and measured (Marangoni & Ickes, 1989). Instruments to measure loneliness assume either a unidimensional or a multidimensional conceptualization. For the multidimensional conceptualization loneliness implies different typologies which generally conceptualize loneliness as either emotional or social (Weiss, 1973; Russell et al., 2004). For example, the short form of the Social and Emotional Loneliness Scale for Adults (SELSA-S) (DiTommaso, Brannen, & Best, 2004) measures both social and emotional loneliness. Emotional loneliness is assessed by family loneliness and romantic loneliness subscales. DiTommaso et al. (2004, p. 101) outlined the advantages of SELSA-S over other assessments of loneliness as its ability “to pinpoint the specific nature of loneliness”. Cramer and Barry (1999, p. 501) argued that “because of comprehensive assessments of the three loneliness dimensions, very high reliability estimates and factors loadings, the SELSA represents the superior instrument to assess both social and emotional loneliness dimensions”.

Background

The purpose of this research was to show besides socio-demographic factors, subjective well-being predictors which contribute to social and emotional loneliness. Several socio-demographic characteristics were considered, such as age, gender, marital status, education level, employment status, and religious involvement. However, relationships between socio-demographic variables and loneliness are still fraught with discrepancies (Lauder et al., 2006). These discrepancies may be related to poor effects of socio-demographic characteristics on loneliness; other factors, besides socio-demographic factors, may influence loneliness. Savikko et al. (2005, p. 231) pointed out that “perceived quality of relationships may explain even more that feeling “. In this vein, we will explore whether the various types of loneliness can be understood on the basis of subjective well-being components, besides socio-demographic factors.

Subjective well-being (SWB) refers to evaluations that people make of their lives (Diener, 2006). For Diener (2009, p. 34) “subjective well-being is a person’s evaluation of his or her life. This valuation can be in terms of cognition states such as satisfaction with one’s marriage, work, and life, and it can be in terms of ongoing affect (i.e., the presence of positive emotions and moods, and the absence of unpleasant affect)”. In this line subjective well-being presents a tripartite structure: satisfaction with life, positive affect and negative affect (Diener, 2000).

Satisfaction with life constitutes the cognitive component of SWB either globally or with respect to specific life domains (Diener, 2009). In the present research we will examine global life satisfaction and two specific life domains, love satisfaction (Neto, 2005) and sex satisfaction (Neto, 2012). Pavot and Diener (2008, p. 140) argued that “measures of life satisfaction are advantageous because they allow respondents to determine their own criteria for inclusion in the judgment process, and to weight them in the

manner they choose”. Positive affect constitutes frequent experiences of pleasant emotions, and negative affect constitutes frequent experiences of unpleasant emotional states. Although cognitive and affective components of subjective well-being are interrelated, they form separate factors (Lucas, Diener, & Suh, 1996). Hence a comprehensive assessment of subjective well-being demands separated measures of the cognitive and the affective components.

Loneliness as a negative experience is negatively related to life satisfaction and happiness (e.g., Moore & Schultz, 1984; Neto, 1993; Goodwin et al., 2001; Mellor et al., 2008; Neto & Barros, 2003; Ben-Zur, 2012). Although there is empirical evidence about a negative relation between loneliness and subjective well-being, a relevant limitation in previous studies is that little research has examined both constructs from a multidimensional point of view. Another limitation in the previous research is that there are few studies on the relation between loneliness and subjective well-being across the adult life span. Most investigations have used samples with specific socio-demographic characteristics, such as students (e.g., Akhunar, 2010), nuns (e.g., Neto & Barros, 2003), older adults (e.g., Chalise, 2010), middle age adults (e.g., Ben-Zur, 2012), immigrants (e.g., Neto, 2001), and people with health problems (e.g., Henk, Elving, & Seydel, 1998; Tse, Leung, & Ho, 2011), and so on. Given that both constructs, loneliness and well-being, constitute an ordinary experience of people’s lives, it is important to approach their relationships in the general population, and to use a multidimensional analysis.

According to the above, three hypotheses on social and emotional loneliness were tested.

Hypothesis 1. It was predicted that global life satisfaction, love satisfaction, sex satisfaction and positive affect would be correlated negatively with social and emotional loneliness.

