

Down in the Mount: Indications of Depression Among Grade 11 Students

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Abstract

There were series of reports in media that depression is one of the pressing problems among teenagers, nowadays. Until about months ago, a Grade 11 student from a certain high school in Pangasinan committed suicide in their own home. Since there are a number of consequences if depression is left undetected, the researchers had the interest to conduct this research to provide baseline information about indications of depression among Grade 11 students of Pangasinan State University-Integrated Laboratory Schools (PSU-ILS)-High School Department in Bayambang Campus. The descriptive survey method and frequency count were used in this study. Utilizing PHQ-2 and PHQ-9 as screening tools, the study revealed that 90% of the subjects of this study indicate mild to moderate depression. The results imply that these students are in need of depression counter measures such as guidance and counselling, family support, school and community support, and the like.

Keywords: depression, suicide, Grade 11, PHQ2 and PHQ-9 screening tools

INTRODUCTION

This study is an attempt and an initial step to deepen one's understanding of what depression is and how to handle people who may be suffering from depression. Adolescents are given special attention because they are vulnerable to this condition. It is the purpose of this study to determine the indications of depression among Grade 11 students utilizing the PHQ-2 and PHQ-9 screening tools. Also, it is our aim to identify the presence and duration of suicidal ideation as well as the weight to the degree to which depressive problems have affected the respondents' level of function. Through this study, the researchers hope to compel others to respond to the need to creating awareness and interventions on depression.

The World Health Organization (WHO) reveals that, one in every four individuals will suffer from mental health problems at some point in their lives and that 450 million people worldwide have a mental health problem (WHO, 2001). More than half of all adolescents' report experiencing depressed mood, and 8% to 10% experience clinically diagnosable symptoms. Depression in the young negatively affects all areas of development, including academic, cognitive, social, and family functioning, and if untreated, it can have significant lasting consequences. The structure interaction networks of adolescents influence the robustness of depressive symptoms (Pachucki et al., 2015 p. 40–50). Moreover, students who have low perceived quality of support were more likely to experience mental health difficulties (Hefner & Eisenberg, 2009, p. 491–499. The extent to which students are involved with both curricular and extra-curricular activities is also indicative of their psychological wellbeing and distress as seen in qualitative (Buckley & Lee, 2018) and

quantitative studies (Billingsley & Hurd, 2019, p. 421–446; Lushington et al., 2015). Various social, developmental and academic challenges offered by the school shape the minds of these late adolescents as they strive towards the attainment of their respective degrees and better life conditions during early adulthood. Teen depression is a serious mental health problem that causes a persistent feeling of sadness and loss of interest in activities. It affects how your teenager thinks, feels and behaves, and it can cause emotional, functional and physical problems. Students experience a lot of pressure and stress brought about by academic, environmental, emotional and psychological factors (Zarate et al., 2020). Although depression can occur at any time in life, symptoms may be different between teens and adults (Mayoclinic.org). According to an article published by Mental Health America entitled "Depression in Teens," adolescent depression is increasing at an alarming rate. Recent surveys indicate that as many as one in five teens suffers from clinical depression. This is a serious problem that calls for prompt, appropriate treatment.

According to the National Institute of Mental Health, in 2015, 12.5% of adolescents aged 12-17 had at least one major depressive episode. There is so much that happens during adolescence that has the potential to widen the door just enough for depression to slip through and find its way to teens. They will have friendship changes, their drive to experiment with their independence will see them feel a pull away from the warmth and protection of their family, and they will experience massive brain and body changes. Another very alarming news is when Senator Joel Villanueva reported on the Senate hearing those Filipino kids as young as 10 years old have committed suicide because of depression. He then firmly added that 46 percent of the total suicide cases recorded since 2010 are from the youth. While the rate of youth suicide in the country was relatively low compared to neighboring countries in the region, Villanueva said, "The bad news is that the suicide rates in the country have been on the rise." Incidence is highest on young adults aged 15 to 24 for both boys and girls according to the Philippine Psychiatric Association.

Recent epidemiological data show that approximately 11 percent of youth will experience depression (Avenevoli et al., 2015, p. 37-44), and these episodes are associated with downstream negative consequences later in adolescence (e.g., academic difficulties, risky behavior engagement, nonsuicidal self-injury) and adulthood (e.g., lower income levels, higher divorce rates, suicidality) (Auerbach, Kim, et al., 2014, p. 579-584; Auerbach, Tsai, & Abela, 2010, p. 726-747; Avenevoli, Knight, Kessler, & Merikangas, 2008, p. 6-32). Most notably, an alarming 75 percent of individuals experiencing depression during adolescence will make a suicide attempt in adulthood (Nock, Green, et al., 2013, p. 300-310).

