

COMPREHENSIVE AND INTEGRATIVE TERTIARY INSTITUTION MENTAL HEALTH (TIM-HEALTH) CARE: DEVELOPING A PROTOCOL FOR NIGERIAN UNIVERSITIES

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ABSTRACT

Background: There is increasing concerns globally over the mental health of youths especially those in tertiary institutions of learning. University education is associated with stress and conflicts arising from the rigours of learning as well as the transition from dependent to independent life. It is therefore important to identify strategies useful for the improvement of the mental and social wellbeing of this unique stratum of the society.

Materials and methods: This study will be the first phase of a proposed three phase research. It will be a cross-sectional study that would utilize a multistage systematic randomization. It will assess mental health literacy, prevalence and risk factors for psychiatric morbidity, and preference for internet-based mental health intervention and its determinants. Data collection would involve the use of a semi-structured self-administered questionnaire on sociodemographic factors, a mental health literacy questionnaire (MHLq) and the General Health Questionnaire (GHQ-12). Descriptive and inferential statistics will be presented while regression model analysis will predict factors associated with mental morbidity and literacy. Results from this data will influence other phases which are aimed at designing appropriate mental health interventions for university students.

Expected outcome: This study is aimed at bridging the gap in literature concerning mental disorders among students in University of Ilorin. It would also provide baseline data for the development and implementation of suitable and sustainable interventions to reduce the burden mental ill health among the students in the university of Ilorin in particular, and by extension students in other Universities across Nigeria.

Keywords: Research protocol, mental health literacy, psychiatric morbidity, university students/ tertiary institutions

1.0 INTRODUCTION;

Tertiary institutions all over the world play host to a large population of young people, most of who are within the age range of 16 to 27 years (late adolescence 15-18 years and emerging adults 18-25), and at this stage in life, they are transiting from new independence from their parents and/or caregivers to interdependence at school (Yang, Hsu, & Chen, 2016). This age bracket forms a unique stratum of the society consisting of young people who are forming identities, lifelong friendships, transitioning into adulthood and making important life decisions (Rodgers and Temison 2009).

Despite the findings that suggests that in almost all parts of the world, a substantial number of university students experience mental health problems, only a few seek help or are able to access help due to lack of adequate knowledge about symptoms, causes of mental health problems and how to assess help as well as dealing with stigma associated with it (Aherne, 2001, Adewuya and Rogers 2005, Eisenberg et al 2007, Hersi et al 2017).

The Nigerian tertiary education system admits students as low as 16 years, who are from different ethno-religious and family backgrounds (UNN, 2018), some of whom may have inherent risks of developing a mental illness such as a previous personal history of mental illness, a family history of mental illness or early childhood adversities (Adewuya 2006, Yussuf 2013). They then undergo stressful conditions related to the university life such as long durations of lectures, over-crowding, and lack of social amenities, haphazard lecture schedules as well as incessant industrial strike actions of academic and other non- academic staff (Salako, 2014, Yussuf 2013). All of these, coupled with a lack of structured mental health promotion, prevention and treatment programmes on most of our campuses, make mental distress and disorder a huge but largely unaddressed health concern in this sub-group of Nigerian youths in tertiary institutions. In spite of this, there appears to be few studies on the burden of emotional and mental disorders among Nigerian University students, and fewer still suggesting interventions that may be appropriate for these students (Adewuya, 2006, Tella & Omigbodun, 2008, Yussuf, 2013).

Avenues for mental health care in the tertiary students' population are limited and include counselling centers, self- help groups, clubs and societies, religious groups etc. but all these alone do not cater sufficiently for the mental health needs of these students (Cook, 2007). There is therefore a need for more focused, specific interventions which will cater for the needs of students with mental health challenges, which is delivered at little or no cost to these students via a modality which is both friendly and appropriate. This formed the enthusiasm for this study, which would serve as a baseline for subsequent longitudinal studies for mental health interventions. This study is designed to investigate mental health literacy among undergraduate students of university of Ilorin, Kwara state, identify prevalence of psychiatric morbidity and their associated factors.

