Prevalence of Depression among Adolescents in Narok County Kenya

Hamisi Antipas, Sabina Mutisya, PhD, Maria Ntaragwe, PhD
Department of Psychology, The Catholic University of Eastern Africa

Abstract: **Depression is one of the most prevalent common mental disorders globally. This condition is also known to be a risk factor for other conditions such as suicidality, drug use disorders and delinquency among others. Understanding the prevalence of depression is important in designing intervention strategies. The sample size included 16 public secondary schools with 396 participants. Simple random and stratified sampling techniques were used. Data were collected using standardized questionnaire for depression, the PHQ 9. Quantitative data was analyzed using descriptive statistics. The results showed that across all the different types of schools, most of the students had a low levels of depression. The highest number of students with low or moderate levels of depression were in mixed boarding schools followed by mixed day secondary schools. The study recommends provision of resources to help strengthen the school guidance and counseling departments. Strengthening the relationships between parents, learning institutions and adolescents through regular engagement.**

***Key words*: Depression, Adolescents, common mental disorders**

I. INTRODUCTION

According to World Health Organization (2019), depression is a mental illness that is characterized by persistent sadness, lack of interest or pleasure in previously enjoyable activities, disturbed sleep patterns, and loss of appetite, tiredness and poor concentration. Depression is one of the leading causes of illness and disabilities among youths globally (WHO, 2018). Depression is characterized by the presence of sad, empty or irritable mood, accompanied by somatic and cognitive changes that significantly affect individual's capacity to function (American Psychiatric Association, 2019). Globally, more than 264 million people of all ages suffer from depression (WHO, 2020). It is the fourth foremost cause of social exhaustion in the world. Depression is mirrored as a major health problem which causes decline of productivity in studies or work, cognitive, psychomotor and vegetative alterations, loss of initiative and apathy (Nagaraja, Reddy, Ravishankar, Jagadisha & Muninarayana (2015). Depression, especially in early adulthood, can cause negative effects in academic success, future relationships, employment, and might lead to alcohol and substance abuse (Eisenberg, Gollust, Golberstein, & Hefner, 2007). Depressed people are likely to feel worthless, incompetent and inadequate, this in turn affects the person's mental health and wellbeing.

It is estimated that 20% of youths in the United States have some type of disorder by the age18 years (Allison et al., 2018). Cases of depression are common because it affects 1 in every 15 adults in any given year, and approximately, 16.6% of individuals are likely to experience depression at some time in their life. Depression strikes at any time, but on average, it first appears during the late teens to mid-20s (WHO, 2021). Women are more likely than men to experience depression (Parekh, 2017). Studies show that one-third of women will experience a major depressive episode in their lifetime (American Psychiatric Association, 2013). In the United States, suicide among teens between 15-24 years accounted for 10.6 per 100,000 people with depression. This represented a 56% increase from 2007 to 2017 with 2007 having only 6.8 deaths per 100,000 people (Wan, 2019).

According to Al-Gelban (2007) in Saudi secondary school boys 38.2% had depression, while 48.9% experienced anxiety, and 35.5% suffered from stress in the Middle East. Another study showed that in girls depression accounted for 41.5%, anxiety was 66.2% and 52.5% experienced stress (Al Gelban, 2009).

Depression remains a chronic illness, with 85% of people who experience a single episode will experience another episode within 15 years (Gladstone, Beardslee & O'Connor, 2011). Children and adolescents are within this group of 85%. According to Young, Miller, and Khan (2010), despite the availability of measures to identify depressed children and adolescents and the number of effective interventions, a significant number of depressed children and adolescents may go on undetected and untreated.

Within the African region, high prevalence of depression and suicide have also been reported. A report by WHO (2018) showed that various countries in Africa are struggling with high suicide rates. For instance, Nigeria and Ivory Coast had high figures of suicide rates as compared to European countries with more than 15 suicides per 100,000 inhabitants per year. A major issue attributed to the prevalence of suicide cases was the lack of professional help and comprehensive research studies into the cause of suicide cases Deutsche Welle (2019).

In countries in Africa, cases of suicide have been reported and mental illness among the young and old people. In South Africa Shahtahmasebi (2013) indicated that 80-90% of suicide cases had depression. Naidoo and Schlebusch (2014) indicated that in KwaZulu Natal province, more than ten percent of non-natural deaths were due to suicide.

