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Determinants of Stress among Undergraduate Students at a Private University in Kenya: A Multifaceted Approach

Sheila Sharon[1], Valerie Suge[1], Edwin Kosgei[1]; and Zaituni Hassan[1]

[1]Department of Nursing, School of Medicine and Health Sciences, Kabarak University.

[1]Corresponding Author: valeriesuge@gmail.com

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Abstract

Stress is a common psychological issue among learners worldwide. Despite its impact on various aspects of life, specific determinants of stress in this group remain unclear. The current study aimed to identify the factors that contribute to stress among undergraduate students at Kabarak University. A cross-sectional quantitative research design was utilized to collect data from 344 eligible participants selected using stratified and simple random sampling. The research questionnaire was pretested, and SPSS Version 24.0 was used to analyze the coded data. Descriptive statistics such as frequencies, averages, and percentages were applied to analyze the quantitative data, and the results were presented using tables, graphs, and pie charts. The findings revealed that the majority of participants (75.1%) were between 18-21 years old, and males (56.7%) were more involved in the study than females (43.3%). Furthermore, first-year students had the highest turnout (49.9%) compared to other year levels. Most students identified as Christians (95.3%), with the remaining students belonging to the other religions (4.7%). The study found that financial problems and academic pressure were the most common causes of stress, at 34.1% and 38.6%, respectively. In conclusion, stress is prevalent among undergraduate students and the study has revealed that stressors among undergraduate students is come from self-imposed stressors and pressures, with academic pressure and financial problems being significant contributors. The study recommends that Stress management, assertiveness skills, time management and counselling sessions can be effective in reducing stress experienced by students. The University management could address these issues by providing focused academic counseling services and financial support strategies to help students cope with stress. Additionally, the study suggests incorporating stress management and coping mechanisms health talk series on assertiveness skills into the university calender and into the curriculum to increase awareness and improve student well-being while on campus.

Keywords: stress, determinants, students

INTRODUCTION

Stress is a ubiquitous phenomenon that induces physical, emotional, and psychological strain. As highlighted by Bickford (2005), the body's response to pressure is stress, which can arise from various life events or circumstances that challenge our sense of self and control. Coping mechanisms differ among individuals and can be influenced by factors such as genetics, early life experiences, personality traits, and socio-economic conditions, as noted by (Shah et al., 2021; Tachè and Selye, 1985). Prolonged exposure to high levels of stress can lead to an array of adverse effects, including difficulty in concentration, irritability, mood swings, poor self-care, frustration, and impaired memory recall, among others (Dhabhar, 2014).

University students face various challenges that can impact their academic performance, mental health, and overall well-being. One of the most prevalent issues affecting students is the experience of negative emotions and feelings that can interfere with their ability to succeed. Research conducted globally shows that individuals in certain countries, such as Greece, the Philippines, and Tanzania, are more prone to experiencing stress, worry, or anger (Sharma et al., 2021). Similarly, in the United States, nearly half of college students report feeling stressed, with academic pressures and career concerns being the main causes (Wilkinson and Singh, 2010). Mental health issues such as anxiety, depression, and stress are among the top concerns for American college students seeking treatment. In Kenya, a vast majority of the population, approximately 81%, report experiencing negative emotions such as loneliness, helplessness, and anger (Bryant et al., 2017). Therefore, it is essential to identify the underlying factors contributing to these feelings to alleviate the negative impact on students' well-being.

The condition is a complex, multi-dimensional concept that has become a prevalent epidemic worldwide, with students bearing a disproportionate burden. Internal and external expectations placed on students have made stress a pervasive part of academic life, affecting not only their academic performance but also their overall health and well-being (Salari et al., 2020). The Kenyan Mental Health Policy 2015-2030 aims to address the systemic issues and reduce the burden of mental health issues and illnesses. However, anecdotal reports of suicide attempts and suicidal ideation involving youths have emerged in recent years, and the burden of stress on undergraduate students is a major problem in Kenyan universities (McEwen, 2008). Poor academic performance and social isolation are just some of the consequences of unchecked stress.