The outcomes from this study will influence the designing of suitable, cost- effective mental health interventions that would improve the mental health status and functioning of students in universities and other higher institutions in Nigeria. This will thereafter help to improve the productivity and quality of life of the students, thereby creating a vibrant and healthy student

population. Ultimately, the developed intervention strategy from this study will serve as a template for implementation of school mental health services across the country.

This study will be propelled by a multidisciplinary team which would be comprised of psychiatrists, counselors, epidemiologists, scientists, educators and psychologists. It is aimed at bridging the gap in literature concerning mental disorders among students in higher institutions in Nigeria as well as developing and implementing suitable and workable interventions to reduce this burden among University students in the university of Ilorin in particular and other university students in Nigeria in general.

2.0 STUDY HYPOTHESIS AND OBJECTIVES

This protocol is that of the first phase of a proposed 3 phased research namely;

Phase 1: This involves a cross-sectional study which aims at assessing the prevalence and risk factors of mental health morbidity. This first phase is expected to generate evidence and information that will influence the other phases of the program.

Phase 2: We will develop the *Nigerian TIM-Health program* intervention using both qualitative studies and expert opinions at this phase. We plan to identify appropriate methods, stakeholders and collaborators to partner with, in implementing the *Nigerian TIM-Health program*.

Phase 3: We will implement *Nigerian TIM-Health program* and impact measurement at this phase. The *Nigerian TIM-Health program* implementation will be multidisciplinary involving the relevant Ministries (health, education, information youth and sports etc), University communities, behavioural scientists, professional educators, epidemiologists, performing artists, clinical psychologists, Nigerian musical artists, student union governments and many others. The intervention mode will be multi-dimensional involving the internet (e-health), mass-mobilization and campaigns; musical and drama shows; and referral for clinical management. Referral linkages will be set up from an e-health platform, social activities platform, mobilization and outreaches sites, during survey to University clinics and at teaching hospital.

2.1 Objectives of phase 1

1. To assess mental health literacy of students of University of Ilorin
2. To determine the prevalence of psychiatric morbidity among students of University of Ilorin
3. To assess risk factors for psychiatric morbidity among students of University of Ilorin

Research Questions:

- What is the level of mental health literacy of students in University of Ilorin?
- What is the proportion of the psychiatric morbidity among students in University of Ilorin?

- Is it feasible to develop and implement a multi-disciplinary and pragmatic mental health Intervention Strategy called Nigerian TIM-Health programme starting with University of Ilorin?
- Does **comprehensive and integrative tertiary institution mental health (TIM-Health) care** improve mental health seeking behaviours, as well as reduce mental morbidity among University students in Ilorin and Nigeria

3.0 THEORETICAL FRAMEWORK:

In order to drive action towards promoting students' mental health and wellbeing, as well as preventing mental ill health, as this research proposes, we need to first have an understanding of the concept of mental health and mental ill health.

Mental health is the foundation for wellbeing and effective functioning of individuals. It is more than absence of a clinically diagnosed mental disorder. It is the ability to think, learn, and understand one's emotions and reactions to others. It requires the participation of biological, psychological, social, cultural, spiritual and other interrelated factors.

Mental morbidity broadly refers to both mental illness (disorders) and mental health problems. Mental illnesses/disorders are those that significantly interfere with an individual's cognitive, emotional and social abilities, and are usually diagnosed by professionals.

Mental health problems on the other hand, just like disorders, may interfere with individual's abilities though they may not meet the criteria for a diagnosis. Mental health problems, if left unattended to may ultimately progress to illness.

Mental health/wellbeing and mental disorders although influenced by each other, are not polar opposites but belong to two interconnected but separate dimensions. This means a person may have a capacity to achieve good mental health and wellbeing while he/she may still have illness in the same way that a person with significant problems with mental health may not have a diagnosable mental illness.