With all these findings, the researchers firmly believe that going through adolescence during any time period is difficult, but in today's world there seems to be even more challenges that face teens that can make things even more difficult for them. All of the pressures and anxiety can lead many teens into a state of depression. If left untreated, depression can lead to all sorts of other problems.

The results of this endeavor will be very beneficial to the university most importantly to the students who are in need of help and are suffering from depression. Likewise, the Guidance Counselor together with the Principal of the High School Department can use the results as basis for their counselling and intervention to monitor and help students overcome depression as well as in creating programs that will address said problem.

Scope and Delimitations

This study has two main limitations. First, this study was conducted in an insured population of adolescents in the Pangasinan State University-Integrated Laboratory Schools (PSU-ILS)-High School Department in Bayambang Campus and may not be generalizable to all adolescent populations. Second, the PHQ-2 measure used in this study was a part of the PHQ-9. Thus, one would expect a high degree of correlation of results and the sensitivity and specificity may be slightly lower if they were administered separately. Although this is a limitation, we do feel that our usage parallels common clinical and research practice of administering a screening measure and immediately following the screener with a more definitive measure for those who were screened to be positive.

METHODOLOGY

Research Design

This research made use of descriptive survey research design. Most quantitative research falls into two areas: studies that describe events and studies aimed at discovering inferences or causal relationships. Descriptive studies are aimed at finding out "what is," so the researchers used observational and survey methods to collect descriptive data.

Population

The researchers used purposive sampling in identifying the respondents. Purposive sampling is a non-probability sampling method and it occurs when "elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money" (Black, 2010). The participants of this study are the Grade 11 students of Pangasinan State University Integrated Laboratory Schools (PSU-ILS)-High School Department in Bayambang Campus who are enrolled school year 2018-2019. The total population of the respondents is 445, composed of 112 males and 334 females. The researchers decided to utilize total enumeration of the population since this will serve as a baseline data to the guidance counselor and principal of said school in monitoring the status and the incident of depression among them.

Instrumentation

The researchers have adopted validated screening tool for depression which are Patient Health Questionnaire – 2 (PHQ-2) and Patient Health Questionnaire – 9 (PhQ-9) (refer to the appendices). The PHQ-2 includes the first 2 items of the PHQ-9 (Thibault et al., 2004). As for PHQ-2, the stem question is, "Over the past 2 weeks, how often have you been bothered by any of the following problems?" The 2 items are "Little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless." For each item, the response options are "Not at all," "Several days," "More than half the days," and "Nearly every day," scored as 0, 1, 2, and 3, respectively (Kroenke et al., 2003). Thus, the PHQ-2 score can range from 0 to 6. A score of 3 points or more on this version of the PHQ-2 has a sensitivity of 83 percent and a specificity of 92

percent for major depressive episode. If providers are concerned about missing depressed youth, they might reasonably choose to use a cut-point of ≥ 2 to maximize sensitivity and then follow this with a longer screening instrument (such as the PHQ-9) (Winter et al., 1999). The Screening with the PHQ-2 is only a first step. Patients who screen positive should be further evaluated with the PHQ-9 (Kroenke et al., 2003).

Table 1. Score Interpretation for PHQ-2

PHQ-2 Score	Probability of major depressive disorder (%)	Probability of any depressive disorder (%)
1	15.4	36.9
2	21.1	48.3
3	38.4	75.0
4	45.5	81.2
5	56.4	84.6
6	78.6	92.9

If providers are concerned about missing depressed youth, they might reasonably choose to use a cut-point of ≥ 2 to maximize sensitivity and then follow this with a longer screening instrument (such as the PHQ-9) (Winter et al., 1999). For this reason, all the Grade 11 students are then qualified for the PHQ-9 screening tool for further assessment. Also, those depressive symptoms exist on a continuum and youth with elevated depressive symptoms are at increased risk for the later development of depression (Pine et al., 1999).

The Patient Health Questionnaire 2-item depression screener is one of the most commonly used brief screens with adult populations). It has been shown to have good diagnostic validity among multiple large samples of adult primary care patients and comparable sensitivity and specificity to other longer measures of depression (Kroenke et al., 2003). In addition, the Patient Health Questionnaire 2-item depression screener is often used as a first step in depression screening, to identify individuals who require further evaluation with the remainder of the PHQ-9 questions (Lowe B et al., 2005).

Furthermore, the PHQ-9 is a multipurpose instrument for screening, diagnosing, monitoring and monitoring and measuring the severity of depression. The PHQ-9 incorporates DSM-IV depression diagnostic criteria with other leading major depressive symptoms into a brief self-report tool (Kroenke et al., 2001). Also, the tool rates the frequency of the symptoms which factors into the scoring severity index. Moreover, question 9 on the PHQ-9 screens for the presence and duration of suicide ideation. And a follow up, non-scored question on the PHQ-9 screens and assigns weight to the degree to which depressive problems have affected the patient's level of function.

