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Prevalence and Predictors of Loneliness Among Youth During the Time of COVID-19: A Multinational Study

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Abstract

BACKGROUND: Given the restrictions associated with COVID-19, feelings of loneliness among youth may increase. **AIMS:** The aims of the current study were to assess the prevalence of loneliness among young people at the time of COVID-19 and to identify whether selected variables related to the pandemic predicted the level of loneliness. **METHOD:** A cross-sectional study using WhatsApp and Facebook social media platforms was conducted to survey 1,057 young people aged 15 to 24 years from six Middle Eastern countries. Participants completed survey items including demographic and COVID-19-related questions; the Depression, Anxiety and Stress Scale (DASS); the Satisfaction With Life Scale (SWLS); and the UCLA Loneliness Scale. **RESULTS:** The prevalence of experienced loneliness was 1 (0.1%), 625 (59.1%), 429 (40.6%), and 2 (0.2%), reflecting low, moderate, moderately high, and high experiences for loneliness, respectively. History of depression or anxiety, being dissatisfied with life, and having depression at the time of COVID-19 were significant predictors of loneliness among youth. The model was significant ($F = 44.95$, $p < .05$) and accounted for 29.8% of the variance in UCLA Loneliness Scale scores. **CONCLUSIONS:** We found that the high prevalence rate of loneliness during the COVID-19 pandemic was correlated with depression and impaired life satisfaction among Middle Eastern youth. Thus, special attention and interventional action plans need to be developed taking into consideration the youths' special situation during COVID-19.

Keywords

youth, loneliness, depression, anxiety, stress, satisfaction with life

Introduction

On January 30, 2020, the World Health Organization (WHO) declared COVID-19 as an infectious pandemic disease (WHO, 2020a). The disease had killed 290,390 and infected 4,247,709 people around the world by May 13, 2020, and the numbers are increasing (Johns Hopkins University, 2020). In response, national officials have implemented many mitigation measures to control the outbreak and spread of COVID-19. Most common among them are travel restrictions and physical distancing measures. In the early stages, international travel was banned and internal travel was discouraged, with officials making discretionary amendments as time progressed. Moreover, large social gatherings were banned to encourage persons to maintain physical distancing, and heavily populated settings such as schools and universities were closed. As such, people have been forced to remain at home and where possible engage virtually in school, work, and other routines as a precaution. Although the measures were not equal across all countries, imposing these precautions and restrictive measures on youth may

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lead to increased anxiety, reduced life satisfaction, and feelings of loneliness. Loneliness is a perceived inconsistency between the social needs of an individual and the degree to which those needs are fulfilled by meaningful social interaction (Hawkley & Cacioppo, 2010; Rokach, 2011). According to Peplau (1982), loneliness could be a result of deficient social relationships or an unpleasant and distressing personal experience.

Young people experience the highest rates of loneliness, compared with other individuals (Barreto et al., 2021; Luhmann & Hawkley, 2016; The Ministry of Social Development [New Zealand], 2016; U.K. Office for National Statistics, 2018). The prevalence of loneliness in childhood and adolescence ranges from 3% to 22% (Qualter et al., 2013; Vanhalst et al., 2013). In the United Kingdom, 5% (2.5 million) of adults (16 to 75+) reported feeling lonely, with youth (16-24 years) at greater risk than the older groups (U.K. Office for National Statistics, 2018). Unfortunately, the prevalence of loneliness has not been investigated in Middle Eastern countries, although previous research has suggested that different cultural contexts may influence the level of loneliness among individuals (Yang & Victor, 2011). Hence, exploring the level and predictors of loneliness among youth in Middle Eastern countries is crucial. Studying this young population is essential in promoting the health and well-being of the entire population.

Several factors have been identified as predictors of loneliness among youth. Poverty (Murphy & Shevlin, 2012), belonging to an ethnic minority, being gay or lesbian, having poor health, suffering from cognitive disability or sensory impairment, having reduced mobility, and being male (Age Concern New Zealand, 2020; Ozben, 2013; Smith & Victor, 2019) are examples of predictors of loneliness. Living with single parents or alone (Özdemir & Tuncay, 2008; Smith & Victor, 2019) and the level of family income (Stickley et al., 2013) are other predictors. People who live in a nuclear or extended family (The Ministry of Social Development [New Zealand], 2016) and/or receive social support are less likely to experience loneliness (Stickley et al., 2013). Researchers identified family wealth as a protective factor against feelings of loneliness (The Ministry of Social Development [New Zealand], 2016).

