

UNIVERSITY OF GHANA



DEPARTMENT OF PSYCHOLOGY

**SUICIDAL BEHAVIOURS AMONG SCHOOL-GOING BLIND
ADOLESCENTS IN GHANA**

BY

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DECLARATION

I, Rose Nana Akyere Bentil, hereby declare that, except for references to other people's work, which have been duly acknowledged, this dissertation is the outcome of my independent research conducted at the Department of Psychology, University of Ghana, Legon, under the supervision of Dr. Johnny Andoh-Arthur and Prof. Emmanuel Nii-Boye Quarshie. I, therefore, declare that this thesis has neither in part nor in whole been presented to any other institution for an academic award.



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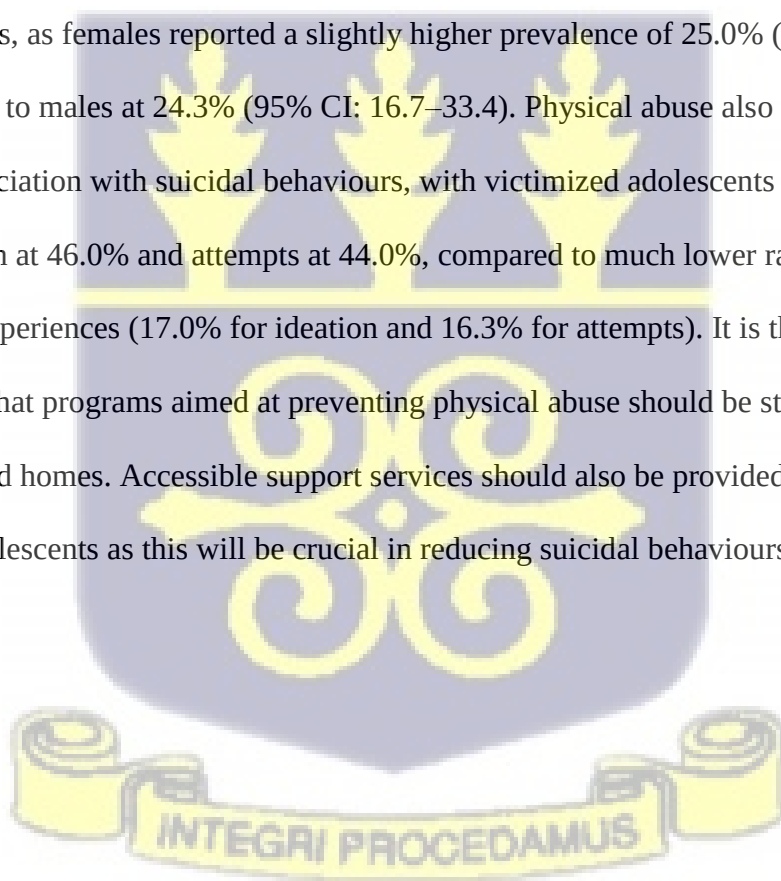
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ABSTRACT

This study examined suicidal behaviours among school-going blind adolescents in Ghana. Specifically, the study aimed to estimate the 12-month prevalence, associated factors, reasons for living, and motivations for suicidal behaviours among school-going blind adolescents in Ghana. The study employed a researcher-administered questionnaire-based cross-sectional survey approach. The theoretical framework adopted for the study was the Ecological System theory. Data were collected at the Akropong School for the Blind in the Eastern Region of Ghana. The study involved a sample of 191 school-going blind adolescents. Bivariate and multivariable data analyses were performed. The prevalence of suicidal ideation in the overall sample was 24.6% (95% CI: 18.7–31.3). There were no statistically significant differences between genders, as females reported a slightly higher prevalence of 25.0% (95% CI: 16.0–36.0) compared to males at 24.3% (95% CI: 16.7–33.4). Physical abuse also showed a significant association with suicidal behaviours, with victimized adolescents reporting suicidal ideation at 46.0% and attempts at 44.0%, compared to much lower rates among those without such experiences (17.0% for ideation and 16.3% for attempts). It is therefore recommended that programs aimed at preventing physical abuse should be strengthened in both schools and homes. Accessible support services should also be provided for school-going blind adolescents as this will be crucial in reducing suicidal behaviours.



DEDICATION

I dedicate this work to God and my family, most especially my father Mr. Samuel Kodwo Bentil who has always believed in my capabilities and harnessed my passion. Thank you for the motivation and support Daddy.



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My first appreciation goes to God Almighty for granting me the grace, wisdom, health and might to successfully complete this work. I thank my family for always seeing my strengths and pushing me to attain higher heights.

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God bless you all graciously.