The theoretical framework of this study is therefore based on interplay of the biopsychosocial model of health and disease aetiology which was proposed by Engel (Engel G, 1977), the mental health promotion quality framework (1997) that operates within the biopsychosocial model of health and the Health Belief Model by Becker et al. (Becker, Haefner and Maiman 1977).

The biopsychosocial model views wellbeing and the aetiology of mental problems vis a vis mental disorders as an interaction between biological factors such as the individual's genetic vulnerabilities, one's social milieu such as one's relationships, as well as psychological factors such as the individual's self-esteem and coping skills (Babalola E et al, 2017).

All these three core areas have been shown to be of importance in designing a successful mental health intervention programmes in any age group, especially the youth. The mental health promotion quality framework that operates within the biopsychosocial model identifies

vulnerability and protective factors for mental health. It also highlights the three key influences on mental health, the biological, psychological and social influences. The areas are healthy structures like the economic, social and cultural framework, the citizenship which includes social support, sense of social integration and inclusion, and the emotional resilience encompassing self-esteem, coping, life skills and sense of control (Health Education Authority, 1997).

The health belief model is a specific behavioural cognitive model created to explain the usefulness of public health promotion and preventive measures. It posits on the belief that behavior is a function of the subjective value of an outcome and of the subjective probability or expectation that a particular action can achieve an outcome. It identifies cues that activate appropriate health behaviours of people and they include the individual's perception of the illness, social influence as well as health education campaigns. It is used to determine or forecast human behaviors towards health. It focuses on attitudes and beliefs of individuals because it is based on the following assumptions or predictions that an individual's opinion or view about health will determine actions taken to prevent to treat illness. It is therefore an important model for public health education and promotion.

In this study, these theories will be used to explore students' perceptions about mental wellbeing, mental illness and decision-making processes as regards health seeking behavior, such utilization of mental health services as a basis for school mental health promotion programme.

