

## The Impact of Loneliness to Depression: An evidence from College Students in Vietnam

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### Abstract:

This study was conducted to investigate the relationship between loneliness and depression among college students in Vietnam. The study sample consisted of 523 students from the Economics/Business and Engineering disciplines, who participated in the survey by responding to questionnaires based on the De Jong Gierveld Loneliness Scale (DJGLS) and the Depression Anxiety Stress Scale (DASS - 21) indicators. The findings of this study indicate that while social loneliness meets the validation standards, emotional loneliness is incongruent with the context and study participants in Vietnam. The final results reveal a positive correlation between loneliness and depression ( $r = 0.42$ ,  $P\text{-value} < 0.005$ ). Subsequently, the research team provides recommendations that college students should actively participate in social and recreational activities, maintain relationships with friends and family to alleviate social loneliness, thereby minimizing the likelihood of developing depression. Social organizations should strive to create a friendly, open environment that fosters a sense of connection and belonging for everyone.

**Key words:** Depression, Emotional Loneliness, Social Loneliness.

### 1. Introduction:

Weiss (1973) suggested that feelings of loneliness are attributable to insufficient amounts of social interaction as well as lack of meaningful and intimate relationships with others. Although loneliness is an emotionally distressing experience, it can be a valuable signal that an individual's personal relationships are inadequate in some important way (Ponzetti, 1990). Specifically,

loneliness is the distressing feeling that occurs when a person's social relationships are perceived as being less satisfying than what is desired. According to Rahman et al., (2017), loneliness may be caused by a multitude of factors. For instance, some individuals may experience loneliness because they don't have friends or they lack relationships in the community or society at

large. Others may experience loneliness because they may be experiencing an emotional crisis. Emotional loneliness and social loneliness are the two facets of loneliness that the research team selected and focused on analyzing.

Loneliness exists within every age group; however, adolescents and young adults appear to be particularly vulnerable (Rubenstein & Shaver, 1982). Researchers have pointed out that adolescents experience more loneliness than any other age group (Jones et al., 1991). Specifically, late adolescence and early adulthood (meaning college age) carry a particularly high risk of experiencing loneliness (Deniz et al., 2005; Ponzetti, 1990). In fact, earlier studies have indicated that loneliness is a common issue among college students (Shaver et al., 1985). The transition from adolescence to young adulthood makes college students a particularly vulnerable group to feelings of loneliness (Diehl et al., 2018). This may be related to the specific risk factors of the developmental process, such as living away from home and their local community, as well as establishing new social relationship networks.

The efforts of college students to integrate, plan for the future, and cope with being away from home often lead to anxiety and depression among them (Hasanah et al., 2020). It is evident that depression in college students is highly prevalent, as this demographic is undergoing the transition from adolescence to adulthood, a period that can bring about stress in life. According to the World Health Organization (2008), depression is a common mental disorder. In the United States, nearly half of individuals in college age experience mental health disorders (Blanco et al., 2008). Similarly, over 20% of Chinese college students suffer from depression, and this rate has been steadily increasing over the past decade (Liu et al., 2019).

In this article, the research team focuses on the structure of loneliness based on two facets: emotional loneliness and social loneliness, subsequently exploring the impact of loneliness on depression among college students in Vietnam.

Longitudinal studies have demonstrated that loneliness and depression mutually influence each

other. This means that lonely individuals are more likely to become depressed, but depression can also exacerbate their loneliness. However, the mechanisms behind the complex relationship between loneliness and depression remain unclear, especially for younger individuals (Achterbergh et al., 2020). Therefore, this study will focus on analyzing the impact of loneliness on depression based on two facets: emotional loneliness and social loneliness.

### *Emotional loneliness*

Emotional loneliness occurs when there is a lack of close, intimate relationships (often with a spouse, partner, parents, or children) (Weiss, 1975). From an emotional perspective, loneliness, as a negative emotion, is closely correlated with depressive symptoms (Erzen et al., 2018). Specifically, when experiencing loneliness, individuals may undergo feelings of sadness, hopelessness, and diminished emotional intelligence (Yung et al., 2021). While feelings of sadness and prolonged disinterest in activities are indicative of depression (WHO, 2023). Other studies have also shown that when individuals are depressed, heightened nervousness and anxiety have a greater impact on the ability to cope with emotional loneliness (Peerenboom et al., 2015). It can be said that emotional loneliness contributes to an increase in depressive symptoms (Wang et al., 2018).

