Social and emotional loneliness among college students during the COVID-19 pandemic: the predictive role of coping behaviours, social support, and personal resilience

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Research Article

Abstract

Background: The mandatory lockdown imposed by the government to curb the transmission of coronavirus disease or COVID-19 has significantly disrupted social activities among student nurses, making them vulnerable to loneliness and social isolation.

Objective: To determine the relative influence of coping behaviours, personal resilience, and social support on student nurses' emotional and social loneliness during the pandemic.

Methods: A cross-sectional research design was utilised to gather data from 261 student nurses from the Central Philippines using the Loneliness Scale, the Brief Resilience Scale, the Coping Behaviour Questionnaire, and the Perceived Social Support Questionnaire through an online survey.

Results: The majority or 89.27% (n = 233) of student nurses experienced moderate to severe levels of loneliness during the lockdown. Age (younger age) (β = -0.168, p = 0.005) and social support (β = -0.176, p = 0.014) predicted emotional resilience, while gender (being female) (β = 0.109, p = 0.045), personal resilience (β = -0.214, p < 0.001), and coping behaviours (β = -0.455, p < 0.001) predicted social loneliness.

Conclusions: Loneliness among student nurses was high during the height of the COVID-19 pandemic. Personal resilience, coping behaviours, and social support were identified as protective factors against loneliness. Empirically tested interventions and strategies directed towards increasing personal resilience, social support, and coping behaviours may help decrease emotional and social loneliness caused by the mandatory lockdown during the COVID-19 pandemic.

Introduction

The COVID-19 pandemic, which originated from Wuhan, China, in November 2019, has brought many unprecedented challenges and has had serious implications on the economy and health of many countries around the globe. Since the onset of the pandemic, many countries, including the Philippines, implemented various public health measures, including the mandatory lockdown for the entire country, to curtail the spread of the coronavirus. In addition, various measures have been imposed, including strict social and physical distancing, targeted community quarantines, mandatory closures of all schools and non-essential establishments, and strict travel restrictions. Public and private sectors were mandated to allow only 30% of their current workforce to go to work while strict curfews were imposed to limit the movement of the citizen and to contain the spread of the virus. These public health measures were imposed to 'flatten the curve', or slow or prevent the transmission of the COVID-19 virus, thus increasing the capacity of the healthcare institutions to adequately manage confirmed cases of the disease. However, particularly among young people, these measures may have had profound emotional and psychological consequences, including social isolation and loneliness, and resulting from the disruption in their daily routines and social interactions with peers and family.

Loneliness, a negative subjective experience in an individual which arises when social relations and interactions are perceived to be insufficient (Peplau & Perlman, 1982), has been identified as a potential consequence of the mandatory lockdown imposed by the government to limit the spread of the coronavirus infection (Bu *et al*., 2020; Rauschenberg *et al*., 2020). Mounting evidence has shown a higher prevalence rate of loneliness among young people during the COVID-19 pandemic, when compared to older adults (Barreto *et al*., 2020). Various studies have estimated that at least 38% to 50% of young people aged 18-24 years old experienced higher levels of loneliness during the mandatory lockdown (Bu *et al*., 2020; Rauschenberg *et al*., 2020), with women having higher odds of experiencing loneliness than men (Losada-Baltar *et al*., 2020; Salo *et al*., 2020).

Loneliness is an important health concern that has been strongly associated with various adverse mental and psychological consequences. Evidence has identified loneliness as a strong precursor of stress, depression, anxiety, and suicide, which could potentially exacerbate pre-existing psychological and mental issues (Holmes *et al*., 2020; Lim *et al*., 2020). Recent studies have shown that social isolation and loneliness due to home confinement measure increase the risk of psychological distress, depression, and anxiety in an individual, with a longer duration of loneliness considered as a strong precursor of adverse psychiatric symptoms (Rauschenberg *et al*., 2020; Loades *et al*., 2020). Further, other reports have strongly linked loneliness to various diseases such as stroke, hypertension, and other heart issues, as well as other cognitive issues such as dementia (Valtorta *et al*., 2016; Kuiper *et al*., 2015). Therefore, measures to address loneliness among young people should be explored to prevent the occurrence of the associated mental health consequences.

