

EXPLORING THE CORRELATION OF PERCEIVED STRESS, PERCEIVED SOCIAL SUPPORT AND DEPRESSIVE SYMPTOMS AMONG UNDERGRADUATES

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ABSTRACT

This study investigated the relationship between perceived stress, perceived social support, and depressive symptoms among undergraduates. The study involved 397 undergraduate students from Nnamdi Azikiwe University who were selected using a purposive sampling technique. The participants comprised 178 males and 219 females, aged between 18 and 26 years, with a mean age of 20.97 years (SD = 2.12). The Beck Depression Inventory (BDI), Perceived Stress Scale (PSS-10), and Multidimensional Scale of Perceived Social Support (MSPSS) were used for data collection. A correlational research design was adopted, and Pearson product-moment correlation analysis was used to analyse the data. The findings revealed a significant positive correlation between perceived stress and depressive symptoms ($r = .29$, $p < .01$). Furthermore, significant negative correlations were found between perceived social support from family, friends, and significant others and depressive symptoms ($r = -.27$, $p < .01$; $r = -.28$, $p < .01$; and $r = -.29$, $p < .01$, respectively). Based on these findings, it is recommended that universities implement and promote programmes that foster positive social support among students, such as peer mentoring, support groups, and community-building activities.

Keywords: depressive symptoms; perceived stress; perceived social support; undergraduates.

INTRODUCTION

Mental health conditions such as depression appear to be increasing among undergraduates, with overwhelming health and psychosocial consequences (Onuoha *et al.*, 2025). Some of the adverse outcomes associated with depression include a higher risk of substance abuse, poor social adjustment, reduced academic performance, and lower life satisfaction (Onuoha, 2024; Onuoha *et al.*, 2024; Onuoha *et al.*, 2025). The undergraduate period represents a pivotal developmental stage characterized by significant academic, social, and personal challenges (Obi-Nwosu *et al.*, 2024). When these challenges become overwhelming, they may result in depressive symptoms. This may account for the high prevalence of depressive symptoms among college students (Liu *et al.*, 2019), making depressive symptoms and clinical depression among the most common negative emotional experiences associated

with the early stages of undergraduate life globally (Beiter *et al.*, 2015). As students progress through their academic journey, these stressors may accumulate and increase their vulnerability to depression and other mental health challenges (Obi-Nwosu & Onuoha, O. C., 2025). Notably, how undergraduates perceive and appraise these stressors, as well as the support available to them, may explain differences in their susceptibility to depressive symptoms. Hence, there is a need to empirically examine the roles of perceived stress and perceived social support in depressive symptoms among undergraduates.

Depression is a common global health problem that causes severe impairments in cognitive and social functioning, including reduced executive and memory functions, difficulty concentrating, and social withdrawal (Rock *et al.*, 2014). Depression is one of the leading causes of disability, affecting approximately 9% of men and 17% of women in Europe (World Health Organisation, 2016). Zhou *et al.* (2021) reported a prevalence rate of 37% among Chinese college students during the COVID-19 pandemic. Similarly, Wang *et al.* (2020) reported that depression is relatively more prevalent among college students than among the general population, with prevalence rates of 31.38% and 6%, respectively. In Nigeria, Onuoha *et al.* (2025) reported a prevalence rate of 32.5% among undergraduates of Nnamdi Azikiwe University. Individuals with severe depression are prone to insomnia, self-harm, and suicidal behaviour due to extreme psychological distress (Riemann *et al.*, 2020; Onuoha, 2024). Stress has also been identified as an underlying factor associated with depression, as overwhelming stress negatively affects mental well-being (Frajerman *et al.*, 2019; Onuoha, Obi-Nwosu *et al.*, 2025).

Stress, according to Onuoha, Umeobi, *et al.* (2024), refers to anything that threatens an individual's survival. Persistent or severe stress can result in poor quality of life, burnout, and psychological problems such as anxiety and depression (Gardani *et al.*, 2022; Onuoha *et al.*, 2025). Perceived stress, however, refers to an individual's appraisal of the level of threat posed by stressors and their ability to cope with them. Stressors are personal or environmental factors that generate stress responses, making stress an important risk factor that negatively affects mental health. High levels of perceived stress are often associated with various mental health problems (O'Connor *et al.*, 2021). Students frequently experience elevated levels of perceived stress due to academic workload, lack of leisure time, extensive learning materials, and repeated examinations in competitive environments (Bali *et al.*, 2020). Consequently, how individuals perceive their stressors can influence their emotional experiences either positively or negatively (Li *et al.*, 2021).