Not only does emotional loneliness exacerbate depressive symptoms, but it also increases the risk of developing depression (Verhallen et al., 2019). Previous studies have demonstrated that the end of an intimate relationship can lead to various symptoms related to sadness, distress, and depression (Field et al., 2009; Stoessel et al., 2011; Najib et al., 2004; Monroe et al., 1999). Stoessel et al. (2011) also pointed out that individuals who experienced a relationship breakup within the six months prior and felt sadness about the breakup exhibited symptoms corresponding to clinical depression (Stoessel et al., 2011). During stressful periods of facing the lack of close relationships, individuals tend to ruminate on the loss, intensifying the severity of depression (Eisma et al., 2014). Epidemiological data indicate a

connection between the breakup of a romantic relationship and the onset of severe depression, which is increasingly observed in younger populations (Monroe et al., 1999).

### *Social loneliness*

Social loneliness is the result of a lack of peer relationships (Weiss, 1975). In a study involving 110 depressed students, Eisemann (1984) found that loneliness was inversely correlated with the frequency of regular contact with family members, and the number of friends had an inverse correlation with feelings of loneliness (Eisemann, 1984). Thus, the fewer connections with peers, the more students tend to experience loneliness. The reduction of relationships and limited interaction among individuals have been studied to lead to various mental disorders, including the development of depression (Rahman et al., 2012).

University is a transitional phase between adolescence and adulthood, where individuals seek to establish and cultivate social relationships and become more connected with others. Therefore, lacking sufficient emotional and social support may lead to increased loneliness among students (Rahman et al., 2012). When individuals feel lonely, they tend to experience heightened anxiety, shyness, hostility, difficulty in social interaction, and decreased self-esteem – all of which are indicative of depressive symptoms (Berscheid & Reis, 1998; Cacioppo et al., 2006). Additionally, receiving specific support from friendships can significantly alleviate feelings of loneliness (Diehl, 2018). Building on previous research, the author's team hypothesizes: Loneliness has a positive correlation with depression in university students.

## **2. Methods:**

### **2.1. Sample**

The research team conducted data collection through a questionnaire comprising 13 items, targeting college students in Vietnam with two major faculties: Economics/Business Management and Engineering. Participants were clearly informed that their involvement was voluntary, and

the authors pledged that all collected information would be securely stored and solely utilized for academic purposes. After the synthesis and filtering data with missing values, the valid sample size ensured for data analysis amounted to 523 responses.

### **2.2. Study design**

The study team carried out data analysis using SPSS 20.0 and Amos 20.0 software to test the research model and hypotheses. Initially, descriptive statistics were employed to ascertain the mean and standard deviation (SD) values of the study variables. Subsequently, the research team conducted an internal consistency reliability test for each variable through the analysis of Cronbach's Alpha and Exploratory Factor Analysis (EFA). Finally, confirmatory factor analysis (CFA) and Structural Equation Modeling (SEM) were employed to validate the model and analyze the collected data.

### **2.3. Scales**

The measurement scales used in the study were inherited from previous research, with some modifications made by the research team to tailor the language of the scales to the study's subjects and context, ensuring participants' comprehension. Specifically, the Depression scale comprised 7 items, referencing Antony et al., 2020, while the Loneliness scale included 6 items, adapted from Jaafar et al., 2020. The study employed a 5-point Likert scale ranging from 1 – "Strongly Disagree" to 5 – "Strongly Agree." Additionally, demographic questions such as gender, place of birth, occupation, and field of study were included at the end of the questionnaire to examine the influence of control variables on the impact of variables within the research model. The final version of the questionnaire was distributed to college students through an online platform

### 3. Result and discussion

**Table 1: Descriptive statistics**

Feature		Percentage (%)
Gender	Male	30,4
	Female	69,6
Place of birth	Urban area	48,6
	Rural area	51,4
Occupation	Yes	54,7
	No	45,3
Field of study	Economics/Business Management	78,0
	Engineering	22,0

#### 3.1. Descriptive statistics

The finding indicated that the female participation rate was 69.4%, while the male participation rate was 30.4%. This gender distribution is attributed to the higher enrollment of female students in economics colleges in Vietnam. The urban - rural division among the respondents was not significantly different, with a fairly balanced representation. As the target population exclusively comprised college students, the number of employed participants slightly outnumbered those without employment but was not substantial. Lastly, the majority of respondents, constituting 78%, belonged to economic/business management colleges, while 22% of students from technical colleges. This distribution reflects the academic backgrounds of the participants and the focus on students pursuing studies in economics and business management disciplines.