The PHQ-9 already has psychometric properties. The diagnostic validity of the PHQ-9 was established in studies involving 8 primary care and 7 obstetrical clinics. PHQ scores ≥ 10 had a sensitivity of 88% and a specificity of 88% for major depression. PHQ-9 scores of 5, 10, 15, and 20 represents mild, moderate, moderately severe and severe depression (Kroenke et al., 2001).

Table 2. Severity Score Findings for PHQ-9

PHQ-9 Score	Provisional Diagnosis	Treatment Recommendation Patient Preferences should be considered
5-9	Minimal Symptoms*	Support, educate to call if worse, return in one month
10-14	Minor Depression ++ Dysthymia* Major Depression, mild	Support, watchful waiting Antidepressant or psychotherapy Antidepressant or psychotherapy
15-19	Major Depression, moderately severe	Antidepressant or psychotherapy
>20	Major Depression, severe	Antidepressant or psychotherapy (especially if not improved on monotherapy)

*If symptoms present \geq two years, then probable chronic depression which warrants antidepressants or psychotherapy (ask "In the past 2 years have you felt depressed or sad most days, even if you felt okay sometimes?")

++ If the symptoms present \geq one month or severe functional impairment, consider active treatment

Data Collection

The researchers requested all Grade 11 students of Pangasinan State University-Integrated Laboratory Schools (PSU-ILS)-High School Department in Bayambang Campus to answer the screening tools considering the venue and their availability. Also, the researchers read the questions one-by-one and explaining each item as needed to ensure the accuracy of the respondents' answers.

Ethical Considerations

A letter of permission addressed to the school principal to carry out the study was submitted to request the Grade 11 students to answer the questionnaire. The availability of the respondents was noted before administering the questionnaire.

RESULTS AND FINDINGS

The data obtained through descriptive survey method from the respondents were encoded and processed through the use of frequency count.

Table 3. Summary of Average of Column Totals for Questions 1 to 2 of PHQ-2 among Grade 11 students

	STRAND														
	STEM A	STEM B	STEM C	ABM A	ABM B	ABM C	ABM D	HUMSS A	HUMSS B	HUMSS C	HUMSS D	HUMSS E	ICT	HE	AVERAGE
AVE.	2.66	2.51	3.12	2.5	2.66	2.12	2.64	2.0	1.78	2.9	2.83	2.7	2.6	3.1	2.6

As gleaned from the table above, the data on the average of the different strand shows that Grade 11 STEM C Strand got the highest score of 3.12. The PHQ-2, comprising the first 2 items of the PHQ-9, includes the degree to which an individual has experienced depressed mood and anhedonia over the past two weeks. Its purpose is not to establish final diagnosis or to monitor depression severity, but rather to screen for depression. Patients who screen positive should be further evaluated with the PHQ-9 to determine whether they meet criteria for a depressive disorder. The PHQ-2 has been validated in 3 studies in which it showed wide variability in sensitivity (American Psychological Association, 2021). Most of the scores of the other Grade 11 strands fall between 2 and 3 scores respectively. As reflected from table 1, score 2 has a probability of major depressive disorder of 21.1 percent and a probability of any depressive disorder of 48.3 percent. Whereas, score 3 means a probability of major depressive disorder of 38.4 percent and a probability of any depressive disorder of 75 percent. Also, the weighted average score of all the Grade 11 strands is 2.6.

Meanwhile the next table presents the average of the different Grade 11 strands in the PHQ-9 screening tool and its corresponding score, its psychometric properties, its provisional diagnosis and recommended intervention.

Table 4. Summary of Average of Column Totals for PHQ-9 among Grade 11 students

	STRAND														
	STEM A	STEM B	STEM C	ABM A	ABM B	ABM C	ABM D	HUMSS A	HUMSS B	HUMSS C	HUMSS D	HUMSS E	ICT	HE	AVERAGE
AVE.	9.24	10.9	11.4	9.2	10.3	7.76	10.29	9.3	7.51	9.3	10.1	10.2	9.42	12	9.8

The table above indicates that the lowest average score is 7.51 and the highest score is 12 respectively. The weighted average score of all the strand is 9.8. Using the severity score findings for PHQ-9 on table 2, this means that the Grade 11 students shows mild to moderate symptoms of depression. Using the psychometric properties of PHQ-9 the Grade 11 students fall in the mild to moderate depression. The recommended interventions are guidance and counselling, family support, school and community support.

