

A SILVER LINING: AGE, FRIENDS AND LONELINESS AMONG PORTUGUESE UNIVERSITY STUDENTS

Genta Kulari¹, Luísa Ribeiro²

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Objective: Evidence suggests that loneliness among students is becoming a public health concern. Meanwhile, friends support is salient during times of intense social changes and transition to adulthood, protecting individuals against loneliness. Friends support as a source of social support and age differences among university students, are putted through a magnifying glass to analyse the effect it has on loneliness.

Method: The sample consisted of 121 university students (age range 18–60; 78,3% female) attending private university in Lisbon. The present study had a cross-sectional design administering the sociodemographic questionnaire, UCLA Loneliness Scale, and Multidimensional Scale of Perceived Social Support.

Results: The results of the study found that age and friends support explained 37.4% of variance of loneliness indicating that students who receive higher support from friends had lower levels of loneliness compared to others with lower friends' support. Furthermore, younger students predicted higher levels of loneliness compared to older students.

Conclusions: To best of our knowledge this is the first study in Portugal to encompass a variety of age group university students analysing the perception of loneliness, as the mainstream of literature focuses on elderly population.

Keywords: Loneliness, friends social support, university students, age differences

Introduction

The transition to university coincides with a critical developmental period for students, characterized by individuation and separation from family, development of new social connections, and increased autonomy and responsibility (Marchini et al., 2020). However, the stringent measures brought about by the COVID-19 pandemic heavily interfered with students' adaptation to university, particularly affecting those who first enrolled in those academic years

1 Assistant Professor and Researcher at the Department of Psychology at the Universidade Autónoma de Lisboa, Portugal.
E-mail: gkulari@autonoma.pt ORCID: 0000-0003-4774-4632

2 Assistant Professor and Researcher at the Department of Psychology at the Universidade Autónoma de Lisboa, Portugal.
E-mail: mrribeiro@autonoma.pt ORCID: 0000-0003-4028-3642

(Heuman et al., 2023). Universities, and their students, are now facing the repercussions of distant learning. Thus, students seem to be experiencing what Turkle (2010) described as they are all “alone together” (p.1). Recent studies are warning universities about increase perception of loneliness among university students and their struggle to build connections with their peers and colleagues (Kaufmann & Vallade, 2020). Furthermore, Portuguese General Directory of Higher Education (GDHE, 2022) in annual statistics found that during 2020-2021 academic year, one in four students (24.4%) enrolled in a university in Portugal dropped out during the first semester. Considering that loneliness is becoming a near-epidemic concern in the Western countries (Cacioppo & Cacioppo, 2018), it is imperative uncovering factors that can protect students from loneliness.

Literature review

Loneliness and age among university students

Loneliness is the subjective feeling people experience when they feel less socially connected to others than they desire (Peplau & Perlman, 1982). Researchers typically associated the high prevalence of loneliness to the ongoing changes in adult life such as maintaining long-term relationships, parenthood, employment, economic security, living alone, and establishing significant social roles (Gomboc et al., 2022; Shovestul et al., 2020). It is a commonly held belief that loneliness is particularly prevalent among older people, but research does not support that proposition (Barreto et al., 2021). For example, a large body of literature has shown that loneliness is not just restricted to old age but varies considerably throughout the lifespan (Hawkley & Cacioppo, 2007; Luhmann & Hawkley, 2016).

Specifically, data on the trajectory of loneliness suggests that it tends to rise in young adulthood and decline through middle adulthood before gradually increasing in the very elderly years (Pinkquart & Sorensen, 2003; Qualter et al., 2015; Surkalim et al., 2022). Herein, studies have shown a U-shaped curve in which young adults and older people report more perceived loneliness than those in middle age (Lasgaard et al., 2016; Victor & Yang, 2012). However, previous literature has focused on selective age groups i.e., exclusively adolescents or elderly cohorts, rather than the entire lifespan, making it difficult to determine age differences across studies (Shovestul et al., 2020). A recent systematic literature review on loneliness highlighted the urge for more inclusive studies with young adults, compared with older adults (Surkalim et al., 2022). Literature regarding loneliness among university students, is still a novel field of research in Portugal. Moreover, to best of our knowledge this is the first study in Portugal to encompass a variety of ages university students addressing protecting factors of loneliness.

Perceived social support and loneliness among university students

Studies have raised warning on the impact of loneliness in health such as bodily pain, shortness of breath, troubles of sleep, and poor perception of health (Zhang & Dong, 2022). In particular, research with students has examined differences in social skills (e.g. empathy, social anxiety), resources (e.g. time, money, transportation, etc.), cohabitation as well as perceived social support

as main factors impacting heavily on the perception of loneliness (Zhang & Dong, 2022). Zimet et al., (1988) introduced for the first time three distinct sources of social support: family, friends, and significant others. Particularly, among university students, Jackson et al. (2000) found that low levels of social support from friends during the middle of the semester were predictive of later feelings of loneliness at the end of the same semester. As an important indicator of social relationship, social support is considered a significant factor that could effectively alleviate loneliness (Zhang & Dong, 2022).