#### 3.2. Testing of the measurement scale

Assessing reliability in the proposed model

The reliability testing results for the depression factor indicate a satisfactory level of measurement accuracy and adherence to statistical criteria. Specifically, the Cronbach's Alpha coefficient for the depression factor exceeded 0.8 (Cronbach's Alpha = 0.926), and the corrected item-total correlation for each variable was greater than 0.3 (Hair et al., 2010). However, in the case of loneliness factor, the initial testing revealed Cronbach's alpha coefficient = 0.721 and the corrected item-total correlation of the variable LL1 = 0.089, both of which did not meet statistical criteria. The research team eliminated variable LL1 and conducted a second reliability test. The results of the second test demonstrated satisfactory adherence to statistical criteria, with Cronbach's Alpha coefficient = 0.770 and all variables having corrected item-total correlation values greater than 0.3 (Hair et al., 2010). Detailed results are presented in Table 2.

**Table 2: Cronbach's Alpha test**

Factor	Variables	Corrected Item - Total Correlation	Cronbach's Alpha if Item Deleted
<b>Loneliness</b> (Cronbach's Alpha = 0.770)	LL2	0.458	0.755
	LL3	0.468	0.754
	LL4	0.627	0.699
	LL5	0.572	0.718
	LL6	0.590	0.711
<b>Depression</b> (Cronbach's Alpha = 0.926)	DP1	0.810	0.911
	DP2	0.800	0.912
	DP3	0.818	0.911
	DP4	0.769	0.915
	DP5	0.767	0.915
	DP6	0.743	0.918
	DP7	0.674	0.924

*Testing of EFA (Exploratory factor analysis)*

The research team conducted exploratory factor analysis (EFA) to examine the discriminant validity and convergence of the scale with two factors: Loneliness and Depression, using Principal Axis Factoring and Promax rotation. The results of the first analysis indicated that the relevant indices met the criteria: the Kaiser-Meyer-Olkin (KMO) was 0.908, falling within the range [0.5; 1]; Bartlett's test with a Sig. coefficient was 0.000; Eigenvalues of the factors were greater than 1, and the Total Variance Explained was 57.631%, surpassing the 50% threshold, indicating the appropriateness of the EFA model for the study (Hair et al., 2010). However, the initial EFA results

suggested that two variables, LL2 and LL3, reconsideration for elimination due to inadequate discriminant validity.

Subsequently, the research team removed variables LL2 and LL3 and conducted a second test of EFA. The rotation matrix results revealed that the 10 variables were grouped into 2 factors, with all variables having factor loadings > 0.5 and no undesirable variables remaining. The KMO measure was 0.897, within the acceptable range [0.5; 1]; Bartlett's test produced a significant result with a Sig. coefficient of 0.000; Eigenvalues of the factors were >1, and the Total Variance Explained increased to 62.665%, confirming the suitability of the EFA model for the study (Hair et al., 2010).