Hypothesis 2. It was predicted that negative affect would be correlated positively with social and emotional loneliness.

Hypothesis 3. It was expected that subjective well-being factors, including global life satisfaction, love satisfaction, sex satisfaction, positive affect and negative affect, would account for a larger proportion of the explained variance in social and emotional loneliness than socio-demographic factors.

2. Method

2.1. Participants

The sample comprised 1,209 participants, 48% female and 52% male. Participants’ mean age was 38.12 years ($SD = 17.49$; range: 18-91 years). The mean age of the respondents by gender was not significantly different, $F(1, 1208) = 2.44, p > .05$. Concerning the level of education 47% had concluded secondary education or less, and 48.5% attended a university. Relatively to marital status 57% reported being single, 33% married, and 8% were divorced

or widowed. Regarding religion 25% of the respondents were churchgoers, 45% were believers in God non goers, and 29% were not believers.

Table 1.

Distribution of the sample by each socio-demographic characteristic

Variable	M	%	M	SD
Age			38.12	17.49
Gender				
Male	632	52		
Female	577	48		
Marital status				
Never married	683	56.5		
Now married	399	33.0		
Divorced/widowed	95	7.9		
No answer	32	2.6		
Educational Level				
Secondary education or less	568	47		
University attendance	586	48.5		
No answer	55	4.5		
Employment status				
Student	423	35.0		
Worker	553	45.7		
Unemployed	53	4.4		
Retired	124	10.3		
No answer	56	4.6		
Religious involvement				
Attendees	300	24.8		
Believers-non attendees	542	44.8		
Non-believers	353	29.2		
No answer	14	1.2		

2.2. Material

The participants were assessed using five scales, previously adapted or developed for a Portuguese population, described below, and socio-demographic questions pertaining to age, gender, education, marital status, employment status and religious involvement. Two questions were asked to assess the degree of religious involvement: “Do you believe in God?” and “Do you attend church every week (except when you are truly unable to do so)?”

(a) *Social and Emotional Loneliness Scale for Adults – Short version* (SELSA-S; DiTommaso, Brannen, & Best, 2004). The SELSA-S includes three subscales (five items each) that evaluate social loneliness, family loneliness, and romantic loneliness. Participants rated their agreement with the items on a 7-point Likert-type scale with 1 as “*strongly disagree*” and as 7 “*strongly agree*”. Greater scores indicated more loneliness. The psychometric properties of the SELSA-S are satisfactory (DiTommaso et al., 2004). The SELSA-S was previously adapted to a Portuguese population (Fernandes, & Neto, 2009). The reliability of the adapted scale was satisfactory (social loneliness $\alpha = .71$, family loneliness $\alpha = .71$, and romantic loneliness $\alpha = .80$). On this sample, Cronbach’s standardized alpha was .65 for social loneliness, .73 for family loneliness, and .76 for romantic loneliness.

(b) *Satisfaction With Life Scale*. The Portuguese version of this scale (Neto, 1993; Neto & Barros, 2007), a scale originally developed by Diener et al. (1985) to measure satisfaction with people’s lives as a whole, was applied. It consists of five items. Respondents rated their degree of agreement with the statements using a 7-point Likert scale, with 1 as “*strongly disagree*” and 7 as “*strongly agree*”. On this sample, Cronbach’s standardized alpha was .87.

(c) *Satisfaction With Love Life Scale* was previously developed, including five items (Neto, 2005). Respondents rated their degree of agreement with the statements using a 7-point Likert scale, with 1 as “*strongly disagree*” and 7 as “*strongly agree*”. Greater scores indicate higher love life satisfaction. The psychometric characteristics displayed by the scale were satisfactory (Neto, 2005; Neto & Pinto, 2015^a). On this sample, Cronbach’s standardized alpha reliability coefficient was .92.

(d) *Satisfaction with Sex Life Scale* was also previously developed, including five items (Neto, 2012). Respondents rated their degree of agreement with the statements using a 7-point Likert scale, with 1 as “*strongly disagree*” and 7 as “*strongly agree*”. Greater scores indicate higher sex life satisfaction. The psychometric characteristics displayed by the scale were satisfactory (Neto, 2012; Neto & Pinto, 2015^b). On this sample, Cronbach’s standardized alpha for the current study was .90.

