

ABSTRACT

Background: Mental disorders affect approximately 15.4% of adolescents aged 15 to 19 years globally, with anxiety and depression being the most prevalent conditions. In Ghana, many Senior High School (SHS) students fall within this age group, yet evidence on their mental health, particularly in underserved regions such as the North East Region, remains limited. Psychosocial and behavioural factors are important determinants of adolescent mental health; however, their influence in this context is not well understood. This study therefore assessed the psychosocial and behavioural factors associated with the mental health of adolescents in SHS in the North East Region of Ghana.

Methodology: This study employed a cross-sectional convergent parallel mixed methods design consisting of both quantitative and qualitative components. The quantitative component consisted of a cross-sectional survey conducted among 417 adolescents aged 15 to 19 years from four randomly selected Senior High Schools across purposively selected districts in the North East Region of Ghana. The qualitative component employed a phenomenological approach to capture the lived experiences of participants, and included in-depth interviews with 20 teaching and non-teaching staff recruited through expert sampling, as well as eight focus group discussions involving 64 adolescents selected through criterion sampling. Key variables measured included social support, stress, substance use, gambling participation and harms, school-based violence, and mental health. Social support was assessed using the Multidimensional Scale of Perceived Social Support (MSPSS), stress using the Adolescent Stress Questionnaire (ASQ-14), and substance use using the CAGE Adapted to Include Drugs screening tool. Depressive and anxiety symptoms were assessed using the Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) scale, respectively. Gambling participation and harms were assessed using gambling behaviour items and the Short Gambling Harm Screen, while school-based violence was measured

using the Multidimensional Peer Victimization Scale (MPVS). Quantitative data were analysed using descriptive statistics and logistic regression in SPSS version 22, with statistical significance set at $p < 0.05$, while qualitative data were analysed thematically using NVivo 15. Findings from the quantitative and qualitative components were integrated during interpretation to provide a comprehensive and contextualised understanding of the study phenomenon.

Results: The results revealed that substance use significantly increased the odds of probable depression (AOR = 3.43, 95% CI [1.45, 8.12], $p < .001$), while stress and school-based violence were strong predictors of both anxiety (stress: $\beta = .30$, $p < .001$; violence: $\beta = .37$, $p < .001$) and depression (stress: $\beta = .35$, $p < .001$; violence: $\beta = .38$, $p < .001$). Moderate social support was protective against both anxiety (AOR = 0.48, 95% CI [0.24, 0.95], $p < .01$) and depression (AOR = 0.44, 95% CI [0.21, 0.91], $p < .01$); whereas high social support did not confer consistent protective effects against anxiety (AOR = 0.84) and depression (AOR = 1.48). Low gambling exposure was associated with nearly six times higher odds of anxiety (cOR = 5.915, $p = .001$), and moderate gambling with four times higher odds (cOR = 4.157, $p = .012$) of anxiety, while high gambling participation appeared protective against anxiety. Qualitative findings underscored normalization of gambling, peer-driven substance use, and weak teacher engagement as key drivers of adolescent risk behaviours.

Conclusions: Adolescent mental health in Senior High Schools in the North East Region of Ghana is shaped by modifiable psychosocial and behavioural conditions within the school and social environment. Addressing substance use, reducing exposure to violence, and strengthening supportive relationships within schools and families are critical priorities. School based mental health promotion and prevention strategies, alongside stronger student support systems and teacher engagement, are essential to improve mental health and overall wellbeing among adolescents.