Social support, personal resilience, and coping abilities were identified as protective factors against adversity and stressful conditions such as disaster situations and disease outbreaks (Turner, 2015; Labrague *et al*., 2016; Yu *et al*., 2020; Xiao *et al*., 2020).). Available studies have shown that during stressful events, a resilient individual and those who have an adequate support system and coping skills are less likely to be stressed or feel lonely (Ogińska-Bulik & Michalska 2020; Wu *et al*., 2016). Adequate support that originates from peers and family was also observed to be vital to assist an individual in effectively managing stress-provoking situations such as disaster events, emergency crises, and infectious disease outbreaks (Langan *et al*., 2017). During the COVID-19 pandemic, where stress and loneliness are high, personal resilience, positive coping behaviours, and adequate social support may assist frontline health care workers to adequately cope with the burden associated with the pandemic (Cooper *et al*., 2020) and sustain their mental health and psychological wellbeing (Labrague *et al*., 2018; Labrague & De los Santos, 2020). Despite the increasing evidence highlighting the value of building resilience and increasing organisational and social support to assist an individual in attaining positive mental health outcomes (e.g., the reduction of anxiety, stress, depression) during the COVID-19 pandemic, studies looking into how these factors contribute to the curtailment of loneliness among college students during the COVID-19 pandemic remain unexplored.

Aim of the Study

The closure of all schools compel many academic institutions to shift to remote learning and obliging at least 3,408,815 young people in the country to stay at home (Commission on Higher Education, 2020) in order to prevent further transmission of the virus. As a consequence of the mandatory lockdown, these students, particularly those aged 21 years old and below, were restricted from going outside of their homes and socialising with their peers. This situation has led to many worries of the ill effects, including loneliness and other mental health concerns, of the disruptions in social interactions with their peers.

Despite evidence showing the vulnerability of college students to experience loneliness during this pandemic, no studies were located examining the role of coping behaviours, social support, and personal resilience in predicting emotional and social loneliness in students. Hence, this study examined the influence of coping behaviours, social support, and personal resilience on emotional and social loneliness among college students during the implementation of mandatory lockdown during the coronavirus pandemic.

Methods

Research Design

This is a cross-sectional study utilising an online-based data collection approach was conducted during the second month of mandatory lockdown.

Samples and Settings

This study included college students enrolled in nursing schools in the Central Philippines. Sample calculation was performed using the G*power program software. A sample size of 261 was required for five predictors to attain an 80% power, with an effect size of 0.05 and alpha set at 0.05 (Soper, 2020). Three hundred students were initially invited; however, only 261 responded. To qualify for the study, students had to: a) be currently enrolled in a college or university, b) be a full time student, and c) be either male or female.

Instrumentations

Loneliness Scale: To examine the overall loneliness in students, the 6-item Loneliness Scale (Gierveld & Tilburg, 2006) was used. Students responded to the questionnaire by answering 'yes', 'more or less', or 'no'. To score their responses, 'yes' and 'more or less' were scored 1, and 'no' was scored 0. The possible score ranged from 0 to 6, the scale of which was categorised into 'not lonely' (0–1), 'moderately lonely' (2–4), and 'severely lonely' (5–6). Previous research confirmed the predictive validity of the scale as evidenced by its significant correlation with mental disorders and physical health, with an acceptable reliability value of 0.76 (Gierveld & Tilburg, 2006) and a Cronbach's alpha of 0.87 in the current study.

Brief Resilience Scale: To examine the capacity to rebound back from distressing events among students, the 4-item Brief Resilience Scale was used (Smith *et al*., 2008). Participants responded to each item of the scale by responding on a Likert scale which ranged from 0 to 5. Previous research confirmed the reliability of the scale, with an internal consistency of 0.91 (Labrague & De los Santos, 2020) and an internal consistency of 0.87 in the present study.

Coping Behaviours Questionnaire: To identify the coping abilities of the students, the modified version of the Coping Behaviour Questionnaire (COPE) (Carver *et al*., 1989; Savitsky et al., 2020) was used. The scale consisted of 8 items answerable by a 5-point Likert scale ('strongly disagree' as 1 to 'strongly agree' as 5), which was classified into four dimensions: humour, consultation and seeking information, spiritual and sources of support, and mental disengagement. The scale had an acceptable validity and an excellent reliability ($\alpha = 0.87$) based on the previous study (Savitsky *et al*., 2020), as well as an internal consistency of 0.87 in the present study.