In Kenya, there are many cases of suicide that go unreported because Kenya law has penalties on suicide attempts as well as higher levels of stigmatization. Section 36 of the penal code states that anyone found guilty of attempting to take their life can be jailed for two years, or fined, or face both. This leads to fear and anxiety about being reported, hence low disclosure to authorities (African Population and Health Research Center, (APHRC), 2019). World Health Report (2017) ranked Kenya number six in Africa in terms of depression and reported that suicide was a leading cause of death among the youths ranging from the age of 15 to 29 years old in the country. This could be due to low self-esteem arising from bullying, poor performance in school and feelings of not belonging to family and community.

II. METHODOLOGY

In this study, a descriptive correlational survey research design was used. This research design was considered to be reliable in the study because it is best suitable for large sample size. Additionally, the design was useful in describing the characteristics of a large population, made use of large samples, thus making the results statistically significant even when analyzing multiple variables, several questions were asked about a self-esteem and depression levels giving considerable flexibility to the analysis. The design allowed the use of various methods of data collection like structured and semi-structured questionnaires. It also made use of standardized questions where reliability of the items was determined (Owen, 2002). The study sample size was determined using Yamen (1967) formula. The sample size for this study was computed using the formula which is stated as follows; $n = N \div (1 + Ne^2)$

Whereby;

n= is the sample size
N= is the size of the population (in this case, 40,638)
e= is the desired level of confidence (at 95% = (0.05)
The sample size shall therefore be computed as follows
$n = N \div (1 + Ne^2)$

n$\approx$ 396 students

Participants were selected using stratified and simple random sampling techniques.

III. RESEARCH INSTRUMENTS

The Patient Health Questionnaire (PHQ-9) was used for testing the levels of depression among the adolescents. This is tool was developed by the World Health Organization and has been validated across many cultures which made it suitable for the study population in this study.

Results

Level of Depression among Adolescents

This study sought to establish levels of depression among adolescents in secondary schools in Narok County. The results are shown in table 1.

Table 1: Depression Level Responses among Adolescents in Secondary Schools

Symptoms	1	2	3	4	5	M	Std
Feeling down, depressed, irritable, or hopeless	53.4%	17.8%	18.8%	3.7%	6.3%	1.90	.35
Little interest or pleasure in doing things	40.3%	17.3%	22.5%	11.6%	8.4%	2.29	1.32
Trouble falling asleep, staying asleep, or sleeping too much	43.5%	17.3%	20.4%	7.3%	11.5%	2.25	1.37
Poor appetite, weight loss, or overeating	55.0%	14.6%	15.2%	4.7%	10.5%	2.01	1.36
Feeling tired, or having little energy	48.7%	16.7%	16.8%	8.9%	8.9%	2.13	1.35
Feeling bad about yourself – or feeling that you are a failure, or that you have let yourself or your family down	50.8%	11.5%	13.6%	7.9%	16.2%	2.27	1.54
Trouble concentrating on things like school work, reading, or watching TV	48.2%	19.4%	13.6%	5.2%	13.6%	2.16	1.43
Moving or speaking so slowly that other people could have noticed	64.9%	9.9%	12.6%	5.7%	6.8%	1.78	1.25
Thoughts that you would be better off dead, or of hurting yourself in some way	71.2%	7.8%	6.8%	3.7%	10.5%	1.74	1.35

Slightly more than half (53.4%) of the students indicated that they did not feel down, depressed, irritable, or hopeless. A few (18.8%) indicated that the feeling was present but moderate whereas 17.8% indicated to a lesser extent. The remaining 3.7% and 6.3% indicated that they felt down, depressed, irritable and hopeless to a great and very great extent respectively. The statement however had a mean of 1.90 and standard deviation of .35. This implies that majority of the students had a positive feeling and did not feel down, depressed, irritable, or hopeless. The few with great and very great extent should be helped by the teachers and counselors to cope with their situation.

Forty point three percent (40.3%) of the respondents indicated that they did not have little interest or pleasure in doing things, 17.3% indicated to a less extent and 22.5% to a moderate extent. The remaining 20% were positive by indicating that they had little interest or pleasure in doing things. The statement on whether the students had little interest in doing things had a mean of 2.29 and standard

deviation of 1.37. On average, this means that majority of the students disagreed and therefore they were more interested in doing things.

Whereas 43.5% of the students indicated that they don't have trouble falling asleep, 17.3% indicated to a less extent, 20.4% moderate, 7.3% great extent and 11.5% very great extent respectively. This statement had a mean of 2.25 and standard deviation of 1.37. This implies that majority of the students did not have much trouble falling asleep, staying asleep, or sleeping too much.