The side effects of loneliness extend to cover mental dimensions of health. People who suffer loneliness have negative thoughts about themselves (Masi et al., 2011), perceive themselves as unworthy, have low self-esteem, and experience dysphoria (Masi et al., 2011), depression (Ypsilanti et al., 2019), drug misuse, self-harm (Rönkä et al., 2013), suicidal attempts (Hatcher & Stubbersfield, 2013; Stickley & Koyanagi, 2016), sleep disturbance (Doane & Thurston, 2014), and eating disorders (Salvy et al., 2011). The physical dimension of health is also affected by loneliness. Individuals with loneliness may adopt unhealthy lifestyles like smoking (Dyal & Valente, 2015), which lead to chronic diseases (Leigh-Hunt et al., 2017; Richard et al., 2017) and increase in mortality rate (Holt-Lunstad et al., 2010).

Youth is a developmental stage between 15 and 24 years (United Nations, 2020), encompassing adolescence and the later stages of childhood. It is accompanied by rapid physical and psychosocial changes (Allen & Waterman, 2020) and a developing identity. Young people are at the stage of moving from socialization with parents to peers and the wider public in order to form their future identity. Exposure to any unexpected external stressor can impact the stage of identity forming and lead to dissatisfaction with life and possible physical and/or mental illnesses (Das et al., 2016).

Youth in the Middle East and the formation of their worldview are influenced by the social construct of the region. Although Arab countries are diverse in many aspects, Arab people still share numerous values, beliefs, and practices (Ahmad & Dardas, 2016). Characteristics such as strong family ties, religious beliefs and practices, and specific cultural values are examples of Middle Eastern culture that may influence young people's perceived level of loneliness (Al Khatib, 2012). At the same time, youth in the Middle East are listening to the news about the mysterious virus that is threatening their lives, depriving them of school and university, restricting their movements and perhaps increasing their feeling of loneliness. Identification of the predictors of loneliness among youth at the time of COVID-19 may inform strategies necessary to enhance their mental health, avoid possible social and emotional loneliness, and consequently promote their healthy development. Recent research reported that individuals could develop feelings of loneliness as a result of social isolation. Loneliness is also shown to be positively associated with self-efficacy (Bu et al., 2020; Hussien & Shahin, 2020; Qiu et al., 2020; WHO, 2020b). Our study aims were to assess the level of loneliness among young people across six countries in the Middle East during the COVID-19 pandemic and to identify associated predictors of loneliness.

Method

A cross-sectional descriptive study was conducted to assess loneliness among young people and identify associated predictors. Since social network platforms like Facebook and WhatsApp are open to everyone, we targeted all youth with a very brief letter explaining the purpose of the study, along with the survey link. The link was active between March 30 and April 10, 2020, to individuals aged between 15 and 24 years, across six countries: Oman, Saudi Arabia, United Arab Emirates (UAE), Iraq,

Jordan, and Egypt. A total of 1,057 participants completed the survey. The response rate was not calculated because the survey was distributed using the social network platforms over the six countries and there was no control over the number of potential participants who read about the survey.

Ethical Considerations

Ethical approval was obtained from study sites prior to data collection, and the study was conducted in accordance with the Helsinki Declaration as revised in 1989. Respondents were informed that their participation was voluntary, and that they could withdraw from the study at any point or choose not to answer any question. Confidentiality was maintained as no identifying information was collected. The participants were also informed that by pressing the link to the survey, accessing the survey, and responding to the questionnaire, they gave their consent to participate in the study.

Study Measurements

We obtained information about potential predictors of loneliness based on a review of the literature.

Sociodemographic Variables. Sociodemographic data were collected using a researcher-generated questionnaire: age, gender, level of education, family members diagnosed with COVID-19, previous history of depression or anxiety, whether quarantined for 14 days, perception of being at risk of COVID-19 infection, and main source of information about COVID-19, as well as the number of hours spent surfing the internet daily.

Depression, Anxiety, and Stress Scale (DASS-21). Depression, anxiety, and stress variables were measured using the Arabic short form of the DASS, which can be used with people aged 14 years and older (Al Omari et al., 2020; Lovibond & Lovibond, 1995). DASS is a 4-point Likert-type scale in which 0 = *did not apply to me at all*, 1 = *applied to me to some degree, or some of the time*, 2 = *applied to me to a considerable degree*, and 3 = *applied to me very much, or most of the time*. DASS comprises 21 items that represent three subscales: depression, anxiety, and stress. Each subscale consists of seven items.