Perceived Social Support Questionnaire: Students' opinion of the degree of support received from others when confronted by stressful events was assessed using the Perceived Social Support Questionnaire (Lin *et al*., 2019). The scale comprised of 6 items answerable by a 5-point Likert-type scale from 1 to 5. The overall scale score was categorised into 'low' (1.00–2.99), 'moderate' (3.00–4.30), and 'high' (4.31–5.00), and the scale demonstrated an excellent criterion validity and excellent reliability ($\alpha = 0.89$) based on the previous research (Labrague & De los Santos, 2020); it had a Cronbach's alpha of 0.87 in the current study.

Data Collection and Ethical Considerations

Before the data collection, the research protocol was submitted to the Research Review Committee of the Ethics Committee of the Public State University, Philippines for ethical approval. The online questionnaire with the use of Google Forms was sent to all prospective students through their emails. The first part of the online questionnaire comprised of brief information to inform the students about the purpose of the research and a letter seeking their permission to join in the study. The online survey was conducted from 20 June to 20 July 2020, during the second month of the mandatory lockdown.

Data Analysis

The SPSS Statistics software, version 23, was used to analyse the data collected. We used frequencies, standard deviations (SDs), and means to present the data. Correlations between key study variables were examined using the student t-test, analysis of variance, and the Pearson's *r* correlation coefficient. To identify potential predictors of loneliness, independent variables which significantly correlated with loneliness were considered into the model (multiple linear regression).

Results

Three hundred three college students joined in the study. Most of the participants were female (80.86%), in the 1st and 2nd level of education (58.74%), and currently enrolled in a public nursing school (67.33%). Table 1 presents the complete characteristics of the students.

Out of 261 participants, 10.7% (n = 28) were found to be 'not lonely', 56.7% (n = 148) were 'moderately lonely', and the remaining 23.6% (85) were 'severely lonely' (Figure 1). The overall mean of the loneliness scale was 3.659 (SD: 1.635). The composite score of the emotional loneliness subscale was 2.332 (SD: 0.859), while the composite score of the social loneliness subscale was 1.325 (SD: 1.191) (Table 2). The composite score of the CBQ was 3.818 (SD: 0.372), with the 'seeking information' (4.263, SD: 0.603) and 'spiritual' (4.241, SD: 0.608) subscales having the highest means. The composite scores of the PRS and SSS were 2.743 (SD: 2.096) and 3.926 (SD: 0.701), respectively.

An independent t-test showed a difference in the mean scale score of the social isolation subscale when grouped according to gender, with female students reporting an increased social loneliness (t = -2.137; p = 0.034). Meanwhile, using Pearson's r correlation coefficient, age (r = -0.205; p = 0.001), readiness (r = -0.187; p = 0.002), and willingness to care (r = -0.168; p = 0.007) for COVID-19 patients correlated significantly with emotional loneliness. Finally, personal resilience, coping behaviours, and social support correlated significantly with emotional and social loneliness (all $p < 0.001$).

To examine the effects of the different students' variables on emotional and social loneliness, a multiple linear regression analysis was conducted (Table 3 and 4). The regression models explained 14.7% and 33.3% of the variances of the emotional and social loneliness scales (F = 8.48; p = 0.001; F = 26.965; p = 0.001). Among the different students' variables, age (β = -0.168, p = 0.005) predicted emotional loneliness, with younger students experiencing higher levels of such. Further, a higher level of emotional loneliness was attributed to lower scores in the social support scale (β = -0.176, p = 0.014). On the other hand, gender (being female) (β = 0.109, p = 0.045), resilience (β = -0.214, $p < 0.001$), and coping behaviours (β = -0.455, p < 0.001) predicted social loneliness.