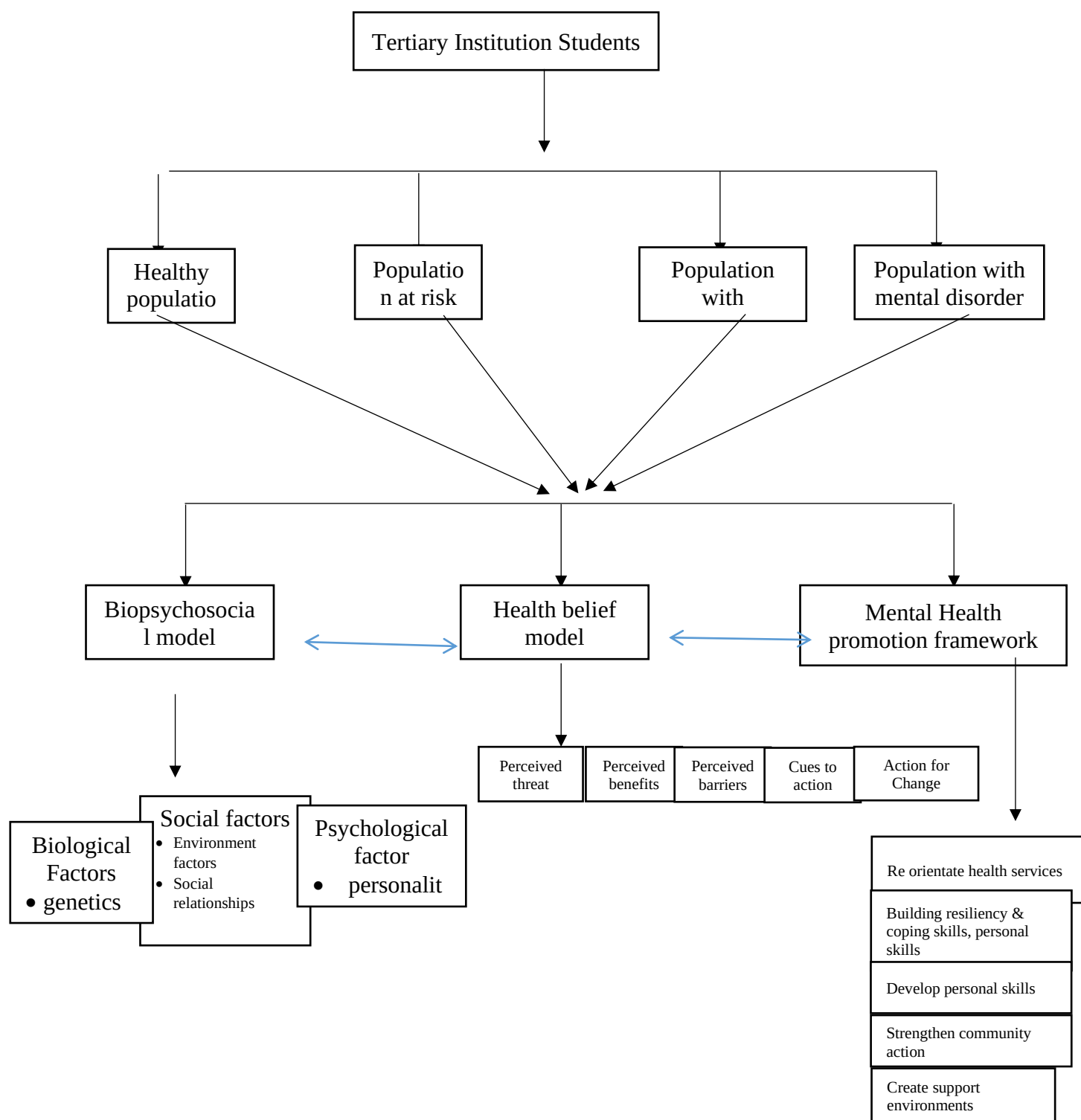
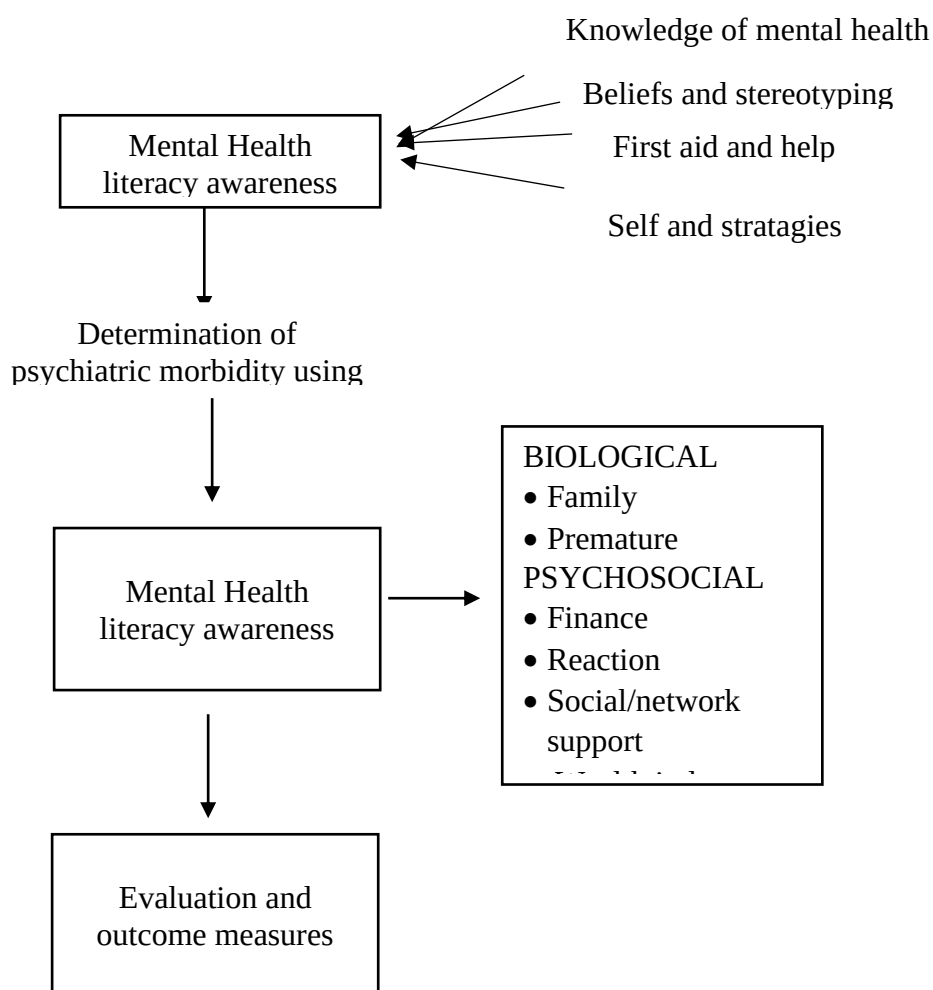