(e) Positive and Negative Affect Scales (PANAS; Watson, Clark, & Tellegen, 1988) evaluate positive and negative affect. Participants utilized a 5-point scale to denote how often they generally experience each emotion descriptor. The Portuguese adaptation of the PANAS was performed by Simões (1993). The coefficient alphas for the current study were .84 and .88, respectively.

2.3. Procedure

Recruitment and test of the respondents were performed by three psychology researchers in the Porto area, Portugal. The sample was recruited at a range of venues, including the universities, railway stations, shopping centers, and community groups. The refused rate was about 25%. It usually took less than 20 minutes to complete the material. The study was conducted in accordance with the legal and ethical norms in the country. Respondents were unpaid volunteers, and when possible, they were debriefed after the study.

2.4. Data analysis

Analyses performed on the data included descriptive statistics, internal reliabilities, analysis of variance, Pearson's correlations, and hierarchical multiple

regressions. Descriptive statistics were conducted in order to portray the sample and the levels of social and emotional loneliness. Internal reliabilities were assessed utilizing the Cronbach's alpha. The analysis of variance allowed us to show possible differences among the types of loneliness. The correlations were used to evidence the existence of relationships between single predictor variables and loneliness. To evidence a combination of factors affecting loneliness, hierarchical regression models were performed. Dummy variables were created for all categorical variables in order to perform the regressions. We used a significance level of .05 for all statistical tests.

3. Results

Scores of the types of loneliness were low (Table 2). The means ranged from 2.74 (family loneliness) to 3.34 (romantic loneliness), with social loneliness scoring 2.92. Significant differences were observed in endorsement of the types of loneliness, Wilks' lambda = .88, ($F(2, 1207) = 85.22$, $p < .001$, $\eta^2 = .124$). Pairwise comparisons showed significant differences in the three types of loneliness. Participants of the present sample showed higher endorsement of romantic loneliness than of social loneliness and family loneliness, and higher endorsement of social loneliness than of family loneliness.

Table 2.

Descriptive statistics and intercorrelations of loneliness and subjective well-being variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1 – Social loneliness	2.92	1.21	(.65)							
2 – Family loneliness	2.74	1.21	.53***	(.73)						
3 – Romantic loneliness	3.34	1.38	.34***	.25***	(.76)					
4 – Satisfaction with life	4.73	1.21	-.21***	-.24***	-.20***	(.87)				
5 – Satisfaction with love life	5.05	1.34	.04	-.09**	-.41***	.39***	(.92)			
6 – Satisfaction with sex life	4.94	1.33	-.15***	-.21***	-.28***	.39***	.59***	(.90)		
7 – Positive affect	3.42	.73	-.19***	-.21***	-.19***	.35***	.25***	.28***	(.84)	
8 – Negative affect	2.60	.91	.39***	.31***	.30***	-.06*	-.04	-.12***	.05	(.88)

Note: Alpha coefficients are in the diagonal in parentheses. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

A correlation analysis was performed that included social and emotional loneliness and the subjective well-being variables. The correlation matrix can be observed in Table 2. According to our predictions, the results showed significant negative correlations between satisfaction with life, satisfaction with love life, satisfaction with sex life and positive affect and the three types of loneliness. The only

exception was a non-significant correlation between social loneliness and love satisfaction. Therefore our first hypothesis tends to be supported. The data also showed significant positive correlations between negative affect and social, family and romantic loneliness. Hence these data also supported the second hypothesis.

