Am I at the Road to Depression? Risk of Depression among Tertiary Students toward University Mental Health Interventions

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ABSTRACT: The literature has a paucity of studies on the risk of depression among tertiary students and early adolescents, particularly in developing countries like the Philippines. The lack of such studies can contribute to weak mental health intervention programs in the universities. Hence, this cross-sectional survey was conducted to fill such gaps by determining the risk of depression among college students in a private higher education institution. Through a stratified sampling technique, 292 third-year students of varying courses have participated in this study. The Automatic Thoughts Questionnaire (ATQ) was used as a screening tool to discriminate the depressed from the non-depressed students and to detect those at risk of having depression. Results indicated the course has a significant difference in the risk of depression, while age and gender do not have. It concluded that the risk of depression varies among courses. However, the majority of college students are potentially at risk in their tertiary years. Ramifications to the Guidance and Counseling Office were offered. Moreover, ideas on implementation and research opportunities concerning mental health interventions were discussed.

KEYWORDS: academic stress, student depression, negative automatic thoughts, college students, Philippine Higher Education Institution

I.   INTRODUCTION

Among the highest-ranking burdensome diseases ranked by World Health Organization (WHO) is depression (Katon&Ciechanowski, 2014). In fact, between 2005 and 2015 alone, WHO (2017) recorded an 18% increase of people diagnosed with depression. Because they are in the stage of early adolescents, college students are more prone to depression (Esperanza & Bulusan, 2020; Field et al., 2012). Thompson and Mazer (2009) reported, too, that dropout rate among college students is escalating while Field, Diego, Pelaez, Deeds, and Delgado (2012) claimed that an increase of 75% among tertiary students had been reported seeking help in the counseling centers because of depression. Their life stage and failure to meet expectations of others are surmised to be contributing to depression of the college students (Field et al., 2012). The developmental stage of college students is crucial for them because they are expected to be self-reliant, independent, and self-sufficient while achieving social relationships (Mahmoud et al., 2012). According to Pillay and Ngcobo (2010), it is in this stage that they are most emotionally vulnerable

Many studies on depression among college students have emanated from first-world countries like the US. However, there is a dearth of studies like this focusing on developing countries like the Philippines (WHO, 2007). The latest data from the Philippines shows that almost 3% of the total population experience depression. Depression is also the major contributor to suicide deaths; such a number is close to 800,000 per year (Redaniel, Lebanan-Dalida, &Gunnell, 2011). Depression surfaces when there is a low mood caused by an interest loss or motivation to live (Venes et al., 2013). Deeley and Love (2012) further explained that depression might be an entry to the suicidal processes because of low-esteem and self-confidence.

Given the fact that very few delve into depression among college students in the Philippines and the fact that 6 out 10 students are enrolled in private Higher Education Institutions (HEIs), there should be a need to increase the understanding of the general public on depression among college students. Moreover, Chung et al. (2011) even mentioned that depression is a recurring problem among college students. They also believed that anxiety and stress negatively affect the academic performance of the students.

One more reason why the set of studies on depression in the Philippines should be given a serious sense of urgency is the 5% increase of college students found to be under depression from 2000 to 2006(Mahmoud et al., 2012). Mahmoud et al. (2012) also opined that suicide is the second leading cause of death among college students. Early detection of who is at risk of depression or under the depression in the universities could be potentially beneficial in both the students and the counseling service of the universities. The study of Newcomb-Anjo, Barker, and Howard (2017) also strongly suggested that more studies should be conducted on the risk of depression-like profiling. The result of such early detection may yield baseline data of who will be aided through counseling.

This study aimed to address this practical gap by producing baseline data for a private university. It is hoped to contribute to identifying the risk of depression of college students. The findings would be essential to craft interventions for those at risk with depression. Eventually, the number of dropouts and delinquent students could be diminished. Specifically, it sought answers to the following questions: (1) What is the risk of depression among college students? (2) Is there a significant difference in the risk of depression when participants are grouped according to their age, gender, and course?