The depression subscale assesses depressive syndromes including lack of interest/involvement, devaluation of life, and hopelessness. The higher score indicates a higher level of depression and can be categorized into four levels of severity. Scores of 0 to 9 indicate a normal depression, 10 to 13 mild, 14 to 20 moderate, 21 to 27 severe, and scores of 28 or more indicate extremely severe depression (Lovibond & Lovibond, 1995). An example of items is "I couldn't seem to experience any positive feeling at all."

The anxiety subscale assesses the subjective experience of situational anxiety, anxious affect, skeletal muscle effects, and autonomic arousal. The higher score indicates a higher anxiety rate, and can be categorized into four levels of severity: 0 to 7 indicates a normal anxiety level, 8 to 9 a mild level, 10 to 14 a moderate level, 15 to 19 a severe level, and scores of 20 or more are considered as extremely severe anxiety (Lovibond & Lovibond, 1995). An example of the items is "I felt I was close to panic."

The stress subscale assesses difficulty relaxing, nervous arousal, being easily agitated, and overreactive behaviors. The higher score indicates a higher stress rate and can be categorized into four levels of severity: 0 to 14 indicates a normal level of stress, 15 to 18 a mild level, 19 to 25 a moderate level, 26 to 33 a severe level, and scores of 34 or more are considered as extremely severe stress (Lovibond & Lovibond, 1995). An example of the items is "I found it difficult to relax."

The construct validity and reliability (Cronbach's α = .88) of the overall Arabic version have been well established (Moussa et al., 2017), and the current study Cronbach's α was .94.

Satisfaction With Life Scale (SWLS). The Arabic version of the SWLS was used to assess participants' perception of their satisfaction with their own life. The SWLS is a five-item, 7-point Likert-type scale in which 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, and 7 = *strongly agree*. Higher scores indicate better satisfaction with life. Scores of 5 to 9 indicate extreme dissatisfaction with life, and those of 31 to 35 indicate extreme satisfaction. An example of the survey items is "In most ways my life is close to my ideal." The reliability measured by Cronbach's α = .89 (Abdallah, 1998) and in the current study .84. The construct validity of the Arabic version has been established (Abdallah, 1998). The survey has previously been used with adolescents and young adults (Moksnes et al., 2014; Silva et al., 2015).

UCLA Loneliness Scale. The UCLA Loneliness Scale–Arabic version was used to assess perception of subjective feelings of loneliness. It is a 20-item, 4-point Likert-type scale, in which 1 = *never*, 2 = *rarely*, 3 = *sometimes*, and 4 = *often*. Higher scores indicate greater loneliness. Scores of 20 to 34 indicate a low degree of loneliness, 35 to 49 a moderate degree, 50 to 64 a moderately high degree, and 65 to 80 a high degree of loneliness (Perry, 1990; Sevil et al., 2006; Yildirim & Kocabiyik, 2010). An example of the survey items is "I am unhappy being so withdrawn." The reliability measured by Cronbach's α =

.96 (Russell et al., 1978) and in the current study .84. The construct validity of the Arabic version was established by AlNajjar and Dodeen (2017). The survey was previously used with adolescents and young adults (Shevlin et al., 2015; Yildiz & Duy, 2014).

Statistical Analysis

Data were entered into SPSS Version 22 for analysis. Data were checked and no missing data were found in the current study. Frequency (nominal variables), mean, and standard deviation (continuous variables) were used to describe participants' characteristics. Hierarchical multivariate linear regression was used to identify the extent to which variables related to COVID-19 (risk of COVID-19, quarantined 14 days) and other variables of interest (sex, chronic illness, self-report of mental health illness, use of internet, life satisfaction/SWLS, anxiety, depression, and stress/DASS) could predict loneliness measured through UCLA. Choice of the variables was based on the bivariate analysis. All the data which have a significant relationship were entered into the model. Bivariate analysis using independent *t*-test was performed to assess the relationship between the loneliness as dependent variable and participants' demographics (history of chronic illness, self-report of mental health problem, family member with mental illness, etc.), and factors related to COVID-19 (diagnosed with COVID-19, quarantined for 14 days, relative diagnosed with COVID-19). The Spearman correlation coefficient was used to test for bivariate relationships between the dependent variable loneliness and the explanatory variables satisfaction with life, depression, anxiety, stress, and number of hours currently spent surfing the internet. Statistical significance was set a priori at $p < .05$. Assumptions of multiple linear regression were checked. To examine whether the variables related to COVID-19 will be significant predictors of loneliness, a two-step hierarchical multiple linear regression was conducted. In Step 1, variables not related to COVID-19, like demographics and participants' self-reported specific medical condition (i.e., self-report of chronic illness and mental health problem), were entered as independent variables. In Step 2, variables related to COVID-19, namely SWLS, depression, anxiety, stress, risk of being infected with COVID-19, and being quarantined for 14 days, were entered in the regression model.