Hierarchical multiple regression models were performed to evince the relative strength of the measures that best predicted social and emotional loneliness. Two sets of possible predictors were examined: socio-demographic (age, gender - 0" female; "1" male -, marital status, level of education, employment status and religious involvement) and subjective well-being factors (global life satisfaction, love satisfaction, sex satisfaction, positive affect, and negative affect). The correlation matrix of the individual predictor variables revealed that there was no correlation higher than .60. The variance inflation factor (VIF) values were all well below 10 and the tolerance statistics all well above .20. We can therefore assume that there was no strong collinearity within our set of possible predictors. Table 3

presents the results of the regressions models. Results showed that at Step 1 age (older), gender (men), divorced and widowed, education level (low), and unemployed predicted significantly social loneliness. The first set of socio-demographic measures predicted 9% of the variance in social loneliness. At Step 2, greater age, unemployed and believers in God together with global life satisfaction, positive affect and negative affect emerged as significant predictors of social loneliness. Gender, divorced and widowed and education level disappeared when the subjective well-being measures were included. The strongest predictor of social loneliness was negative affect. Overall, 26% of the variance was explained.

Table 3.

Stepwise multiple regression of the social and emotional loneliness

Variable	Social loneliness		Family loneliness		Romantic loneliness	
	Step 1 β	Step2 β	Step 1 β	Step2 β	Step 1 β	Step 2 β
Age	.21***	.13***	.18***	.05	.29***	.12***
Gender	.09**	.04	.04	.02	.09**	.05
Marital status ^a						
Single	-.04	-.05	.04	-.01	.10*	.06
Divorced/widowed	-.07*	-.04	-.04	-.01	-.01	-.03
Education level	-.14***	-.05	-.14***	-.07*	-.08*	-.01
Employment status ^a						
Worker	.03	.05	.03	.09**	-.14***	-.05
Unemployed	.11***	.07*	.06	.07*	.04	.08**
Retired	-.03	-.02	-.12**	-.03	-.14***	-.04
Religious involvement ^a						
Believers in God	-.06	.06*	-.06	-.05	.03	-.04
Not believers	-.02	-.05	.05	.04	.01	-.01
Life satisfaction		-.18***		-.13*		-.01
Love satisfaction		.05		.05		-.38***
Sex satisfaction		-.06		-.10**		-.01
Positive affect		-.18***		-.16***		-.10**
Negative affect		.36***		.30***		.24***

Notes: $R^2 = .09$ for Step 1; $R^2 = .26$ for Step 2 for social loneliness; $R^2 = .04$ for Step 1; $R^2 = .21$ for Step 2 for family loneliness; $R^2 = .06$ for Step 1; $R^2 = .27$ for Step 2 for romantic loneliness.

Significance levels: * $p < .05$, ** $p < .01$, *** $p < .001$.

^a The reference group for marital status, employment status and religious involvement are, respectively, marital/partnership, student, and attendees.

A second series of regression models were run to evince the relative strength of the measures in predicting family loneliness. Similarly to the previous analyses, at Step 1, socio-demographic variables were entered and at Step 2, the subjective well-being variables were added. Results showed that at Step 1, age (older), education level (low), and retired emerged as significant predictors of family loneliness, and explained 4% of the variance. At Step 2, education level, worker and unemployed together with global life satisfaction, sex satisfaction, positive affect and negative affect emerged as significant predictors of family loneliness.

Age and retired disappeared when subjective well-being measures were included. The strongest predictor of family loneliness was also negative affect. On adding the SWB variables, the variance increased to 21%.

Finally, another series of models were run to examine the impact of socio-demographic and subjective well-being variables on romantic loneliness. The results showed that age (older), gender (being male), single, education level (low), worker and retired emerged as significant predictors of romantic loneliness, and explained 6% of the variance. At Step 2, age (older), and unemployed together with love

satisfaction, positive affect and negative affect emerged as significant predictors of romantic loneliness. Gender, single, and education level, worker and retired disappeared when the subjective well-being measures were added. This time the largest impact on romantic loneliness was love satisfaction. On adding the SWB variables, the variance increased to 27%. In sum, subjective well-being factor accounted for a larger proportion of the explained variance in social, family and romantic loneliness scores than socio-demographic factors, supporting our third hypothesis.

4. Discussion

The main purpose of this research was to evince, beyond socio-demographic characteristics, subjective well-being predictors of social and emotional loneliness across the adult life span. The results provide support to the Weiss's (1973) approach to loneliness.