The negative effects of stress on individuals are well-documented, yet there is a dearth of information regarding the specific factors that contribute to stress among young people in Kenya. This information gap is problematic because it makes it difficult to develop targeted interventions that could alleviate the burden of stress among youths. For instance, recent data from the World Health Organization (WHO) indicate that mental health issues are on the rise in Kenya, with depression being the leading cause of illness among young people aged 15-29 years (Jenkins et al., 2015). Moreover, a survey conducted by Infotrack Research in 2020 revealed that 81% of Kenyans experienced stress, with loneliness, helplessness, and anger being the most commonly reported emotions (Huho, 2020). However, the study did not provide any insights into the specific factors that contribute to stress among young people.

This information gap is not unique to Kenya. Globally, there is limited data on the determinants of stress among youths. For example, a study conducted by the Organization for Economic Co-operation and Development (OECD) found that 15-year-olds in OECD countries reported high levels of stress, with academic pressure and fear of failure being the most common stressors (OECD, 2017). However, the study did not provide insights into how these stressors were linked to other factors such as family dynamics, socio-economic status, or individual personality traits. Thus, a comprehensive understanding of the determinants of stress among youths in Kenya is critical for developing effective interventions to mitigate its negative consequences. Specifically, research is needed to identify the specific factors that contribute to stress among young people in Kenya, such as academic pressure, family dynamics, socio-economic status, and individual personality traits. Such research will pave the way for the development of targeted interventions that could alleviate the burden of stress among youths in Kenya.

METHODS

Study Design

This study employed a descriptive cross-sectional design to assess the demographic, psycho-social, and institutional factors that contribute to stress among university students in Kenya (Kesmodel, 2018). The choice of this design was based on the need to obtain a snapshot of the current state of stress among the participants at a single point in time. Additionally, the cross-sectional design allowed for the assessment of multiple factors influencing stress simultaneously. Furthermore, This approach allowed for the examination of quantifiable factors that influence stress, such as age, gender, academic performance, and social support.

Study Site

The study was conducted at Kabarak University, a private Christian university located in Rongai Sub-County, Nakuru county, Kenya. The university has various schools, including Medicine and Health Sciences, Law, Education, Business, Engineering and Information Technology, and Music and Performing Arts, offering a wide range of courses. This location was chosen because Kabarak University is a well-established institution with a diverse student population and a range of academic programs, making it a suitable site for investigating the determinants of stress among university students in Kenya. Additionally, the university's location in Nakuru county, a major urban center in Kenya, provides a representative sample of the stressors faced by students in similar urban areas.

Target Population

The study population comprised eligible undergraduate students enrolled at Kabarak University's main campus. According to the university's admission records for 2022, the total number of undergraduate students was 9030. The researchers selected this population because they are more likely to face academic, social, and financial challenges. Additionally, the majority of the university's students are undergraduate students, making them a more accessible target population for the study within the study period. The population was selected based on its relevance to the research question and the ease of access to the study site.

Sample Size Determination

The sample size was determined using Cochrane's formula, 1977 as cited by (Harris et al., 2018), due to the large population size. We estimated the proportion of undergraduate students in Kabarak University who experience stress to be 37% based on previous research. With a margin of error of 5% and a 95% confidence interval, the minimum required sample size was calculated to be 358. However, since the total population is less than 10,000, a finite population correction for proportions formula was applied, resulting in a sample size of 344.

Sampling Technique

Stratified sampling was implemented to select a representative sample of 344 participants from the target population of 9030 students at Kabarak University (Parsons, 2014). The schools were stratified into seven distinct datasets based on the schools of the university. The proportion of students from each school was determined using the Naisumas method, and the sample size for each school was calculated accordingly. The resulting sample sizes for each school were as follows: School of Medicine and Health Sciences (61), School of Law (49), School of Education (48), School of Business (65), School of Engineering and Information Technology (54), School of Music and Performing Arts (24), and the remaining students from other schools (43). This stratified approach ensured that each school was represented proportionally in the final sample.

Data Collection Tools

A structured questionnaire was used to collect data from the participants. The questionnaire was divided into three sections: demographic information, institutional factors, and psycho-social factors. The demographic information section contained questions on age, gender, year of study, and school of study. The institutional factors section included questions on academic workload, availability of support services, and financial challenges. The psycho-social factors section contained questions on

social support, coping mechanisms, and perceived stress levels. The questionnaire was developed by the researchers and reviewed by a panel of experts in the field to ensure its validity and reliability. A pilot study was conducted with a sample of 20 students to test the clarity and comprehensibility of the questionnaire. Based on the feedback from the pilot study, the questionnaire was revised and finalized for data collection.