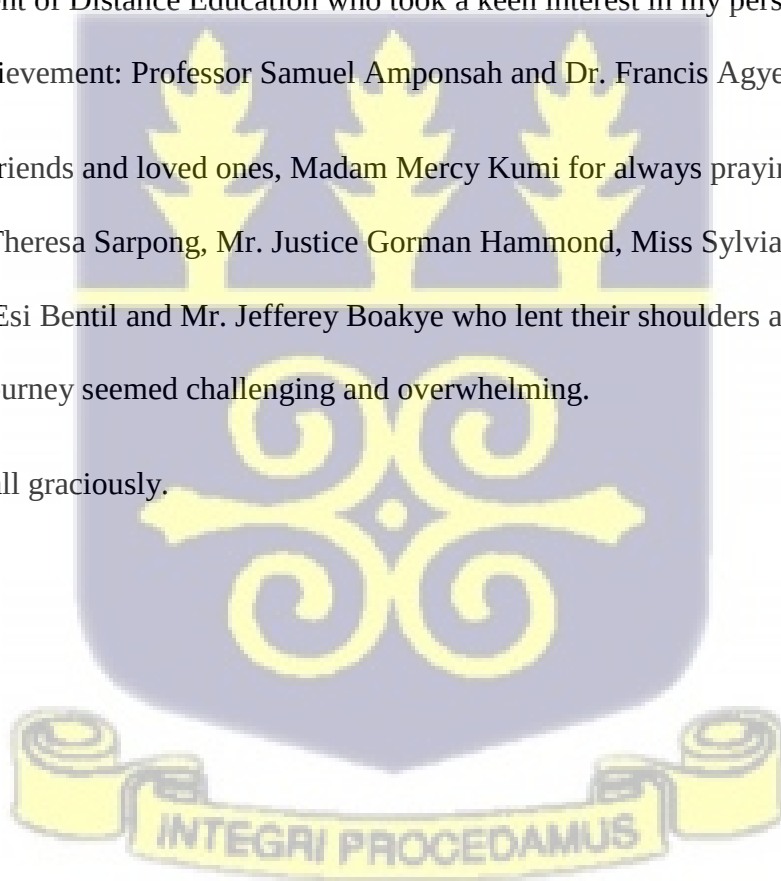
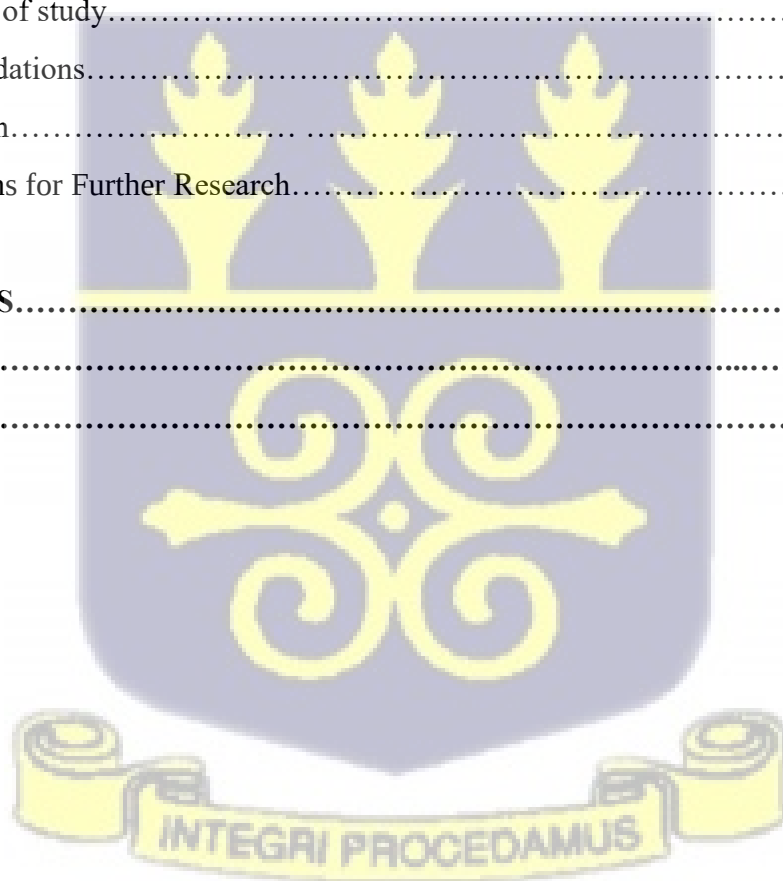


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LIST OF ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
BRFL-A	Brief Reasons for Living Inventory for Adolescents
ECH	Ethics Committee for Humanities
FEP	First Episode of Psychosis
FS	Fear of Suicide
FSD	Fear of Social Disapproval
GSS	Ghana Statistical Service
HC	Healthy Control
HICs	High-Income Countries.
HIV	Human Immunodeficiency Virus
IPTS	Interpersonal-Psychological Theory of Suicide
LDs	Learning Disabilities
LAMICs	Low and Middle-Income countries
MNSDs	Mental and neurological disorders
MO	Moral Objectives
OR	Odds Ratio
PTSD	Posttraumatic Stress Disorder
RF	Responsibility to Family
SBQ-R	Suicidal Behaviour Questionnaire-Revised
SCB	Survival and Coping Beliefs
SPSS	Statistical Package for the Social Sciences Software
TBI	Traumatic Brain Injury
WHO	World Health Organization
WHO-GSHS	World Health Organization Global School-based Student Health Survey

CHAPTER ONE

INTRODUCTION

1.0 Introduction

The issue of adolescent suicide recent years has gained increasing attention as a global public health crisis. Among the most vulnerable groups are adolescents with disabilities, particularly those who are blind (Liu & Wang, 2024). In many societies, including Ghana, these young individuals often face compounded challenges, from social isolation and discrimination to limited access to education and mental health resources. The situation is further exacerbated by the lack of targeted research and interventions addressing the specific needs of this population. This study seeks to explore the suicidal behaviours among school-going blind adolescents in Ghana, a demography that has largely been neglected in both academic research and public policy (Quarshie et al., 2022). By focusing on this group, the research aims to fill a critical gap in the literature and provide insights that could inform future interventions. Understanding the unique factors that contribute to suicidal ideation and behaviour in blind adolescents is essential for developing effective prevention strategies and supporting their mental health and well-being.

1.1 Background of the Study

Suicide has become one of the emerging global “pandemics” in our world today among young persons aged 10 -25 years (Niederkrötenhaler et al., 2020) has been ranked the third leading cause of death among adolescents and young adults (ages 15-24 years) and the second leading cause of death among persons between the ages of 10-19 years globally with 79% of this global number being cases from Low and Middle-Income countries (Campisi et al., 2020). Glenn et al. (2020) also reports that approximately 4 out of 100,000 young people in the world between the ages of 10 and 19 take their lives each year. These numbers indicate

that suicidal behaviours among adolescents and young people is a significant public health problem worldwide requiring public health initiatives in its prevention. It also indicates that suicide is a worldwide phenomenon that affects all countries of the world, and not simply a problem in High-Income Nations (Ilic & Ilic, 2022).

Suicidal behaviour, according to the World Health Organization (WHO), is "a range of behaviours that include thinking about suicide (or ideation), planning for suicide, trying to kill oneself, and the suicide itself " (WHO, 2014). Suicidal ideation, planning, and (repeated) attempts all pose significant risks for suicide in the general population (Demesmaeker et al., 2022; Fazel & Runeson, 2020; WHO, 2014). Again, suicidal thinking and planning in adolescents increase the chance of suicide attempts. It has been observed that the single highest risk factor for suicide death is a history of attempted suicide. Currently, there is also a dearth of national-level statistics on suicidal thought, planning, and attempts, as well as their associated factors to assist research-informed intervention and preventive initiatives and programs, particularly in LMICs, including those in Africa (Quarshie, Dey, & Oppong Asante, 2023).

There are several critical factors for suicidal mortality across all age groups in the general population. These include alcohol or other drug misuse, physical illness and chronic pain, Hopelessness, aggressiveness, mental illness, particularly clinical depression (Klonsky et al., 2016; Turecki et al., 2019; WHO, 2014). Suicidal behaviours, especially suicide ideation is linked to elevated risk of suicide cases. Thus, people with a history of suicidal ideation are more likely to die by suicide, regardless of their age or gender (Quarshie, 2023). The prevalence of suicide among adolescents and young people is a complicated issue, which arises usually as a result of several factors. These factors encompass mental health issues, social and economic considerations, life events, cultural and religious beliefs (WHO, 2021).