Three hypotheses were put forward. First, it was hypothesized that global life satisfaction, love satisfaction, sex satisfaction and positive affect would be correlated negatively with social and emotional loneliness. Second, it was hypothesized that negative affect would be correlated positively with social and emotional loneliness. Current findings evidenced support for these hypotheses. Overall, social, family and romantic loneliness were significantly associated with the five indicators of subjective well-being. Only satisfaction with love life was not significantly correlated with social loneliness. How can we interpret this finding? Are our perceptions of social loneliness irrelevant to our perceptions of satisfaction in our love relationships? By definition, someone in a love relationship, even if they only have that sole relationship, would probably not meet objective criteria for being lonely. This is an issue worthy of future investigation. Thus, excepting this non-significant correlation, current findings supported a negative relationship between social and emotional loneliness and SWB, that is, when loneliness increases, the SWB decreases. This is in agreement with previous findings (e.g., Neto, 1993; Mellor et al., 2008; Kapikiran, 2013). Third, it was hypothesized that subjective well-being factors, including global life satisfaction, love satisfaction, sex satisfaction, positive affect and negative affect, would account for a larger proportion of the explained variance in social and emotional loneliness than socio-demographic factors. The present results showed also support for this hypothesis. Overall, subjective well-being factors accounted for a larger proportion of the explained variance in social, family and romantic loneliness scores than socio-demographic factors. The present research points to the multiple sources of loneliness, given that significant predictors of loneliness were found within socio-demographic and subjective well-being factors. However, in agreement with the present study, previous community research has found psychosocial

factors to be stronger predictors of loneliness than socio-demographic factors (Neto & Barros, 2000; Uruk & Demir, 2003).

The only socio-demographic factor that predicted all the three types of loneliness was unemployment. This finding is in agreement with the observation made by Lauder et al. (2006, p. 338) that "unemployment continues to be one of the strongest predictors of loneliness". This result is also in line with that of Creed and Reynolds (2001) who have examined just one type of loneliness, social loneliness, and it was related to employment status. However, in the current study we have also examined two other types of loneliness. According to Jahoda (1982) the work supplies manifest and latent functions associated, respectively, with financial income and meeting psychological needs. If unemployment produces "deprivation in both manifest and latent functions, but it is the loss of the latent functions that operates to reduce well-being" (Creed & Reynolds, 2001, p. 168) and, consequently, to increase loneliness.

Concerning the relationship between loneliness and age current findings showed that increasing age predicted significantly social and romantic loneliness. These findings are consistent with previous investigation conducted in Ireland among old people (Drennan et al., 2008). "With increasing age, there is of course an increasing risk of losing partners and friends, which may reduce the number of meaningful relationships and thus increase the prevalence of loneliness" (Drennan et al., 2008, p. 1126). However, greater age has not emerged as significant a predictor of family loneliness. Similarly to Ireland, family links remain strong in Portugal, providing much of the emotional bonds that individuals experience.

All three types of loneliness were predicted by positive and negative affect, whereas social loneliness was predicted by deficits in life satisfaction, family loneliness by deficits in life satisfaction and sex satisfaction, and romantic loneliness by deficits in love satisfaction. These findings call our attention to the importance of specific life domains in predicting emotional loneliness, that is, sex satisfaction and love satisfaction. In particular, romantic loneliness was better predicted by deficits in love satisfaction than by socio-demographic factors or other SWB factors, a finding that is consistent with Weiss's theoretical ideas.

This research has several limitations. First, the current research was correlational and we should remind that correlation does not imply causation. So, three different explanations may be produced for these associations. For example, increases in loneliness could lead to lower SWB, or lower SWB could lead to higher loneliness, or both phenomena could be accounted for their associations with a third variable. Second, the present study used a convenient sample. For example, concerning old people all participants were living in the community. Thus the results are not generalizable to old people living in nursing homes. So generalization of the results is limited because the sample

was nonrandomized and the sampling procedure does not assure representativeness. Furthermore, current result may not statistically mirror the associations between the constructs examined in other cultural contexts, and thus it would be of interest to replicate them in other cultural contexts. However, the multidimensional analysis of the constructs considered in the current work helps to deepen our understanding of the relations between these variables. A third limitation of this research was the exclusive use of self-report questionnaires for data collection. Self-report questionnaires are useful in loneliness research, but the application of multiple methods should help to better understand the loneliness process. Despite these limitations, this research shows that older adults feel lonelier and that we need to consider different kinds of loneliness when researching SWB predictors across the adult life span.

