



Determination of the Prevalence of Depression Among Students in Public Universities In Kenya: A Case of Kisii University.

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Abstract

Depression is a common and severe mental illness that impairs the sufferer's emotional state. It is characterized by a combination of abnormal thoughts, perceptions, emotions, behaviour and poor relationship with other people. Moreover, depression is a complex illness, that takes many forms, while remaining widely under-diagnosed and under-reported. It has a global presence, is a significant contributor to the burden of disease, and affects people of all ages, sexes, and communities. In 2020, depression was estimated to affect approximately 280 million people, or 3.8% of the world population. This study aimed to investigate the prevalence of depression among students in public universities in Kenya: a case of Kisii Universality. The study adopted a correlational research design and survey instruments to collect data to determine the strength and/or direction of the relationship. This study also utilized a random sampling technique because the methodology has a tendency of being free from bias, and results in a more representative sample of the population. A total of 896 respondents were used. The study was supported by the Theory of Planned Behaviour and found that the prevalence rate of depression among university students was 48.8%. In addition, gender, age, year of study, residency, field of study, and religious affiliation were among the factors that influence the prevalence of depression.

Key words: Behaviour, Demographic, Depression, Health, mental, population, Prevalence, students,

Depression is a common, yet serious, and complicated mood disorder, with a global presence, and whose exact prevalence is poorly understood. Despite being a significant contributor to the burden of disease and affects people of all ages, sexes, and communities; depression remains widely under-diagnosed and, under-reported. Likewise, depression is implicated in devastating consequences that substantially impair the sufferer's ability to function well, both at work and school, and to cope with daily life (WHO, 2019). Plus, it is associated with the reduction in social functioning and often keeps recurring (Bernaras et al., 2019). Furthermore; depression during an early age can build up negative consequences in later adult life, on career prospects, and social relationships (Ngin, et al., 2018; Wood, et al. 2018). At its worst, depression can lead to suicide (WHO, 2020b); thereby, affecting individuals as well as societies.

Prevalence is probably the most common measure used to quantify and characterise the burden of disease. It measures the frequency of occurrence among subjects in a population at a given point in time (Spronk, 2019). This technique is useful in identifying how the disease frequency may differ over time or among groups and subgroups of interest (Fontaine, 2018). For example, among university students, studies have reported an even higher prevalence of depression with adverse consequences, than in the general population (Hakami, 2018; January et al., 2018). However, only limited studies seem to have assessed the prevalence of depression, especially among students in public universities. Moreover, existing studies are either too old or lack certain important attributes such as prevalence rates.

Furthermore, studies have consistently reported that the prevalence of depression varies across groups depending on their socio-demographic characteristics. Highly Studied features include gender, age (Auerbach, 2018), and region (Evans-Lacko, et al., 2018). For example, in females, depression occurs approximately twice more frequently than in men (Brody et al., 2018; Shi, et al., 2021). As for age, the prevalence is at its peak in older adults—above 7.5% and 5.5% respectively, among females and males aged 55-74 years (WHO, 2017). Finally, in terms of region, prevalence varies from a low of 2.6% among males in the Western Pacific Region to 5.9% among females in the African Region (Evans-Lacko, et al., 2018). Generally, high income Countries report higher prevalence rates compared to Low income countries (WHO, 2017). This represents a major health disparity.

A high prevalence of depression highlights the need for increased use of mental health services to address psychological needs. Given the benefits associated with early detection and prevention of psychological distress, there is every reason to seek for a clearer and better understanding on populations and factors that are likely to contribute to increased prevalence of depression. Prior studies have revealed that the prevalence of depression globally is much higher among university students than in the general population (Hakami, 2018; Heinig, 2021; Mirza, et al., 2021; Ngin et al., 2018). Moreover, the risk due to depression is higher among individuals who have experienced adverse life events such as prolonged unemployment, bereavement, or traumatizing episodes. Plus, depression can lead to more stress, dysfunction, and impairment thereby affecting one's life situation (WHO, 2021). Other explanations suggest that depression can result from deficits in response reinforcement and inadequate social skills or reliance upon the delay and avoidance coping strategy (Halverson et al., 2020). This is because depression negatively affects one's mood, thoughts, feelings, behaviours and physical health. In addition, exposure to pharmacological agents as well as substance abuse can also worsen the risk of depression.