Results

Sample Characteristics

One thousand fifty-seven youths completed the online survey: 155, 335, 121, 117, 147, and 182 from Oman, Jordan, Saudi Arabia, Iraq, UAE, and Egypt, respectively. The average age was 20 years (standard deviation [*SD*] = 2.4) with 756 (71.5%) females and 301 (28.5 %) males. The majority of participants, 980 (92.7%), were following the COVID-19 news using different methods, but nearly two thirds, 685 (64.8%), were using the internet as their main source of information, and 437 (41.3%) believed that they were at risk of COVID-19. The degrees of loneliness experienced were one participant, 625 (59.1%), 429 (40.6%), and 2 (0.2%), that is low, moderate, moderately high, and high, respectively. The full demographics are presented in Tables 1 to 3.

Descriptive, Bivariate, and Correlation Analyses

The average level of loneliness was a moderate 48.4 ($SD = 4.8$). There were no statistically significant differences by country ($F[5, 1051] = 1.713$, $p = .129$), with Egyptians experiencing the highest level ($M = 49.21$; $SD = 4.54$) and Saudis the lowest ($M = 47.71$; $SD = 4.79$). However, this was not the same for life satisfaction. There was a significant difference across the six countries ($F[5, 1051] = 2.303$, $p = .043$) with the highest level for Saudis ($M = 23.322$; $SD = 7.7$) and the lowest for Iraqis ($M = 21.40$; $SD = 7.00$) and Jordanians ($M = 21.46$; $SD = 6.96$). Females ($M = 48.65$; $SD = 4.85$) recorded a higher average loneliness score than males ($M = 47.97$; $SD = 4.65$), $t(1055) = -2.078$, $P = .038$. For more details see Table 4.

A significant positive correlation was revealed between loneliness, depression, anxiety, stress, and using the internet, and a negative significant correlation with satisfaction of life and loneliness. Refer to Table 5.

Predictors of Loneliness

We found that self-report of physical and mental health problems, low level of life satisfaction, and a high score on the DASS-21 depression subscales were significant predictors of high levels of loneliness among Middle Eastern youth. The first model was statistically significant ($F = 8.61$, $p < .05$), with the R^2 and adjusted R^2 .032 and .028, respectively. The second model was also statistically significant ($F = 42.71$, $p < .05$) with significant increase explaining additional variance, $\Delta R^2 = .273$, $p \leq .05$. The final model was statistically significant compared with the constant ($F = 44.95$, $p < .05$); R^2 and adjusted R^2 of the second model were .305 and .298, respectively. This alludes to the significant contribution of the selected variable to the experience of loneliness (Table 6).

Table 1. Sample Characteristics ($N = 1,057$).

Variable	*n* (%)	Variable	*n* (%)
Gender		Contacted person with COVID-19	
Male	301 (28.5)	Yes	14 (1.3)
Female	756 (71.5)	No	1,043 (98.7)
Country		At risk from COVID-19	
Oman	155 (14.7)	Yes	437 (41.3)
Jordan	335 (31.7)	No	620 (58.7)
Saudi Arabia	121 (11.4)	Have been quarantined for 14 days	
Iraq	117 (11.1)	Yes	288 (27.2)
UAE	147 (13.9)	No	769 (72.8)
Egypt	182 (17.2)	Following the COVID-19 news	
Level of education		Yes	980 (92.7)
9th	29 (2.7)	No	77 (7.3)
10th	81 (7.7)	Knowing someone diagnosed with COVID-19	
11th	22 (2.1)	No	982 (92.9)
12th	163 (15.4)	Friend	46 (4.4)
University	762 (72.0)	Family member	29 (3.0)
Self-report of mental health problem		Main source of information about COVID-19	
Yes	8 (0.9)	The internet	685 (64.8)
No	1,048 (99.1)	TV	353 (33.4)
Friend diagnosed with mental illness		Friends	19 (1.8)
Yes	54 (5.1)	Self-report of chronic illness	
No	1,003 (94.9)	Yes	91 (8.6)
Family member with mental illness		No	966 (91.4)
Yes	45 (4.3)		
No	1,011 (95.7)		

Table 2. Sample Characteristics ($N = 1,057$).