The most powerful predictors identified in the current research show a tendency to support Weiss's (1973) approach to loneliness. Marital status and employment status predictors show a tendency to support the situational approach to loneliness. For Weiss (1973) persons are amenable to experience loneliness in situations that are deficient in relational provisions with attachment figures or peers. The SWB predictors show a tendency to support characterological approach to loneliness. For Weiss (1973) personality characteristics make people more vulnerable to loneliness. Thus, according to this perspective, antecedents or maintaining factors of loneliness are not linked only to personal dispositions or situational forces. On the basis of the review literature, Heinrich and Gullone (2006, p. 709) concluded that factors related to "loneliness include the interaction between one's personal characteristics and their sociocultural context". Both factors should be taken into account by people working in public health in the prevention and detection of 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 and unemployed. In particular, policy makers and other experts who work with old persons should promote interventions according to their needs.

References

- Akhunlar, M. N. (2010). An investigation about the relationships between life satisfaction and loneliness of nursing students in Usak University. *Procedia Social and Behavioral Sciences*, 5, 2409-2415. <http://dx.doi.org/10.1016/j.sbspro.2010.07.472>
- Andersson, L. (1998). Loneliness research and interventions: A review of the literature. *Aging and Mental Health*, 2, 264-274. <http://dx.doi.org/10.1080/13607869856506>
- Ascher, S. R., & Paquette, J. A. (2003). Loneliness and peer relations in childhood. *Currents Directions in Psychological Science*, 12, 75-78. <http://dx.doi.org/10.1111/1467-8721.01233>
- Ben-Zur, H. (2012). Loneliness, optimism, and well-being among married, divorced, and widowed individuals. *The Journal of Psychology: Interdisciplinary and Applied*, 146, 23-36. <http://dx.doi.org/10.1080/00223980.2010.548414>
- Chalise, H. N. (2010). Social support and its correlation with Loneliness and Subjective well-being: A cross-cultural study of older Nepalese adults. *Asian Social Work and Policy Review*, 4, 1-25. <http://dx.doi.org/10.1111/j.1753-1411.2009.00034.x>
- Cornwell, E. Y., & Waite, L. J. (2009). Social disconnectedness, perceived isolation, and health among older adults. *Journal of Health and Social Behaviors*, 50, 31-48. <http://dx.doi.org/10.1177/002214650905000103>
- Cramer, K. M., & Barry, J. E. (1999). Conceptualizations and measures of loneliness: A comparison of subscales. *Personality and Individual Differences*, 27, 491-502. [http://dx.doi.org/10.1016/S0191-8869\(98\)00257-8](http://dx.doi.org/10.1016/S0191-8869(98)00257-8)
- Creed, P. A., & Reynolds, J. (2001). Economic deprivation, experiential deprivation and social loneliness in unemployed and employed youth. *Journal of Community & Applied Social Psychology*, 11, 167-178. <http://dx.doi.org/10.1002/casp.612>
- Diener, E. (2000). Subjective well-being. *American Psychologist*, 55, 34-43. <http://dx.doi.org/10.1037/0003-066X.55.1.34>
- Diener, E. (2006). Guidelines for national indicators of subjective well-being. *Applied Research in Quality of Life*, 1, 151-157. <http://dx.doi.org/10.1007/s11482-006-9007-x>
- Diener, E. (2009). Subjective well-being. In E. Diener (Ed.), *The science of well-being: The collected works of Ed Diener* (pp. 11-58). *Social Indicators Research Series* 37. http://dx.doi.org/10.1007/978-90-481-2350-6_2
- Diener, E. R., Emmons, R. Larsen, R., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71-75. http://dx.doi.org/10.1207/s15327752jpa4901_13
- DiTommaso, E., Brannen, C., & Best, L. A. (2004). Measurement and validity characteristics of the short version of the Social and Emotional Loneliness Scale for Adults. *Educational and Psychological Measurement*, 64, 99-119. <http://dx.doi.org/10.1177/0013164403258450>
- Drennan, J., Treacy, M., Butler, M., Byrne, A., Fealy, G., Frazer, K., & Irving, K. (2008). The experience of social and emotional loneliness among older people in Ireland. *Ageing and Society*, 28, 1113-1132. <http://dx.doi.org/10.1017/S0144686X08007526>

