

# Psychological predictors of loneliness among Palestinian university students in the West Bank

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Transcultural Psychiatry  
2020, Vol. 57(5) 688–697

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DOI: 10.1177/1363461519857298

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## Abstract

The purpose of this study was to examine the predictive role of life satisfaction, perceived social support, and psychological problems on loneliness among Palestinian university students in the West Bank. Participants were 254 volunteer undergraduate students (50.4% males and 49.6% females), ranging from 18 to 26 years of age. Data was collected using the Loneliness Scale (UCLA), Satisfaction with Life Scale (SWLS), Multidimensional Scale of Perceived Social Support (MSPSS), Psychological Problems Scale and a Demographic Information Form. There was a significant gender bias towards loneliness, male students being lonelier than female students. Results showed that students who had higher loneliness, felt less satisfied with their life and perceived less support from friends, family and significant others. Furthermore, students who had high loneliness also presented more psychological problems. These results also indicated that, after accounting for psychological problems, life satisfaction, and social support from friends and significant others are negative predictors of loneliness. These findings suggest that universities should create strategies to improve well-being and social support to protect students from the negative effects of loneliness.

## Keywords

life satisfaction, loneliness, Palestine, perceived social support, psychological problems, university students, West Bank

## Introduction

The State of Palestine, or as it is known, Palestine, is an Arab Muslim country located in the Middle East. The State of Palestine claims the West Bank bordering Jordan, and the Gaza Strip bordering Egypt, with Jerusalem as the capital. These areas of Palestine have been occupied by Israel since 1967, and are administered by the Palestinian Authority. As a result of the occupation and continuous conflict the Palestinian people live a continuous crisis (Al-Krenawi, Lev-Wiesel, & Mahmud, 2007).

Palestine is divided into 16 administrative divisions. Nablus and Jenin are two of them. The estimated total population of Palestine was about 4.81 million until the mid of 2016, 2.36 million being females, and 2.45 million males. A total of 2.93 million live in the West Bank and 1.88 million in the Gaza Strip; 73.9% of the population lives in urban areas, 16.6% in rural areas, and 9.5% in camps. Regarding religion, 93% of Palestinians are Muslim, 6% are Christians, and the remaining 1% are Druze, Samaritans and Jewish (Palestinian Central Bureau of Statistics, 2016). West Bank is managed by the Palestinian National

Authority, which was established by the Palestine Liberation Organization pursuant to the Oslo Accords of 1993, and it has limited control of populated areas of the West Bank.

For more than 66 years, Palestinians have been suffering from various levels of traumatic experiences as a result of the occupation of Palestine by the Israeli army. The Palestinian population suffers abuse to basic human rights and stress imposed by armed military violence such as continuous restriction of movement through checkpoints, closures and curfews. Traumatic events such as shootings or bombings, physical injuries, destruction of houses, countryside and infrastructures including ministries, schools, and universities, physical violence and deaths of relatives occur on a daily basis (Abdeen, Qasrawi, Nabil, & Shaheen, 2008; Espié,

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et al., 2009; Punamäki, Komproe, Qouta, Elmasri, & Jong, 2005; Qato, 2004; Rytter, Kjældgaard, Brønnum-Hansen, & Helweg-Larsen, 2006).

There is some evidence that children and youth who have experienced such trauma are more vulnerable to psychological problems (Assaf, 2002), and that trauma and violence have been increasingly affecting mental health among the Palestinian populations (Giacaman, Shannon, Saab, Arya, & Boyce, 2007). For example, Palestinian children frequently suffer negative psychological and social effects such as insomnia, phobias, depression, anxiety, bedwetting, negative social interaction, behavioral problems, and post-traumatic stress disorder (Al-Krenawi, et al. 2007; Altawil, Nel, Asker, Samara, & Harrold, 2008). These childhood traumas might result into severe psychological disorders in the Palestinian youth including university students (Assaf, 2002).

Transition from secondary school to university usually implies that students develop new social networks involving people from different social, religious, cultural and political backgrounds (Al-Kadoumi, Sawalha, & Momani, 2012). However, many students face difficulties in developing new social relationships, which can lead to loneliness. This study analyzes the predictive role of life satisfaction and perceived social support in loneliness among Palestinian university students in the West Bank, after accounting for psychological problems.

While loneliness can be a normative experience, it can also be stressful and debilitating for the individual and interfere with psychosocial functioning. Perlman and Peplau (1984) define loneliness as “the unpleasant experience that occurs when a person’s network of social relationships is significantly deficient in either quality or quantity” (p. 15). Loneliness is characterized by unpleasant feelings that arise when an individual perceives a discrepancy between their desired and actual social relationships (Peplau & Perlman, 1982). In other words, loneliness results from the mismatch between the actual and the desired perceptions on the size and quality of an individual’s social network (Lykes & Kemmelmeier, 2014). Several studies have shown that the causes of loneliness are related to changes in personal relationships and social networks (Peplau & Perlman, 1982). The cultural background such as ethnicity, language, and ethics, also plays an important role in the experience of loneliness. People may differ in their experience of loneliness according to their cultural background (Jordaan & Le Roux, 2004; Mullett, 2002; Neto & Barros, 2003). For instance, Non-Caucasian adolescents were found to feel more lonely than Caucasian ones (Jordaan, & Le Roux 2004; Mullett, 2002). How individuals cope with loneliness is related to their cultural background and their cultural beliefs (Rokach, 1999).