Variable	*M* (*SD*)	[Min, max] (range)
Age	20 (2.4)	[15, 24] (09)
Depression score (DASS)	13.2 (10.4)	[02, 42] (40)
Anxiety score (DASS)	7.6 (7.9)	[03, 38] (35)
Stress score (DASS)	13.4 (10.4)	[08, 42] (34)
Life satisfaction (SWLS)	22.1 (7.1)	[05, 35] (30)
Loneliness (UCLA Loneliness Scale)	48.4 (4.8)	[32, 65] (33)
Internet use, hours/day	5.6 (3.8)	[01, 10] (09)

Note. DASS = Depression, Anxiety, and Stress Scale; SWLS = Satisfaction With Life Scale.

Discussion

The aim of the current study was to assess the prevalence of loneliness among youth during the time of COVID-19 and identify its associated predictors. Findings from the hierarchical regression model explain how variables related to COVID-19 impact feelings of loneliness. Specifically, the young people who reported more symptoms of depression and greater dissatisfaction with their lives at the time of COVID-19 experienced greater loneliness.

In the current study, the majority of the participants across all the countries were experiencing moderate (50.5% to 64.5%) to moderately high degrees (35.5% to 49.5%) of loneliness. The Egyptian participants had the greatest percentage of moderate high degrees of loneliness (49.5%) compared with others, and the lowest prevalence of moderate degree of loneliness was for Omani participants (57.4%). In previous studies, the prevalence of loneliness among youth has been reported as between 20% and 71% (Brennan, 1982; Hawthorne, 2008; Luhmann & Hawkley, 2016; Rönkä et al., 2014). The prevalence of loneliness is higher compared with other age groups (Bartels et al., 2008; Griffin, 2010). However, none of these studies was conducted in the Middle East. A possible explanation for the high prevalence rate is

Table 3. Prevalence of Loneliness.

Country	Level	Loneliness	
		N	Percent
Jordan	Low degree of loneliness	0	0
	Moderate degree of loneliness	213	63.6
	Moderately high degree of loneliness	120	35.8
	High degree of loneliness	2	0.6
Saudi Arabia	Low degree of loneliness	0	0
	Moderate degree of loneliness	78	64.5
	Moderately high degree of loneliness	43	35.5
	High degree of loneliness	0	0
Oman	Low degree of loneliness	0	0
	Moderate degree of loneliness	89	57.4
	Moderately high degree of loneliness	66	42.6
	High degree of loneliness	0	0
Iraq	Low degree of loneliness	1	0.9
	Moderate degree of loneliness	68	58.1
	Moderately high degree of loneliness	48	41.0
	High degree of loneliness	0	0
UAE	Low degree of loneliness	0	0
	Moderate degree of loneliness	85	57.8
	Moderately high degree of loneliness	62	42.2
	High degree of loneliness	0	0
Egypt	Low degree of loneliness	0	0
	Moderate degree of loneliness	92	50.5
	Moderately high degree of loneliness	90	49.5
	High degree of loneliness	0	0
Total	Low degree of loneliness	1	0.1
	Moderate degree of loneliness	625	59.1
	Moderately high degree of loneliness	429	40.6
	High degree of loneliness	2	0.2

Table 4. Bivariate Analyses of Loneliness in Relation to Self-Reported Characteristics.

Variable	Loneliness, *M* (*SD*)				
	Yes	No	*t*	*df*	*p*
Self-report of chronic illness	49.4 (4.8)	48.4 (4.8)	−1.96	1,055	.049
Self-report of mental health problem	54.5 (5.3)	48.41 (4.8)	−3.58	1,055	<.001
Family member with mental illness	50.3 (5.2)	48.4 (4.8)	−2.62	1,054	.009
Friend with mental illness	49.9 (5.2)	48.4 (4.8)	−2.3	1,055	.021
Contacted a person with COVID-19	49.8 (4.9)	48.4 (4.8)	−1.09	1,055	.274
Have a relative diagnosed with COVID-19	49.5 (4.3)	48.4 (4.8)	−1.49	1,027	.312
At risk of being infected with COVID-19	49.4 (4.6)	47.81 (4.9)	−5.27	1,055	<.001
Have been quarantined for 14 days	48.9 (4.8)	48.3 (4.8)	−2.01	1,055	.045

related to the unique nature of this developmental stage, as youth are more sensitive and may suffer from low self-esteem, anxiety, and low level of trust of their counterparts (Qualter et al., 2015). More research exploring the prevalence of and reasons behind the loneliness among youth in the Middle East should be conducted.