The close and supportive relationship with friends have a positive role improving academic performance, dealing with life problems, improving general adaptiveness, developing physical and psychological wellbeing (Sadoughi & Hasempour, 2017). The reverse may cause anxiety in social relationships and sensitivity to rejection (Xu et al., 2020). Furthermore, support from friends has been found to reduce the impact on psychological problems among students (Zhang & Dong, 2022). Thus, perceived support from friends and peers is likely to be of particular benefit for students' interaction adjustment (Suwinyattichaiporn & Johnson, 2022). Students that establish supportive connections at university, including with peer and faculty members, are more likely to persist and succeed academically (Dennis et al., 2005). Differently, students who are lonelier in their academic years, are more likely to be isolated, less connected to peers, and have poorer overall adjustment to university life (Dennis et al., 2005; Suwinyattichaiporn & Johnson, 2022).

Additionally, it is very important to shed light on this specific source of perceived social support that contribute to loneliness. A recent systematic review of 177 articles in English and Chinese found that, research is scant examining the differential associations of varying sources of social support on the impact of loneliness, thereby warranting exploration (Zhang & Dong, 2022). Moreover, results from the limited literature are contradictory, challenging the possibility to compare studies among different populations and age groups. For example, Henninger IV et al. (2016) found that social support from friends and significant others was the largest predictor of loneliness. Another study with university students in India, found that there was no difference among the three sources of social support on loneliness (Suri & Garg, 2020). Yet another study among university students found that only the friends' support buffered the association between stress and loneliness, indicating that students with higher levels of support from friends, have lower level of loneliness and stress (Lee & Goldstein, 2016). Therefore, the present study addresses this gap by examining university students' perception of friends as a source of social support alongside with age differences impacting loneliness.

Age and loneliness among university students

Transition to young adulthood makes university students particularly vulnerable to feelings of loneliness (Gomboc et al., 2022). This may be related to developmental-specific risk factors, such as moving away from home and their local community, and re-establishing new social networks. Surprisingly, the epidemiology of loneliness in young people has received scant attention in Portugal. However, evidence indicate that first year students are more vulnerable to loneliness compared to other students (Wazni et al., 2021) Hence, if loneliness is limited to, or peak at the actual transition from moving away from home, a decline in loneliness over time should be expected among senior students. Moreover, Portugal is facing an increase in number of students with more of 23 years old, which correspond to 28.9% of all students (Santos et al., 2016).

These students usually correspond to individuals who dropped out university and return after a long-time gap, or individuals with no previous higher education experience. While attention is provided in the recent years to traditional age students, enrolling to university immediately after the secondary education, little is known about students of different age groups, and how does age impacts loneliness among these students.

Present study

Using a representative and diverse age group sample of university students, the purpose of the present study is to extend the current research on social support from friends by examining its associations with loneliness. As evidenced from various studies, friends as a source of social support has an important impact during the university path (Mallika Appuhamilage & Torri, 2019). Age differences regarding loneliness is also explored in this study. Considering the elevated number of students dropping out of university, interruptions or failure in academic accomplishments may be attributed in part to stress-related problems and/or struggles in social relationships that many university students experience, such as loneliness (Lee & Goldstain, 2016; Romero et al., 2023). Thus, in order to promote success in university and social adjustment in university life, it is both essential and urgent to examine whether friends as a source of social support might help alleviate students' feelings of loneliness and if so, whether the age differences might impact their university experience. Based on the research discussed above, the goal of our study is twofold. The present study proposed the following research questions:

What is the effect of social support from friends buffering the perception of loneliness among university students?

What is the student's age groups effect on loneliness among university students?

Method

Procedure and Participants

After receiving approval from Universidade Autónoma de Lisboa Ethical Commission of, a cross-sections design study was administered to undergraduate and master's students. Data was collected in person during the month of January 2023. Participants were recruited individually in their classes and the surveys were conducted in their classrooms. Informed consent was taken prior to participation and confidentiality of all participants was ensured. The inclusion criteria included university students with more than 18 years of age, who are enrolled in the private university and attending their full-time studies. The survey was composed of two phases. Initially the participants were introduced with two instruments, the loneliness scale (UCLA, Russell, 1996) and the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988)-as well as some sociodemographic questions including: sex, age, civil status, and number of cohabitants in the house. Collected data was analysed using IBM SPSS. The sample consisted of 121 university students from the psychology department.