Prevalence of loneliness among the general population has been increasing, and it is a serious problem among university students (Al Khatib, 2012). In their study with Turkish university students, Özdemir and Tuncay (2008) found that 60.2% of the participants had experienced loneliness. In this same vein, Sawir, Marginson, Deumert, Nyland and Ramia (2008) found that 65% of the international students in Australia experienced loneliness. Moreover, loneliness is an important concept for epidemiological and social research as it directly relates to human health and well-being (Bozorgpour & Salimi, 2012; Cacioppo et al., 2002).

The results reported in the literature regarding gender differences in loneliness among university students are conflicting. In a first group of studies conducted in Iraq (Aljabari, 2012), Gaza (Alqeeq, 2011), Turkey (Ekinci, Demirel, Demirel, & Isik, 2015), Biskra (Merrakchi, 2014), Jordan (Migdady, 2008), and Portugal and Angola (Neto & Barros, 2003), loneliness did not differ according to gender. In a second group of studies performed in Saudi Arabia (Addelaim, 2002), Iran (Bozorgpour & Salimi, 2012), Turkey (Ceyhan & Ceyhan, 2011; Demrl, 2007; Ozben, 2013; Tümkaya, Aybek & Çelik, 2008), and Algeria (Ibraiam, 2013), results pointed out higher loneliness among male university students. Finally, in a third group of studies conducted in Iraq (Abdullah, 2011), United Arab Emirates (Al Khatib, 2012), Turkey (Bugay, 2007), and Jordan (Mustafa & Alshrefen, 2012), results revealed higher loneliness among female university students.

There is some evidence showing that loneliness varies across age. In a study with Palestinian university students in Gaza, Alqeeq (2011) found that fourth-year students feel lonelier than the first-year students. Merrakchi (2014) found that university students in Algeria from 21 to 23 years old experience more loneliness than those with ages comprised between 18 and 20 and those above 23 years old.

The way loneliness is experienced differs also according to religiosity (Lauder, Mummery & Sharkey, 2006). Religion plays a significant role in people’s life and in explaining the response to life events (Hackney & Sanders, 2003). Religiosity has been found to be positively associated with well-being and mental health, and negatively associated with psychopathology, such as anxiety. Thus religious people report higher levels of satisfaction with their lives, better mental health and lower levels of anxiety and depression (Abdel-Khalek, 2007; Abdel-Khalek & Naceur, 2007; Cohen & Johnson, 2016). According to Sobosan (in Jordaan & Le Roux, 2004), loneliness is found when people feel far away from God and from the humanity. Faith in God, prayer, fasting and attending religious institutions are some of the beliefs which play an important role in maintaining well-being (Acharya & Northcott, 2007).

Even though religious practice has decreased in several countries around the world, religiosity still remains central to individuals' lives, playing a relevant role in preventing loneliness (Lauder, Mummery & Sharkey, 2006).

Given the cognitive and social dimensions of loneliness (i.e., the perceived discrepancy between actual and desired social relationships (Peplau & Perlman, 1982), one can expect that other sociocognitive variables, such as life satisfaction and perceived social support, have a protective role on loneliness.

Life satisfaction is defined as a "judgmental process, in which individuals assess the quality of their lives on the basis of their own unique criteria" (Pavot & Diener, 1993, p. 164). Furthermore, life satisfaction refers to a global cognitive evaluation or judgment of one's satisfaction with his or her own life (Diener, Emmons, Larsen, & Griffin, 1985). Some studies show that gender did not correlate with life satisfaction (Shaqora, 2012; Tmkaya, 2008), while other studies indicate that life satisfaction is higher among male university students in Turkey (Bugay, 2007; Ozben, 2013) and among female university students in Iran (Bozorgpour & Salimi, 2012). In Palestine, Shaqora (2012) found that the university students from high income and high education families have higher levels of life satisfaction.

Some evidence regarding a negative association between loneliness and life satisfaction has been found in nursing students in Turkey (Akhunlar, 2010), medical university students in Malaysia (Swami et al., 2007), and university students in Iran (Bozorgpour & Salimi, 2012).

Perceived social support refers to "an individual's perception of general support or specific supportive behaviors (available or enacted on) from people in their social network, which can either enhance functioning or buffer from adverse outcomes" (Demaray & Malecki, 2002, p. 215). The social support network offers people an opportunity to share a wide range of issues, and to build a support system (Lumadi & Sethusha, 2013). Some studies addressing the relationship between loneliness and social support, both in young and elderly people, have shown that social support relieves loneliness (Wilson, Calsyn, & Orlofsky, 1995). Social support from friends, family and significant others prevents loneliness also among university students (Davison, Pennebaker, & Dickerson, 2000; Eshbaugh, 2008; Lumadi & Sethusha, 2013).

As far as we know, there is only one study about the relationship between loneliness, perceived social support, and life satisfaction among university students (Shahini, Asayesh, Ghobadi, & Sadeghi, 2013). This study was conducted in Iraq and its results revealed that loneliness was negatively correlated with life satisfaction and family and friends' social support, whereas

social support from the family and friends was positively correlated with life satisfaction.

Not surprisingly, loneliness appears to be positively related to several mental health problems among university students (Daniel, 2013; Nordin, Abu Talib, & Yaacob, 2009; Russell, 1996; Swami et al., 2007). For instance, loneliness and lack of social support, can lead to depression. When people feel depressed they tend to avoid social contacts which may lead to loneliness (Aljabari, 2012; Migdady, 2008; Wei, Russell, & Zakalik, 2005). Research with Palestinian university students in the Gaza Strip showed that greater attention should be given to students' mental health, especially among students coming from low income families (Abadsa & Thabet, 2012; Assaf, 2002).