In sub-Saharan Africa, suicide continues to be one of the 12 leading causes of death among young people age 10-25 (Naghavi and Global Burden of Disease Self-Harm Collaborators, 2019; Quarshie, 2023). A variety of factors are linked to suicidal thought, planning, and attempt among school-going adolescents. Various studies show that suicidal behaviour is a complicated phenomenon in sub-Saharan Africa just as it is globally (Klonsky et al., 2016; Nock et al., 2008; Turecki et al., 2019; WHO, 2014). Suicidal behaviour is also multifaceted, existing at personal/ individual level (e.g. female gender, depression, alcohol and substance use), family context (e.g. parental understanding, parental divorce, conflict with parents, parental involvement), school (e.g. schoolwork problems, bullying victimization, physical abuse) and other social relationship contextual factors such as peer influence, break-up, and sexual abuse victimization (Biswas et al., 2020; Campisi et al., 2020; Quarshie et al., 2020; Quarshie et al., 2021).

In addition, suicides may occur due to failure in coping with life's challenges such as financial instability, disruption in interpersonal relationships, sexual abuse and victimization, chronic pain, and diseases (Quarshie et al., 2021). For instance, during the period of adolescence, young people begin to identify themselves sexually and crave for some level of independence that often conflicts with the rules and expectations set by others, especially their close superiors. There is also pressure to fit in socially, to perform academically, and to act responsibly. All these culminate in intense stress and worry which makes them sometimes have suicidal thoughts (Cammarata, 2020).

A subgroup of teenagers who are more vulnerable to suicide are those with disabilities (Graham et al., 2017). There is rising concern across the world that there is minimum attention given to young people with disabilities, particularly those living in LAMICs. The World Health Organization (WHO, 2015) captures disability as a universal term for impairments, activity limitations and participation restrictions. These include blindness,

deafness, cerebral palsy, down syndrome, autism, attention deficit hyperactivity disorder (ADHD), multiple disabilities, speech and language impairments. It also captures persons who have experienced challenges in functioning at some point in their lives either directly or indirectly (WHO, 2015).

Globally, there are over 240 million youth with disabilities and nearly 80% of them live in developing countries (UNICEF, 2021). In addition, one in twenty people under the age of 15 have a moderate or severe disability (WHO, 2022). The World Health Organization (WHO, 2021) also reported that at least 2.2 billion people globally suffer from a near- or distant blindness. More than 90% of these blind people reside in developing nations, and this geographic discrepancy may be explained by a higher prevalence of illnesses linked to poverty, the environment, or limited access to health care (Naipal & Rampersad, 2018). In Ghana, the statistics from the 2021 population and housing census show that there are over 2 million persons who live with disability, and this translates to 8% of the population (Ghana Statistical Service, 2021).

The presence of sensory impairment particularly blindness is one likely contributor to suicide risk. Difficulty in seeing according to Ghana Statistical Service (2021) refers to “challenges or problems faced by a person in perceiving, observing what is happening around him/her, or seeing even when wearing glasses or contact lenses”. Osafo et al. (2015) pointed out that suicide among adolescents is a growing public health problem in Ghana. They indicated that this stems from the lack of consideration given to the interests and welfare of persons with disability in national choices. This situation, coupled with the societal discrimination they face daily, negatively affects their overall well-being and mental health (Wayo, 2022). All these tendencies can lead to suicide attempts.

1.2 Problem Statement

In Ghana, persons especially adolescents with functional disabilities face some level of stigma and discrimination, posing as a major barrier which prevents them from equitably accessing health and social opportunities (Sightsavers, 2022). This discrimination and stigma make these adolescents who are still in their formative years susceptible to increased risk of attempted suicide, suicide and other emotional and behavioural problems (Milner et al., 2019; Moses, 2018; Quarshie et al., 2021; Stevenson et al., 2015). This stems from the fact that they have to deal with the usual challenges of adolescence as well as the several difficulties associated with their disability (Nagraj & Omar, 2015).

However, Quarshie et al. (2021) note that in spite of all these, little attention has been paid to young people with disabilities not only in Ghana but most Low- and Middle-income countries. For instance, in Ghana, few studies have assessed the factors that are associated with suicidal behaviours in Ghana (Baiden et al., 2018; Oppong et al., 2017; Oppong-Asante & Meyer-Weitz, 2017; Quarshie & Andoh-Arthur, 2020). As a result of this, research from high-income nations are usually used as the basis of what is known about adolescent suicide behaviours in low- and middle-income countries (Aggarwal et al., 2017; Biswas et al., 2020; Glenn et al., 2020; Lim et al., 2019; Quarshie et al., 2020). These evidence highlights the significance of suicidal thinking, planning, and attempt as major research areas to guide suicide intervention and prevention efforts. Thus, more studies must be done on suicide ideation, especially in low-income and middle-income nations among young people who are particularly vulnerable groups to fill the knowledge gap.

Additionally, since suicide-related deaths has been given special priority in the sustainable development goals (goal 4 and 8), it is important to contribute sound and timely

research evidence, particularly, among young vulnerable groups such as blind adolescents in LAMICs to inform intervention and prevention efforts.

This research, therefore, seeks to study blind adolescents with suicidal behaviours. It is critical public health research that will help in identifying risk factors, understanding unique challenges, promoting inclusion and diversity and improving suicide prevention strategies to curtail the global prevalence of elevated risk of suicide ideation and suicide attempts as linked to blindness.

1.3 Aim and Objectives

The aim of the study is to examine suicidal behaviours among school-going blind adolescents in Ghana. In this study, the term suicidal behaviours are taken to mean suicidal ideation and suicidal attempt. The Specific objectives are:

1. To estimate the 12-month prevalence of suicidal behaviours among school-going blind young adolescents in Ghana.
2. To investigate the individual, familial, school and interpersonal factors associated with suicidal behaviours among school-going blind adolescents in Ghana.
3. To explore reasons for living among school-going blind young people in Ghana.
4. To examine motivations for engaging in suicidal behaviours among school-going blind young people in Ghana.

1.4 Research Questions

These research questions directly align with the four objectives of the study and will guide the investigation into the factors and experiences of blind adolescents in relation to suicidal behaviours.