Perceived stress is prevalent among undergraduate students, with reported rates ranging from 31% to 63.5% among medical students (Worku *et al.*, 2020). However, the impact of perceived stress on mental well-being is complex and may be influenced by internal and external resources such as coping skills and social support (Alharbi & Smith, 2018).

Social support refers to the ways in which individuals provide assistance to one another and can generally be categorized into perceived social support and received social support (Eagle *et al.*, 2019). This distinction is important because perceived social support refers to an individual's belief that support is available and their satisfaction with such support, whereas received social support focuses on the specific supportive behaviours provided by members of one's social network (Eagle *et al.*, 2019). Lack of social support can be detrimental to mental health and may contribute to depressive symptoms (Bukhari & Afzal, 2017). Support received from family, friends, and the academic community can positively influence students' well-being and academic success (Scanlon *et al.*, 2020). Furthermore, these sources of support can enhance students' ability to cope with the challenges associated with university life (Cage *et al.*, 2021).

Undergraduates' sources of social support often change as they progress through university. They spend less time with family and existing friends, adjust to unfamiliar environments, and develop new support networks (Charalambous, 2020). Social support during the first year of study has consistently been associated with improved well-being (Brailovskaia *et al.*, 2018) and positive academic outcomes (Charalambous, 2020). Social support appears to reduce depressive symptoms and may also buffer the effects of perceived stress. Although extensive research has examined the impact of social support on depression in adult and general populations, many of these studies were conducted within Western contexts. Furthermore, studies involving university students have largely focused on medical students, which may not adequately represent the broader student population (Dafaalla *et al.*, 2016). Therefore, there is a need to examine the relationship between perceived social support and depressive symptoms among undergraduates. In addition, there is limited evidence regarding the role of perceived stress in depressive symptoms among undergraduates in South-East Nigeria. These gaps necessitated the present study, which examined the relationship between perceived stress, perceived social support, and depressive symptoms among undergraduates of Nnamdi Azikiwe University, Awka.