Furthermore, the respondents including their friends, parents and teachers are unaware of this indication. This has been becoming a trend that most likely can cause serious consequences if left undetected.

Table 5. Summary of the Number of Students Diagnosed with Different Severity Scores using PHQ-9

	STRAND		
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PHQ-9 Severity Score Ranges	STEM A	STEM B	STEM C	ABM A	ABM B	ABM C	ABM D	HUMSS A	HUMSS B	HUMSS C	HUMSS D	HUMSS E	ICT	HE	SUM TOTAL	PERCENTAGE
0-4	3	3	1	1	1	6	4	4	5	0	9	2	6	0	45	10.11
5-9	17	15	9	13	12	11	11	11	17	10	14	9	19	10	178	40
10-14	16	11	7	12	16	8	17	13	4	20	10	15	17	7	173	38.88
15-19	2	5	6	1	2	0	4	2	1	0	4	3	4	4	38	8.54
>20	0	3	1	0	0	0	1	0	0	0	3	0	1	3	12	2.70

In an individual participant data meta-analysis of studies that compared PHQ scores with major depression diagnoses, the combination of PHQ-2 (with cutoff ≥ 2) followed by PHQ-9 (with cutoff ≥ 10) had similar sensitivity but higher specificity compared with PHQ-9 cutoff scores of 10 or greater alone. Further research is needed to understand the clinical and research value of this combined approach to screening (Levis et al., 2020).

The data obtained from the PHQ-9 screening tool were then tallied and classified according to its severity scores. Using the severity score findings from table 2 in relation to the table above, it is evident that 40% of the respondents have mild symptoms of depression, 38.88% have moderate depression, 8.54% have moderately severe depression and 2.70% are positive with severe, major depression. Considering the percentages, the result is quite alarming and needs immediate intervention.

Since it is the purpose of the study to identify the indication of depression among Grade 11 students, this will serve as a baseline data for the principal and guidance counselor of the school. Depression in adolescents is a serious public health concern.

Table 6. Summary of Responses of Students to Question 9 of PHQ-9 (Suicidal Ideation)

Responses to Question 9	STRAND														TOTAL	PERCENTAGE
	STEM A	STEM B	STEM C	ABM A	ABM B	ABM C	ABM D	HUMSS A	HUMSS B	HUMSS C	HUMSS D	HUMSS E	ICT	HE		
0	26	21	15	18	19	20	20	21	21	19	33	17	21	10	281	63
1	11	8	5	5	9	4	10	5	6	8	3	10	19	11	114	37
2	1	7	2	4	2	1	5	4	0	2	2	2	3	3	38	
3	0	1	2	0	1	0	2	0	0	1	2	0	4	0	13	
Total															446	

The question 9 on the PHQ-9 screens for the presence and duration of suicide ideation. Using the table above it can be determined that 37% of the respondents are positive for suicidal ideation. This data would call for immediate response. Using this baseline data, early detection and

treatment are the best ways to prevent suicidal ideation and suicide attempts. Lifetime prevalence of passive suicidal ideation (13–17 years old), serious suicidal ideation, and suicide attempt (13–20 years old) were 22.2%, 9.8%, and 6.7%, respectively. Prevalence was twice as high for females as for males. Overall, rates of passive (15–17 years old; 11.8%–18.4%) and serious ideation (13–20 years old; 3.3%–9.5%) increased over time but were stable for attempt (13–20 years old; 3.5%–3.8%) (Orri et al., 2020).

It is evident from the table that, adolescents who have suicidal thoughts are a high-risk group who require assessment of their mental state including current suicidal thoughts and behaviors, and assessment of the key risk factors known to be associated with eventual suicide. Of adolescents who die as a result of suicide, most are struggling with mental illness.

Nevertheless, parents and/or guardians should be encouraged to allow open communication with the adolescent, particularly regarding negative feeling states and suicidal thoughts, and to ensure the home environment is safe. In addition to supportive family and friends, mental health supports should be strengthened at school through guidance counseling with a psychometrician, at a health clinic or community health center (including urgent mental health services), a physician or a private therapist.