1. What is the 12-month prevalence of suicidal behaviours among school-going blind adolescents in Ghana?
2. What individual, familial, school, and interpersonal factors are associated with suicidal behaviours among school-going blind adolescents in Ghana?
3. What are the reasons for living among school-going blind adolescents in Ghana?
4. What are the motivations for engaging in suicidal behaviours among school-going blind adolescents in Ghana?

1.5 Relevance of Study

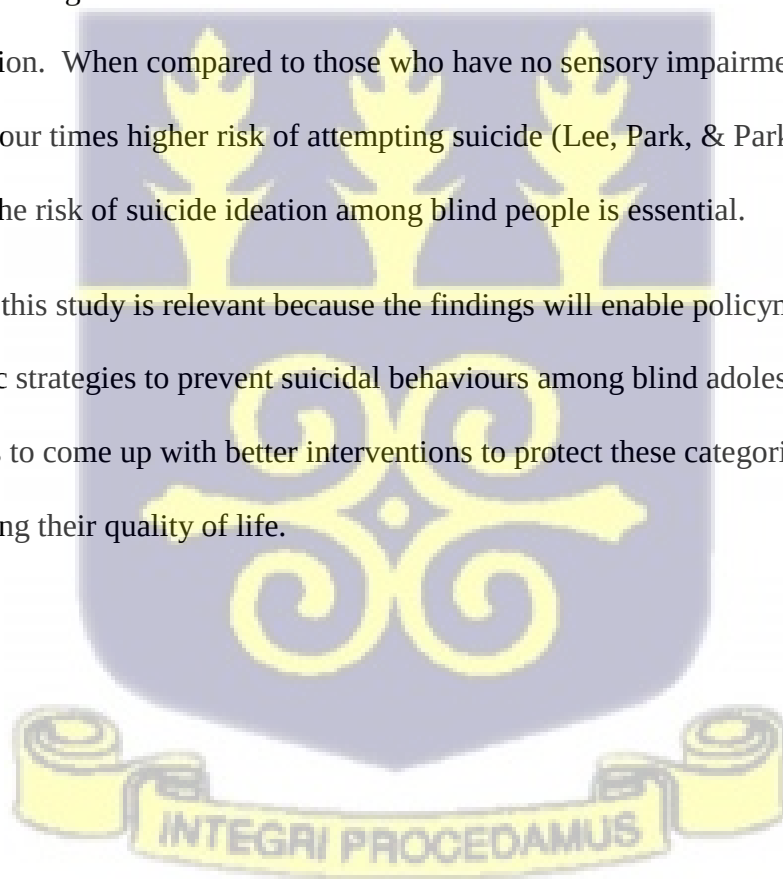
The concept of disability, which encompasses a wide range of terminology in the field of psychology, has been a challenging subject of study for much of the twentieth century and the early part of the twenty-first century (Álvarez-Delgado et al., 2020). The main areas of study regarding people with disabilities are usually centered on the general and various types of disabilities, such as physical, intellectual, and learning difficulties etc. For example, Jones et al. (2012) observed that people with disabilities are more likely to encounter violence and prejudice. Nagraj and Omar, (2015) also identified that individuals with physical disabilities are more likely to have drug use issues, mental disorders and suicide risk as compared to those without physical disabilities.

Other studies have also been done on the impact of disability on the family. Key among these studies is the coping and adjustments styles of parents, siblings and other family members as well as caregivers to disability and the impact of intellectual disability on the psychological health of close relationships (Anum, 2011; Mbwilo, Smide & Aarts, 2010; Vidyasagar & Koshy, 2010). However, few studies have assessed the factors that are associated with suicidal behaviours among persons with disability especially young people in Ghana. Among such is the study by Quarshie et al. (2021) which focuses on deaf adolescents. The study found that the key challenges facing adolescents with sensory impairment in

Ghana include poor access to professional health care and a lack of braille and other communication aids, such as sign interpreters. This study will therefore augment the available study on sensory impairment in Ghana, focusing on blind adolescents.

Furthermore, this study sheds light on the factors associated with suicidal behaviours among the blind as well as predictors of suicidal behaviour. It will also bring more insight into the reasons for living as well as the motivations for engaging in suicidal behaviours among school-going blind adolescents. This is because there is a relationship between suicidal ideation (SI) and behaviours associated with suicide attempts (Rajeshkannan et al., 2022). This suggests that young people with sensory impairments regularly experience psychosocial challenges and outcomes that are known to elevate the risk of suicide in the general population. When compared to those who have no sensory impairment, persons who are blind have four times higher risk of attempting suicide (Lee, Park, & Park, 2022). Thus, understanding the risk of suicide ideation among blind people is essential.

Finally, this study is relevant because the findings will enable policymakers to develop specific strategies to prevent suicidal behaviours among blind adolescents. It will also aid schools to come up with better interventions to protect these categories of people as well as improving their quality of life.



CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the theoretical framework of the study. It also provides a thorough review of the relevant literature on suicidal behaviours among blind adolescents as well as reviews of related studies that are relevant to the objectives of the study.

2.2 Theoretical Framework

The Ecological System theory was used to conceptualize this study. This theory provides a comprehensive framework for understanding the complex interplay between individual and environmental factors that contribute to suicidal behaviours among blind adolescents. The ecological systems theory was chosen as the theory underpinning this study because it has been found to be relevant in understanding adolescent suicidal behaviours (Hirsch & Cukrowicz, 2014; Perkins & Hartless, 2002; Pfladderer, Burns, & Brusseau, 2019). It is also recommended by the World Health Organization for the study of factors related to suicidal behaviours (WHO, 2014).

2.2.1 The Ecological Systems Theory

The ecological systems theory as propounded by Bronfenbrenner (1993) posits that the development phase of a child is captured within a complex system of relationships affected by multiple levels of the surrounding environment. Thus, the well-being and behavioural outcomes of a child are influenced by multiple levels of social systems that exist at the individual, familial, interpersonal, organizational, community, and societal levels (Centers for Disease Control and Prevention, 2019). Bronfenbrenner (1993) envisioned the environment as a series of interrelated, nested structures that include but also extend beyond

the home, school, and neighborhood settings in which children spend their everyday lives. In the context of blind adolescents, this theory helps explain the complex interplay of personal, relational, institutional, and societal factors that contribute to suicidal behaviours.