Slightly more than half (55.5%) of the students disagreed with the statement that they had poor appetite, weight loss or overeating. This was further supported by 14.6% who indicated that they experienced those conditions but to a less extent whereas 15.2% indicated to a moderate extent. The remaining 15.2% were positive that they experienced they had poor appetite, weight loss and overeating to a great and very great extent respectively. This statement had a mean of 2.01 and standard deviation of 1.36. This means that on average the experience of poor appetite, weight loss and overeating was to a less extent among the students who participated in the study.

On the statement whether the students were feeling tired, or having little energy, 48.7% indicated not at all, 16.7% less extent and 16.8% moderate extent. On the other hand, 17.8% indicated to a great and very great extent. The statement had a mean of 2.13 and standard deviation of 1.35. This means that most of the students who took part in the study did not feel tired or had low energy. Hence, they were energetic and strong.

When asked to indicate whether they felt bad about themselves – or felt that they were failures or had left themselves or their family down, 50.8% indicated not at all, 11.5% less extent, and 13.6% moderate extent. On the other hand, 16.2% of the students indicated to a very great extent/severe whereas the remaining 7.9% indicated to a great extent respectively. This statement had a mean of 2.27 and standard deviation of 1.54. This means that most of the students did not feel bad about themselves. Additionally, they considered themselves not to be failures or disappointing to their families.

On the question whether they had trouble in concentrating on things like school work, reading, or watching TV, 48.2% indicated not at all whereas 19.4% and 13.6% indicated to a less or moderate extent respectively. The remaining 5.2% and 13.6% indicated to a great and very great extent respectively. This statement had a mean of 2.16 and standard deviation of 1.43 respectively. This means that majority of the students did not face any trouble or challenge concentrating on things like academic work, reading and watching television.

When asked to indicate whether they move or speak so slowly that other people could have noticed, majority (64.9%) indicated not at all whereas 9.9% and 12.6% indicated to less and moderate extent respectively. The remaining 5.7% and 6.8% indicated to a great and greater extent respectively. The statement had a mean of 1.78 and standard deviation of 1.25 respectively. This means that majority of the students were able to speak properly and in a pace that is audible and understandable.

On whether the students had thoughts that they would be better off dead, or hurt themselves in some way, 71.2% indicated not at all. Only a few of the students indicated to a less extent (7.8%), moderate extent (6.8%), great extent (3.7%) and very great extent (10.5%) respectively. This statement had a mean of 1.74 and standard deviation of 1.35 implying that majority of the students did not have the thoughts of being dead or hurting themselves in some way.

Overall, it is evident from Table 1 that most of the statements had a mean of 2 and 1 respectively. Additionally, majority of the respondents indicated not all across all the statements measuring the level of depression. In order to further establish the depression levels among the students with regard to their gender, age bracket, school type and class; further cross tabulations were carried out and the responses are as covered below.

Demographic Differences in Depression Levels

The study further explored various demographic variables and how they influence depression among adolescents in Narok County.

Table 2: Cross Tabulation between Gender and Depression Levels

		Depression Levels					**Total**
		1.00	2.00	3.00	4.00	5.00	
Gender	Male	60	94	48	4	0	206
	Female	45	67	58	3	1	174
Total		105	161	106	7	1	380

As shown in Table 2, a good number of both male and females had depression levels to a less extent with majority being Males. However, across all the levels of depression the males were high compared to females. On the other hand, a high population of students with a moderate extent of depression levels were females.

The researcher also sought to establish the levels of depression among the students based on their age bracket. The response obtained is as summarized by Table 3.

Table 3: Cross Tabulation between Age Bracket and Depression Levels

		Depression Levels					Total
		1.00	2.00	3.00	4.00	5.00	
Age Bracket	14-15 Years	4	9	21	0	0	34
	16-17 Years	59	112	59	4	0	234
	18 Years and above	42	40	26	3	1	112
Total		**105**	**161**	**106**	**7**	**1**	**380**

With regard to the age bracket, a high number of students between the age of 16 and 17 years had depression levels to a less and moderate extent respectively. This is followed by students who are above 18 years of age. This implies that these teenagers who are above 16 years are at a greater risk of being depressed compared to those below 15 years.

The researcher further carried out a cross-tabulation to understand how the distribution of depression levels varied within the different types of schools. The responses are as summarized in Table 4.