Data Collection Procedure

Prior to data collection, the research team followed an ethical protocol which involved obtaining informed consent from the study participants. The purpose, objectives, and potential risks and benefits of the research were explained to the participants to ensure their understanding and informed decision-making. Participants were also assured of their right to withdraw from the study at any time without providing an explanation. To protect their privacy and maintain confidentiality, participants were not required to disclose their names, and the study was conducted in a private classroom setting. Upon obtaining informed consent, the participants were provided with the questionnaires, and only those who voluntarily agreed to participate were included in the study.

Data Analysis

The collected data were analyzed using both descriptive and inferential statistics. Descriptive statistics were used to summarize and present the data in a meaningful way. The measures of central tendency (mean, median, and mode) and measures of variability (standard deviation and range) were calculated for the quantitative variables. Frequencies and percentages were computed for the categorical variables. Inferential statistics were used to test hypotheses and make inferences about the population based on the sample data. The level of significance was set at 0.05 for all statistical tests. The data were analyzed using SPSS version 27 software.

Ethical Considerations

The present study adhered to rigorous ethical principles and guidelines, which were approved by relevant authorities. Specifically, the Nursing Department Research Committee approved the research proposal, while the Kabarak University Research Ethics Committee (KUREC) granted ethical approval. Additionally, permission to conduct the research was obtained from the National Commission for Science, Technology and Innovation (NACOSTI).To ensure the protection of participants' rights, informed consent was sought using a comprehensive consent form, which highlighted the research's purpose, risks and benefits, and the participants' right to withdraw from the study at any time without any consequences. Anonymity was strictly enforced throughout the study to maintain confidentiality, and participants' privacy was guaranteed by conducting the research in a designated classroom. Furthermore, individualized administration of the questionnaires was conducted to ensure the utmost confidentiality during data collection. Respondents had the option to leave the study at any time, and their data was treated with the utmost confidentiality to avoid any possible breaches of privacy.

RESULTS

Socio-demographic Characteristics of the Study Subjects

The study had 337 participants, all between the ages of 18 and 25 years old. The majority of participants (56.7%) were male and 43.3% were female. Immediate family was the primary source of financial support for most participants (84%), followed by guardian (7%), bursary (7%) and loans (2.4%). Most participants identified as Christian (95.3%), while a small percentage identified as Muslim (0.3%) or other (4.4%). In terms of year of study, the largest group consisted of first year students (49.9%), followed by fourth year students (29.6%), third year students (9.2%), and second year students (11.3%).

Table 1:
Analysis of the Socio-demographic Characteristics of the Study Subjects

Characteristic	Frequency	Percentage (%)
Age (years)		
18-25	337	100
≥26	0	0
Gender		
Male	191	56.7
Female	146	43.3
Financial Support		
Immediate family	283	84
Guardian	23	7
Bursary	23	7
Loans	8	8
Religion		
Christian	321	95.3
Muslim	1	0.3
Other	15	4.4
Year of Study		
1st year	168	49.9
2nd year	38	11.3
3rd year	31	9.2
4th year	100	29.6

Assorted Causes of Stress among Study Subjects

Out of 337 undergraduate students who participated in the study, 230 reported experiencing stress while 107 did not. The causes of stress reported by the 230 students who have experienced stress are as follows: academic pressure (38.6%), financial issues (34.1%), relationship issues (11.3%), bereavement (9.2%), and health issues (6.8%).

Table 2:
Description of Different Causes of Stress among Study Subjects

Cause	Frequency	Percentage
Academic pressure	89	38.6%
Health	16	6.8%
Bereavement	21	9.2%
Relationship with others	26	11.3%
Financial issues	78	34.1%
Total	**230**	**100%**

Personal Determinants of Stress among Study Subjects

The study found that a variety of factors contribute to stress in university students. These include combining job with studies (13.5%), change in living environment (11.3%), change in sleeping habits (4.5%), new responsibilities (22.8%), financial difficulties (38.6%), and health problems (9.2%). Interestingly, poor eating habits did not emerge as a significant source of stress for any of the participants. These findings highlight the importance of taking a holistic approach to managing stress among university students, as multiple factors can be involved.