At the microsystem level, blind adolescents face direct challenges within their immediate environments—family, peers, and school. Academic pressure, bullying, and strained family relationships can lead to emotional distress, especially when expectations are high but support is limited (Cammarata, 2020; Nyundo et al., 2020). The mesosystem reflects the interconnections between these microsystems, such as the coordination between parents and teachers or between home and community support systems. Weak linkages here can result in fragmented care and increased vulnerability.

The exosystem includes indirect influences such as parental stress, school policies, and access to mental health services. For blind adolescents, inaccessible infrastructure and limited psychosocial support can exacerbate feelings of helplessness (Centers for Disease Control and Prevention [CDC], 2019). The macro system encompasses broader cultural and societal norms. Stigma around disability, gender-based violence, and systemic neglect—especially in rural or underserved areas—can deepen isolation and hopelessness (Kinyanda et al., 2011; Rudatsikira et al., 2007; Shilubane et al., 2014). Finally, the chronosystem captures life transitions and historical events. Adolescence itself is a turbulent phase, and experiences like orphan hood, trauma, or abuse can have lasting psychological effects (Lin & Guo, 2024; Liu & Wang, 2024).

This ecological approach aligns with recent studies from sub-Saharan Africa, which identify factors such as bullying, depression, financial hardship, and exposure to violence as key predictors of suicidal ideation. By mapping these constructs onto Bronfenbrenner's

framework, the study emphasizes the need for holistic, multi-level interventions that address the unique vulnerabilities of blind adolescents across all layers of their environment.

2.3 Empirical Review

This sub-section presents empirical studies that have delved into the realms of suicidal attempts, planning, and ideation among adolescents, shedding light on the complex interplay of factors that contribute to these distressing phenomena. It cuts across different populations, people with disabilities as well as blind persons.

2.3.1 Prevalence of Suicidal Behaviours Among Adolescents

Several scholars posit that the 12-month prevalence estimates of adolescent suicidal behaviour in low and middle-income countries are higher in the African region (Biswas et al., 2020; Li et al., 2021; Quarshie et al., 2023; Uddin et al., 2019). These estimates are also in tandem with evidence from pooled regional rates based on published data from the World Health Organization Global School-based Student Health Survey (WHO-GSHS). In Ghana, there are no official national statistics on suicide, however, various research suggests that the act is a major public health issue. For instance, Quarshie et al. (2021) also investigated adolescent suicidal behaviour in Namibia using a cross-sectional study of prevalence and correlates among 3,152 school learners aged 12–17 years. The study revealed comparable estimates of suicide behaviour in boys and girls, with about 2 in 10 adolescent boys and girls reporting suicidal ideation, planning, or attempt in the previous 12 months. An average of one in twenty students reported attempting suicide more than once within the past 12 months of the study.

Also, Oppong Asante et al. (2021) conducted a study to explore the 12-month prevalence, performing bivariable and multivariable analyses to assess the correlates of suicidal behaviours amongst school-going adolescents in post-conflict Sierra Leone. The

findings of the research showed that the prevalence estimates highlighted suicide ideations and attempts as significant mental health outcomes among school-aged adolescents in post-conflict Sierra Leone. Using 2,798 analytic samples, they observed that 14.6% (males = 15.1%, females = 14.0%) reported suicidal ideation, and the 12-month prevalence estimate of suicide attempts was 19.6% (males = 20.9%, females = 17.8%).

Furthermore, Shirima et al. (2023) examined suicidal attempts among school-going adolescents in Kilimanjaro Region, Northern Tanzania to determine the prevalence and factors associated with suicide attempts among secondary school-going adolescents in the Kilimanjaro region, northern Tanzania. The study found that secondary school-going students in the Kilimanjaro region of northern Tanzania frequently attempt suicide. Similarly, research by Quarshie et al. (2021) which sought to estimate the 12-month prevalence and identify some of the correlates of suicide behaviours among school-going adolescents in Eswatini, disclosed that within the past 12 months of the study, nearly 1.7 in 10 participants reported suicidal ideation, 1 in 5 reported suicidal planning, and about 1.5 out of 10 participants attempted suicide.

Oppong Asante et al. (2017) conducted a study on the prevalence and correlates of suicidal behaviours (ideation, plan and attempt) among adolescents in senior high schools which was aimed at exploring the prevalence risk and protective factors associated with suicide in Ghana. The finding of the study showed that the prevalence of suicidal behaviours was 18.2%, 22.5% and 22.2% for suicidal ideation, suicidal plan and suicidal attempt, respectively, among senior high school adolescents in Ghana.

Similarly, a study conducted by Oppong Asante and Meyer-Weitz (2017) showed that suicidal thoughts were linked to being physically assaulted, robbed, and weapon-assaulted whereas a suicide attempt was linked to having been both robbed and physically assaulted.

In Nigeria, Adewuya and Oladipo (2019) conducted a study which estimated the current (1 month) prevalence and associated factors of suicidal behaviours (ideation, planning, and attempt) amongst secondary school adolescents in Lagos with a total of 9441 adolescents. At the end of the study, it was assessed that suicidal behaviours were prevalent among secondary school adolescents in Lagos, Nigeria. Likewise, a study by Omigbodun et al. (2008) revealed that suicidal ideation and attempts are at the highest prevalence for young persons. Additionally, Adeyemo et al. (2019) identified that suicidal thoughts are a significant comorbidity in adolescents with HIV in South-western Nigeria. This study showed that HIV is a reliable indicator of both attempted and successful suicide in this population.

In addition, Dema et al. (2019) in Bhutan, conducted a study on Suicidal ideation and attempt among school-going adolescents with a sample of 5809 to determine the prevalence and factors associated with self-reported suicidal behaviour (suicidal ideation and attempt) among school going adolescents (13–17 years). The study concluded that during the previous year, a total of 667 adolescents admitted to considering suicide attempt whereas 656 reported attempting suicide. This indicated that many adolescents experienced distressing thoughts and engaged in self-harmful behaviours.

In conclusion, these studies provide evidences that suicidal behaviours are prevalent in adolescents. These behaviours are influenced by associated factors such as physical abuse or assault and gender disparities.

2.3.2 Factors associated with suicidal behaviours

Suicidal behaviours, such as contemplating suicide or actually attempting it, can be influenced by a variety of elements that affect a person's emotional and mental health. Several studies have been conducted to ascertain what makes people want to kill themselves or consider attempting suicide. Some of these factors are intrapersonal factors such as

substance use and abuse (cigarette smoking, marijuana use, tobacco and alcohol intake), psychosocial factors like job insecurity, food scarcity and interpersonal factors like bullying victimization or harassment, depression, anxiety, loneliness and parental intrusion of privacy, sexual abuse and lack of parental understanding (Cardoso et al., 2017; Milner et al., 2016; Peprah et al., 2023; Putra et al., 2019; Quarshie et al., 2020).