II.   METHODS

Research Design

This quantitative study made use of descriptive cross-sectional survey design. According to Fraenkel, Wallen, and Hyunn (2012), a cross-sectional survey is used to gather information from a sample that has been drawn from a predetermined population. Furthermore, the data is collected at just one point in time, although the time it takes to collect all of the data may take anywhere from a day to a few weeks or more (Gravetter & Forzano, 2018; Leedy & Ormrod, 2015). The cross-sectional survey design was appropriate because the risk of depression was surveyed among the sampled population in a particular HEI at a specific time.

Study Site and Respondents

This study was conducted in a private tertiary institution in the northern part of the Philippines. The locale was chosen because a study on depression has never been conducted in the study site. Determined through the aid of sample size calculator, the sample came from the 3rd year college students. Stratified random sampling was used to achieve a proportional number of participants per course. Third-year students were chosen as participants with the assumption that intervention programs would be created after the study. In this way, they could be benefited, for they could still stay for a year in the institution. Table 1 shows the demographic characteristics of the 292 participants.

Table 1.

Respondents' Demographic Profile

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Respondents' Demographic Profile

Characteristics	Category	f	%
	18	136	46.58
	19	115	39.38
	20	19	6.51
	21	10	3.42
Age	22	7	2.40
	23	1	0.34
	24	1	0.34
	26	2	0.68

	31	1	0.34
Gender	Male	111	38.01
	Female	181	61.99
Course	BAPS	3	1.03
	ABJOURN	2	0.68
	BSPSY	4	1.37
	BSSW	6	2.05
	BSOA	3	1.03
	BSA	8	2.74
	BSAT	15	5.14
	BSCPE	9	3.08
	BSIT	19	6.51
	BSCRIM	12	4.11
	BSPT	3	1.03
	BSHRM	13	4.45
	BSARC	12	4.11
	BSN	4	1.37
	BSECE	5	1.71
	BEED	9	3.08
	BSTM	8	2.74
	BSPH	28	9.59
	BSED	22	7.53
	BMLS	24	8.22
	BSM	5	1.71
	BSCE	33	11.30
	BSBA	45	15.41
Total		292	100.00

Instrument

The Automatic Thoughts Questionnaire (ATQ), an adopted questionnaire developed by Hollon and Kendall (1980), was used in this study. It was used after permission was granted through email from the owners of the questionnaire. The ATQ is a 30-item instrument that measures the frequency of automatic negative statements about the self. Such statements play an essential role in the development, maintenance, and treatment of various psychopathologies, including depression. Total ATQ scores range from 30-150, with higher scores reflective of increased rates of negative self-statements. This questionnaire is frequently used in studies about depression. The instrument also has an excellent internal consistency (Alan E. Kazdin, 1990; Hollon & Kendall, 1980) with an alpha coefficient of 0.97. The ATQ has good concurrent validity (Harell & Ryon, 1983; Hollon & Kendall, 1980), correlating with two measures of depression, the Beck Depression Inventory (BDI) (Kai-Yein Teo & Yee-How Say, 2012) and the Minnesota Multi personality Inventory Depression scale (MMPI Depression Scale) (Harell & Ryon, 1983; Hollon & Kendall, 1980). The ATQ was also found to significantly discriminate depressed from non-depressed groups (Aldahadha & Sulaiman, 2012; Harell & Ryon, 1983; Hollon & Kendall, 1980; Kazdin, 1990; Dobson, Ashraf & Niveen, 2016). Notably, this instrument was used in this study, not as a diagnostic

instrument, rather, as a screening tool that would discriminate the non-depressed to the depressed respondents of the study.

Data Gathering Procedure

The collection protocol was followed. It started in asking permission from authorities (see Bulusan, Antonio, & Dumaga, 2019). A letter was sent to the University Registrar's Office asking for permission to obtain the total number of third-year enrollees of each department and course. A letter was also sent to the College Deans to ask for their permission to administer the questionnaire to the selected number of participants. After getting their approval, the researchers sought the signatures of the participants in the consent form. They answered the questionnaire during their vacant time. In answering the questionnaire, participants were asked to separately indicate how frequent the 30 depressing thoughts have occurred over the last week according to a 5-point scale (1= not at all to 5= all the time). Because the questionnaires were collected immediately after they were answered, the researchers achieved a 100% response rate.