- Fernandes, H., & Neto, F. (2009). Adaptação portuguesa da escala de solidão social e emocional (SELSA-S). *Psicologia, Educação e Cultura, XIII*, 7-31.
- Goodwin, R., Cook, O., & Yung, Y. (2001). Loneliness and life satisfaction among three cultural groups. *Personal Relationships*, 8, 225-230. <http://dx.doi.org/10.1111/j.1475-6811.2001.tb00037.x>
- Green, L. K., Richardson, D. S., Lago, T., & Schatten-Jones, E. C. (2001). Network correlates of social and emotional loneliness in young and older adults. *Personality and Social Psychology Bulletin*, 27, 281-288. <http://dx.doi.org/10.1177/0146167201273002>
- Hawkey, L. C., Thisted, R. A., & Cacioppo, J. T. (2009). Loneliness predicts reduced physical activity: Cross-sectional & longitudinal analysis. *Health Psychology*, 28, 354-363. <http://dx.doi.org/10.1037/a0014400>
- Heinrich, L. A., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical Psychology Review*, 26, 695-718. <http://dx.doi.org/10.1016/j.cpr.2006.04.002>
- Henk, B., Elving, W. J., & Seydel, E. R. (1998). Psychosocial factors and mental health in cancer patients: Opportunities for health promotion. *Psychology, Health & Medicine*, 3, 71-79. <http://dx.doi.org/10.1080/13548509808400591>
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analysis review. *Perspectives on Psychological Science*, 10, 227-237. <http://dx.doi.org/10.1177/1745691614568352>
- Jahoda, M. (1982). *Employment and unemployment: A social-psychological analysis*. Cambridge University Press: London.
- Kapikiran, S. (2013). Loneliness and life satisfaction in Turkish early adolescents: The mediating role of self-esteem and social support. *Social Indicators Research*, 111, 617-632. <http://dx.doi.org/10.1007/s11205-012-0024-x>
- Lauder, W., Mummery, K., & Sharley, S. (2006). Social capital, age and religiosity in people who are lonely. *Journal of Clinical Nursing*, 15, 334-340. <http://dx.doi.org/10.1111/j.1365-2702.2006.01192.x>
- Lucas, R. E., Diener, E., & Suh, E. M. (1996). Discriminant validity of subjective well-being measures. *Journal of Personality and Social Psychology*, 71, 616-628. <http://dx.doi.org/10.1037/0022-3514.71.3.616>
- Marangoni, C., Ickes, W. (1989). Loneliness: A theoretical review with implications for measurement. *Journal of Social and Personal Relationships*, 6, 93-128. <http://dx.doi.org/10.1177/026540758900600107>
- Mellor, D., Stokes, M., Firth, L., Hayashi, Y., & Cummins, R. (2008). Need for belonging, relationship satisfaction, loneliness, and life satisfaction. *Personality and Individual Differences*, 45, 213-218. <http://dx.doi.org/10.1016/j.paid.2008.03.020>
- Moore, D., & Schultz, N. (1984). Loneliness: Correlates, attributions, and coping among older adults. *Personality and Social Psychology Bulletin*, 10, 67-77. <http://dx.doi.org/10.1177/0146167284101007>
- Neto, F. (1993). The satisfaction with life scale: Psychometrics properties in an adolescent sample. *Journal of Youth and Adolescence*, 22, 125-134. <http://dx.doi.org/10.1007/BF01536648>
- Neto, F. (2001). Satisfaction with life among adolescents from immigrant families in Portugal. *Journal of Youth and Adolescence*, 30, 53-67. <http://dx.doi.org/10.1023/A:1005272805052>
- Neto, F. (2005). The Satisfaction With Love Life Scale. *Measurement and Evaluation in Counseling and Development*, 38, 2-13.
- Neto, F. (2012). The Satisfaction With Sex Life Scale. *Measurement and Evaluation in Counseling and Development*, 45, 18-31. <http://dx.doi.org/10.1177/0748175611422898>
- Neto, F., & Barros, J. (2000). Psychosocial concomitants of loneliness among students of Cape Verde and Portugal. *The Journal of Psychology*, 134, 503-514. <http://dx.doi.org/10.1080/00223980009598232>
- Neto, F., & Barros, J. (2003). Predictors of loneliness among students and nuns in Angola and Portugal. *The Journal of Psychology*, 137, 351-362. <http://dx.doi.org/10.1080/00223980309600619>
- Neto, F., & Barros, J. (2007). Satisfaction with life among adolescents from Portuguese immigrant families in Switzerland. *Swiss Journal of Psychology*, 66, 215-223. <http://dx.doi.org/10.1024/1421-0185.66.4.215>
- Neto, F., & Pinto, M. C. (2015^a). Satisfaction with love life across the adult life span. *Applied Research in Quality of Life*, 10, 289-304. doi: 10.1007/s11482-014-9314-6 <http://dx.doi.org/10.1007/s11482-014-9314-6>
- Neto, F., & Pinto, M. C. (2015^b). A cross-cultural investigation of satisfaction with sex life among emerging adults. *Social Indicators Research*, 120, 545-557. doi: 10.1007/s11205-014-0604-z <http://dx.doi.org/10.1007/s11205-014-0604-z>
- Pavot, W., & Diener, E. (2008). The Satisfaction With Life Scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, 3, 137-152.
- Peplau, L., & Perlman, D. (Eds.) (1982). *Loneliness: A sourcebook of current theory, research and therapy*. New York: Wiley-Interscience.
- Rokach, A., & Neto, F. (2005). Age, culture, and the antecedents of loneliness. *Social Behavior and Personality*, 33, 477-494. <http://dx.doi.org/10.2224/sbp.2005.33.5.477>
- Russell, D., Cutrona, C. E., Rose, J., & Yurko, K. (1984). Social and emotional loneliness: An examination of Weiss's typology of loneliness. *Journal of Personality and Social Psychology*, 46, 1313-1321. <http://dx.doi.org/10.1037/0022-3514.46.6.1313>