Table 7. Summary of Responses in the Non-Scored Questions on the PHQ-9

Question	Responses	STRAND														TOTAL	PERCENTAGE
		STEM A	STEM B	STEM C	ABM A	ABM B	ABM C	ABM D	HUMSS A	HUMSS B	HUMSS C	HUMSS D	HUMSS E	ICT	HE		
A	Yes	29	21	19	23	25	21	24	14	18	24	29	18	31	19	315	70.6
	No	9	16	5	4	6	4	13	16	9	6	11	11	16	5	131	29.4
B	NDAA	7	4	2	5	10	10	11	10	3	3	11	3	10	3	92	20.6
	SD	26	28	18	18	16	14	20	17	21	23	25	24	31	18	299	67
	VD	6	4	3	3	5	1	6	3	1	4	3	2	5	3	49	11
	ED	0	1	1	1	0	0	0	0	2	0	1	0	1	0	7	1.57
C	Yes	4	6	2	5	3	2	7	2	0	8	10	3	12	7	71	15.9
	No	34	31	22	22	28	23	30	28	27	22	30	26	35	17	375	84.1
D	Yes	2	7	4	5	3	0	5	1	3	7	6	3	9	8	63	14.1
	No	36	30	20	22	28	25	32	29	24	23	34	26	38	16	383	85.9

Legend: NDAA – Not Difficult At All; SD – Somewhat difficult; VD – Very Difficult; ED – Extremely Difficult

There is a follow up, non-scored question on the PHQ-9 screens and assigns weight to the degree to which depressive problems have affected the respondent's level of function. For Question A, 70.6% answered yes while 29.4% said no to the question, "In the past year have you felt depressed or sad most days, even if you felt okay sometimes?" For Question B which is, "If you are experiencing any of the problems on this form, how difficult have these problems made it for you to do your work, take care of the things at home or get along with other people?" 20.6 % of the respondents answered "Not Difficult at All," 67% answered "Somewhat Difficult," 11% said it

was "Very Difficult," and 1.57% confirmed it to be "Extremely Difficult." In addition, the non-scored question includes a scree about the question, "Have you ever in the past month when you have had serious thoughts about ending your life?" 15.9% said they want to end their life and 84.1% didn't have that serious thought. And lastly, for the question, "have you ever in your whole life tried to kill yourself or made a suicide attempt?" 14.1% answered yes and 85.9% said no. This suggests that youth who present with depressive symptoms (and not solely those who are clinically depressed) may be more likely to experience suicidal ideation or attempt suicide (Orri et al., 2020).

DISCUSSIONS

This study showed that the summary of average of column totals for Questions 1 to 2 of PHQ-2 among grade 11 students is 2.6 which is a positive indication of depression where the STEM C strand got a score of 3.16 and HE strand got an average of 3.1. A score of 3 points or more on this version of PHQ-2 has a sensitivity of 83% and a specificity of 92% for major depressive episodes. Similar research indicated that the PHQ-2 is well suited as a first-line screening tool for depression as it is brief, easy to score, and available without cost. When comparing to the PHQ-9, the sensitivity and specificity of the PHQ-2 is similar to what has been found with the Beck Depression Inventory for Primary Care (Richardson et al., 2010). Some researches verified that the sensitivity and specificity of the PHQ-2 is similar to what has been found with the Beck Depression Inventory for Primary Care 22 and the Adolescent Version of the Patient Health Questionnaire (PHQ-A) which led to increased diagnosis of depression among adolescents (Leslie, 2010).

Furthermore, when comparing the summary of average column totals for PHQ-9 among Grade 11 students in this study, the lowest average score is 7.51 and the highest score is 12. Using the severity score findings for PHQ-9, the student showed mild to moderate symptoms of depression. Using the psychometric properties of PHQ-9, the Grade 11 students fall in the mild to moderate depression.

This research confirms the findings of one of the studies where approximately 9% of teenagers meet the criteria for depression at any given time, and one in five teenagers have a history of depression during adolescence. Also, the lifetime prevalence of depression in the adolescent population was 13%. Changes in the social environment and puberty, along with cognitive maturation, may lead to the increased prevalence of depression among teenagers (Blakemore, 2008). Major depressive disorder has short-term effects that include poor school performance, suboptimal growth and development, behavioral changes and impairment in normal interaction with family members and peers. Some of the long-term consequences include poor education rates that lead to low socioeconomic status, aggressive behavior, the diagnosis of depression and anxiety in adulthood, increased risk for self-injurious behavior and suicidal ideation.

As indicated in the results of the PHQ-2 and PHQ-9, the Grade 11 students fall under the mild to moderately severe category of depression. In fact, 40% of the respondents have mild symptoms, 38.88% have moderate depression and 2.70% are positive with severe, major depression. Previous research proposed that Major depressive disorder (MDD) can have significant effects when onset occurs in adolescence. Impaired school performance, interpersonal difficulties later in life, early parenthood, and increased risk of other mental health disorders and substance use disorders have been associated with the diagnosis of MDD in childhood (Cheung, 2013). In 2016, an estimated 12.8% of the US population aged 12-17 years had been diagnosed with at least one major depressive episode (NIMH, 2017). As many as 8% of adolescents

diagnosed with MDD have completed suicide by young adulthood, making suicide the second leading cause of death among adolescents 12-17 years of age (Perou et al., 2013).