Table 3:
Description of Personal Determinants as Source of Stress among Study Subjects

Determinant	Frequency	Percentage
Combining job with studies	31	13.5%
Change in living environment	26	11.3%
Change in sleeping habits	10	4.3%
New responsibilities	52	22.6%%
Financial difficulties	89	38.7%
Health problems	22	9.6%
Poor eating habits	0	0%
Total	**230**	**100%**

Manifestations of Stress among Study Subjects

About one-sixth (16.1%) of the participants reported feeling tired during the day, while more than one-fourth (27.4%) reported experiencing difficulty sleeping. A significant proportion of participants (43.0%) reported occasional feelings of not being well when experiencing stress, and a minority (13.5%) did not provide any specific response regarding their experience of stress-related symptoms.

Table 4:
Description of the Stress Manifestations among Study Subjects

Variable	N=230	Frequency
Feeling tired during the day	37	16.1%
Cannot sleep at night	63	27.4%
Occasionally do not feel well at times	99	43.0%
Others	31	13.5%
TOTAL	**230**	**100%**

DISCUSSION

The present study investigated the association between individual characteristics and perceived stress among undergraduate students at Kabarak University. The study's findings were consistent with those of a recent investigation by Asturias et al. (2021), which explored the influence of socio-demographic factors on stress and coping strategies among undergraduate nursing students. The results suggested that individual characteristics may play a role in stress perception and coping strategies utilized by students. The study participants were predominantly aged 18-21 years (75.1%), with 24.9% of participants aged 22-25 years. The younger age group (18-21 years) had higher levels of perceived stress. Males represented the majority of participants at 56.7%, while females comprised 43.3%. Regarding academic level, first-year students reported the highest levels of perceived stress (49.9%) compared to other academic levels. The majority of participants identified as Christians (95%), while Muslims accounted for 0.3% and other religions for 4.4%.

The influence of psycho-social elements on stress and health has been well-documented in various studies. Our findings are consistent with previous research that has identified social support as a significant factor in reducing stress levels and promoting better health outcomes (Gerich, 2014). Interestingly, the majority of participants in our study coped with stress by talking to friends or watching movies/videos. This finding is consistent with the study conducted by (Nadeem et al., 2021), which found that social support from friends and family was an effective coping mechanism for stress among undergraduate students. Financial problems were a significant stressor for many participants in our study, with 70% of students reporting financial difficulties. This finding is consistent with the study

conducted by (Oketch-Oboth and Okunya, 2018), which identified financial problems as a common cause of stress among undergraduate students. Effective stress management strategies are essential for promoting overall well-being. Our study identified sharing and talking about stress, reducing expectations, and seeking guidance and counseling as effective stress management strategies. These findings are consistent with previous research that has identified the benefits of social support, positive thinking, and seeking professional help for stress management (Kim et al., 2008).

Various academic stressors, such as overcrowding in lecture rooms, a semester grading system, insufficient resources and facilities, a large syllabus, long hours, and rote learning requirements, have been found to cause stress among undergraduate students (Deb et al., 2015). In a study involving 337 respondents, 86% of undergraduate students reported feeling academic pressure from their academic calendars. The short holidays and excessive workload were among the factors causing stress. The degree of stress is linked to academic performance. Students who experience high levels of stress are likely to perform poorly in their academic work (Sohail, 2013). Poor academic performance can further lead to negative consequences and increase stress levels among students. To balance their academic work and leisure, students often use timetables to plan their school life effectively. Effective planning can reduce pressure from academic workload and improve academic performance. In a study involving undergraduate students, 91% of respondents believed that stress awareness should be taught in school, with the majority citing the importance of learning how to prevent and cope with stress to improve quality of life, health, and relationships with others.

CONCLUSIONS

We conclude as follows:

i. Personal determinants such as change in sleeping habits, lack of planning considering the new student role and responsibility, and combining jobs with academic activies were found to be among the perceived causes of stress among undergraduate students.

ii. Psycho-social factors, such as social support, negative affect, perceived health status, and coping skills, significantly influence stress levels among university students.

iii. Academic pressure is a significant source of stress among university students and is linked to reduced academic performance.

iv. Stress management techniques, such as effective planning, seeking guidance and counseling, and stress awareness education, can help reduce stress levels among university students.

RECOMMENDATIONS

i. Universities should provide adequate resources and facilities to support students' academic and personal needs, including mental health services and counseling, Planned physical exercises/ activities for all students.

ii. It is important for universities to promote a supportive environment for students, including opportunities for social support and stress management programs.

iii. Educational institutions should consider implementing stress management education and awareness programs, to equip students with the necessary assertiveness skills to cope with academic stress and improve their overall well-being.

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