

PSYCHOLOGICAL WELLBEING AND COPING STRATEGIES OF UNIVERSITY STUDENTS WITH PHYSICAL DISABILITY

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ABSTRACT

Objective: University education can be challenging and students with disabilities (SWDs) have the added disadvantage of disability as a potential source of distress. This study examined the psychological well-being of students with physical disabilities at the Kwame Nkrumah University of Science and Technology (KNUST) and how they cope.

Method: This was a cross-sectional study using the Depression, Anxiety, Stress Scale (DASS-21) and Brief COPE assessment tools to assess psychological distress and coping mechanisms among KNUST students with physical disabilities. Descriptive analyses, including correlations, were performed to examine the associations between well-being indices and coping variables.

Results: Forty-five (45) students participated in the study. The mean age was 23 years ($SD \pm 2.96$) and 77.8% of them were male students. Approximately 31.1% of the students experienced moderate to severe stress, 42.2% experienced moderate to extremely severe depression, and 46.7% experienced moderate to extremely severe anxiety. Emotion-focused coping style was the most highly used among the students followed by problem-focused, then avoidant coping. This is suggestive of poor adaptation.

Conclusion: University SWD experience varied levels of depression, anxiety and stress with majority of them adopting an emotion focused coping style. Continuous efforts should be made to identify psychological distress among SWDs and provide the necessary intervention to ameliorate and prevent the worsening of their challenges.

Keywords: Coping strategies, psychological wellbeing, anxiety, depression, students

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INTRODUCTION

Disability is a global phenomenon that can affect the intellectual, physical, sensory, or mental functioning of individuals and limits one or more functional capacities of the individual (The Ghana Disability Act 2006, 715; Avoke, 2002). About 40% of the African population consists of Persons with Disabilities (PWDs) (WHO, 2020); and there is an upward trend due to increased prevalence of chronic diseases (WHO, 2018) and lack of adequate attention for PWDs (WHO, 2011). The estimate of PWDs in the Ghanaian population is approximately 10 percent (Akoto, 2021) with about 650,000 to 860,000 people living with physical disability (Dassah, *et al.*, 2018).

PWDs experience more frequent mental distress (Kim *et al.*, 2021), discrimination, stigmatization (Akoto, 2021; Mosia, 2017) and a diminished quality of life evidenced by high levels of depression, anxiety, stress, and disrupted social relationships particularly when they lack emotional support (Owusu-Ansah & Nkrumah, 2017). In addition, the physically challenged student experiences additional frustration in negotiating a physical environment that is generally not disability-friendly (Alorwu, 2011; Danso, *et al.*, 2012). Other challenges include transportation inaccessibility and difficulties participating in extra-curricular activities like their able-bodied counterparts (Debicka *et al.*, 2020).

Low self-esteem in the disabled person reflects a poor self-evaluation and is characterized by feelings of inadequacy, guilt, shyness, social inhibition, independency, helplessness, reduced ability and masked hospitality, withdrawal, vulnerability and interpersonal problems (Mushtaq, 2016).

University education can be stressful for most young adults given the academic rigors and other challenges that require adaptation, resulting in psychological distress among

students (Adams, 2022). The added burden of disability renders the physically impaired student more susceptible to poor emotional and psychological well-being given the additional stress of being a person with a disability (Chen *et al.*, 2019).

Depression and anxiety are common among PWDs in general (WHO, 2020; Leta, 2001) and students with disabilities (Owusu-Ansah, *et al.*, 2017) with negative impact on academic performance (McCraty, *et al.*, 2007). Lack of support exacerbates the feelings of depression (Owusu-Ansah, *et al.*, 2017); and feelings of anxiety arise from awareness of limitations and lack of capabilities, especially in tasks where disability is a setback.