Discussion

The results of the study showed that loneliness was prevalent among college students during the period of mandatory lockdown to curtail the transmission of coronavirus, with 56.7% experiencing moderate levels of loneliness and 23.6% feeling severely lonely. Students reported higher levels of emotional loneliness than social loneliness, which is in accordance with previous research (Diehl *et al.*, 2018). When we compared our result to previous studies in which young adolescents were participants, we found higher levels of loneliness in our samples. In three previous studies conducted among young adults, the percentage of participants reporting moderate to severe loneliness ranged from 2.5% to 18.4% (Diehl *et al.,* 2018; Hysing *et al.*, 2020; Singh *et al.*, 2020). Such an increased percentage of students reporting loneliness in this study may be attributed to the mandatory lockdown being imposed by the government

to control the transmission of coronavirus. Tull *et al.* (2020) suggested that measures such as home confinement, social distancing, and quarantine to control infection greatly contribute to a sense of loneliness among young people as they restrict them from socialising with their peers. In addition, closure of schools could partly play a role in the development of loneliness among students as school routines and activities were identified as essential coping mechanisms, especially for young people (Auger *et al.*, 2020).

Overall, students reported moderate levels of coping behaviours and social support during the lockdown period, which is in line with studies conducted prior (Labrague *et al.*, 2018) and during the coronavirus outbreak (Labrague & De los Santos, 2020). Among the different coping styles, the most commonly used during the lockdown period were 'consultation and seeking information' and 'spiritual and seeking support'. These coping behaviours were classified as problem-focused behaviours which aim to reduce the sources of stress by targeting its causes (Labrague *et al.*, 2018a), and they have been associated with positive physical, mental, and psychological outcomes in students (Labrague *et al.*, 2018b). Personal resilience, on the other hand, was rated low by students. As personal resilience offers protection against stressful events such as emergency and disaster situations (Turner, 2015) and disease outbreaks (Labrague & De los Santos, 2020) by strengthening an individual's ability to endure the burden through the pandemic, building resilience through evidence-based interventions should be prioritised.

Among the different predictive variables, age predicted emotional loneliness, with younger students experiencing higher levels of emotional loneliness during the COVID-19 pandemic. This result confirms previous studies showing a higher tendency of younger individuals to feel emotionally lonely during the coronavirus pandemic Bu *et al.*, 2020; Rauschenberg *et al.*, 2020). In a large scale study comprising 35,712 UK adults, younger adults were found particularly at risk of experiencing severe loneliness during the pandemic in comparison to the older age group (Bu *et al.*, 2020). This result also lends support to earlier studies, which reported younger people to be significantly lonelier than older respondents (Barreto *et al.*, 2020; Child & Lawton, 2019). A few possible explanations are offered here. First, younger adults such as college students are heavily affected by infection control policies that prevent young people aged 21 and below from going outside, thereby increasing social isolation, resulting in the loss of links to their peers, and making vulnerable to emotional loneliness (Matthews *et al.*, 2016). Further, when compared to older adults, younger people were less likely to use positive coping strategies which are vital to combat the negative psychological effects of social isolation.

With regards to gender, the results of our study showed higher levels of social loneliness among female students when compared to their male counterparts. An increased social loneliness score in female students may be explained by the fact that women, compared to men, value participation in social activities more highly, prefer greater interpersonal connectedness, and are more sensitive to the interpersonal context (Barreto *et al.*, 2020, thus making them more vulnerable to social loneliness during a mandatory lockdown where social contact with peers is limited. This result corroborates previous studies, which identified female young adults to be particularly more at risk of experiencing social loneliness than male young adults (Bu *et al.*, 2020; Liu *et al.*, 2020).

Social support, personal resilience, and adequate coping skills have been identified as vital personal resources to effectively manage and bounce back from stressful situations such as disease outbreaks and disasters (Duncan, 2020). In this study, a higher level of emotional loneliness was attributed to lower scores in the personal resilience category, while a higher level of social loneliness was attributed to lower scores in the coping and social support categories, suggesting the importance of building individual resilience and coping behaviours and enhancing social support to combat the negative psychological and mental effects of disease control protocols such as the home quarantine, social distancing, and lockdown measures during the pandemic. Further, this study's result provides support to earlier studies involving the general population and linking personal resilience to reduced anxiety, stress, and depression (Foster *et al.*, 2020; Labrague & De los Santos, 2020) and improved overall mental and psychological health (Cooper *et al.,* 2020). In a study involving young adolescents, adequate coping skills and resilience were identified as protective factors against loneliness and other negative effects of social distancing and lockdown measures during the pandemic (Groarke *et al.*, 2020). In a recent study by Savitsky *et al.* (2020), higher levels of resilience and positive coping skills related to decreased levels of pandemic-related anxiety among students during the mandatory lockdown.