Instruments

Perceived Social Support: Sources of social support were measured by the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988), which consists of 12 items assessing three particular sources of social support: family, friends and romantic partners (four items per source of support). Zimet et al. (1988) used undergraduate university students in their study, reporting coefficient alphas of .87, .85, and .91 for the support subscales of family, friends, and romantic partners, respectively. The respondents indicated to what extent they agreed with each statement using a 7-pointing scale (1=strongly disagree, 7= strongly agree). In this study we are going to use the perceived social support from friends' dimension. Sample items include, "I can count on my o friends when things go wrong" (support from friends). The Portuguese version of the instrument was validated with the same sample as the original one (Carvalho et al., 2011). The validated instrument reported Cronbach alpha of .94 for the scale and .93, for friends' source.

Loneliness: Loneliness was evaluated by the 20-item UCLA Loneliness Scale (UCLA; Russell, 1996). Participants rated how often they felt the way described in each of the statements (1 = never, 2 = rarely, 3 = sometimes, 4 = often). Sample statements are "I feel isolated from others" and "I lack companionship." Mean scores were calculated so that higher scores signify higher levels of loneliness. Russell (1996) reported a coefficient alpha of .94 for the scale's internal consistency and provided evidence of its construct validity via positive correlation with measures of health and well-being in a sample of university students, nurses, teachers, and elderly. The Cronbach's of the validated versions of the instrument in Portuguese was .90 (Pocinho et al., 2005).

Age of students: Age was collected by asking the participants to write their chronological age in the sociodemographic questionnaire that further included information in relation to sex, marital status, academic background, and number of people they cohabitated.

Statistical Analysis

Data were processed and analysed using the Statistical Package for the Social Sciences (SPSS) 29.0 for Windows. Descriptive statistics and reliability estimates were computed for all the study variables. Pearson correlation analysis was conducted to examine the association among study variables, and linear regression was used to measure the effect of social support from friends and age on loneliness.

Results

Respondents profile

The majority of the participants were women ($n = 94$; 78.3%) and 26 men (21.7%). Only one participant selected the option "I prefer not to say" (0.8%). All participants were students enrolled in the faculty of psychology where 71 (58.7%) attending their Master's degree and 50 (41.30%) attending their Bachelor's degree. The age range varied from 18 to 60 years old, with a mean of 32.20 ($SD = 12.11$). A total of 18 (14.9%) participants did not report their age. Table 1 presents the variation of age groups in this sample. Moreover, results showed that young adults (age equal or older than 35 years) represented over half of the sample ($n = 64$; 63.1%). In regard to the

marital status, the majority of participants were single ($n = 77$, 65.3%). Almost 30% of our sample cohabitated with one person ($n = 30$, 24.4%). Around one fourth of the participants cohabitated with two people ($n = 27$, 22%), and another fourth cohabitated with equal or more than 3 people ($n = 57$, 47.1%).

TABLE 1
Socio-demographic data

Items	N	%
Sex		
Female	93	75.6
Male	27	21.1
Prefer not to say	1	0.8
Age Group		
< 25 years old	42	34.7
26 - 35 years old	23	19
36 - 45 years old	22	18.18
> 46 years old	34	28.12
Marital Status		
Single	77	65.3
Married	22	17.9
Education		
Bachelor's degree	50	41.3
Master's Degree	71	58.7
Divorced	7	5.7
Non-marital partnership	12	9.7
Residential status		
Living alone	7	5.7
Living with 1 other person	30	24.4
Living with 2 other people	27	22.0
Living with 3 other people	26	21.1
Living with more other people	31	25.61

Correlations

Correlation analysis for the sample is reported in Table 2. Loneliness was negatively correlated with social support from friends ($r=.556$; $p<0.001$) and negatively correlated with age ($r=-.212$; $p<0.05$). Therefore, higher levels of support from friends indicated lower levels of loneliness among university students in our sample. Similarly, higher levels of loneliness were detected among younger participants in this study. However, no significant correlation was found between social support from friends and age of the students.

TABLE 2*Mean, standard deviation, correlations among study variables*

Variables	M	SD	1	2
Loneliness	1.96	.559	-	-
Social Support from friends	5.70	1.237	-.556**	-
Age	32.20	12.11	-.212*	-.055

Note: * $p < 0.05$, ** $p < 0.001$ **Regression results**

Linear regression was performed to analyse the impact of perceived social support from friends and age on loneliness among university students. Table 3 shows that to explain loneliness, perceived social support from friends and age are relevant as they indicate significant values. Therefore, when perceived social support from friends increases by one-point, parental stress decreases by -.579 points. The proposed model was significant $F(2,101) = 30.800$, $p < 0.001$. Perceived social support from friends and age of students explained 37.9% of the variance of loneliness (R^2 adjusted). The Durbin-Watson test statistics in our study is lower than two, showing error independence ($DW = 2.141$). Errors have an average of zero. Age and social support from friends (independent variables) are independent of each other as indicated by the value of $VIF = 1.003$ (≥ 5) and Tolerance = .997 (≥ 0.2).