Depression manifests itself differently in each person struggling with it, thereby resulting in a wide variety of symptoms. Some of the most significant ones include, sadness, hopelessness, loss of interest or pleasure, feelings of guilt or low self-esteem, disturbed sleep or appetite, low energy and poor concentration (Syed, et al., 2018; Wabai, 2019). If these symptoms persist for weeks or months and are severe enough to interfere with functioning in work, social life and family life; then depression is implicated. For this reason, accurate diagnosis is an essential first step towards the treatment of depression, done through an association between symptoms and signs.

2. Methodology

2.1 Procedures and Participants

This study was conducted at Kisii University's main campus, with an undergraduate population of 18,430 students. Participants were recruited across all fields of study based on their population. Self-report questionnaires were disseminated to students through personal email, Whatsapp, and posters. Student volunteers were recruited on a first come first basis and requested to complete the questionnaires after providing a written consent. Approximately, 1104 questionnaires were administered to students from various fields of study; but, only 919 (83.2%) completed and returned them. After an initial examination of the data, 23 participants were excluded for not meeting the inclusion criteria. Thus, the final number of respondents accepted for analysis were, 896 (Males = 473, Females = 423).

2.2. Inclusion and Exclusion Criteria

Selection of respondents for the study was based on meeting the following inclusion criteria: - Students must be aged between 18 – 25 years implying no inclusion without disclosing one's age. Respondents were subjected to a four multiple choice question (under 18; 18-21; 22-25; and over 25) to choose from. Students under 18 or over 25 years were excluded. Further, only undergraduates qualified for inclusion, but must either in their first year (FY), Second year (SY) or third year (TY) of study. In addition, participants who did not indicate their field of study were excluded; plus, for any incomplete questionnaire to qualify, it must contain not less than 80% of the required data.

2.3 Research Design

Investigators adopted a correlational research design to investigate the prevalence of depression among other objectives because it has several advantages—one, the design does not allow control or manipulation of variables; two, it uses survey instruments to collect data; three, enables the collection of much more data compared to experimental studies; and has predictive capabilities, allowing investigators to predict the likelihood of occurrence of a variable. However, correlation does not necessarily imply causality (Makin & Orban de Xivry, 2019; Rohrer, 2018).

Besides, results from correlational research tend to be more applicable to everyday life because investigation is undertaken outside of the lab (Filipowich, 2018). Additionally, correlational studies open up a great deal of further research. Moreover, correlational studies can either be purely descriptive or analytical in nature. Whereas, descriptive studies are specifically appropriate for estimating prevalence of an outcome of interest, analytical studies aim to investigate the association between different factors influencing an outcome. More importantly, correlational designs have linkages with other research purposes but limited in their ability to draw valid inferences about possible causal associations.

2.4 Instruments

To solicit for demographical data, participants completed the demographic and awareness questionnaire. This instrument comprised of two sections—one with eight items to solicit for sociodemographic data and section two with five simple Yes/No items; meant to gauge participants knowledge about depression. The socio-demographic data sought included, gender (male or

female), age (under 18, 18-21, 22-25, and over 25), marital status (Single or Married); year of study (First Year, Second Year, and Third Year); field of study (Education, health Sciences, Arts, and Social Sciences, Business and Economic, Law, Agriculture, information Technology, and Pure and Applied sciences); Living arrangements (off campus with family, off-Campus with fellow Students, and, on-campus- in halls of residence); ethnic community (Kamba, Kalenjin, Kikuyu, Kisii, Luhya, Luo, and others). All measures were captured for the ‘current’ state (i.e., as at the time of the survey).

The second instrument used was the BDI-II scale—a 21-item, self-report and rating scale that is widely used as a screening and assessment tool. It was used to screen and measure depressive symptoms. Each item on the scale was scored using a four-point Likert like scale, rated between zero (0) and three (3) and were summed up linearly to create a scale ranging from 0 to 63. Higher scores are indicative of severe depression while low scores represent nominal depression. In addition, an individual scoring 14 and more on the BDI-II scale, is presumed to have screened positive for depression, while scoring 13 and below, reflects a negative screen.

To determine the prevalence of depression, data were coded, scored and entered into the SPSS program. Total scores were coded into two main categories—Non positive screen [cases with score ranging between zero (0) and thirteen (13)] was coded one (1) while Positive screen [cases with scores ranging between 14-63, were coded two (2)]. Further, data were arranged into five sub-categories— two for “non-positive screen” and three for “positive screen”. Sub category one was termed “Normal” and consisted cases with a score ranging between Zero and four (0-4). Sub-category two was called “Minimal” and used to enter cases with scores ranging between five and thirteen (5 -13). Sub-category three was called “Mild” and comprised of cases with scores ranging between fourteen and nine-teen (14 -19). Sub category four was used for cases with scores ranging between twenty and twenty-eight (20-28) and were termed as moderate. Finally, sub-category five comprised of cases with scores ranging between twenty-nine and sixty-three (29- 63).