In our study, increased social support was strongly linked with significantly lower emotional loneliness in students during the period of mandatory lockdown. This result highlights the value of adequate emotional support that originates from peers and family when facing adversity and may provide individuals with resources to cope with loneliness associated with social distancing and lockdown measures. In addition, our result concurs with the findings of Bu *et al.* (2020), who reported that young people with an adequate support system experienced decreased levels of loneliness compared to those young people who perceived lower social support. Apart from the protective effects of social support against social loneliness during the COVID-19 pandemic, previous studies (Xiao *et al.*, 2020; Labrague & De los Santos, 2020) recognised the importance of an adequate support system in enhancing emotional state, psychological wellbeing, and mental health among individuals.

A few limitations were identified in the study. First, although a sample calculation was conducted to determine the required sample size, determining the accurate prevalence of emotional and social loneliness in young people requires much larger and heterogeneous samples. Second, while we found evidence linking personal resilience, coping behaviours and social support to emotional and social loneliness, randomised control trials (RCTs) may be needed to examine the efficacy of resilience intervention and other measures in enhancing coping skills and social support in reducing loneliness among students. Finally, other factors not included in the study that might influence loneliness among students should be considered in future studies.

Conclusion

To our knowledge, this is research is one of the earliest to examine loneliness among college students during the height of the COVID-19 pandemic, although several studies assessing loneliness among young adolescents before the COVID-19 pandemic were found. This study suggests that disease control

measures (e.g., mandatory lockdown and social distancing) to contain the virus have increased the levels of loneliness, particularly in younger and female students. Further, students who had higher levels of personal resilience and coping behaviours, and those who perceive greater social support, reported a lower level of loneliness.

Implications for nursing practice

Empirically tested interventions and strategies directed towards increasing personal resilience, social support, and coping behaviours may help reduce emotional and social loneliness in students during the mandatory lockdown during the COVID-19 pandemic. Additionally, educators can better support the emotional state of the college students during the COVID-19 pandemic by strengthening their coping skills and their personal resilience. Mann *et al.*, (2017) identified a few strategies to effectively address loneliness in young people, including social skills training, psycho-education, and socialisation. However, with the mandatory lockdown and social distancing requirements, the use of digital technologies to deliver these interventions may be supported. Through the use of social networking sites and other communication technologies, social connection and interaction can be maintained. Finally, support from family may provide a sense of safety to students in order to lessen their apprehensions regarding the pandemic.

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Tables

Table 1. Students' characteristics (*n* = 303)

Characteristics	Categories	Mean	SD
Age (18 − 35)		21.70	2.59
		N	**%**
Gender	Male	58	19.14
	Female	245	80.86
Year Level	1	69	22.77
	2	109	35.97
	3	79	26.07
	4	46	15.18
School Category	Private	99	32.67
	Public	204	67.33
School Location	Urban	201	66.34
	Rural	102	31.433.66

Table 2. Descriptive statistics of the key study variables

Variables	Mean	SD
Emotional and Social Loneliness Scale (ESLS)†	3.659	1.635
Emotional Loneliness‡	2.333	0.859
Social Loneliness‡	1.326	1.192
Coping Behaviors†	3.818	0.372
Seeking information and consultation‡	4.263	0.603
Mental disengagement‡	1.462	0.875
Spiritual and not scientific sources of support‡	4.241	0.608
Humor‡	2.448	1.247
Personal Resilience†	2.743	2.096
Social Support†	3.926	0.701

†Mean scale score

‡Mean subscale score

Table 3. Predictors of emotional loneliness

Student Variables	B	SE	β	t	p values	95% CI	
(Constant)	6.076	0.649		9.365	0.001	4.798	7.354
Age	-0.056	0.019	-0.168	-2.862	0.005	-0.094	-0.017
Social Support	-0.210	0.085	-0.176	-2.468	0.014	-0.377	-0.042
Personal Resilience	-0.220	0.157	-0.095	-1.399	0.163	-0.529	0.090
Coping Behaviors	-0.153	0.079	-0.125	-1.944	0.053	-0.307	0.002