**Table 3: The result of Exploratory factor analysis**

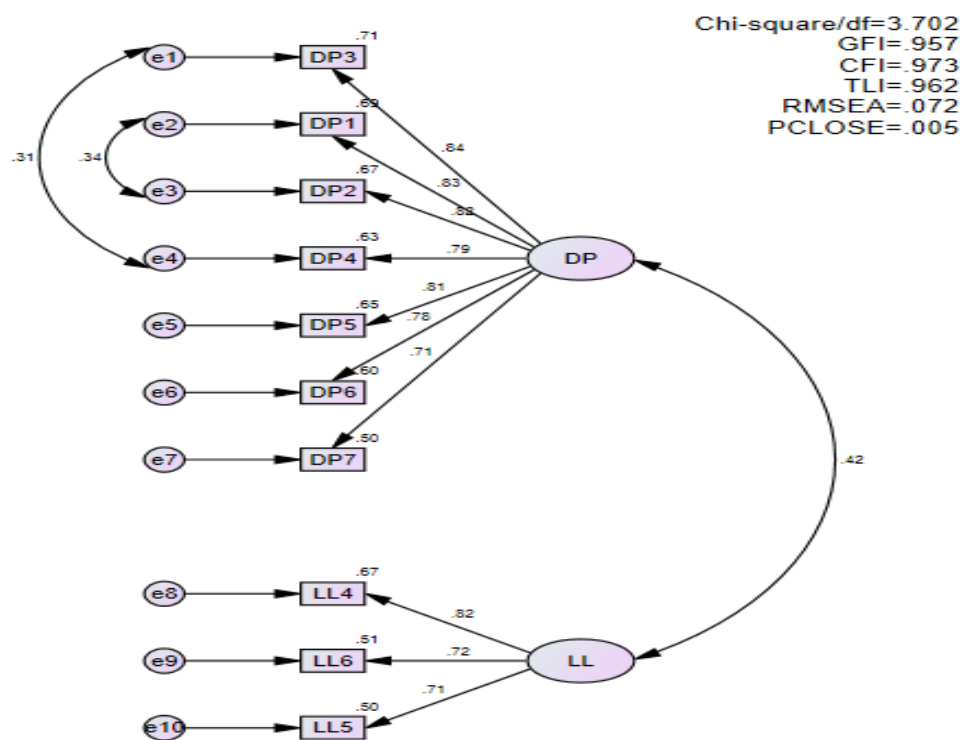
<b>Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy</b>		0.897
<b>Bartlett’s test of sphericity</b>		3223.543
<b>Sig.</b>		0.000
<b>Cumulative (%)</b>		62.665
<b>The value of initial Eigenvalue</b>	Loneliness	1.709
	Depression	5.315

3.3. Quantitative Research Utilizing Structural Equation Modeling (SEM) Framework

*Testing of CFA (Confirmatory factor analysis)*

The research team conducted Confirmatory Factor Analysis (CFA) to assess the overall suitability of the data, the quality of observed variables, and the convergence and discriminant validity. When inappropriate values were detected, the model was adjusted by establishing relationships with adjustment coefficients corresponding to changes

in  $\chi^2$  over a degree of freedom greater than 4, using a reference suggested by SEM model analysis researchers. Model test indicated satisfactory results, with a Chi-square/df value of 3.702 ( $\leq 5$ ), CFI = 0.973, TLI = 0.962, GFI = 0.957 ( $\geq 0.9$ ), and RMSEA coefficient of 0.072 ( $\leq 0.08$ ). Therefore, the model fit indices met the standards set by (Hair et al., 2010). The P-values of the observed variables were all equal to \*\*\* (i.e., 0.000), indicating that the observed variables were well-represented in the CFA model.



**Figure 1. The result of Confirmatory factor analysis**

Testing the research hypotheses of the Model

The model fit indices in Figure 2, including a Chi-square/df value of 3.702 ( $\leq 5$ ), CFI = 0.973, TLI = 0.962, GFI = 0.957 ( $\geq 0.9$ ), and RMSEA coefficient of 0.072 ( $\leq 0.08$ ), indicate that the model responds well with the data in the research area. The P-values of the independent variable - loneliness are lower than the 0.05 threshold (with

95% confidence), suggesting that loneliness significantly influences the dependent variable - depression. The standardized coefficient of H1, being consistent with the hypothesized direction, is supported. Specifically, the standardized coefficient for the relationship H1 is 0.42, indicating a relatively strong influence of loneliness on depression.