Data Analysis

The first question required descriptive statistics to analyze the data. Hence the collected data were treated using frequency, percentage, mean, and standard deviation. The significant difference of risk depression and gender were computed using independent samples t-test The One-way ANOVA, on the other hand, was used to determine the significant difference on risk depression and other profile variables (Age and Course). The Bonferroni Post Hoc Test was used to determine the location of the significant differences. The significant difference was tested at the 0.05 level. In analyzing the data, the researchers used the Statistical Package for Social Sciences (SPSS).

III.   RESULTS

This study evaluated the risk of depression among college students in a private higher education institution. It also identified a difference in the risk of depression when participants are grouped according to their age, gender, and course. Using the ATQ, the risk of depression was calculated. According to Hollon and Kendall (1980), for a participant taking the ATQ to be declared as depressed, he or she should get a mean score of 79.64 and higher. A non-depressed participant is declared as such when he or she gets a mean score of 48.57 or below.

Table 2 shows the risk of depression of the participants according to their age, gender, and course. An over-all interpretation suggests that all the participants under the age category are "At-Risk" of having depression with age twenty (23) as having the highest mean of 75.00 and age 26 with having the lowest mean of 52.00. When grouped according to gender, both male and female participants are in the "At-Risk" category, with mean ATQ scores of 65.74 and 67.23, respectively.

Table 2. Risk of Depression of the College Students

Characteristics	Category	N	Mean	SD	Interpretation
	18	136	65.64	20.72	AT RISK
	19	115	67.66	22.10	AT RISK
	20	19	73.53	25.97	AT RISK
	21	10	64.90	17.87	AT RISK
AGE	22	7	58.86	10.09	AT RISK
	23	1	75.00		AT RISK
	24	1	61.00		AT RISK
	26	2	52.00	8.49	AT RISK
	31	1	59.00		AT RISK

	Grand Mean	-	66.661	-	AT RISK
Gender	Male	111	65.74	20.13	AT RISK
	Female	181	67.23	21.96	AT RISK
	Grand Mean	-	66.48		AT RISK
COURSE	BAPS	3	57.67	12.74	AT RISK
	ABJOURN	2	98.50	50.20	DEPRESSED
	BSPSY	4	57.25	17.78	AT RISK
	BSSW	6	63.17	8.13	AT RISK
	BSOA	3	64.00	11.00	AT RISK
	BSA	8	108.63	15.97	DEPRESSED
	BSAT	15	58.53	14.74	AT RISK
	BSCPE	9	69.11	21.56	AT RISK
	BSIT	19	74.37	29.46	AT RISK
	BSCRIM	12	56.17	12.39	AT RISK
	BSPT	3	64.33	6.03	AT RISK
	BSHRM	13	59.46	18.71	AT RISK
	BSARC	12	78.42	23.66	AT RISK
	BSN	4	46.50	7.59	NON-DEPRESSED
	BSECE	5	63.60	21.40	AT RISK
	BEED	9	59.11	14.64	AT RISK
	BSTM	8	77.88	25.51	AT RISK
	BSPH	28	67.61	20.96	AT RISK
	BSED	22	63.55	15.51	AT RISK
	BMLS	24	65.33	19.83	AT RISK
	BSM	5	54.40	8.85	AT RISK
	BSCE	33	75.79	21.91	AT RISK
	BSBA	45	58.69	13.87	AT RISK
	Grand Mean	-	66.66	-	AT RISK
Total		292	-	-	-

Meanwhile, when the respondents are grouped according to course. All the respondents are categorized as "At-Risk" except for the BS Accountancy students. They have the highest mean score of 108.63, while AB Journalism students record a mean score of 98.50 who fell under the category of "Depressed." The BS Nursing students, on the other hand, are recorded with the lowest mean of 46.50, who fell under the category of "Nondepressed."