To the best of our knowledge there are, to date, no studies on life satisfaction and social support as determinants of loneliness among Palestinian university students in the West Bank. This study aims to fill this gap. Based on the existing research, we have defined one research question (RQ1) and four hypotheses.

RQ1: Are there significant differences in the degree of loneliness according to individual characteristics such as gender and age, family background, place of residence, and local academic context? Results of previous research on the relationship between loneliness and demographic variables are not conclusive, preventing us from advancing specific hypotheses.

Hypothesis 1: Loneliness and life satisfaction are negatively correlated.

Hypothesis 2: Loneliness and support from friends, family, and significant others are negatively correlated.

Hypothesis 3: Loneliness and psychological problems are positively correlated.

Hypothesis 4: Loneliness is negatively predicted by life satisfaction, perceived social support from friends, family and significant others, and positively predicted by psychological problems.

## Methods

### Participants

Participants were 254 (126 females and 128 males) undergraduate students from two Palestinian universities in the West Bank in Palestine. The age of the participants ranged from 18 to 26 years (41.3% of participants were 18 to 21 years old and 58.7% were 22 to 26 years old). Eighty-seven percent were attending the An-Najah National University and 19.3% were attending the Arab American University; 27% were attending a course in sciences and 73% in humanities. All the participants were Arab Muslim Palestinian.

Regarding parental education, 20.1% of the parents did not complete secondary school, 37.4% completed secondary school, and 42.5% hold a bachelor degree or higher. Regarding monthly family income, about 37% of the participants' families had a monthly income ranging between 500–1000 USD. Furthermore, 52.4% of the participants were living in villages, about 42.5% in cities, and 5.1% in refugee camps. More than 89.8% of the participants' families had their own houses (see Table 1).

## Measures

Students were asked to fill five self-report questionnaires: Revised UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980), Satisfaction with Life Scale (Diener et al., 1985), Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988), Psychological Problems Scale (Berry et al., 2006; Neto, 2009), and Demographic Information Form.

*Revised UCLA Loneliness Scale.* UCLA was developed by Russell et al. (1980). It is a 20-item measure of

loneliness, comprised of 10 positively stated items (1, 4, 5, 6, 8, 10, 15, 16, 19, 20) and 10 negatively stated items (2, 3, 7, 9, 11, 12, 13, 14, 17, 18), assessed with a 4-point Likert-scale (*1 = never, 4 = often*). These statements concern the individual's satisfaction with his or her interpersonal relationships. Items are summed to produce a total score. Greater scores indicate greater loneliness. The Arabic version of Loneliness scale was adapted by Alomari and Jaradat (2013) and by Asaad (2010) in Jordan. In this study, the Alomari and Jaradat (2013) version was used, and revealed good internal consistency (Cronbach's  $\alpha = .81$ ).

*Satisfaction with Life Scale (SWLS).* SWLS assesses the individual's subjective evaluation of his or her life. It was developed by Diener et al. (1985), including five items assessed with a 7-point Likert-scale (*1 = strongly disagree, 7 = strongly agree*). In this study, the Jaradat (2013) version was used, and revealed good internal consistency (Cronbach's  $\alpha = .71$ ).

*Multidimensional Scale of Perceived Social Support (MSPSS).* MSPSS was developed by Zimet et al. (1988) to assess support in three domains: family (FA), friends (FR), and significant others (SO). It is a 12-item scale assessed with a 7-point Likert scale (*1 = strongly disagree, 7 = strongly agree*). The Arabic version of MSPSS adapted by Abou-hashem (2010) in Egypt was used in this study. Cronbach's alpha coefficients for the total scale, friends support, family support and significant others support were of .89, .83, .78 and .81, respectively, revealing good internal consistency.

*Psychological Problems Scale (PPS).* This scale assesses depression, anxiety and psychosomatic symptoms (Berry et al., 2006; Neto, 2009). It consists of 15 items assessed with a 5-point Likert scale (*1 = strongly disagree, 5 = strongly agree*). Factor analyses show that the 15 items constitute a single factor. Chronbach's alpha in this study was .87, revealing good internal consistency.

*Demographic Information Form.* This form was used to gather detailed information on basic demographics such as student's age and gender, family income, parents' level of education, housing conditions, place of residence, and university and faculty attended by students.

## Procedures

Ethical approval for the study was obtained retroactively from the Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto. Additionally, permission from the administration of the An-Najah University and the Arab American University was obtained to allow the researcher to enter the classrooms to conduct data collection.

**Table 1.** Demographic characteristics of the participants (N = 254).

Demographic variables	Frequency	%
Gender		
Males	128	50.4
Females	126	49.6
Age		
18–21	105	41.3
22–26	149	58.7
Parental education level		
Less than secondary	51	20.1
Secondary	95	37.4
Bachelor and more	108	42.5
Monthly family income		
\$500 and less	77	30.3
\$500–\$1,000	94	37.0
More than \$1,000	79	31.5
Place of residence		
Village	133	52.4
City	108	42.5
Refugee camp	13	5.1
University		
An-Najah	205	80.7
Arab American	49	19.3
Faculty		
Sciences	68	26.8
Humanities	185	72.8



Students were invited to participate in the research by answering the questionnaires. Informed consent was obtained from all individual participants and they were informed that they were free to withdraw participation at any moment without any kind of retaliation. Students completed the questionnaires during their classes in the absence of teachers and in the presence of the researcher. Students were assured of the confidentiality of their answers and did not receive compensation for their participation. The questionnaires were presented in Arabic for all participants. This was considered an adequate procedure, as all participants were fluent in Arabic. It took approximately 20 minutes to complete the full set of questionnaires. Data confidentiality was assured. Students did not provide any personal information, apart from demographic data. Each questionnaire was anonymous; after data collection, a number was attributed to each participant with no correspondence to students' names or identity.