The research echoed that 14.1% of the students answered "yes" to the question, "have you ever in your whole life tried to kill yourself or made a suicide attempt?" This amplified the question 9 on the PHQ-9 screens for the presence and duration of suicide ideation which has a specificity was 82.3% for detecting youth with probable major depression on the PHQ-9 and has a positive predictive value was 42% for detecting probable major depression. A similar study showed that Learners who answered "yes" to the question on (1) wish to be dead, (2) active suicidal ideation but without intent to act, or (3) active suicidal ideation with some intent to act but no specific plan held more permissive attitudes than those who answered "no" Learners who engaged in aborted or interrupted attempts also held more permissive attitudes than those who did not. No significant difference in terms of permissiveness towards suicide was observed between those who reported suicidal ideation or behavior and those who did not (Estrada, C.A.M., Nonaka, D., Gregorio, E.R. et al., 2019). Furthermore, except for those who reported an aborted attempt, learners who experienced any type of suicidal ideation and engaged in suicidal behavior in their lifetime were significantly more agreeing that suicide is a process as compared to those who did not. Previous researches indicated that suicide is a global public health concern, accounting for approximately 1.5% of all deaths worldwide. Its prevalence is high among the adolescent and young adult populations (WHO, 2017). In the Philippines, the prevalence of suicide is not clear since there is no country-wide suicide registry in place. However, the most recent Global School-based Student Health Survey (GSHS) reported that 11.6% of Filipino adolescents aged 13 to 17 years old considered attempting suicide while 16.8% attempted suicide at least once in the past year (WHO-GSHS, 2015).

Though this study only focuses on the indication of depression among Grade 11 students, the researcher would like to emphasize the importance of immediate interventions and actions from the school administration, parents and other concern stakeholders. The present study also highlights the need to forge partnerships with mental health experts, another directive stipulated by RA 11306. Some teachers recognized that they can only provide support to learners to some extent, and that addressing suicidal ideation and behaviors warrants the assistance of guidance counselors or mental health experts. RA 11306 also endorses the promotion of mental health and well-being in schools. According to the UNICEF Framework for rights-based, child-friendly educational systems and schools, teachers play a significant role in creating effective and inclusive classrooms (UNICEF, 2018).

CONCLUSIONS

Based from the findings, the following conclusions were drawn:

1. The general average of all the Grade 11 students is 2.6, rounding it off to 3 for PHQ-2. This means that Grade 11 students have 38.4% probability of major depressive disorder and 75% of probability of any depressive disorder.
2. The PHQ-9 showed that ninety percent (90%) of the students have mild to moderate depression. This calls for support from teachers, peers, family as well as encouragement to undergo psychotherapy. Moreover, the data shows the need for immediate response or action coming from the principal, and guidance counselor/ psychometrician.

3. The question 9 on the PHQ-9 screens for the presence and duration of suicidal ideation, revealed 37% of the respondents had suicidal thoughts.
4. Lastly, the result of the non-scored question on the PHQ-9 that screens and assigns weight to the degree to which depressive problems have affected the respondents' level of function are as follows: 70.6% have felt depressed or sad most days; 67% answered Somewhat Difficult, 11% said it was very difficult and 1,57% confirmed it to extremely difficult to have these problems made it in their work, home, and other people; 15.9% want to end their life; and 14.1% tried to kill themselves.

Recommendations:

Based on the findings and conclusions of the study, the following are hereby recommended:

1. Since the weighted average of all Grade 11 students is 2.6 and is a positive indication of depression, an intensive in-house education and counseling on depression should be attended by all the respondents to help develop a deep sense of understanding about depression.
2. Since 90% of the respondents have mild to moderate depression, the principal as well as the school psychometrician should collaborate with the parents of the respondents to monitor and assess the severity of depression. This can be done by developing a monitoring and evaluating scheme to objectively assess depression among students.
3. Since suicidal thought is evident among 37% of the respondents, counseling at a health clinic or community health center (including urgent mental health services) with a physician or a private therapist is needed to ensure further diagnosis and treatment as needed. Hence, further and in-depth study should be made using the baseline data provided.
4. Capitalizing on idealized support, as a component of helping those with depression, it is recommended that the principal or school psychometrician create support groups and other tools that helps students overcome depression. Furthermore, upon the implementation of the said proposed plan, further study may be executed in terms of its impact and effectiveness. As the primary aim of this research is to provide a baseline data for the indications of depression among Grade 11 students, the researchers recommend that a more in-depth study be made regarding the results of this research.