This study inquired if there is a significant difference in the risk of depression when grouped according to profile variables. The answer can be gleaned in Table 3. It shows that gender is not statistically significant (t = -.580, P=

0.562) to the risk of depression of the respondents. Therefore, the null hypothesis is accepted. Meanwhile, the course yielded a statistically significant difference (F= 4.162, P= 0.001) to the Risk of Depression of the respondents. Therefore, the null hypothesis is rejected.

Table 3. ANOVA on the Risk Depression and Profile Variables

Profile Variables	Test of Homogeneity of Variances		ANOVA		Interpretation
	Levene Statistic	p-value	F	p-value	
Age	1.058	0.384	0.893	0.486	Not Significant
Course	1.739	0.023	4.162	0.001	Significant

*. The mean difference is significant at the 0.05 level.

The data on course was further subjected to post hoc analysis through the Bonferroni test. This was done to identify which course is significant to be at risk of depression. Eventually, Table 4 shows that there is a significant difference in the Risk of Depression of Bachelor of Science in Accountancy (BSA) students to all courses except on the courses AB Journalism, BS Office Administration, BS Physical Therapy, BS Architecture& BS Tourism Management. It also shows that there is also a significant difference in the risk of depression of Bachelor of Science in Civil Engineering students and Bachelor of Science in Business Administration students.

Table 4. Post Hoc Test (Bonferroni) on Risk Depression and Course.

Course		Mean Difference	Std. Error	p-value	Interpretation
BSA	BAPS	50.95833*	12.99	0.03	Significant
	BSPSY	51.37500*	11.75	0.01	Significant
	BSSW	45.45833*	10.36	0.01	Significant
	BSAT	50.09167*	8.40	0.01	Significant
	BSCPE	39.51389*	9.32	0.01	Significant
	BSIT	34.25658*	8.09	0.01	Significant
	BSCRIM	52.45833*	8.76	0.01	Significant
	BSHRM	49.16346*	8.62	0.01	Significant
	BSN	62.12500*	11.75	0.01	Significant
	BSECE	45.02500*	10.94	0.01	Significant
	BEED	49.51389*	9.32	0.01	Significant
	BSPH	41.01786*	7.69	0.01	Significant
	BSED	45.07955*	7.92	0.01	Significant
	BMLS	43.29167*	7.83	0.01	Significant
	BSM	54.22500*	10.94	0.01	Significant
	BSCE	32.83712*	7.56	0.01	Significant
	BSBA	49.93611*	7.36	0.01	Significant
BSCE	BSBA	17.09899*	4.40	0.03	Significant

*. The mean difference is significant at the 0.05 level.

IV.   DISCUSSION

This quantitative study identified the risk of depression in junior college students in a private university. By using the Automatic Thoughts Questionnaire, it has identified that all students are at risk, regardless of age, gender, and course. On the course category, there are two courses identified as "Depressed." These are the BS Accountancy and AB Journalism, whose mean scores (M= 108.63) (M= 98.50) exceeded the "Depressed" mean score of 79.64. On the other hand, students taking up BS in Nursing are identified as "Nondepressed."

The finding on BS Nursing students as non-depressed is contrary to the study of Abdallah and Gabr (2014) that there is a 62.5% prevalence of depression among medical and allied health students. This implies that the majority of the BS Nursing students can manage the stressors well in their academics than any other course in the study site.

The mean scores or the frequency of negative thoughts of the respondents tackles one of the elements of Beck's Cognitive triad, which is the "negative view about the self." In connection to this, according to Beck, a direct relationship occurs between the amount and severity of someone's negative thoughts and the severity of their depressive symptoms (Aldahadha &, 2012). This implicates that the BS Accountancy and AB Journalism students experience a higher rate of negative self-statements, considering that their mean scores are far higher than other courses. Therefore, it can be said that the higher the ATQ scores of the respondents, the more depressed the respondents are.