TABLE 3*Summary of regression analysis for predicting the effect of perceived social support from friends and age of students on loneliness*

Predictors	95% IC for B			S.E.	b	p
	B	Inferior	Superior			
Social Support from Friends	-.275	-.349	-.201	.037	-.579	.000
Age	-.011	-.018	-.004	.004	-.244	.000

 $R^2 = .379$; $F = 30.800$; $N = 121$ **Discussion**

The current study extends research on the role of friends' social support and age in association to loneliness among university students between 18 and 60 years old. First, the results indicate that students who receive less social support from friends perceive higher levels of loneliness. This pattern of findings supports our research question, which predicted that support from friends would impact of loneliness. Prior research corroborates these findings (Kulari, 2024; Lee & Goldstein, 2016). Loneliness reflects a subjective feeling or disconnectedness which is often characterized as a discrepancy between desired and actual social relationships (Perplau & Perlman, 1982).

Therefore, our study adds to literature suggesting that the function of social support from friends can buffer the effects of loneliness. This could have occurred for a number of reasons: for example, perhaps friendships were more emotionally intimate and longer lasting compared to other sources (Suwinyattichaiorn & Johnson, 2022). Although the current data do not allow for this particular of follow-up inquiry, it will be interesting for future research to explore these issues in greater detail. The current findings are consistent with the life course perspective which places individual's relationships and their meaning within a developmental context (Hawkley & Cacioppo, 2007; Luhmann & Hawkley, 2016). As an individual moves from adolescence and transition to adulthood, support from friends and peers may be particularly effective in enhancing their social abilities (Sadoughi & Hasempour, 2017). This knowledge is essential, as the university years are often characterized by considerable relationship transitions (Zhang & Dong, 2022).

An additional key finding of the current study is understanding age differences in perception of loneliness. Literature has shown a U-shaped line of loneliness among different age groups (Viktor & Young, 2012). Therefore, the results of the present study indicated that younger students have a higher level of loneliness compared to older individuals. However, literature is scarce when compared among a variety of age groups and in particular university students. This is a notable contribution to the literature, and is consistent with previous literature regarding age differences and the experiences of loneliness. For example, Lee and Goldstain (2016) have pointed out that younger adults experience more changes in life and adaptation, indicating a higher level of loneliness. Similarly, research indicated that younger adults strive for peer relationships as a source of protection toward loneliness (Barreto *et al.*, 2021). Thus, even though a friend's relationships are very important, perhaps an increased emphasis on relationships puts them at risk for an increased discrepancy between desired and achieved social relationship, therefore intensifying their vulnerability to loneliness. Although this was not analysed in the present study, would be imperative to explore these issues in future research.

Limitations

Despite the strength of the study, there are several limitations that should be noted. First, sample size consists of a little number of participants that doesn't permit to generalize the difference of age groups and the association among friends support and loneliness. Furthermore, the study sample included students of only one university, to extent to which results generalize to students of other type of universities and field of study is unclear. Second, this study was cross-sectional in design. Thus, no casual inferences can be made. In other words, would be very important to understand social support from friends not only as a predictor of loneliness but also as an outcome. Finally, the current data do not allow for the specification of other social support sources. Given the diversity of romantic relationship experience of university students, it will be important for future research to assess whether romantic relationship experience buffers loneliness.

Conclusion

Literature has consistently demonstrated varied associated effects of loneliness both in mental (cognitive decline, dementia, depression, anxiety, substance abuse, suicidal ideation and suicide) as well as physical health (cardiovascular diseases, diabetes, chronic pain, cancer, depressed immune system, sleep deprivation), showing pervasive and deleterious effects in many aspects of human health (Goldman et al., 2024; Pai, & Vella, 2022; McWhirter, 1990; Shovestul et al. 2020). These findings emphasize the need for targeting prevention and intervention initiatives aiming to alleviate loneliness among the population, including university students. As university years are the most important time of social and relational transition, it is unclear how different age group react to these new social relationships.

The current study expands on this research, and demonstrates that friends' social support during the years of academic studies buffers some of the negative effects of loneliness. Loneliness may be at its lifetime peak during university years, since young adults (typical higher education student) have usually high levels of loneliness (Lee & Goldstain, 2016; Viktor & Young, 2012). Their strong need for friends' support (Barreto et al., 2021) may be thwarted during university years, especially if the student has to relocate. The present results call attention to the need for friends relationship development and urges institutions to development of means of facilitating this type of support during these transitional years.

Conflict of interest

The authors have no conflicts of interest to declare.

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