Table 4: Cross Tabulation between School Type and Depression Levels

		Depression Levels					Total
		1.00	2.00	3.0	4.00	5.00	
School Type	Mixed Day Secondary School	15	57	26	2	0	100
	Mixed Boarding School	28	47	43	5	1	124
	Boys Boarding Secondary School	28	36	16	0	0	80
	Girls Boarding Secondary School	34	21	21	0	0	76
Total		105	161	106	7	1	380

As shown in Table 4, across all the different types of schools, most of the students had a less extent of depression levels. However, individually, the highest number of students with less or moderate extent of depression levels were in mixed boarding schools followed by mixed day secondary schools. This clearly shows that students in mixed school were more prone to depression levels compared to those in singular gender schools.

The researcher also intended to establish the levels of depression among students based on their educational class. Hence, Table 5 shows the distribution of the responses obtained.

Table 5: Cross Tabulation between Education/Class and Depression Levels

		Depression Levels					**Total**
		1.00	**2.00**	**3.00**	**4.00**	**5.00**	
Education/Class	Form One	17	30	49	0	0	96
	Form Two	22	47	19	4	0	92
	Form Three	30	56	12	1	1	100
	Form Four	36	28	26	2	0	92
Total		105	161	106	7	1	380

In terms of the education/class, it is evident that most of the students with some level of depressions (less and moderate extent respectively) were in form one followed by form three and form two respectively. This may be due to the fact the form ones are still struggling to adjust in secondary schools whereas the form threes may be having some anxiety to joining form four. The form fours had the least number of students with little or moderate extent of depression. Their maturity levels is also advanced and mature.

The researcher also intended to establish the levels of depression among students based on their religion. Hence, Table 6 shows the distribution of the responses obtained.

Table 5: Cross Tabulation between Religion and Depression Levels

		Depression Levels					Total
		1.00	**2.00**	**3.00**	**4.00**	**5.00**	
Religion	Christian	101	157	104	7	1	370
	Muslim	0	4	0	0	0	4
	Atheist	0	0	2	0	0	2
	Others	4	0	0	0	0	4
Total		105	161	106	7	1	380

In terms of the religion and depression, it is evident that majority of the Christian students have minimal or no depression levels followed by the Muslims. However, a few of the atheists had a moderate level of depression. These results may show that religion differences and teaching may influence the extent to which adolescents get to be depressed.

Responses were also obtained from the guidance and counselling teachers on depression levels among the students in the public secondary schools. When asked to indicate whether there were students in the school who seemed to have depressed mood, all of the guidance and counselling teachers reported that the students existed. They further gave their views regarding the manifestation of depressed mood among the adolescents. Some of the manifestations that were given include loss of hope, feeling overburdened, being absent minded, restlessness, poor concentration, weight loss, and avoiding interactions. In fact one of the teachers reported that:

IV. DISCUSSION

The results show that overall, the students have low levels of depression. This observation is slightly different from other previous studies carried out which showed that depression was high among high school students. For instance, the study by Bhattarai, Shrestha and Paudel (2020) carried out in Nepal showed that more than two-fifths (44.2%) of students had depression with almost a quarter (25.3%) of the students having mild depression and 18.9% expressing major depression levels. An earlier study by Ramli et al. (2008) also showed that sizable proportion of children in secondary schools potentially suffered from depression. Similarly, other researchers such as Jha, Singh, and Nirala (2017) pointed out that almost half (49.2%) of the adolescents of 9th–12th standards in Bihar, India had depression. Abdul Latiff, Tajik and Ibrahim, (2016) likewise noted that the overall prevalence of depression lies at 42.6%, with mild, moderate and severe depression at 21.5%, 18.1% and 3.0%, respectively among secondary and higher secondary students of Malaysia.

In line with gender differences in depression, a previous report by Miller, et al. (2010) showed that young men were prone to committing suicide and having depression as compared to females. Additionally, another study by Seaman (2013) also affirmed that depression symptoms are quite high among male adolescents as compared to their female counterparts. In further supporting the differences observed, Khesht-Masjedi, Shokrgozar, Abdollahi, Golshahi, and Sharif-Ghaziani (2017) noted that depressed girls felt sadness, guilt, punishment, worthlessness, low energy and fatigue, or more asthenia, whereas depressed boys have symptoms such as irritability, depression, suicidal thoughts, or desires to reduce their pleasure.

In line with age differences, Costello, Erkanli and Angold (2006) indicated that there is a high prevalence of depression among adolescents between the age of 13 and 18 years. This was further confirmed by a report presented by Nepal Health Research Council (2020) which indicated that the prevalence of mental distress among adolescents (age 13–17 years) was 5.2%, with a similar rate of depression between male and female gender. The findings are also in line with Brent and Birmaher (2002) who pointed out that there are several factors which put the adolescents at the risk of being depressed and they include sexual relationships, family history which includes; having a parent, grandparent or other blood relative with depression, bipolar disorder or alcohol use problems among others.