### Data analyses

Data were analyzed using descriptive statistics, independent sample t-test and one-way ANOVA to test differences among groups defined by sociodemographic variables, and bivariate correlation to examine the association among variables. Hierarchical multiple regression analysis was used to identify the independent variables that are important in predicting university students' loneliness.

### Results

Descriptive statistics are presented in Table 2. Results show that loneliness was higher in male than in female students,  $t(252) = 2.29, p < .05$ . Life satisfaction was higher in female than in male students,  $t(252) = -5.17, p < .05$ . No significant differences were found between male and female students regarding perceived social support from friends,  $t(252) = -1.28,$

$p > .05$ . Perceived social support from the family and from significant others was higher in female than in male students,  $t(252) = -2.54, p < .05$ , and,  $t(252) = -3.96, p < .05$ , respectively. Female students revealed more psychological problems than male students,  $t(252) = -3.74, p < .05$ . This difference is due to anxiety,  $t(252) = -2.84, p < .05$ , and psychosomatic symptoms,  $t(252) = -3.75, p < .05$ ; there were no gender differences for depression.

There were no significant differences in loneliness between 18 to 21 and 22 to 26 age groups,  $t(252) = -.49, p > .05$ , between An-Najah and Arab American universities,  $t(252) = .88, p > .05$ , nor between sciences and humanities faculties,  $t(251) = .89, p > .05$ . There were no significant differences between the three parental education groups (less than secondary, secondary and bachelor and more),  $F(2,252) = 2.53, p > .05$ , nor between the three income family groups,  $F(2,247) = .11, p > .05$ , regarding loneliness. Finally, there were no significant differences in loneliness according to the place of residence (village, city and refugee camp),  $F(2,251) = .02, p > .05$ .

To test hypotheses 1, 2 and 3 a correlation analysis was conducted (see Table 3). According to Cohen, Manion & Morrison (2000) an absolute correlation coefficient between 0.00 and  $\pm 0.10$  is weak, 0.10 and  $\pm 0.30$  is modest, 0.30 and  $\pm 0.50$  is moderate, 0.50 and  $\pm 0.80$  is strong, and larger than  $\pm 0.80$  is very strong. Significant correlations among all variables ( $p < .01$ ) were found. There was a moderate negative correlation between loneliness and life satisfaction ( $r = -.35$ ), and a modest positive correlation between life satisfaction and support from friends ( $r = .26$ ), family ( $r = .42$ ), and significant others ( $r = .39$ ). Strong negative correlations between loneliness and support from significant others ( $r = -.56$ ) and friends ( $r = -.54$ ) were also found. There was a moderate positive correlation between loneliness and psychological problems ( $r = .43$ ). According to these findings, the hypotheses 1, 2, and 3 were supported.

**Table 2.** Descriptive statistics of the major study variables, and independent sample t-test performance scores of students with gender.

	Total ( <i>n</i> = 254) <i>M</i> ( <i>SD</i> )	Min–Max	Male ( <i>n</i> = 128) <i>M</i> ( <i>SD</i> )	Female ( <i>n</i> = 126) <i>M</i> ( <i>SD</i> )	<i>t</i> ( <i>df</i> = 252)	<i>p</i> -value
Loneliness	38.5 (8.17)	22–69	39.7 (8.0)	37.4 (8.2)	2.29	.02
Life satisfaction	23.2 (5.68)	6–35	21.4 (5.0)	24.9 (5.8)	–5.17	.00
Friends support	20.4 (4.70)	4–28	20.1 (4.9)	20.8 (4.5)	–1.28	.20
Family support	21.6 (4.72)	4–28	20.9 (4.7)	22.3 (4.7)	–2.54	.01
Significant others support	21.9 (4.80)	4–28	20.8 (5.0)	23.1 (4.3)	–3.96	.00
Psychological problems	39.3 (11.13)	16–72	37.2 (2.9)	41.4 (12.4)	–3.74	.00

**Table 3.** Correlation among the study's variables (n = 254).

	1	2	3	4	5
1. Loneliness					
2. Life satisfaction	-.35***				
3. Friends support	-.54***	.26***			
4. Family support	-.43***	.42***	.49***		
5. Significant others support	-.56***	.39***	.58***	.57***	
6. Psychological problems	.43***	-.19**	-.21**	-.21**	-.23***

\*\* $p < .01$ . \*\*\* $p < .001$ .

**Table 4.** Multiple linear regression analysis results for study variables as predictors of loneliness.

	B	SE	B	t	p
Step 1					
(Constant)	26.3	1.71	.43	15.4	<.001
Psychological problems	.31	.04		7.45	<.001
Step 2					
(Constant)	55.7	2.96		18.8	<.001
Life satisfaction	-.15	.08	-.11	-2.04	.04
Friends support	-.49	.10	-.28	-4.79	<.001
Family support	-.07	.10	-.04	-.66	.51
Significant others support	-.47	.11	-.27	-4.34	<.001
Psychological problems	.20	.04	.27	5.74	<.001

Note.  $N = 254$ ,  $R = .69$ ,  $R^2 = .48$ ,  $F(5,253) = 45.061$ ,  $p < .05$ .