Figure 1: Theoretical framework for study



4.0 RESEARCH FLOWCHART

1. Stakeholders consultations
2. Review of literatures. This is to ensure that the project builds on existing knowledge and understanding relating to students' mental health and mental health literacy and it's determinants.
3. Determination of objectives and selection of Instruments for gathering data.
4. Submission of the research proposal for ethical approval.
5. Gantt chart for project schedule and budgeting.
6. Submission of proposal to Tertiary Education Trust Fund (TETFund) for funding.
7. Stakeholders' consultations to review research and plan steps in evaluation and monitoring of the research progress.
8. Pre-test of questionnaires/ instruments for suitability and for contextual adaptation
9. Training of research assistants and a test run
10. Fieldwork. Data collection
11. Post fieldwork debriefing
12. Data cleaning, analysis and interpretations
13. Publication of research findings and its utilization in the design of school mental health interventions in phase 2 and 3.

5.0 MATERIALS AND METHODS

5.1 Study setting

This study would take place in the University of Ilorin (Unilorin), Ilorin. It is one of the second generation Universities in Nigeria created in 1975. It is located in Ilorin, Kwara State North – Central Nigeria on latitude 8.4799° N and longitude 4.5418° E, covering an approximate landmass of 5,000 hectares. Unilorin has 96 undergraduate programmes and 109 postgraduate programmes across its' 15 faculties with more than 60 departments. It enrolls students for both fulltime and part time courses. It runs both undergraduate and postgraduate courses. The university runs a two-semester system called Harmattan and Rain semester with each semester comprising one half of an academic year. The faculties with exception of health sciences are run by course systems with courses quantified into credits.

The total undergraduate students' enrolment for the 2018/2019 academic session was 44,897 with a male to female ratio of 51.03% to 48.97%. The arts and humanities constitute 41% of the population while the remaining 59% are from the sciences. (<http://annualreport.unilorin.edu.ng/2019ap.pdf>)