Successful completion of academic pursuits requires that students with physical disabilities cope well with constraints. Coping refers to conscious, voluntarily mobilized acts, different from defense mechanisms or unconscious adaptive responses, aimed to reduce or tolerate stress (Venner, 1988). It includes thoughts and behaviours that are mobilized to manage perceived stressors (Folkman *et al.*, 2004; de Boer, 2017). A coping style can be reactive or proactive. It is reactive when it is elicited and aimed at the specific stressor and proactive when aimed at building capacity to neutralize future stressors (Coppens, *et al.*, 2010).

A coping style can prove useful and adaptive if it enhances well-being. Coping is maladaptive when associated with poor mental health outcomes and higher levels of psychopathology symptoms (Folkman, 2004).

This study aimed at investigating SWD's psychological well-being and coping mechanisms as needs assessment for a better understanding towards the design of more effectively tailored interventions within the university for students with physical disabilities. The study also sought to understand how coping strategies correlate with psychological distress indices.

METHODOLOGY

Setting

The Kwame Nkrumah University of Science and Technology (KNUST) is one of the four public universities in Ghana with a student population of approximately eighty thousand. There are six colleges within the university namely; College of Agriculture and Natural Resources (CANR), College of Art and Built Environment (CABE), College of Humanities and Social Sciences (COHSS), College of Engineering (COE), College of Health (COHS), College of Science (COS). Students with physical disabilities who participated in this study were fairly distributed among the colleges.

In the last decade, KNUST has initiated innovative programmes of support for students in general and those with disabilities in particular. These include the provision of transportation services for students with disabilities, aside that provided for other students, and an effort to make buildings more accessible.

Study design

This was a cross-sectional study involving KNUST students with physical disabilities who were members of the Association of Students with Disabilities (ASWD). The association has a membership of 50 students. A purposive sampling method was employed. The aim of the study and study procedure were explained to members of the ASWD. After addressing all concerns and answering questions, students with physical disability who were willing to participate in the study, signed an informed consent form.

Data Collection and Analysis

The duration of data collection was one month. The main data collection tool was a standardized questionnaire which

was digitized (made into a google form) incorporated the Depression, Anxiety, and Stress Scale (DASS-21) and the Brief Coping Orientation to Problems Experienced (COPE) assessment tool. These were used to assess students' psychological distress and coping mechanisms. The DASS-21 can be used as a global measure of psychological distress. It can also be used to indicate the prevalence and severity of the various indices of stress, depression, and anxiety. Developed by Lovibond and Lovibond (1995), it is a 21-item self-report questionnaire designed to measure the level of psychological distress; with high internal consistency (Cronbach's alpha scores of > 0.7). In completing the DASS, a respondent indicates the experience of a symptom in recent times. Each item is scored from 0 (*did not apply to me at all over the last week*) to 3 (*applied to me very much or most of the time over the past week*). Higher scores indicate higher levels of psychological distress (when used as a global measure) or higher levels of depression, anxiety, or stress (when the various indices are used to indicate prevalence and severity).

The Brief COPE is a 28-item multidimensional measure of strategies used for coping or regulating cognitions in response to stressors. Respondents were asked to rate on a Likert scale of 1 (*I have not been doing this at all*) to 4 (*I have been doing this a lot*) how much of each coping style they have been using in response to a hardship in their lives. Items reflect problem-focused, avoidant, or emotional coping styles. "*I have been taking action to try to make the situation better*" is an example of a problem-focused style. Problem-focused coping is active and addresses the issues causing the distress by planning and suppressing competing activities. An avoidant coping style engages in a minimization or denial of the problem. It is characterized by the facets of either productive activities or self-distraction, denial, substance use and behavioural disengagement. An example is "*I*

have been turning to work or other activities to take my mind off things". Emotion-focused coping response items reflect acceptance or management of emotions and support from others. Emotion-focused coping aims to reduce negative emotions associated with the problem by social interaction, reframing or humour. "I have been learning to live with it" is an example of emotion-focused coping style. Higher scores indicate high usage of that coping mechanism.