REFERENCES

[1] Abdul-Latiff, L., Tajik, E., and Ibrahim, N. (2016). Depression and its associated factors among secondary school students in Malaysia. Southeast Asian J Trop Med Public Health, 47: 131–41.

[2] Al-Gelban, K.S. (2007). Depression, anxiety, and stress among Saudi adolescent school boys. J. R. SocPromot Health, 127(1), 33-7.

[3] Al Gelban, K.S. (2009). Prevalence of psychological symptoms in Saudi secondary School girls in Abha, Saudi Arabia. Ann Saudi Med, 29(4), 275-9.

[4] Allison.T, Carey.A, Sbarra.D, Donnella.B. Depression, Negative Emotionality, and Self-Referential Language: A Multi-Lab, Multi-Measure, and Multi-Language-Task Research Synthesis. Journal of Personality and Social Psychology 116(5). USA: University of Arizona

[5] American Psychiatric Association (2019). Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Fifth edition. National Institute of Mental Health. (Data from the 2019 National Survey on Drug Use and Health.) Retrieved from www.nimh.nih.gov/health/statistics/prevalence/major-depression-among-adults.shtml.

[6] Bhattarai, D., Shrestha, N., & Paudel, S. (2020). Prevalence and factors associated with depression among higher secondary school adolescents of Pokhara Metropolitan, Nepal: a cross-sectional study. BMJ, 10(12).

[7] Brent, D. A., & Birmaher, B. (2002). Clinical practice. Adolescent depression. A journal of N Engl J med, 347:667

[8] Costello, J.E., Erkanli, A., and Angold, A. (2006). Is there an epidemic of child or adolescent depression? J Child Psychol Psychiatry, and allied disciplines, 47:1263–71.

[9] Deutsche Welle (2019). Africa battles high rates of suicide, depression. Retrieved from https://www.dw.com/en/africa-battles-high-rates-of-suicide-depression/a-49114146

[10] Eisenberg, Gollust, Golberstein, & Hefner (2007). Prevalence and Correlates of Depression, Anxiety, and Suicidality among University Students. American Journal of Orthopsychiatry 77(4):534-42. USA: University of Michigan

[11] Gladstone, T. R. G., Beardslee, W. R., & O'Connor, E. E. (2011). The prevention of Adolescent Depression. The Psychiatric Clinics of North America, 34(1), 35–52.

[12] Khesht-Masjedi, M. F., Shokrgozar, S., Abdollahi, E., Golshahi, M., & Sharif-Ghaziani, Z. (2017). Comparing depressive symptoms in teenage boys and girls. Journal of family medicine and primary care, 6(4), 775–779.

[13] Miller, I. W., Keitner, G., I., Whisman, A., Ryan, C. E., & Epstein, B. (2010). Depressed patients with dysfunctional families: description and course of illness. J Abnorm Psychol. 1992(101): 637–646.

[14] Nagaraja, Reddy, Ravishankar, Jagadisha & Muninarayana, (2015) Study the Prevalence of Depression among Nursing College Students of Kolar District, Karnataka State. India: Karnataka State

[15] Naidoo, S.S. & Schlebusch, L. (2014). Sociodemographic characteristics of persons committing suicide in Durban, South Africa: 2006- 2007. Afr J Prim Health Care, 6: 568-575.

[16] Ramli, M., Adlina, S., Ariaratnam, S., & Ederiah, A.B. et al. (2008). Depression among Secondary School Students: A comparison between urban and rural populations in a Malaysian community. Hong Kong Journal of Psychiatry, 18(2), 55-61.

[17] Seaman, A.M. (2013). Percent of depression men comparable to women. JAMA Psychiatry, 102: 966–9.

[18] Shahtahmasebi, S. (2013). Examining the claim that 80-90% of suicide cases had depression. Frontiers in Public Health, 1: 62.

[19] WHO (2018). Depression. Retrieved from WHO Mental Health Department's Web page. http://www.who.int/mental_health/management/depression/definition/en.

[20] WHO (2017). Partners in Life Skills Education. Conclusions from a United Nations Interagency Meeting. Geneva: World Health Organization.

[21] Young, J., Miller, M., & Khan, N. (2010). Screening and managing depression in Adolescents. Adolescent Health, Medicine and Therapeutics, (1), 87-95.