To test hypothesis 4, a two-step hierarchical multiple regression analysis was performed to determine whether the university students' life satisfaction and perceived social support from friends, family and significant others predict loneliness, after accounting for psychological problems. Results show that all the variables are significant predictors of loneliness, except family support (see Table 4). Independent variables explained 48% of the variance in loneliness. Psychological problems, in a positive way ( $\beta = .27$ ,  $p < .001$ ), and life satisfaction ( $\beta = -.11$ ,  $p < .05$ ), support from friends ( $\beta = -.28$ ,  $p < .001$ ), support from significant others, in a negative way ( $\beta = -.27$ ,  $p < .001$ ), emerged as significant predictors of loneliness.

## Discussion

This study was designed to examine the predictive role of life satisfaction and perceived social support in loneliness among Palestinian university students living in the West Bank, after accounting for psychological problems. Studies in the West Bank are scarce compared to studies developed in Gaza.

A significant gender bias towards loneliness was found. Male students feel lonelier than female students.

This result is supported by some studies in Saudi Arabia (Addelaim, 2002), Iran (Bozorgpour & Salimi, 2012), Turkey (Ceyhan & Ceyhan, 2011; Demrl, 2007; Ozben, 2013; Tmkaya et al., 2008), and Algeria (Ibraiam, 2013). However, several studies found that female students feel lonelier than male students (Abdullah, 2011; Al Khatib, 2012; Bugay, 2007; Mustafa & Alshrefen, 2012), or that there were no statistically significant differences in loneliness according to gender (Aljabari, 2012; Alqeeq, 2011; Bozorgpour & Salimi, 2012; Ekinci et al., 2015; Merrakchi, 2014; Migdady, 2008; Neto & Barros, 2003).

In the present study several factors can explain the gender bias towards loneliness. It is possible that lower life satisfaction and perceived social support from family and significant others reported in the male population might be the reason for their higher level of loneliness. Moreover, males are less prone to share their problems and emotions with others than females (Salimi, 2011; Salimi & Bozorgpour, 2012). In line with studies on the role of cultural background in loneliness (Al-Kadoumi, et al. 2012; Neto & Barros, 2003), females have larger social networks, which can be explained by cultural family norms in Palestinian society. At this life stage, males are looking for

identification and self-realization, planning their future, career and marriage (Migdady, 2008). Families put a lot of stress on them, because Palestinian males are expected to take responsibility for their family (Salimi, 2011). Due to the permanent fear of being recruited to military service, male students lack social networks and frequently find difficulties in building satisfying and meaningful relationships (Aljabari, 2012). Additionally, some studies show that loneliness is explained by a lack of social support and difficulty in building significant relationships (Peplau & Perlman, 1982; Sawir et al., 2008). All these factors may lead to higher loneliness among male students (Addelaim, 2002; Demrl, 2007; Ibraiam, 2013). Results also show that there are no significant differences in loneliness according to the other sociodemographic variables.

A significant gender difference regarding psychological problems were found. Female students had a higher level of psychological problems than male students, which is in agreement with previous results among university students in Palestine (Abadsa & Thabet, 2012; Alansari, 2006). Females usually have fewer job opportunities and are less free to live their life in the way they want in the Islamic and Eastern countries, which could lead to the negative affect associated with psychological problems (Abadsa & Thabet, 2012; Alansari, 2006; Assaf, 2002).

Confirming hypothesis 1, the correlation analyses showed that loneliness is negatively related to life satisfaction. This result is supported by several studies with university students in Turkey (Akhunlar, 2010; Bugay, 2007; Ozben, 2013; Tmkaya et al., 2008), Iran (Shahini et al., 2013), and Malaysia (Swami et al., 2007). Loneliness is also negatively correlated with perceived social support from friends, family, and significant others, confirming hypothesis 2 and in line with a study by Yilmaz, Yilmaz, & Karaca (2008). When individuals perceive to have consistent support from their social network, they tend to perceive themselves as feeling less lonely and to experience more life satisfaction than those who perceive less social support (Shahini et al., 2013). Students who receive more support from their social network feel more satisfied than those who receive less support. Additionally, students who receive more support and feel more satisfied about their life feel less loneliness (Bozorgpour & Salimi, 2012; Swami, et al., 2007). The positive correlation found between loneliness and psychological problems confirms hypothesis 3 and shows that people with good psychological well-being feel less lonely than others (Aljabari, 2012; Migdady, 2008).

Finally, the results of the multiple regression analysis show that both life satisfaction and perceived social support from friends and significant others were negative predictors of loneliness among Palestinian

university students, after accounting for their psychological problems. As life satisfaction and perceived social support increase, loneliness decreases. These results are in line with studies by Eshbaugh (2008) and Davison et al. (2000) in the US, and Shahini et al. (2013) in Iran. Individuals who perceive friends and significant others as being available and supportive tend to feel less lonely, in line with a study by Salimi and Bozorgpour (2012). These results highlight the importance of improving social support among Palestinian university students to promote their life satisfaction. However, it must be underlined that perceived family support is not a significant predictor of loneliness. This probably occurs because university students spend more time with their friends, who play an important role in reducing their sense of loneliness, especially when they are at the same developmental stage. The higher influence of perceived social support from friends, when compared with support from family, may also be attributed to the authoritarian rearing practices of Palestinian parents, which contrast with the higher sensitivity of friends to peers' needs, and for that reason, friends' social support is probably more influential (Ozben, 2013).