References

- Auerbach, R.P., Kim, J.C., Chango, J.M., Spiro, W.J., Cha, C., Gold, J., Nock, M.K. (2014). Adolescent nonsuicidal self-injury: Examining the role of child abuse, comorbidity, and disinhibition. *Psychiatry Research*, 220(1), 579-584.
- Auerbach, R.P., Tsai, B., & Abela, J.R.Z. (2010). Temporal relationships among depressive symptoms, risky behavior engagement, perceived control, and gender in a sample of adolescents. *Journal of Research on Adolescence*, 20(3), 726-747

Avenevoli, S., Knight, E., Kessler, R.C., & Merikangas, K.R. (2008). Epidemiology of depression in children and adolescents. In J.R.Z. Abela & B.L. Hankin (Eds.), *Handbook of depression in children and adolescents*. (pp. 6-32). New York, N.Y.: Guilford Press.

Avenevoli, S., Swendsen, J., He, J.P., Burstein, M., & Merikangas, K.R. (2015). Major depression in the national comorbidity survey-adolescent supplement: Prevalence, correlates, and treatment. *Journal of the American Academy of Child and Adolescent Psychiatry*, 54(1), 37-44 e32.

Billingsley, J. T., & Hurd, N. M. (2019). Discrimination, mental health and academic performance among underrepresented college students: The role of extracurricular activities at predominantly white institutions. *Social Psychology of Education*, 22(2), 421–446. [Crossref], [Web of Science ®], [Google Scholar]

Black, K. (2010) "Business Statistics: Contemporary Decision Making" 6th edition, John Wiley & Sons

Blakemore S-J. The social brain in adolescence. *Nat Rev Neurosci* 2008;9:267–77.doi:10.1038/nrn2353pmid:http://www.ncbi.nlm.nih.gov/pubmed/18354399CrossRefPubMed Web of ScienceGoogle Scholar

Buckley, P., & Lee, P. (2018). The impact of extra-curricular activity on the student experience. *Active Learning in Higher Education*, 146978741880898. doi:10.1177/1469787418808988 [Crossref], [Google Scholar]

Brown RA, Lewinsohn PM, Seeley JR, Wagner EF, *J Am Acad Child Adolesc Psychiatry*. 1996 Dec; 35(12): 1602-10.

Cavanagh, JO; Owens, DC; Johnstone, EC (1999). "Life events in suicide and undetermined death in south-east Scotland: a case-control study using the method of psychological autopsy". *Social Psychiatry and Psychiatric Epidemiology*. 34 (12): 645–650. doi:10.1007/s001270050187. PMID 10703274.

Cheung AH, Kozloff N, Sacks D. Pediatric depression: an evidence-based update on treatment interventions. *Curr Psychiatry Rep*. 2013;15(8):381. doi: 10.1007/s11920-013-0381-4. 23881712 DOI: 10.1007/s11920-013-0381-4 PubMed PMID: PubMed PMID: 23881712. [PMC free article] [PubMed] [CrossRef] [Google Scholar]

Estrada, C.A.M., Nonaka, D., Gregorio, E.R. et al. Suicidal ideation, suicidal behaviors, and attitudes towards suicide of adolescents enrolled in the Alternative Learning System in Manila, Philippines—a mixed methods study. *Trop Med Health* 47, 22 (2019). <https://doi.org/10.1186/s41182-019-0149-6>

Gilbody, S., Richards, D., Brealey, S., & Hewitt, C. (2007). Screening for depression in medical settings with the Patient Health Questionnaire (PHQ): A diagnostic meta-analysis. *Journal of General Internal Medicine*, 22(11), 1596-1602. 10.1007/s11606-007-0333-y

Inquirer.Net (2016). Villanueva: Youth Suicide in PH on the Rise. Available from: <http://newsinfo.inquirer.net/847516/villanueva-youth-suicide-in-ph-on-the-rise>.

Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: validity of a two-item depression screener. *Med Care*. 2003 Nov;41(11):1284–1292

Kroenke K, Spitzer R, Williams W. The PHQ-9: Validity of a brief depression severity measure. *JGIM*, 2001;16:606-616.

Leslie KR, Chike-Harris K. Patient-Administered screening tool may improve detection and diagnosis of depression among adolescents. *Clin Pediatr* 2018;57:457–60. doi:10.1177/0009922817730343 pmid:<http://www.ncbi.nlm.nih.gov/pubmed/28950718> PubMed Google Scholar

Levis, Brooke, PhD^{1,2}; Ying Sun, MPH¹; Chen He, MScPH¹; et al., (2020). Accuracy of the PHQ-2 Alone and in Combination With the PHQ-9 for Screening to Detect Major Depression, Systematic Review and Meta-analysis. *JAMA*. 2020;323(22):2290-2300. doi:10.1001/jama.2020.6504

Lewinsohn PM, Hops H, Roberts RE, Seeley JR, Andrews JA. Adolescent psychopathology: I. Prevalence and incidence of depression and other DSM-III-R disorders in high school students. *J Abnorm Psychol*. 2010;102(1):133–144.