- Savikko, N., Routasalo, P., Tilvis, R. S. Strandberg, T. E., & Pitkälä, K. H. (2005). Predictors and subjective causes of loneliness in an aged population. *Archives of Gerontology and Geriatrics*, 41, 223-233. <http://dx.doi.org/10.1016/j.archger.2005.03.002>
- Simões, A. (1993). São os homens mais agressivos que as mulheres? *Revista Portuguesa de Pedagogia*, 3, 387, 404.
- Thurston, R. C., & Kubzansky, L. D. (2009). Women, loneliness, and incident coronary heart disease. *Psychosomatic Medicine*, 71, 836-842. <http://dx.doi.org/10.1097/PSY.0b013e3181b40efc>
- Tse, M., Leung, R., & Ho, S. (2012) Pain and psychological well-being of older persons living in nursing homes: an exploratory study in planning patient-centred intervention. *Journal of Advanced Nursing*, 68, 312–321. <http://dx.doi.org/10.1111/j.1365-2648.2011.05738.x>
- Uruk, A. C., & Demir, A. (2003). The role of peers and families in predicting the loneliness level of adolescents. *The Journal of Psychology: Interdisciplinary and Applied*, 137, 179-193. <http://dx.doi.org/10.1080/00223980309600607>
- Victor, C. R., & Yang, K. (2012). The prevalence of loneliness among adults: A case study of United Kingdom. *The Journal of Psychology*, 146, 85-104. <http://dx.doi.org/10.1080/00223980.2011.613875>
- Watson, D., Clark, L. A., & Tellegen A. (1988). Development and validation of brief measures of positive and negative affect. *Journal of Personality and Social Psychology*, 54, 1063-1070. <http://dx.doi.org/10.1037/0022-3514.54.6.1063>
- Weiss, R. S. (1973). *Loneliness: The experience of emotional and social isolation*. Cambridge, MA: MIT Press.