Conceptual Framework

Fig 1

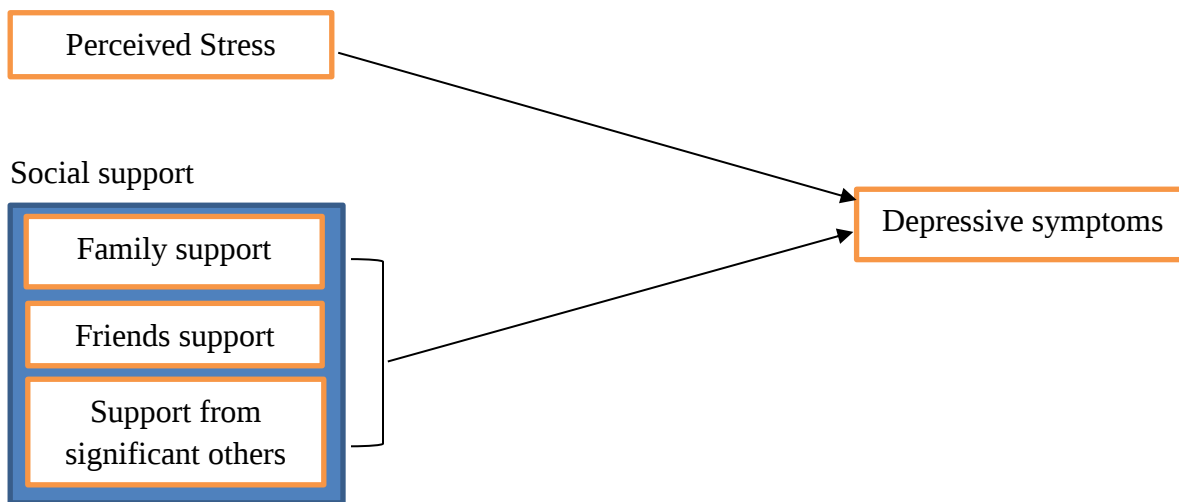


Fig 1: showed the conceptual pathways of the relationships in this study

Theoretical Framework

This study was anchored on Beck's Cognitive Theory of Depression (Beck, 1963). The theory posits that depression originates from maladaptive cognitive schemas that shape how individuals perceive themselves, their environment, and their future. According to Beck (1963), depressed individuals exhibit what he termed the cognitive triad, consisting of a negative view of the self, a negative view of the world, and a negative view of the future. These dysfunctional cognitive patterns predispose individuals to interpret experiences in a distorted and pessimistic manner, thereby increasing their vulnerability to depressive symptoms.

The central assumption of the theory is that it is not necessarily external events themselves that produce depression, but rather the individual's cognitive appraisal and interpretation of those events. Consequently, people exposed to similar circumstances may experience different psychological outcomes depending on how they perceive and process those experiences.

The present study considers perceived stress as a cognitive appraisal variable. Although stressors are inevitable components of undergraduate life, Beck's theory suggests that the extent to which students interpret these demands as threatening, overwhelming, or beyond their coping abilities determines their emotional outcomes. Undergraduates who possess negative cognitive schemas may perceive academic pressures, financial difficulties, interpersonal conflicts, and other life challenges as uncontrollable and

unbearable. Such negative appraisals are likely to intensify feelings of hopelessness, helplessness, and worthlessness, thereby increasing the risk of depressive symptoms.

Similarly, perceived social support reflects individuals' cognitive evaluations regarding the availability and adequacy of support from family, friends, and significant others. Within the framework of Beck's theory, students who hold negative cognitive beliefs may underestimate or discount available social support, thereby reinforcing feelings of loneliness, rejection, and emotional isolation. Conversely, students who perceive their social networks as supportive are more likely to develop positive interpretations of stressful experiences and maintain healthier emotional functioning. Consequently, positive perceptions of social support may weaken the influence of negative cognitive schemas and protect against depressive symptoms.

Critically, Beck's Cognitive Theory provides a unifying framework for understanding the interaction among the study variables. While perceived stress represents negative cognitive appraisals of environmental demands, perceived social support represents positive cognitive appraisals of interpersonal resources. These appraisals influence emotional responses and ultimately determine the extent to which undergraduates experience depressive symptoms. Therefore, the theory explains why higher perceived stress may be associated with increased depressive symptoms, whereas higher perceived social support may serve as a protective factor against depression.

Hypotheses

In line with the reviewed literatures, two hypotheses were postulated for this study, they are:

1. Perceived stress would positively and significantly correlate with depressive symptoms among undergraduates.
2. Social support (family, friends, and significant others support) would negatively and significantly correlate with depressive symptoms among undergraduates.

Method

Participants

The study involved 397 undergraduate students from Nnamdi Azikiwe University, Awka, Anambra State, Nigeria, who were selected using a convenience sampling method. Participants ranged in age from

18 to 26 years ($M = 20.97$, $SD = 2.12$). The sample comprised 178 males and 219 females. All participants were registered full-time undergraduate students of Nnamdi Azikiwe University.

Inclusion Criteria

Participants were eligible for inclusion if they:

1. Were aged 18 years and above;
2. Were full-time students of Nnamdi Azikiwe University;
3. Voluntarily agreed to participate in the study; and
4. Provided informed consent.

Instruments

Three instruments were used for data collection: the Beck Depression Inventory-II (BDI-II), the Perceived Stress Scale (PSS-10), and the Multidimensional Scale of Perceived Social Support (MSPSS).

Beck Depression Inventory-II (BDI-II)

Depressive symptoms were assessed using the Beck Depression Inventory-II developed by Beck *et al.* (1996). The instrument consists of 21 items rated on a 4-point scale ranging from 0 to 3, with higher scores indicating greater severity of depressive symptoms. Previous Nigerian studies have reported satisfactory reliability for the scale (Ibeneme *et al.*, 2017). In the present study, the scale demonstrated good internal consistency ($\alpha = .88$).