In Nepal, a study conducted by Pandey et al. (2019) identified a high burden of suicidal ideation and suicidal attempts among adolescent students in the country. The study found that factors such as anxiety, loneliness, truancy, and cigarette usage were associated with suicidal attempt whereas food insecurity, anxiety and loneliness were associated with suicidal ideation. In Ghana, Aboagye et al. (2021) examined the prevalence and correlates of bullying victimization among in-school adolescents in Ghana using the 2012 GSHS data and found that adolescents with a history of suicide attempts were more likely to be bullied. This has also been confirmed in the works of Smith et al. (2021) and Iyanda et al (2022). Similarly, Peprah et al. (2023) investigated the association between bullying and suicidal behaviour among school-going adolescents. They examined the link between bullying and suicidal behaviour. The results showed that among school-going adolescents, bullying is significantly linked to suicide behaviour.

After exploring the onset, characteristics, and recent patterns of suicide among Ghanaian middle and high school students, Azasu and Joe (2022) found out that being worried (anxiety) has a significant influence on suicide plan and attempt. The study also found bullying as a significant factor in ideation and attempt after controlling other factors. Compared to a study in Australia by Milner et al. (2016), people with thoughts of suicide reported greater odds of repeated exposure to harassment and bullying than people who did not have suicide ideation after psychological distress was controlled. Again, the study observed that after adjusting psychological distress, those who had suicidal thoughts had

higher probabilities of reporting having experienced bullying or harassment than those who did not. Job insecurity and job control were additional factors that predicted suicidal ideation.

Another research conducted by Quarshie et al. (2020) showed that increased probabilities of suicide behaviour are linked to personal risky health behaviours and social adversities to identify the commonly reported psychosocial factors associated with suicidal behaviours (ideation, planning, and attempt) among school-going adolescents in Liberia. In effect, school-going adolescents are less likely to engage in suicide behaviour when supportive social and familial elements are present. In a broader perspective, Tetteh et al. (2021), examined marijuana use and suicidal behaviours among school-going adolescents in Africa. The study observed that among the students, marijuana use was substantially linked to suicidal behaviours (suicidal ideation, planning and repeated attempts).

Similarly, a study by Putra et al. (2019) on suicidal ideation and suicide attempt among Indonesian adolescent students which sought to identify factors associated with suicidal behaviours (suicidal ideation and suicide attempt) among Indonesian adolescents reported that the effects of the interpersonal factors (physically attacked, bullying, victimization, having no close friends, parental understanding, and having sexual intercourse) and intrapersonal actors (sex, age, loneliness, anxiety, current use of cigarettes and alcohol) differed by suicidal behaviour and sex. Multivariate results of the study indicated that bullying victimization, substance use, and physical inactivity are significantly associated with suicidal thoughts, plans, and attempts among high school students. It was also revealed that substance use (i.e., alcohol consumption and smoking) was positively associated with suicidal thoughts among senior high school adolescents and associated with suicidal plans or attempts for both JHS and SHS. However, bullying victimization was only significantly associated with suicidal attempts for JHS students and not for SHS students.

In addition, Smith et al. (2021) investigated the association of putative physical, behavioural, and social correlates with multiple suicide attempts among adolescents aged 12–15 years from 61 countries. It was also revealed that among those who attempted suicide, in the overall sample, food insecurity, smoking, alcohol consumption, cannabis use, amphetamine use, sedentary behaviour, sexual intercourse, sleep problems, loneliness, no close friends, and bullying victimization were all associated with higher odds for multiple suicide attempts, compared to single suicide attempts. However, this outcome was different with that of Pandey et al. (2019) and Page et al. (2016). In their study, food insecurity, anxiety and loneliness and job control and work uncertainty were found to be indicators of suicidal thoughts rather than attempts.

2.3.3 Demographics and Suicidal Behaviours

Demographic characteristics have been a focal point in understanding the prevalence and factors associated with suicidal behaviour among specific populations. This literature review examines key studies that have concentrated on school-going adolescents within the age range of 10 to 19 years, providing gender-specific insights into the unique challenges and vulnerabilities faced by this age group.

Many studies conducted to understand the dynamics of suicidal behaviour have focused on school-going adolescents between the ages of 10 and 19 years, revealing significant associations between demographic characteristics and suicidal outcomes. For instance, Quarshie et al. (2023) investigated suicidal behaviour among adolescents aged 12–17 years in Namibia and found that age, gender, and school grade level were significantly associated with suicidal ideation and attempts, with younger adolescents and females reporting higher vulnerability. Dema et al. (2019), in their study of adolescents aged 13–17 years, identified gender, age, and socioeconomic status as key demographic predictors,

noting that female adolescents and those from lower-income households were more likely to report suicidal thoughts and behaviours. Similarly, Quarshie and Andoh-Arthur (2020) estimated the 12-month prevalence of suicide attempts among junior high school students in Ghana and highlighted gender-specific risk factors, showing that female students were disproportionately affected, often linked to emotional distress and interpersonal challenges. Lui et al. (2018) extended this analysis across 40 low- and middle-income countries, revealing that age, gender, and regional disparities played a significant role in shaping suicidal behaviour, with girls and younger adolescents consistently reporting higher rates of suicide attempts, particularly in contexts marked by poverty, violence, and limited access to mental health services.

The dynamics of how males and female adolescents engage in suicidal behaviours are interesting to note. For instance, studies have found that bullying, whether in person or online, significantly increases the risk of suicide-related behaviours, particularly in males who may also struggle with alcohol use. Additionally, females who experience anxiety or engage in sexual activity are found to be at increased risk for suicide attempts, likely due to the emotional and social complexities surrounding these experiences (Vijayakumar, 2015). However, a study conducted by Quarshie et al. (2015) indicated that there has been an increase in reported suicide cases among adolescents in Ghana over a 15-year period with boys more likely than females to attempt and die by suicide than females. In the same survey, adolescent suicide behaviours are influenced by socioeconomic issues, low academic achievement, volatile relationships, loss of a significant person, and psychological concerns.