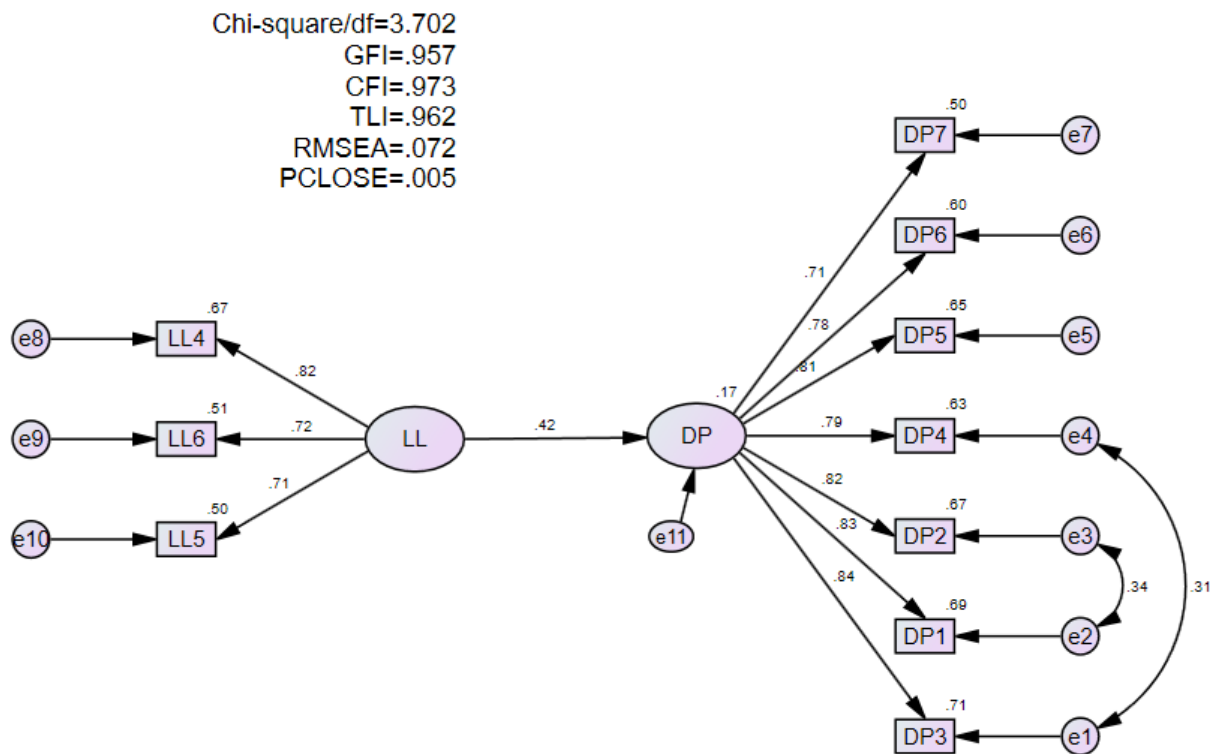


Figure 2. SEM model

4. Conclusions:

The research conducted a data analysis to examine the impact of loneliness on depression among college students in Vietnam. The study results revealed a positive association between loneliness and depression. Particularly, the analysis of the loneliness factor indicated that three observed variables within the emotional aspect of loneliness did not meet the reliability criteria of Cronbach’s Alpha and Exploratory Factor Analysis (EFA). This discrepancy is attributed to variations in the study’s subjects and context. On the other hand, the social aspect of loneliness (comprising LL4, LL5, LL6) exhibited a positive impact on depression.

This phenomenon can be explained by loneliness, contrary to the inherent nature of human beings, who tend to engage in social communication and bonding (Cacioppo & Patrick, 2008). Loneliness, stemming from deficiencies in the quality and quantity of an individual’s social networks, is a negative state. Especially during the college years, which mark the transition from adolescence to adulthood, the desire for connection and interaction with those around becomes increasingly pronounced. Consequently, when social interactions are limited, students are prone to heightened feelings of anxiety, shyness, hostility,

social communication apprehension, and diminished self-esteem. These are also indicative symptoms of depression (e.g., Berscheid & Reis, 1998; Cacioppo et al., 2006).

Based on the research findings, the authors propose several recommendations:

Firstly, individuals should pay special attention to the contributing factors of loneliness and depression to better understand their own psychological states. Additionally, students need to recognize that therapeutic medications and psychological interventions may not always be the suitable choices for addressing issues related to loneliness and depression.

Secondly, students should actively engage in social and recreational activities and maintain relationships with friends and family. These relationships have been proven to mitigate the impact of loneliness and depression while supporting the psychological recovery process.

Thirdly, from a governmental and societal perspective, it is crucial to create a socially friendly and open environment that fosters a sense of connection and belonging, thereby minimizing the negative effects of loneliness and depression. Furthermore, there is a need to enhance mental health education for the younger generation, as this knowledge is essential for identifying and addressing mental health issues promptly.

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