Perceived Stress Scale (PSS-10)

Perceived stress was measured using the 10-item Perceived Stress Scale developed by Cohen and Williamson (1988). The instrument assesses the extent to which individuals perceive situations in their lives as stressful during the previous month. Responses are rated on a 5-point scale ranging from 0 (Never) to 4 (Very often), with items 4, 5, 7, and 8 reverse scored. Previous studies among Nigerian samples reported acceptable reliability coefficients (Edmund *et al.*, 2019). In the present study, Cronbach's alpha coefficient was .76.

Multidimensional Scale of Perceived Social Support (MSPSS)

Perceived social support was assessed using the Multidimensional Scale of Perceived Social Support developed by Zimet *et al.* (1988). The scale contains 12 items measuring support from family, friends,

and significant others. Responses are rated on a 7-point Likert scale ranging from 1 (Very strongly disagree) to 7 (Very strongly agree), with higher scores indicating greater perceived social support. Previous evidence among Nigerian samples has demonstrated satisfactory psychometric properties (Adesola *et al.*, 2025). In the present study, Cronbach's alpha coefficients were .83 for family support, .96 for friend support, and .74 for support from significant others.

Procedure

The study was conducted at Nnamdi Azikiwe University, Awka, Anambra State, Nigeria. After the ethical approval for this study was obtained, the researchers selected participants for this study, using purposive sampling method; after the purpose of the study and their right to withdraw at any stage without penalty was explained to them. Those who agreed to participate signed informed consent forms before completing the questionnaires. Of the 400 questionnaires distributed, 397 were properly completed and retained for analysis.

Design and Data Analysis

The study adopted a cross-sectional correlational research design. Data were analysed using Pearson product-moment correlation analysis to examine the relationships among perceived stress, perceived social support, and depressive symptoms.

Results

Table I: Summary table of the descriptive analysis and Pearson correlation coefficients, showing the relationship among perceived stress, social support, and depressive symptoms

Variables	M	SD	1	2	3	4	5
1. Depression	11.64	10.624	-	-			
2. P S	20.31	5.625	.293**	-			
3. F S S	22.15	5.401	-.271**	-.135**	-		
4. Fr S S	18.07	6.190	-.280**	-.088	.317**	-	
5. S O S S	20.57	6.220	-.286**	-.151**	.588**	.559**	-

Note, PS = perceived stress, FSS= family social support, FrSS= friends social support, SOSS= significant others social support, and $p < .01$ level (2-tailed).

From Table 1, it was found that a positive and significant relationship existed between perceived stress and depressive symptoms among undergraduates. Hence, the first hypothesis was accepted at ($r = .29$, p

< .01). However, it was found from Table 1 that perceived social supports (family, friends, and significant others) were negatively and significantly correlated with depressive symptoms among undergraduates. As such, the second hypothesis was accepted at $r = -.27, p < .01$, $r = -.28, p < .01$, and $r = -.29, p < .01$; for family support, friends, and significant others respectively.

Discussion

This study examined the relationship between perceived stress, perceived social support, and depressive symptoms among undergraduates of Nnamdi Azikiwe University, Awka. The findings revealed that perceived stress was positively and significantly associated with depressive symptoms, whereas perceived social support from family, friends, and significant others was negatively and significantly related to depressive symptoms. These findings can be interpreted within the framework of Cognitive Theory of Depression of Beck (1963), which served as the theoretical foundation of the study.

The first finding showed that perceived stress had a positive and significant relationship with depressive symptoms among undergraduates. This implies that students who appraised their life experiences and academic demands as highly stressful were more likely to report depressive symptoms. From the perspective of Beck's Cognitive Theory of Depression, individuals do not become depressed merely because stressful events occur, but because of how they cognitively interpret and assign meaning to those events. According to Beck (1963), maladaptive cognitive schemas produce the cognitive triad of negative views about the self, the world, and the future. Consequently, undergraduates who perceive academic pressures, financial challenges, interpersonal difficulties, and uncertainties about the future as overwhelming may develop persistent negative thoughts that predispose them to depressive symptoms. Therefore, the present finding supports the proposition that cognitive appraisal serves as an important mechanism through which stress influences emotional well-being.