Again, in Ghana, Oppong Asante (2015) in his research on suicidality in street children and adolescents, observed that there was a higher proportion of females reporting suicide plans and attempts compared to males. Evans et al. (2005) also found out that most

suicidal phenomena were reported by females much more often than by males. Thus, these findings are in line with observations from other studies that females are more likely than males to have suicidal thinking and suicide plans.

When Lui et al. (2018) studied the prevalence, distribution, and associated factors of suicide attempts among young adolescents in 40 low-income and middle-income countries, it was found that the overall prevalence of suicide attempts was higher for girls than for boys. Among the suicide attempts, the proportion of suicide attempts with a plan was higher for girls than for boys. Both the prevalence of suicide attempts and the proportion of suicide attempts with a plan increased with age. However, this is not always the case across regions. For instance, when Madu and Matla, (2003) investigated the prevalence of suicidal behaviours among secondary school adolescents in the Limpopo Province, they found out at the end of the study that a higher percentage of males than females had attempted suicide.

In other demographic characteristics such as level of education and family dynamics, Koh et al. (2023), observed that suicide attempt was more likely for those who had lower educational qualifications and parental separation. The sum of their research was to investigate the prevalence of suicide planning and attempt among those with suicidal ideation and their associations with sociodemographic characteristics, mental disorders, adverse childhood events and prior suicidal behaviour. Waldrop et al. (2007), also revealed that as compared to males, suicidal thoughts and attempts were strongly correlated with family drug and alcohol issues, exposure to violence, lifelong depression, and posttraumatic stress disorder (PTSD). Similarly, a study in Kuwait by Badr (2017) aimed to determine the prevalence of suicidal behaviours (ideation, planning, and attempts) among adolescents aged 13–16, and to identify psychosocial correlates of suicidal behaviours found out in its multivariate analysis that smoking, physical violence, loneliness, being the target of bullying

at school, and having uncaring parents were all significant predictors of adolescent suicide behaviour.

In conclusion, these studies reveal that suicidal behaviours be it ideation or attempts are high among young adolescents between the ages of 10-19 in low- and middle-income countries.

2.3.4 Disability and Suicidal Behaviours

After being diagnosed with a terminal disease be it physical, emotional or intellectual, it is not surprising when a person decides to withdraw from social life, lose interest in things that were once entertaining or decide to shut down on his or her life. Disability in any form has been linked to suicidal behaviours by several scholars (Grant et al., 2023; Katta-Charles et al., 2023; Khoury et al., 2023; Newell et al., 2023; Onger et al., 2023; Villa-Badia et al., 2023).

While some studies have focused on factors that influence suicidal behaviours, others have found that disabilities can also influence suicide. For instance, a study conducted by Quarshie et al. (2021) on school-going deaf adolescents found that the majority of sociodemographic characteristics and exposure variables had statistically significant bivariate relationships with suicidal behaviours (ideation and attempt).

Similarly, a recent meta-analysis showed a significant association between suicide ideation and blindness. According to the study's findings, those who are blind have a four times higher risk of attempting suicide than those who are not impaired in any way (Rajeshkannan et al., 2022). Other studies have highlighted the possibility that some characteristics of suicide behaviour may be more common in blind people than in people who are deaf or have no sensory impairment. This is because the majority of information that we get comes through our sense of vision (Akram & Batool, 2020; Rajeshkannan et al., 2022).

Additionally, Epstein and Spirito (2009) found that adolescents with physical disabilities and health issues were considerably more likely to attempt suicide compared to those without such issues in a cross-sectional study that included 13,917 teenagers from all 50 states and the District of Columbia. Another study by Akram and Batool (2020) found that people who are blind recorded a greater rate of suicidal behaviour. In their analysis, the likelihood of blind people engaging in suicide behaviour was 1.44 times higher. In addition, the study revealed that blind people appeared to be higher on suicidal planning and attempt. They also indicated that gender, parent's monthly income, and access to therapy were assumed to play various roles in determining the participants' suicidal behaviour. It was opined that each of the three groups had diverse life experiences. Thus, suicidal behaviour was positively and significantly predicted by the parents' monthly income, along with age and the severity of the blindness. This translates that age, monthly income of the parents, and levels of severity of blind condition increase as risk of suicidal behaviour increases.

Previous studies reported positive relationship among age, severity of disability, and self-harm behaviour (Akram et al., 2017; Asante et al., 2017). These phenomena also happen among these categories of persons as a result of their unmet special needs. Majority of people with disabilities may have weak cognitive and social skills. People with disabilities may experience anxiety, sadness, self-harm, and suicidal thoughts in addition to physical illness when their families lack the knowledge and capacities to address the needs of their impairment (Ebrahim, 2012; Kim et al., 2015; Meyer-Rochow et al., 2015; Turner et al., 2007).

In a different case-control study with 294 adolescents in Canada in 1997, McBride and Siegel (1997) found that 89% of the 27 adolescents who tried to kill themselves had significant spelling and handwriting deficits that were similar to those of the adolescents with learning disabilities and that they were significantly more impaired than the non-LD

adolescents. Also, an examination of adolescents with and without learning difficulties was done in a cross-sectional study by Svetaz, Ireland and Blum (2000) with 20,780 adolescents in the United States. According to their findings, compared to their peers, those with learning difficulties had a significantly higher probability of making an attempt at suicide. Studies on adolescents that examined learning disabilities revealed that there was a significantly higher risk of suicide than adolescents without such disabilities (Nagraj & Omar, 2015).

Factors measured at the family level revealed that a history of suicide attempts or completions by a family member was associated with increased risk for a person to be suicidal. Among school factors, a history of having repeated a grade and a history of trouble in school (both of which were more common among youth with LDs) were each associated with increased risk of suicidal behaviours. Newell et al. (2023) conducted a systematic review and meta-analysis of suicidality in autistic and possibly autistic people without co-occurring intellectual disability. They found out that without co-occurring intellectual disabilities, suicidality is relatively prevalent in autistic people, and attempts at suicide in adults are frequently accompanied by high levels of autistic features. Another research by (Ongeri et al., 2023) also showed that there lies a relationship between suicidal behaviour and mental and neurological disorders (MNSDs) in low and middle-income countries (LMICs), and the link is stronger for depressive disorder there than it has been in High Income Countries (HICs).