Data were coded, cleaned, and analyzed with the Statistical Package of Social Sciences (SPSS) version 25.

Ethical consideration

Ethical approval was sought and obtained (CHPRE/AP/420/22) from the Committee on Human Research Publication and Ethics (CHRPE) of the KNUST.

Results Demographic characteristics of participants

Participants were students with physical disabilities from all six colleges of KNUST. They were within the age range of 18 to 32 years (Mean = 22.6; SD = 2.96), 77.8% of them were males and 48.9% were in year one of their course of study. Approximately 93.3% of them were Christians. [Table 1]

Table 1: Demographic characteristics of participants

Variable	N	%	Mean	SD
Age	45	100	22.6	2.96
Gender				
Male	35	77.78		
Female	10	22.22		
Year				
First	22	48.89		
Second	9	20.00		
Third	4	8.89		
Fourth	4	8.89		
Above fourth	6	13.33		
Religion				
Christianity	42	93.33		
Islam	3	6.67		
College				
COHS	7	15.56		
COS	10	22.22		
COE	8	17.78		
COHSS	12	26.67		
CABESA	6	13.33		
CANR	2	4.44		

Coping Strategies among Students with Disability

Prevalence and Severity of Psychological Distress

The prevalence and severity of depression, anxiety, and stress were explored using the cut-off points of the DASS-21. Approximately

31.1% of the students experienced moderate to severe stress, 42.2% experienced moderate to extremely severe depression, and 46.7% experienced moderate to extremely severe anxiety [Table 2].

Table 2: Prevalence and Severity of Psychological Distress

Variable	N	%
Stress		
Normal	25	55.5
Mild	6	13.33
Moderate	7	15.56
Severe	7	15.56
Extremely	0	
Depression		
Normal	20	44.44
Mild	6	13.33
Moderate	8	17.78
Severe	5	11.11
Extremely	6	13.33
Anxiety		
Normal	23	51.11
Mild	1	2.22
Moderate	4	8.89
Severe	8	17.78
Extremely	9	20.00

Coping styles of participants

There was a heterogenous use of coping styles as participants reported the use of a combination of coping responses; plausibly warranted by different situational challenges. Generally, and comparatively, avoidant coping was least highly used followed by problem focused coping. Emotion-focused

copying was relatively most highly used by students. [Table 3] This pattern of response would be understandable in the light of the fact that a disability is an unavoidable, ever present, stressor. Learning to accept, obtain support, and manage own emotions would be a realistic and adaptive coping response than an avoidant coping response.

Table 3: Coping styles of participants

Variable	N	%
Avoidant Coping		
High	2	4.44
Moderate	9	20.00
Low	30	66.67
Not at all	4	8.89
Problem Focused Coping		
High	8	17.78
Moderate	20	44.44
Low	15	33.33
Not at all	2	4.44
Emotion Focused Coping		
High	13	28.89
Moderate	20	44.44
Low	11	24.44
Not at all	1	2.22

To examine the relationships between psychological distress indices and coping styles, a correlation between the indices of psychological distress (stress, anxiety, and depression) and coping styles (problem-focused, avoidant, and emotion-focused) was conducted. All correlations were in the positive direction. However, there were significant correlations between the psychological distress indices (stress, anxiety, depression) and the avoidant and emotion-focused coping styles but not between those indices (stress, anxiety, depression) and the problem-focused coping style. Problem-focused coping was not significantly associated with the psychological distress indices.