Lowe B, Kroenke K, Grafe K. Detecting and monitoring depression with a two-item questionnaire (PHQ-2) *J Psychosom Res*. 2005 Feb;58(2):163–171

Mansour M, Krishnaprasadh D, Lichtenberger J, et al Implementing the Patient Health Questionnaire Modified for Adolescents to improve screening for depression among adolescents in a Federally Qualified Health Centre *BMJ Open Quality* 2020;9:e000751. doi: 10.1136/bmjopen-2019-000751

Mayo Clinic (2021). Teen Depression. <https://www.mayoclinic.org/diseases-conditions/teen-depression/symptomscauses/syc-20350985>.

National Institute of Mental Health. Major depression. [updated 2017 Nov; cited 2018 June 28] Available from: <https://www.nimh.nih.gov/health/statistics/major-depression.shtml>.

Nock, M.K., Green, J.G., Hwang, I., McLaughlin, K.A., Sampson, N.A., Zaslavsky, A.M., & Kessler, R.C. (2013). Prevalence, correlates, and treatment of lifetime suicidal behavior among adolescents: Results from the National Comorbidity Survey Replication Adolescent Supplement. *JAMA Psychiatry*, 70(3), 300-310.

Orri, Massimiliano, Scardera, Sara, et al., (2020). Mental Health Problems and Risk of Suicidal Ideation and Attempts in Adolescents. *Pediatrics* July 2020, 146 (1) e20193823; DOI: <https://doi.org/10.1542/peds.2019-3823>

Pachucki, M. C. , Ozer, E. J. , Barrat, A. , & Cattuto, C. (2015). Mental health and social networks in early adolescence: A dynamic study of objectively-measured social interaction behaviors. *Social Science & Medicine* , 125, 40–50. [Crossref], [PubMed], [Web of Science ®], [Google Scholar]

Richardson, Laura P., Rockhill, Carol, Russo, Joan E., Grossman, David C., Richards, Julie, McCarty, Carolyn, McCauley, Elizabeth, and Katon, Wayne. Evaluation of the PHQ-2 as a Brief Screen for Detecting Major Depression among Adolescents. *Pediatrics*. 2010 May; 125(5): e1097–e1103.

Perou R, Bitsko RH, Blumberg SJ, Pastor P, Ghandour RM, Gfroerer JC, et al. Mental health surveillance among children—United States, 2005-2011. *MMWR Suppl*. 2013;62(2):1–35. PubMed PMID: 23677130. [PubMed] [Google Scholar]

Pine DS, Cohen E, Cohen P, Brook J. Adolescent depressive symptoms as predictors of adult depression: moodiness or mood disorder? *Am J Psychiatry*. 1999;156(1):133–135.

PMC (2010). Evaluation of the PHQ-2 as a Brief Screen for Detecting Major Depression among Adolescents. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3100798/>

Shaffer D, Fisher P, Dulcan MK, et al. The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): description, acceptability, prevalence rates, and performance in the MECA Study. *Methods for the Epidemiology of Child and Adolescent Mental Disorders Study*. *J Am Acad Child Adolesc Psychiatry*. 2010 ;35:865-877.

The Asian Parent (2021). Helping Teens Cope with Depression. Available from: <https://ph.theasianparent.com/helping-teens-cope-with-depression/>

Thibault JM, Steiner RW. Efficient identification of adults with depression and dementia. *Am Fam Physician*. 2004;70:1101-1110

UNICEF (2021). Child friendly schools. https://www.unicef.org/lifeskills/index_7260.html#A%20Framework%20for%20Rights-Based,%20Child-Friendly. Accessed 18 August 2021.

Winter LB, Steer RA, Jones-Hicks L, Beck AT. Screening for major depression disorders in adolescent medical outpatients with the Beck Depression Inventory for Primary Care. *J Adolesc Health*. 1999;24(6):389–394.

World Health Organization (2021). Global School-based Health Survey Philippines 2015 Fact Sheet. http://www.who.int/ncds/surveillance/gshs/PIH2015_fact_sheet.pdf.

World Health Organization (2021). Depression and other common mental disorders: global health estimates. 2017. <http://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER-2017.2-eng.pdf?sequence=1>. Accessed 18 August 2021.

Zarate, J. J. V., Peralta, J. G. D., Guinto, V. M. R., & Ferrer, R. C. (2020). Implementation of Outcome-Based Education to STEM Strand in Pangasinan State University. ASEAN Multidisciplinary Research Journal,6(1)