Consistent with previous literature (Salimi, 2011), satisfaction with life was a significant negative predictor of loneliness in the current study. Satisfaction is the outcome of the cumulative evaluations of individual and cognitive views of life (Diener et al., 1985). Life satisfaction has a negative correlation with stress, and a positive correlation

Table 5. Correlations Between Loneliness, Life Satisfaction, Depression, Anxiety, and Stress.

	1	2	3	4	5	6
1. Loneliness	—	−.401*	.494*	.394*	.430*	.115
2. Life satisfaction	−.401*	—	−.441	−.332*	−.387*	−.103
3. Depression	.494*	−.441*	—	.689*	.801*	.151
4. Anxiety	.394*	−.332*	.689*	—	.768*	.132
5. Stress	.430*	−.387*	.801*	.768*	—	.168
6. Internet use	.115*	−.103*	.151*	.132*	.168*	—

*$p \leq .01$.

Table 6. Hierarchical Linear Regression Predicting Loneliness.

					95.0% Confidence interval for B	
Predictor	B	β	*t*	*P*	Lower bound	Upper bound
Step 1, $\Delta F(P) = 8.61$ (<.001), $\Delta R^2 = .026$						
Constant	39.254		20.802	<.001	35.551	42.957
Gender	0.593	0.056	1.826	.068	−0.044	1.231
Chronic illness	1.049	0.061	2.016	.044	0.028	2.071
Mental illness	5.982	0.108	3.555	<.001	2.680	9.284
Internet use, hours/day	0.105	0.109	3.583	<.001	0.048	0.163
Step 2, $\Delta F(P) = 68.41$ (<.001), $\Delta R^2 = .275$						
Constant	42.712		24.917	<.001	39.349	46.076
Gender	0.028	0.003	0.099	.921	−0.522	0.578
Chronic illness	1.131	0.066	2.547	.011	0.260	2.003
Mental illness	4.479	0.081	3.116	.002	1.659	7.300
Internet use hours/day	0.026	0.027	1.045	.296	−0.023	0.076
Life satisfaction (SWLS)	−0.155	−0.228	−7.905	<.001	−0.193	−0.116
Anxiety (DASS)	0.046	0.075	1.823	.069	−0.003	0.095
Depression (DASS)	0.142	0.308	6.796	.000	0.101	0.184
Stress (DASS)	0.007	0.015	.300	.764	−0.039	0.053
Risk of COVID-19	0.464	0.047	1.777	.076	−0.048	0.975
Quarantined 14 days	0.120	0.011	0.427	.670	−0.432	0.672

Note. The model summary is reported. $\Delta F(p)$ = significance of change in *F* test for the R^2, and ΔR^2 = change in R^2. SWLS = Satisfaction With Life Scale; DASS = Depression, Anxiety, and Stress Scale; B = unstandardized coefficient; β = standardized coefficient; *t* = corresponding *t* test, and *p* = *p* value/significance level.

with positive relationships with others, self-efficacy, and academic achievement (Antaramian, 2017). Young people will have a higher level of satisfaction with life when they feel that life around them is predictable and within their own standards (Kong & You, 2013). Previous experience influences them in a positive or negative way and can motivate them to meet their goals. Health care team members, especially mental health nurses, need to assess and provide a holistic approach to care. That is, they need to evaluate the current biopsychosocial dimension of young people's lives and provide them with appropriate care to increase their satisfaction with life, which in turn may alleviate the loneliness experience.

Depression was another significant predictor of loneliness. This finding is in line with previous studies (Kekkonen et al., 2020; Kong & You, 2013; Ozben, 2013). However, none of these studies investigated the relationship between these variables in times of global pandemic. No focus on experiences related to the total lockdown and international physical isolation has been witnessed in modern human history, so this is also a contribution of the current study. In addition, in relation to COVID-19 and young people's feelings of loneliness, this study is one of the first of its kind among Middle Eastern adolescents and young adults, and the multicountry approach are additional novelties.