### *Limitations and implications*

This study has several limitations. The sample only includes university students from two universities in the Northern West Bank, An-Najah National University in the Nablus District, and the Arab American University in the Jenin District. This makes generalization to all Palestinian university students difficult. Thus, research should be carried out with representative groups of all the university students in Palestine. It would also be useful to consider other variables, such as happiness and self-esteem, other age groups, and other social groups who have suffered abnormal life events, such as those who have been wounded in conflicts and the sons of martyrs, to examine if the same patterns occur. Moreover, for future studies it would be useful to analyze the effects of religiosity and ethnicity.

This study has practical implications for counseling centers in universities. Students who lack social support are more prone to feel loneliness. Programs should be designed to educate students and teachers on loneliness and to improve social support and life satisfaction in university students who feel loneliness. It is important that these programs allow students the opportunity to participate in extracurricular activities such as students' associations and volunteering in community service, which can improve their personal and social skills. These social activities are important to increase students' satisfaction about their own life and to improve

their perception of social support, which are key aspects in the reduction of loneliness and in the prevention of mental health problems.

### Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

### References

- Abadsa, A., & Thabet, A. (2012). Mental health problems among Palestinian university students in the Gaza Strip. *Arabpsynet e. Journal*, 34–35, 220–226.
- Abdeen, Z., Qasrawi, R., Nabil, S., & Shaheen, M. (2008). Psychological reaction to Israeli occupation: Findings from the national study of school-based screening in Palestine. *International Journal of Behavioral Development*, 32, 290–297. doi: 10.1177/0165025408092220
- Abdel-Khalek, A. M. (2007). Religiosity, happiness, health, and psychopathology in a probability sample of Muslim adolescents. *Mental Health, Religion and Culture*, 10, 571–583. doi.org/10.1080/13674670601034547
- Abdel-Khalek, A. M., & Naceur, F. (2007). Religiosity and its association with positive and negative emotions among college students from Algeria. *Mental Health, Religion & Culture*, 10, 159–170. doi: 10.1080/13694670500497197
- Abdullah, M. (2011). Loneliness and its relation with the psychological tension for the management and economics college in Mosul University. *Journal of Tikrit University of Science*, 18, 324–361.
- Abou-hashem, M. (2010). Structure model relations between psychological well-being and big five personality factors and self-esteem and social support to university students. *Journal of Faculty of Education*, 20, 269–350.
- Acharya, M. P., & Northcott, H. C. (2007). Mental distress and the coping strategies of elderly Indian immigrant women. *Transcultural Psychiatry*, 44, 614–636. doi: 10.1177/1363461507083901
- Addelaim, F. A. (2002). The relationship between psychological security and loneliness among college students. Retrieved on 16 December 2015, from [http://www.gulf-kids.com/pdf/Taman\\_Nafseah.pdf](http://www.gulf-kids.com/pdf/Taman_Nafseah.pdf)
- Akhunlar, M. N. (2010). An investigation about the relationship between life satisfaction and loneliness of nursing students in Uşak University. *Procedia-Social and Behavioral Sciences*, 5, 2409–2415. doi:10.1016/j.sbspro.2010.07.472
- Alansari, B. M. (2006). Gender differences in depression among undergraduates from seventeen Islamic countries. *Social Behavior and Personality: An International Journal*, 34, 729–738.
- Al Khatib, S. A. (2012). Exploring the relationship among loneliness, self-esteem, self-efficacy and gender in United Arab Emirates college students. *Europe's Journal of Psychology*, 8, 159–181. doi:10.5964/ejop.v8i1.301
- Al-Krenawi, A., Lev-Wiesel, R., & Mahmud, A. S. (2007). Psychological symptomatology among Palestinian adolescents living with political violence. *Child and Adolescent Mental Health*, 12, 27–31. doi: 10.1111/j.1475-3588.2006.00416.x
- Aljabari, J. (2012). Psychological sense of unity among the students of the university of Kirkuk. *Journal of Kirkuk University for the Humanities*, 7, 1–19.
- Al-Kadoumi, K., Sawalha, A. M., & Momani, M. M. A. (2012). Psychological loneliness among Arab students at Irbid National University, Jordan. *Journal of International Education Research (JIER)*, 8, 349–358.
- Alomari, K. H., & Jaradat, A. (2013). Exploring the relationship between self-disclosure and loneliness among a sample of Yarmouk university students. *Quds Open University Journal of Research and Educational and Psychological Studied*, 6, 293–326.
- Alqeeq, N. (2011). Loneliness among students from fine arts faculty at Al-Aqsa University Gaza. *Journal of the Islamic University (Humanities Series)*, 19, 597–618.
- Altawil, M., Nel, P. W., Asker, A., Samara, M., & Harrold, D. (2008). The effects of chronic war trauma among Palestinian children. In M. Parsons (Ed.), *Children: The invisible victims of war – An interdisciplinary study* (pp. 183–196). Peterborough, England: DSM Technical Publications Ltd.
- Asaad, A. (2010). The difference in loneliness and life orientation between married and singles and widows from different economic levels. *Damascus University Journal*, 26, 695–735.
- Assaf, A. (2002). The perception of student psychological problems at An-Najah National University through the Al-Aqsa Intifada as a result of Israeli occupation. *An-Najah University Journal for Research (Humanities)*, 19, 221–254.
- Berry, J. W., Phinney, J. S., Sam, D. L., & Vedder, P. (2006). Immigrant youth: Acculturation, identity, and adaptation. *Applied Psychology*, 55, 303–332.
- Bozorgpour, F., & Salimi, A. (2012). State self-esteem, loneliness and life satisfaction. *Procedia-Social and Behavioral Sciences*, 69, 2004–2008. doi: 10.1016/j.sbspro.2012.12.157
- Bugay, A. (2007). Loneliness and life satisfaction of Turkish university students. In *Education in a changing environment conference proceedings* (pp. 371–376). Retrieved on 19 May 2017, from [http://www.ece.salford.ac.uk/proceedings/papers/38\\_07.pdf](http://www.ece.salford.ac.uk/proceedings/papers/38_07.pdf)
- Cacioppo, J. T., Hawkley, L. C., Crawford, L. E., Ernst, J. M., Burleson, M. H., Kowalewski, R. B., & Berntson, G. G. (2002). Loneliness and health: Potential mechanisms. *Psychosomatic Medicine*, 64, 407–417.
- Ceyhan, E., & Ceyhan, A. A. (2011). Loneliness and depression levels of the students applying the university counseling center. *Education and Science*, 36, 81–92.
- Cohen, A. B., & Johnson, K. A. (2016). The relation between religion and well-being. *Applied Research in Quality of Life*, 1–15. doi: 10.1007/s11482-016-9475-6
- Cohen, L. Manion, L., & Morrison, K. (2000) *Research methods in education*. London and New York: Routledge.
- Daniel, K. (2013). Loneliness and depression among university students in Kenya. *Global Journal of Human-Social Science Research*, 13, 10–18.