3 Data Analysis

The SPSS version 25 was utilised to analyse data. Descriptive analysis was used to identify as well as characterize respondents’ socio-demographic features. Furthermore, data was checked for normality distribution and the results reported using tables. Through a cross-tabulation, data were arranged according to socio-demographic variables indicated by respondents. These were based

on gender, age, marital status, year of study, living arrangements, field of study, ethnic community, and religious affiliation.

4. Results and Discussions

Results of the analysis are shown in Tables 1 and 2.

Table 1
Level, Frequency and Percentage of Depression

Level	Score Range	Frequency (n)	Percentage	Category
1. Normal	0 - 4	94	10.5%	NP
2. Minimal	5 – 13	365	40.7%	NP
Total	0 – 13	459	51.2	TNP
3. Mild depression	14 – 19	211	23.5%	P
4. Moderate depression	20 – 28	161	18.0%	P
5. Severe depression	29 – 63	65	7.3%	P
Total		437	48.8%	TP

Key: NP Non Positive; TNP Total Non-Positive; P Positive; TP Total Positive.

Table 1 shows that 459 (51.2%) respondents scored “non-positive” compared with 437 (48.8%) who scored “positive”; implying a depression prevalence of 48.8% among students at Kisii university (i.e., cases with scores ≥ 14). This finding differs slightly with majority studies suggesting the rate being around 35% (Hakami, 2018; Heinig, 2021; Mirza, et al., 2021; Ngin, et al., 2018). However, the finding aligns with studies suggesting the rate as lying in a continuum—between 4-79% (Ahmed et al, 2020; Yusoff, 2018). The finding also implies that for every two students, there is a high likelihood that one may be struggling with depression.

Table 2
Prevalence of Depression based on Socio-demographic characteristics.

Variable	Category	Positive	Negative	Total (%)	χ^2	P
Gender (n=896)	Male	221	252	473 (46.7%)	1.684	.204
	Female	216	207	423 (51.1%)		
Age (n=896)	Co1	289	305	594 (48.7%)	0.010	.944
	Co2	148	154	302 (49%)		
Marital Status (892)	Single	417	439	856 (48.7)	0.023	1.000
	Married	18	18	36 (50%)		
Year of Study (896)	FY	200	190	390 (51.3%)	4.418	0.109
	SY	122	158	280 (43.6%)		
	TY	115	111	226 (50.9%)		

Living Arrangements (n=885)	OCWF	32	39	71 (44.9%)	.494	.794
	OCWFS	362	374	736 83 (49.2%)		
	OCHR	37	41	78 (47.4%)		
	Education	146	153	299 (48.8%)	21.334	.287
Field of Study (n=896)	Health Science	20	19	39 (51.3%)		
	Arts and Social Sciences	96	88	184 (52.2%)		
	Business Economics	61	84	145 (42.1%)		
	Information science	26	52	78 (33.3%)		
	Law	9	12	21 (75%)		
	Pure & Applied Sciences	38	32	70 (48.7%)		
	Agriculture	41	19	60 (68.3%)		
	Kamba	44	31	75 (58.7%)	9.906	.297
	Kikuyu	35	32	67 (52.2%)		
	Kisii	102	116	218 (46.8%)		
Ethnicity (n=873)	Kalenjin	52	75	127 (40.9%)		
	Luhya	88	72	160 (55%)		
	Luo	75	89	164 (45.7%)		
	Others	29	33	62 (46.8%)		
	Catholic	141	138	279 (50.5%)	2.862	.743
	SDA	122	124	246 (49.6%)		
Religious Affiliation (857)	Protestant	100	124	224 (44.6%)		
	Muslim	8	11	19 (42.1%)		
	Others	47	42	89 (10.1)		

Key: Co1 = Cohort 1; Co2 = Cohort 2; FY = First Year; SY = Second Year, TY = Third Year; OCWF = off-campus with family; OCWFS = Off-Campus with fellow students; OCHR = On-Campus in Halls of residence.