Moreover, the results revealed that university students are prone and vulnerable to depression (Izadinia et al., 2010; Manning et al., 2019;Stowell, Lewis, & Brooks, 2019). Newcomb-Anjo et al. (2017) argued that this is because they are in the transition stage. This stage of life, according to Schulenberg and Zarrett (2006), is rich with risk factors that compromise the wellbeing of young adults. Even those with low-risk experiences were found to be vulnerable to depression (Newcomb-Anjo et al., 2017). This has ramifications to Guidance and Counseling Services of any university, like in the study site. More intervention programs should be crafted and implemented in the university to promote viable mental health and wellbeing of the college students.

The lack of a significant difference in the risk of depression and age is supported by several studies (Harrell &Ryon, 1983; Kazdin, 1990; Lee, Sta. Maria, Estanislao, & Rodriguez, 2013). However, it is contrary to the result in the study of Wahed& Hassan, (2017) that age was associated with higher depression. Neimi and Vainiomaki (2006) even opined that as the college medical students near the termination of the clinical training, the level of stress could progress. However, such a study cannot be linked entirely to this study because the context of Neimi and Vianiomaki's study is on medical student training only.

A number of studies (Hollon & Kendall, 1980; Harrell & Ryon, 1983; Kazdin, 1990; Lee et al., 2013) yielded the same result that supports the lack of significant difference in the risk of depression and gender. Meanwhile, the findings of this study are not consistent with the studies claiming that depression is more prevalent among females(Black, Roberts, & Li-Leng, 2012; Kai-Teo & Say, 2012). Hatzenbuehler & Hilt's study (2010) showed that 2:1 gender prevalence exists and that females are more vulnerable to depression.

On the other hand, the course category yielded an exciting result. The findings revealed that "course" was significant to the risk of depression of the participants. Meaning, their academic preparation for their chosen profession could be a potential contributor to their risk of depression. This finding has a ramification to the core faculty members in the college and educational managers like the Dean. This result is reinforced by the study of Chen et al. (2013), proving that there was a significant association between the students' satisfaction with their specialization and depression. While the study of Lee et al. (2013) contradicted the current result, it is evident that the BS Accountancy students experience a higher level of severity of depressive symptoms due to the number of negative self-statements about themselves compared to the other courses. Possible risk factors that may have affected the students' depression include inter or intrapersonal related stressors, related social stressors, drive and desire related stressors, group activities related stressors, and related academic stressors (Fuad et al.,2016; Esperanza & Bulusan, 2020).

V.   CONCLUSION

Aiming to enrich the literature on depression among adolescents in developing countries, this study identified the risk of depression of college students in a private university. It also inquired on the significant difference in the risk of depression among the participants when grouped into selected variables. This study concludes that the risk of depression varies among courses. However, the majority of students are potentially at risk in their tertiary years. Age and gender, on the other hand, do not bear any significance to college students' risk of depression.

Essential inputs to mental health programs and interventions of the university can be picked from this study. Sustainable stress management activities may be crafted based on the profile of the students. For instance, the university can now determine which course should be given more focus on mental health programs and interventions. Through these interventions, the "depressed" students could be essentially aided for them to cope with their academic demands. Such activities may be potentially useful if they would be implemented in the form of outreach, as studies record very few students voluntarily seeking counseling help. Since the risk of depression varies according to courses, academic-related interventions may be crafted and implemented by the faculty members and educational managers.

This study is not without any caveats. While it is true that the response rate is 100%, generalization is weak because it is conducted only in one context. To increase the study's power of generalizability, future researchers might want to use multiple sites. Solid survey design could also be another limitation. The study is unable to put forward luxuriant explanations because it did not use a qualitative technique. Succeeding researchers might want to consider using mixed methods design to substantiate the quantitative findings of this study. Finally, testing an intervention crafted out of the findings of this study may be potential research. In that way, an essential intervention could be adopted by other universities to decrease the risk of depression among college students.

VI.   References

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