- Davison, K. P., Pennebaker, J. W., & Dickerson, S. S. (2000). Who talks? The social psychology of illness support groups. *American Psychologist*, 55, 205–217. doi: 10.1037/0003-066X.55.2.205
- Demaray, M. K., & Malecki, C. K. (2002). The relationship between perceived social support and maladjustment for students at risk. *Psychology in the Schools*, 39, 305–316. doi: 10.1002/pits.10018
- Demrl, A. (2007). *The role of gender, attachment dimensions, and family environment in loneliness*. Unpublished doctoral dissertation, Middle East Technical University. Retrieved on 11 October 2015, from <https://etd.lib.metu.edu.tr/upload/12608553/index.pdf>
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49, 71–75.
- Ekinci, N., Demirel, M., Demirel, D., & Isik, U. (2015). Investigation of loneliness perception of high school students according to participating in recreational activities and individual variables. *Sportif Bakış: Spor ve Eğitim Bilimleri Dergisi*, 2, 71–78.
- Eshbaugh, E. M. (2008). Brief report: Gender, social support, and loneliness among residence hall students. *Journal of College & University Student Housing*, 35, 24–33.
- Espié, E., Gaboulaud, V., Baubet, T., Casas, G., Mouchenik, Y., Yun, O., ... Moro, M. R. (2009). Trauma-related psychological disorders among Palestinian children and adults in Gaza and West Bank, 2005–2008. *International Journal of Mental Health Systems*, 3, 21. doi: 10.1186/1752-4458-3-21
- Giacaman, R., Shannon, H. S., Saab, H., Arya, N., & Boyce, W. (2007). Individual and collective exposure to political violence: Palestinian adolescents coping with conflict. *The European Journal of Public Health*, 17, 361–368. doi: 10.1093/eurpub/ckl260
- Hackney, C. H., & Sanders, G. S. (2003). Religiosity and mental health: A meta-analysis of recent studies. *Journal for the Scientific Study of Religion*, 42, 43–55.
- Ibraiam, S. (2013). Sense of loneness and their relationship with internet addiction for Oum El Bouaghi university students in Algeria. *An-Najah University Journal for Research (Humanities)*, 18, 2309–2340.
- Jaradat, A. K. M. (2013). Multidimensional perfectionism in a sample of Jordanian high school students. *Australian Journal of Guidance and Counseling*, 23, 95–105. doi: 10.1017/jgc.2012.20
- Jordaan, J., & Le Roux, A. (2004). Morality as a predictor of loneliness: A cross-cultural study. *Curationis*, 27, 81–93.
- Lauder, W., Mummery, K., & Sharkey, S. (2006). Social capital, age and religiosity in people who are lonely. *Journal of Clinical Nursing*, 15, 334–340. doi: 10.1111/j.1365-2702.2005.01416.x
- Lumadi, M. W., & Sethusha, M. J. (2013). Child support grant: A dangling carrot in curriculum development Mediterranean. *Journal of Social Sciences*, 4, 669–675. doi: 10.5901/mjss.2013.v4n14p669
- Lykes, V. A., & Kemmelmeier, M. (2014). What predicts loneliness? Cultural difference between individualistic and collectivistic societies in Europe. *Journal of Cross-Cultural Psychology*, 45, 468–490. doi: 10.1177/0022022113509881
- Merrakchi, M. (2014). *The correlation between the use of social networks, "Facebook" and loneliness among a sample of university students*. Unpublished doctoral dissertation, University Mohamed Khider Biskra. Retrieved on 2 November 2015, from <http://thesis.univ-biskra.dz/id/eprint/2279>
- Migdady, Y. (2008). Relationship between loneliness and depression among students in the department of education at Al al-Bayt University. *Journal of Educational and Psychological Sciences*, 9, 175–195.
- Mullett, C. (2002). 'n Kruiskulturele ondersoek na die verband tussen individualisme-kollektivisme en eensaamheid by adollesente. O ngepubliseerde magisterverhandeling, Unpublished master dissertation, Universiteit van die Vrystaat, Bloemfontein.
- Mustafa, M., & Alshrefen, A. (2012). Psychological loneliness and psychological security and the relationship between them among a sample of foreign students at Yarmouk University. *Jordan Journal of Science in Education*, 9, 141–162.
- Neto, F. (2009). Predictors of mental health among adolescents from immigrant families in Portugal. *Journal of Family Psychology*, 23, 375–385. doi: 10.1037/a0015831
- Neto, F., & Barros, J. (2003). Predictors of loneliness among students and nuns in Angola and Portugal. *The Journal of Psychology*, 137, 351–362. doi: 10.1080/00223980309600619
- Nordin, N., Abu Talib, M., & Yaacob, S. N. (2009). Personality, loneliness and mental health among undergraduates at Malaysian Universities. *European Journal of Scientific Research*, 36, 285–298.
- Ozben, S. (2013). Social skills, life satisfaction, and loneliness in Turkish university students. *Social Behavior and Personality: An International Journal*, 41, 203–213. doi: org/10.2224/sbp.2013.41.2.203
- Özdemir, U., & Tuncay, T. (2008). Correlates of loneliness among university students. *Child and Adolescent Psychiatry and Mental Health*, 2, 1–6. doi: 10.1186/1753-2000-2-29
- Palestinian Central Bureau of Statistics (2016). National Population Committee, on the eve of the International Population Day. Ramalla, Palestine. Available from <http://www.pcbs.gov.ps/site/512/default.aspx?tabID=512&lang=en&ItemID=1701&mid=3171&wversion=Staging>
- Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment*, 5, 164–172. doi: 10.1016/j.paid.2007.10.030
- Peplau, L. A., & Perlman, D. (1982). Perspectives on loneliness. In L. A. Peplau, & D. Perlman (Eds.), *Loneliness: A sourcebook of current theory, research and therapy* (pp. 1–18). New York: Wiley- Interscience.
- Perlman, D., & Peplau, L. A. (1984). Loneliness research: A survey of empirical findings. In L. A. Peplau, & S. Goldston (Eds.), *Preventing the harmful consequences of severe and persistent loneliness* (pp.13–46). Washington, D. C.; U.S. Government Publishing Office. DDH Publication No. (ADM) 84-1312.