R^2 = 14.7%; F = 8.48; p = 0.001

β, Standardized Regression Coefficient; SE, Standard Error; CI, Confidence Interval

Table 4. Predictors of social loneliness

Student Variables	B	SE	β	t	p values	95% CI	
(Constant)	6.565	0.656		10.010	0.001	5.273	7.856
Gender: (R: Male)							
Female	0.300	0.156	0.109	1.923	0.045	-0.007	0.607
Social Support	-0.026	0.103	-0.016	.254	0.801	-0.177	0.229
Personal Resilience	-0.687	0.192	-0.214	-3.570	0.001	-1.066	-0.308
Coping Behaviors	-0.773	0.095	-0.455	-8.145	0.001	-0.960	-0.586

R^2 = 33.3%; F = 26.965; p = 0.001

β, Standardized Regression Coefficient; SE, Standard Error; CI, Confidence Interval

Declarations

Conflict of interest: The authors declare no competing interests.

The Ethics committee is the Ethics Committee of the Public State University, Philippines.
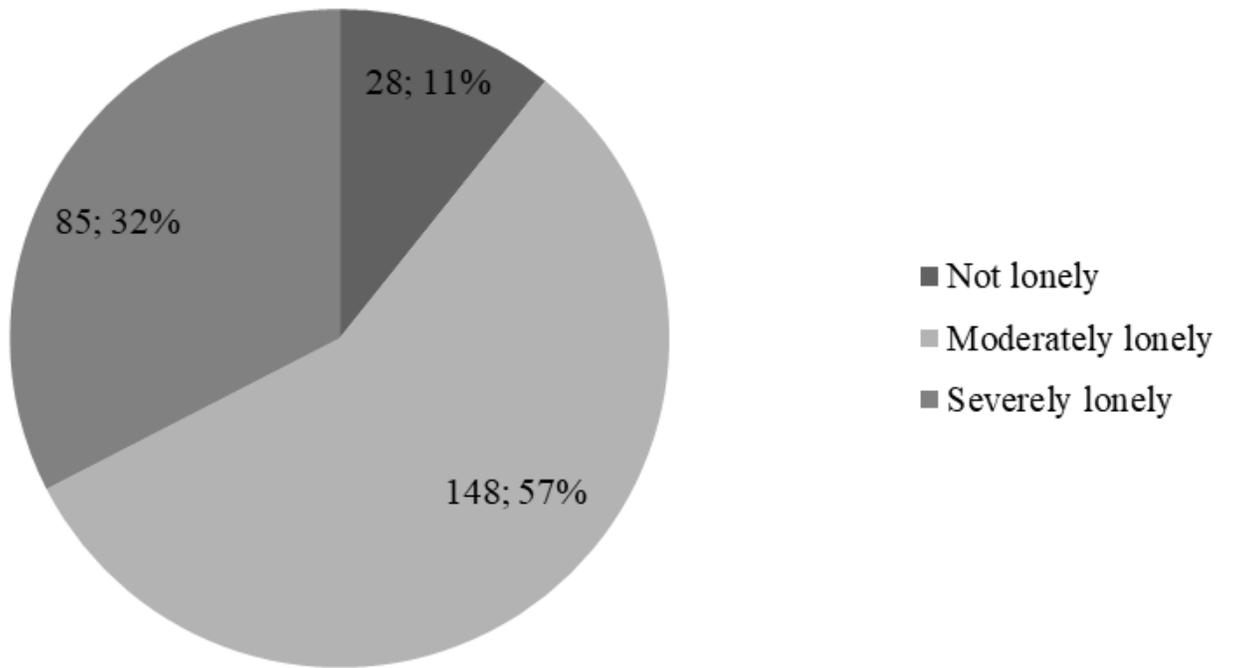
Figures

Prevalence of Loneliness

28; 11%

85; 32%

148; 57%

- Not lonely
- Moderately lonely
- Severely lonely

Figure 1

Prevalence of Loneliness