In other words, higher levels of stress, anxiety and depression were associated with an increase in the use of avoidant and emotion-focused coping styles. Students who reported higher levels of stress, anxiety, and depression were more likely to use avoidant or emotion-focused, but not problem-focused coping. Furthermore, the correlation between avoidant coping and psychological distress indices was more significant (at 0.01 level) than that between same and emotion-focused coping (at 0.05 level). Higher levels of psychological distress (stress, anxiety, or depression) were more significantly associated with less adaptive coping responses (that is, avoidant coping). [Table 4]

Table 4: Correlations among psychological distress indices and coping styles

Variables	Stress	Anxiety	Depression
Avoidant coping	0.591**	0.586**	0.527**
Problem-focused coping	0.090	0.235	0.247
Emotion-focused coping	0.241	0.335*	0.359*

**Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed)

DISCUSSION

The pursuit of university education is generally tasking and students with physical disability have a greater challenge due to added burden of their disability. This study examined the psychological well-being and coping styles of students with physical disability at the Kwame Nkrumah University of Science and Technology (KNUST). The study sought to understand how coping styles correlated with psychological distress indices to determine adaptiveness.

Corroborating previous studies (Owusu-Ansah, *et al.*, 2017), findings of the study showed that over fifty percent of participating students reported some symptoms of depression; and a few others were severely depressed according to DASS-21 symptom classification. Likewise, majority of the students evidenced moderate levels of stress; with continuing students (relative to 'freshers') reporting more stress that is plausibly attributable to increasing academic workload. It was interesting to observe that relative to their female counterparts, more males reported being stressed and anxious. A finding which may be reflective of the differing societal pressures or expectations for males and females.

The general impression of findings regarding how students with physical disabilities coped with their limitations and challenges suggest an eclectic means of coping as they appeared to combine coping strategies. Many of the

students used an emotion-focused coping which is characterized by venting, humor, use of emotional support, acceptance, and religion. Moderate use of problem-focused coping was also evident among them. This is an active method of coping characterized by use of support, planning, and positive reframing. The least highly used coping style was the avoidant strategy which is characterized by self-distraction, denial, substance use, and behavioral disengagement.

Effective management of stressors requires a robust psychological wellbeing as psychological distress compromises mental health, life choices, and affects several spheres of human functioning. Therefore, it was expected that high levels of psychological distress (stress, anxiety, and depression) would be associated with less adaptive coping responses. Higher levels of psychological distress (stress, anxiety, or depression) were more significantly associated with avoidant and emotion-focused coping responses. In other words, increases in stress, anxiety and depression were associated with increases in the use of avoidant and emotion focused coping styles. Those students who used problem-focused showed less psychological distress. A less adaptive coping style, such as avoidant coping, associated with greater psychological distress ((Folkman, 2004) is likely to affect the academic and social lives of students.

Limitations and strengths

The limitation of a small sample size and the cross-sectional study design notwithstanding, this study has revealed that increase in psychological distress (stress, anxiety, and depression) is accompanied by increase in less adaptive coping responses. Findings of the study suggest that students with disability (SWD) at KNUST would exhibit more adaptive coping when their psychological distress is ameliorated. To the best of our knowledge, this is the first study of its kind and the findings provide essential baseline data for recommended future studies with a bigger sample size, involving SWDs in other tertiary institutions.

CONCLUSION

There are more male students with physical disabilities than females; and the students demonstrated varied forms of psychological distress of anxiety, stress, and depression. Students with more robust psychological well-being (that is, less psychological distress), used problem-focused coping strategies. Those who showed higher levels of psychological distress used emotion-focused and avoidant coping strategies which are less adaptive. This calls for the implementation of assistive programmes by university outfits dedicated to students' welfare such as the KNUST Counselling Center, Students Representative Council and the Students with Disabilities Association. The Association of Students with Physical Disability at KNUST, working in collaboration with the KNUST Counselling Center, should also organize psycho-educational programmes for students with disabilities geared towards enhancing greater psychological well-being among these students.

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Authors' contributions

GO and FEOA conceptualized the study, performed data collection and analysis. GO, FEOA and NKAB prepared the draft of the manuscript and were involved in editing and review of the manuscript. All authors approved the final version of the manuscript for publication.

Conflict of Interest statement

All authors do not have any conflict of interest to declare.

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