Self-reporting of a chronic and mental health problem was another significant predictor of loneliness in the current study. Previous meta-analysis supports the current research findings (Maes et al., 2017). Chronic illness was associated with stressors disturbing life (Compas et al., 2012), and compromising social and emotional functions (Cacioppo et al., 2015; Rubin et al., 2015). Those with chronic illness may need frequent hospital visits, special treatment, and physical restrictions, which may increase school absenteeism (Maes et al., 2017). This will cast a shadow on the quality of time spent with their peers, limit their participation in extracurricular activities like sport and celebrating with friends, as some chronic illnesses need special management including restrictions on certain types of food and physical activity (Seiffge-Krenke, 2001). Overall this might increase the risk of developing feelings of loneliness. Policymakers in both health care and public health sectors need to take supportive actions toward people with chronic and mental illness and develop special programs for them.

At the bivariate level there was a significant correlation between stress, anxiety, being quarantined, and "I am at risk of COVID-19." Governments worldwide are taking special measures to stop the spread of COVID-19, one of which is requesting people who have potential signs and symptoms to quarantine themselves for 14 days. Previous research has found a significant positive correlation between quarantine, loneliness, and stress (Danvers, 2020; Sprang & Silman, 2013). Under these special circumstances, governments need to follow-up young people and provide them with a psychological and social support system. Families can play a significant role in this regard as previous research stresses the importance of extended families. Previous research has also found the family to be a protective measure against loneliness (Cavanaugh & Buehler, 2016). This should not be problematic in the Middle Eastern culture that is characterized by strong family ties and religiously and culturally induced social support (Al Khatib, 2012). Nevertheless, mental health nurses and school nurses have a major responsibility in addressing and developing strategies to handle the stressors faced by youth during times of social and physical isolation. Strategies to strengthen psychological resilience could be developed by mental health nurses in collaboration with the family and individuals.

The age range of the sample includes more than one developmental stage, that is, middle adolescence, late adolescence, and young adulthood. The desire to socially connect with others is a basic need and a fundamental aspect of human development and well-being throughout life. Although loneliness is a transient experience, researchers need to explore the specific differences between these age groups using a qualitative approach, which will help in developing more age-specific interventions to overcome loneliness. Social skills training programs may be a good option to reduce the level of loneliness among youth (De Mooij et al., 2020). There are many programs designed for adolescents; however, mental health nurses need to pull information from these programs to develop others which are sensitive to the current population needs. Youth can be taught the necessary skills for positive interactions with peers, which might improve social acceptance and build a trusting relationship with friends, reducing feelings of loneliness.

Limitations

This study has some limitations related to self-reporting and the cross-sectional design, which does not allow for a temporal sequence between the variables. Prospective longitudinal or cohort studies are recommended in future to establish the temporal sequence of the variables. Another limitation is related to the method of data collection. The use of online surveys and social media platforms means that only those who have internet connection and accounts on social media were able to complete the survey, limiting the generalizability of the current findings to only those with internet accessibility. Future research incorporating a larger sample size and using traditional data collection methods are required to reach those without internet and measure their level of loneliness.

Conclusion

In conclusion, we found that high levels of loneliness during the COVID-19 pandemic were correlated with depression and impaired life satisfaction among Middle Eastern youth. Human beings are social creatures who need a sense of belonging. When they are unable to gratify this need, loneliness may manifest itself. To develop interventions to reduce loneliness, particularly in a pandemic with a novel illness, its characteristics and predictors must be identified and understood. Although the current study did not identify predictors related to COVID-19 in explaining feelings of loneliness, depression and life satisfaction were found to relate indirectly to the current situation of COVID-19. Loneliness needs special attention, as failure to resolve it early might lead to future impaired social relationships and mental illness.

Authors' Note

The SPSS data used to support the findings of this study are restricted by the Research and Ethics Committee in College of Nursing at Sultan Qaboos University in order to protect patient privacy. Data are available from Dr. Omar Al Omari (o.alomari@squ.edu.om) for researchers who meet the criteria for access to confidential data.

Author Roles

All authors contributed to the conception or design of the study or to the acquisition, analysis, or interpretation of the data. All authors drafted the manuscript, or critically revised the manuscript, and gave final approval of the version that was submitted for publication. All authors agree to be accountable for all aspects of the work, ensuring integrity and accuracy.

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