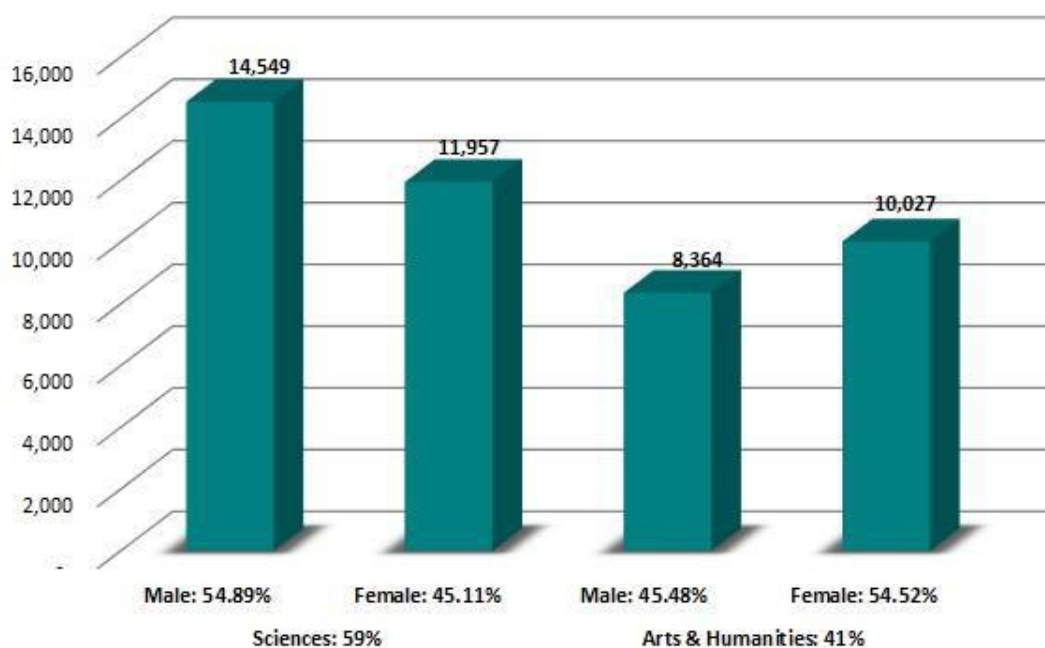


Figure 3: The distribution of students enrolled per programme

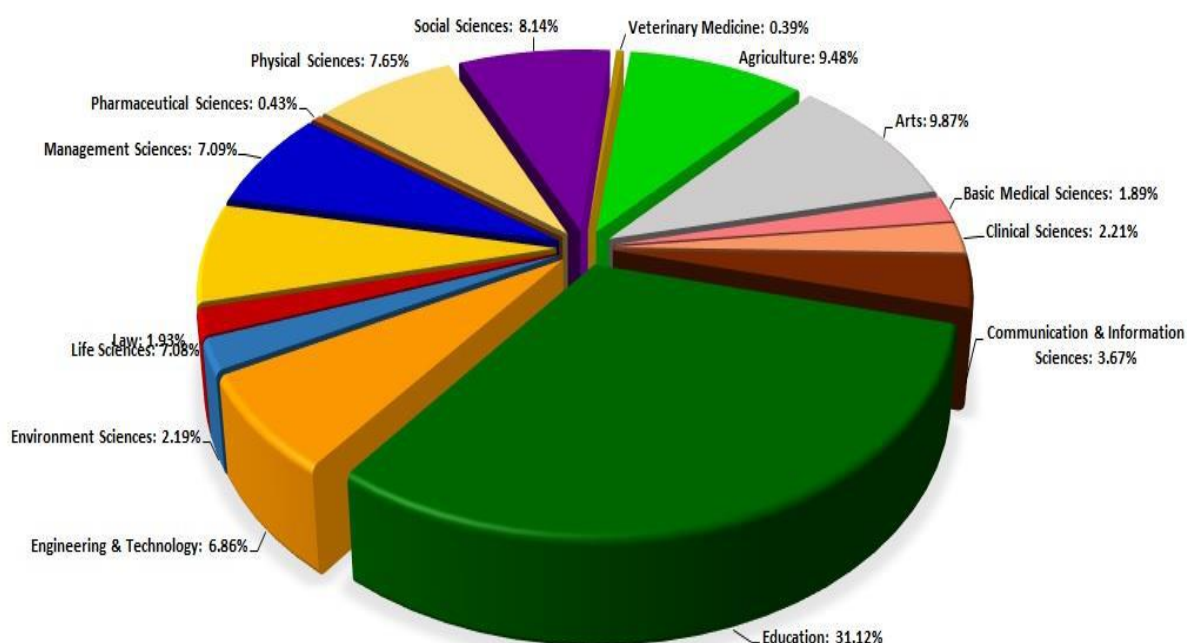


Figure 4: Proportional Population of Returning Students per Faculty

The compositions of the departments that make up each faculty can be found at the university website and in the 2019 annual report. Undergraduate degree programme runs for 3-5, or 6 years, depending on the entry qualifications and chosen discipline.

The university has both public and privately owned housing facility within the school campus. The public housing is much cheaper and government owned. Its facilities like room space, kitchen, toilet and common rooms are shared. Private hostels are of different types some have shared facilities between fewer numbers of people while others are self-contained with housing facilities exclusive to each individual. Some other students prefer private accommodation located outside the school campus.