The finding also corroborates previous empirical studies. For instance, Acoba (2024) found that higher perceived stress significantly predicted depressive symptoms among Filipino adults. Similarly, McHugh *et al.* (2019), Liu *et al.* (2023), and Chen *et al.* (2026) reported that individuals experiencing elevated levels of perceived stress were more vulnerable to depression. However, the current study extends these findings by demonstrating that the relationship also exists among Nigerian undergraduates, a population in which empirical evidence remains relatively limited. This suggests that despite cultural and contextual differences, the cognitive processes underlying stress and depression may be universally applicable.

Furthermore, the study found that perceived social support from family, friends, and significant others was negatively associated with depressive symptoms. This indicates that students who perceived greater availability of emotional and interpersonal support experienced fewer depressive symptoms. This finding can equally be explained by Beck's Cognitive Theory of Depression. Positive social relationships may challenge negative cognitive schemas by providing reassurance, validation, and emotional security. In other words, supportive interpersonal networks may foster more adaptive interpretations of stressful experiences and reduce the tendency to engage in negative self-evaluation. Consequently, students who perceive their social environment as supportive are less likely to develop the negative cognitive triad associated with depression.

The protective role of social support observed in this study is consistent with previous empirical evidence. Acoba (2024) reported that perceived social support was associated with lower depressive symptoms. Likewise, Chao *et al.* (2018), Sandoval *et al.* (2019), Yang *et al.* (2023), and Liu *et al.* (2026) found that individuals with stronger perceived social support demonstrated better psychological outcomes and lower levels of depression. These findings reinforce the notion that social support functions as a psychological resource that buffers individuals against emotional distress.

Critically, the findings of this study suggest that Beck's Cognitive Theory of Depression provides a useful explanation for understanding depressive symptoms among undergraduates; however, the theory may not fully account for the social and environmental dimensions highlighted in the present findings. While the theory emphasizes internal cognitive processes, the significant role of perceived social support observed in this study indicates that external interpersonal factors also contribute substantially to mental health outcomes. Thus, depressive symptoms among undergraduates appear to result from the interaction between cognitive appraisals and environmental resources. This implies that cognitive explanations alone may be insufficient, and integrating Beck's theory with social support perspectives could provide a more comprehensive understanding of depression among university students.

Overall, the findings validate the relevance of Beck's Cognitive Theory of Depression within the Nigerian university context. They suggest that interventions aimed at reducing depressive symptoms among undergraduates should focus not only on modifying maladaptive cognitions and stress appraisals but also on strengthening supportive social networks. Such an approach may enhance students' resilience and promote better psychological well-being.

Implications of the study

1. Theoretically, the findings of this study could be used to further elaborate the theoretical framework of the study (cognitive theory of depression by Beck 1963) since perception is a cognitive factor, and the increase in negative cognition, reflect negative perception, resulting to depressive symptoms among undergraduates.
2. The research outcome implies that perceived stress and perceived social support are among the factors that could engenders depressive symptoms among undergraduates.
3. It also means that the enhancement of positive social support among undergraduates could be used by management of tertiary institutions to cub high rate of depression among undergraduates.

Recommendation

Based on the research findings, the researchers recommends as follows:

1. That mental health professionals and school psychologist should probe for perceived stress and perceived social support when dealing with depressive symptoms among undergraduates. More so, it is important for school psychologist to be proactive in treatment plans that would enhance positive cognitive appraisal among undergraduates. Thus, enhancing positive mental schema.
2. Stakeholder and management of institutions should implement, and promote programs that foster positive social support among students; such as peer mentoring, support groups, and community-building activities.

Conclusion

This study explored the association among perceived stress, perceived social support, and depressive symptoms involving undergraduates of Nnamdi Azikiwe University Awka. Participants were selected using purposive sampling method, and the data collected were analysed with Pearson Product Moment Statistic. From the outcome of the research, it was conveyed that the study variables (perceived stress and perceived social supports) were among the significant factors associated with undergraduate depressive symptoms. However, perceived stress had a positive implication that could increase undergraduates' chances of developing depressive symptoms; while positive perception of undergraduates' social support serves as insulator that could shield them from developing depressive symptoms.

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