Table 2 shows that depression is more implicated among female respondents (51.1%) compared to males (46.7%). This finding is consistent with a number of prior studies; including, Brody et al., 2018; Shi et al., 2021. This may be due to males seeking help and utilizing Mental health services for depressive problems less frequently across all ages (Parent, et al., 2018; Rasmussen et al., 2018; Sagar-Ouriaghli, et al., 2019). Whereas, depression can occur at any time during the lifespan; on average its first onset is during the young adult (18-25 years) stage (APA, 2022). Plus, age negatively affect feelings, thoughts and actions of people and, there are high chances of age acting as a barrier to help-seeking (Pretorius, et al., 2019). Results show only a slight difference between the prevalence of depression among students aged between 18 – 21 years (48.65) compared to those aged between 22 – 25 years (49.0%). This suggests that age may not be a determinant factor for the prevalence of depression among university students. This finding is consistent with a study by Wang, 2019.

Further, results reveal that 417 out of 856 (48.7%) not married (i.e., single) respondents, screened positive, compared to 50% for those in a marital relationship. Our findings contradict prior studies

that consistently show that people in a marital relationship tend to report lower levels of depression (Harandi, et al., 2017; Maiuolo, et al., 2019). In terms of year of study, prevalence of depression was significantly more common among first-year students (51.3%), compared to second and third years who accounted for (43.6%) and (50.9%) respectively; implying that the rate drops significantly during the second year of study. This may be attributed to the culture shock and freedom that 'freshers' get exposed to on entry to university. This finding is consistent with studies conducted by Birhanu and Hassen, (2016); and Anyayo, et al., (2022).

Concerning living arrangements, off-campus with fellow students is implicated with the highest prevalence rate (49.2%) compared to those living in halls of residence (47.4%), or off-campus with family (45.1%). This may be due to limited domestic responsibilities and the readily available campus resources (Beiter et al., 2015). Additionally, campus belongingness is related to academic persistence (Gopalan & Brady, 2020), suggesting more academic advantages for students living in residency halls. Results also indicated that depression was more common among respondents from Agriculture (68.3%), followed by those from Pure and applied sciences (54.3%) and Arts and Social sciences (52.3%). Fields of study showing low rates included Information science (33.3%), followed by Business and Economics (42.1%) and Law (42.9%). Reasons for this, may include work load, and preparedness.

Depression was more common among the Kamba (58.7%), Luhya (55%) and the Kikuyu (52.2%) compared to other ethnic communities such as the Luo (45.7%), and the Kisii (46.8%). This may be due to cultural and belief systems. Finally, depression varies in terms of religious affiliation. Our study shows that depression is more common among respondents affiliated to the catholic faith (51.6%); followed by those affiliated to protestant faith (44.6%) and the Muslims faith (42.1%). However, depression is least common among respondents affiliated to the SDA faith (30.0%). This finding aligns to previous studies such as Gallardo-Peralta, (2022).

Depression is a complicated and highly prevalent mental illness. Its prevalence varies across groups depending on their socio-demographic characteristics. According to this study, factors that showed high variability were the female gender (51.1%), the married (50%), the first year students (51.3%), living off-campus with fellow students (49.2%); students in the fields of Agriculture (68.3%), Pure and applied sciences (54.3%) and Arts and Social sciences (52.3%); among the Kamba (58.7%), Luhya (55%) and the Kikuyu (52.2%); and those affiliated to the catholic faith

(51.6%). However, age showed non-significant variability. University students display a higher risk of developing depression (Hakami, 2018; January, et al., 2018), partly because they have a unique cluster of stressful experiences or stressors (Saleh, et al., 2017). Moreover, young adults (18 – 25 years) at this transitory stage—from adolescence to young adulthood and from high school to university, not only experience multiple academic and social pressures, but also need to navigate developmental challenges.

5. Conclusion

Approximately half (48.8%) of undergraduate students at Kisii University self-reported high prevalence of depression. The results, therefore, implies that depression among students in public universities is an identifiable illness that needs diagnosis, prevention, and treatment. Our results indicated that among all socio-demographic characteristics investigated only age was not a predictor of prevalence of depression. Consequently, public universities need to offer preventive mental health services and counselling as part of the university setup. When interpreting this study, we need to keep in mind limitations of the study. For example, the prevalence rate attributed to this present study, may not be generalised to all undergraduate students in public universities in Kenya for two important reasons—one, the sample was drawn from only one university out of 37 public universities. Second, data was collected using a self-report instrument whose veracity depends on the participants' ability to understand the questions. However, bias in understanding the questions is highly possible.

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