The school has a standard stadium for both indoor and outdoor games and a gymnasium for use of both students and staff. Apart from these recreational facilities, the students' union secretariat building also boasts of both in and outdoor recreational facilities. The school has a botanical garden/ zoo and a water dam for domestic water treatment with a reception area at the lakeside for recreational activities.

The university has a teaching support unit with a well-equipped computer center (COMSIT) and Internet supply for students and staff. It has a standard and well stocked library for students and public. It has a standard radio station for dissemination of information, entertainment and education.

They also have public and privately owned transport services that shuttle within the campus and outside the campus. There are different religious centers for the various religious sects on campus.

Most of the facilities are a replica of what exists in other universities in Nigeria.

5.2 Sample size and Sampling methods

This study would adopt a multidisciplinary/ interdisciplinary approach meaning that professionals across multiple disciplines are involved in the research, promotion of mental wellbeing, prevention, care, and treatment of mental illnesses. The team comprises of psychiatrists, counsellors, epidemiologists, scientists, educators, social workers and psychologists.

The study is proposed to be a cross sectional study. A multistaged systematic randomization for recruitment of students would be done. A total of 3,300 students will be recruited into the study. This would be made up of the sample size obtained after a scientific sample size determination method (3000) plus 10% of sample size (300) would be added to cater for attrition and improve statistical power necessary adjustments are made due to stratifications in the study population.

Students will be recruited from all the 15 faculties in the University including two randomly selected departments per faculty via balloting except where the faculty consists of only a department. The number of students to be studied in each departments and faculties will be

allocated proportionate to size. Students to be interviewed will be randomly chosen from the selected departments at the last stage of the sampling. Proportional selection of respondents across various levels would be done with exception of 100 level students. Students will be recruited while the University is in academic session and interviews will be conducted in between lecture periods. Proportionate calculation is based on full time undergraduate students' enrolment data for the previous year (2018-2019) as obtained from the school annual report (<http://annualreport.unilorin.edu.ng/2019ap.pdf>).

5.3 Inclusion criteria:

All regular full-time undergraduate students studying for a degree or certificate courses in the University of Ilorin will be included in the study. Part-time and postgraduate students will be excluded from the study.

5.4 Exclusion criteria:

Entry level (100 level) undergraduate students and those that are absent from class at time of administration of questionnaire.

5.5 Ethical consideration:

Ethical clearance will be obtained from the Ethical Review Committee of the University of Ilorin. In addition, informed consent will be taken from every student participating in the study after the students must have read an initial introductory note on the study. Strict adherence to ethical provisions on confidentiality and autonomy will be observed. Anonymity would be maintained and a contact note would be added for those who desire mental health consultation afterwards.

5.6 Data Collection and Intervention strategy

Semi structured self-administered questionnaire will be used for the cross-sectional survey phase. This will be structured into various sections; first section would assess socio-demographics, previous health conditions and willingness to have internet based mental health interventions. The second part would assess knowledge and attitude to mental health, and mental ill health while the 12 item General health questionnaire GHQ12 would be used to screen for psychiatric morbidity.

Fifteen (15) research assistants will be trained and involved in this study. They will distribute the questionnaires, assist respondents in filling the questionnaires and check for non-response and omissions before certifying the questionnaire as completed.

5.7 Instruments

1. A questionnaire designed by researchers to assess socio-demographics, previous health conditions and willingness to use internet based mental health interventions

2. **The Mac Authur Scale of subjective social status:** The Mac Arthur scale of subjective social status is a pictorial representation that uses a symbolic picture of a ladder with 10 steps,

developed to capture the common sense of social status based on socioeconomic status indicator (Alder & Stewart, 2007). There are two versions of the ladder that have distinct references to which individuals can compare themselves. The society ladder is a global measure of subjective social status and is related to the individual's place in the social hierarchy. References used are objective indicators such as income, education and occupation. The community ladder; on the other hand, assesses how individuals see themselves in the ladder considering the community where they live in; those who present higher living standard are at the top of the ladder and those who present lower ones are at the bottom. (Alder, Singh-Manoux, Schwartz, Stewart, Matthews, & Marmot, 2007). The societal ladder would be used in this study.