- Punamäki, R. L., Komproe, I. H., Qouta, S., Elmasri, M., & de Jong, J. T. (2005). The role of peritraumatic dissociation and gender in the association between trauma and mental health in a Palestinian community sample. *American Journal of Psychiatry*, 162, 545–551.
- Qato, D. (2004). The politics of deteriorating health: The case of Palestine. *International Journal of Health Services*, 34, 341–364.
- Rokach, A. (1999). Cultural background and coping with loneliness. *The Journal of psychology*, 133(2), 217–229.
- Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA loneliness scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, 39, 472–480.
- Russell, D. (1996). UCLA Loneliness scale (version 3): Reliability, validity and factor structure. *Journal of Personality Assessment*, 66, 20–40. doi: 10.1207/s15327752
- Rytter, M. J. H., Kjældgaard, A. L., Brønnum-Hansen, H., & Helweg-Larsen, K. (2006). Effects of armed conflict on access to emergency health care in Palestinian West Bank: Systematic collection of data in emergency departments. *BMJ: British Medical Journal (International Edition)*, 332, 1122–1124.
- Salimi, A. (2011). Social-emotional loneliness and life satisfaction. *Procedia-Social and Behavioral Sciences*, 29, 292–295. doi:10.1016/j.sbspro.2011.11.241
- Salimi, A., & Bozorgpour, F. (2012). Perceived social support and social-emotional loneliness. *Procedia-Social and Behavioral Sciences*, 69, 2009–2013. doi: 10.1016/j.sbspro.2012. 12.158
- Sawir, E., Marginson, S., Deumert, A., Nyland, C., & Ramia, G. (2008). Loneliness and international students: An Australian study. *Journal of Studies in International Education*, 12, 148–180. doi: 10.1177/1028315307299699
- Shahini, N., Asayesh, H., Ghobadi, M., & Sadeghi, J. (2013). Correlation between perceived social support and loneliness with life satisfaction among students of Golestan University of medical sciences. *Pajoohandeh Journal*, 17, 302–306.
- Shaqora, Y. (2012). *Psychological resilience and its relationship with satisfaction of life among the Palestinian university students in Gaza governorates*. Unpublished master's thesis, University of Alazhar, Gaza, Palestine. Retrieved on 11 June 2015 from <http://search.shamaa.org/fullrecord?ID=76874>
- Swami, V., Chamorro-Premuzic, T., Sinniah, D., Maniam, T., Kannan, K., Stanistreet, D.,... Furnham, A. (2007). General health mediates the relationship between loneliness, life satisfaction and depression. *Social Psychiatry and Psychiatric Epidemiology*, 42, 161–166. doi: 10.1007/s00127-006-0140-5
- Tümekaya, S., Aybek, B., & Çelik, M. (2008). An investigation of students' life satisfaction and loneliness level in a sample of Turkish students. *International Journal of Human Sciences*, 5, 1–15.
- Wei, M., Russell, D. W., & Zakalik, R. A. (2005). Adult attachment, social self-efficacy, self-disclosure, loneliness, and subsequent depression for freshman college students: A longitudinal study. *Journal of Counseling Psychology*, 52, 602–614. doi: 10.1037/0022-0167.52.4.602
- Wilson, J. G., Calsyn, R. J., & Orlofsky, J. L. (1995). Impact of sibling relationships on social support and morale in the elderly. *Journal of Gerontological Social Work*, 22, 157–170.
- Yılmaz, E., Yılmaz, E., & Karaca, F. (2008). Üniversite öğrencilerinin sosyal destek ve yalnızlık düzeylerinin incelenmesi. *Genel Tıp Dergisi*, 18, 71–79.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52, 30–41.
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