3. The 12 -item general health questionnaire (GHQ-12): The General Health Questionnaire (GHQ) is a measure of current mental health developed by Goldberg in the 1970s. The questionnaire was originally developed as a 60-item instrument but at present a range of shortened versions of the questionnaire including the GHQ-30, the GHQ-28, the GHQ-20, and the GHQ-12 is available. (Goldberg, 1992)

The GHQ-12 is a popular self-administered screening questionnaire for psychological wellbeing and it has been used and validated in various populations including adolescent age group and for community studies. The instrument has been found to have high validity, sensitivity, specificity and a minimum misclassification rate (Abiodun 1992, Abiodun 1993, Abiodun & Parakoyi 1992). The 12-item questionnaire asks whether the respondent has experienced a particular symptom or behaviour recently. Each item is rated on a four-point scale (less than usual, no more than usual, rather more than usual, or much more than usual); and when using the GHQ-12 it gives a total score of 36 or 12 based on the selected scoring methods. The most common scoring methods are bi-modal (0-0-1-1) and Likert scoring styles (0-1-2-3). Since the GHQ-12 is a brief, simple, easy to complete, and its application in research settings, as a screening tool is well documented. The cut- off point for GHQ-12 is 3 for community-based studies when the bi- modal method of scoring is used. (Goldberg 1992, Abiodun 1993).

4. A Mental Health Literacy (MHL) Questionnaire: This questionnaire is adapted from the mental health literacy questionnaire for young adults MHLq. It is a practical, valid, and reliable screening tool for identifying gaps in knowledge, beliefs, and behavioural intentions related to mental health and mental disorders, planning promotion programs, and evaluating intervention effectiveness. (Dias et al 2018). It assesses four dimensions of mental health literacy (Knowledge of mental health problems, erroneous beliefs/ stereotypes, first aid skills and help seeking behaviours, and self-help strategies).

5.8 Data Analysis

The main outcome measurement will be mental morbidity score from GHQ and the mental literacy. In addition, mental morbidity risk factors will be identified. Both descriptive and inferential statistics will be presented. Regression model analysis will predict factors associated with mental morbidity and literacy. Statistical Package for Social Scientist SPSS software will be used for data analysis. Level of significant will be set at p-value of < 0.05 and a confidence interval of 95%.

5.9 Expected outputs are

1. The proportion of students with probable mental morbidity i.e. with a score of 3 or more on GHQ -12
2. The levels of students with mental health literacy (MHL).
3. The global MHL and dimensional scores (Knowledge of mental health problems, Erroneous beliefs/stereotypes, First aid skills and help seeking behaviour, Self-help strategies) would be determined.
4. The main determinants of mental morbidity would be determined.
5. The main determinants of levels of mental literacy would be determined.
6. The development of guidelines for Tertiary School Interventions for Mental Health (TIM-Health) in Nigeria
7. Impact of TIM-Health on the mental health seeking behaviour and morbidities among the University students will be determined.

6.0 BENEFITS OF STUDY

This study will be the first of its kind in Nigeria to pilot a multi-disciplinary and pragmatic intervention programme to solving the mental health problems of the young people in University of Ilorin. In addition, the proposed study is design to be replicable in other Universities in Nigeria, with the view of making it a Nigerian solution.

7.0 ACKNOWLEDGEMENT

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7.1 Declaration

The authors declare that we all contributed to the conceptualization, writing and proof reading of this manuscript.

7.2 Authors contributions:

This was a collaborative work among all contributing authors. The research was conceived by AA, OAB, OINB, JO and SM. All authors contributed to the literature search, methodology and instrument used in the study. OINB, OAB, AJO and RO managed the literature review. AA, OINB, OAB, AJO and OAA analyzed the data. All authors read and approved the final draft of manuscript.

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