2.3.5 Mental Health Disorders and suicide

The intersection of mental health disorders and suicide remains a pivotal area of research, shedding light on the complex interplay between psychological well-being and the gravely concerning phenomenon of suicide. This section examines several cross-sectional studies that delve into the intricate dynamics of mental health disorders and suicidal behaviours,

revealing insights into the prevalence, risk factors, and underlying complexities. A cross-sectional study by Khoury et al. (2023) at an urban dialysis unit revealed that patients had an alarmingly high rates of depression, anxiety, PTSD, suicidality, and cognitive impairment. However, even though some had passive death wishes and suicide plans, no one had attempted suicide. Also, a study by Katta-Charles et al. (2023) showed that the relationships between predictors and outcomes related to mental health were similar before and during the post-Covid-19 pandemic. Thus, there were no appreciable variations in depression, anxiety, or suicidal ideation. The study draws attention to the persistently high rates of anxiety, sadness, and suicidal thoughts among traumatic brain injury (TBI) patients.

Villa-Badia et al. (2023) also conducted a study which aimed to explore suicidal behaviour and its most relevant factors in a population with first episode of psychosis (FEP) and a healthy control (HC) sample and also to compare suicidal behaviour between males and females. The study found out that patients demonstrated greater levels of suicidal thoughts, suicide attempts, suicide risk, and overall scores in the Plutchik Suicide Risk Scale as compared to healthy controls, which is generally consistent with prior findings. Furthermore, another study by Koh et al. (2023) highlighted that suicide planning was more likely among those who had mood disorders while suicide attempt was more likely for those had history of anxiety disorders and emotional neglect.

Taken together, these reviewed studies emphasize the correlation between disability, particularly terminal illnesses and mental/neurological disorders, and an increased risk of suicidal behaviour. It highlights that individuals who are facing terminal diseases or living with various forms of disability, including autism and mental/neurological disorders, often experience heightened feelings of despair, isolation, and hopelessness. The studies cited underscore the prevalence of suicidal tendencies among these individuals and points out the need for understanding and addressing the emotional and psychological challenges they face.

Moreover, they also draw attention to the differences in the impact of mental disorders on suicidal behaviour between low/middle-income countries and high-income countries, suggesting that socioeconomic factors might play a role in shaping these tendencies. Overall, the emphasis is on recognizing the intersection of disability and mental health and the importance of providing appropriate support and interventions to mitigate the risk of suicide among affected individuals.

2.3.6 The Role of Social Support and Family Dynamics

Research has consistently shown that strong social support and positive family dynamics are protective factors against suicidal behaviours. A longitudinal study by Olfson et al. (2021) found that adolescents who reported high levels of family support were significantly less likely to engage in suicidal behaviours, even when controlling for other risk factors, such as depression and substance use. The study highlighted the role of open communication, emotional support, and family cohesion in mitigating the risk of suicide. In contrast, studies have also shown that family dysfunction, such as parental conflict, divorce, and abuse, significantly increases the risk of suicidal behaviours. A study by Liu and Tein (2015) found that adolescents from divorced families were more likely to report suicidal ideation and attempts, particularly when they experienced ongoing conflict between their parents. This suggests that interventions aimed at improving family dynamics could be a crucial component of suicide prevention strategies.

2.3.7 Cultural and Societal Influences on Suicidal Behaviours

Cultural and societal factors play a significant role in shaping attitudes towards suicide and influencing the prevalence of suicidal behaviours. In many LMICs, including Ghana, cultural stigmas surrounding mental health and disability often prevent individuals from seeking help, exacerbating their risk of suicide. A study by Osafo et al. (2015) found that negative cultural

attitudes towards mental illness in Ghana contributed to the underreporting of suicidal behaviours and hindered access to mental health services. Moreover, societal factors such as poverty, unemployment, and lack of access to education and healthcare further exacerbate the risk of suicide. A study by Patel et al. (2018) in India found that adolescents from low-income families were significantly more likely to report suicidal ideation and attempts, highlighting the need for targeted interventions that address the broader social determinants of health.



CHAPTER THREE

METHODS

3.1 Introduction

This chapter provides information on the research methodology used in examining suicidal behaviours among school-going blind adolescents. This study was designed and reported following the community-adopted guidelines of Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) (Vandenbroucke et al., 2007).

3.2 Study Design

This study employed a cross-sectional survey design to quantitatively examine the prevalence, factors, reason for living, and motivations associated with suicidal behaviours among school-going blind adolescents in Ghana. Cross-sectional design is particularly effective for this research as it allows for the collection of data at a single point in time, providing a snapshot of the current prevalence and associated factors of suicidal ideation and behaviours within the target population (Adeyemo et al., 2019). This design enables the identification of relationships between key variables, such as demographic characteristics, individual, familial influences, interpersonal and school-related factors, and their association with suicidal behaviours.

The study utilized structured questionnaires to collect data from a representative sample of school-going blind adolescents. These questionnaires included standardized scales and items designed to measure various aspects of suicidal behaviours, such as ideation and attempts, as well as associated factors like family dynamics, social support, and mental health status. The use of standardized instruments ensures the reliability and validity of the data, allowing for robust statistical analysis. The quantitative approach is central to this research, as it allows for the systematic measurement and analysis of variables, facilitating the

identification of significant predictors of suicidal behaviours. Statistical methods such as descriptive statistics, correlation analysis, and multivariable regression models were employed to analyse the data, providing insights into the factors that contribute to suicidal behaviours among blind adolescents in Ghana.

3.3 Target Population and Sample size

The target population for this study comprised school-going blind adolescents, including both those who were born blind and those who became blind later in life. The eligibility criterion was school-going adolescents who were born blind and/or those who became blind after birth. The inclusion criteria were adolescents born blind and/or became blind after birth and who were schooling. These inclusion criteria ensured that the study captured a broad spectrum of experiences related to blindness, while the exclusion criterion looked at participants who had been diagnosed with mental health conditions as this could confound the study's focus on suicidal behaviours.

To achieve the study's objectives, a sample size of 200 school-going blind adolescents was targeted. It is important to note that Junior High Schools in Ghana last for three years and are for persons aged 12 to 14. However, because many persons with disabilities start school late, most of the students in special schools at this level of basic education are actually older teens and young adults aged 15 to 25. Thus, this sample size was determined to ensure adequate statistical power for detecting significant effects in the data. Specifically, the study aimed for a statistical power of 80%, which is commonly used in social science research to minimize the risk of Type II errors. The effect size, which measures the strength of the relationship between variables, was assumed to be medium (Cohen's $d = 0.5$) based on previous research in similar populations (Sullivan & Feinn, 2012). A significance level of 5% ($\alpha = 0.05$) was chosen for hypothesis testing, meaning that the probability of committing a Type I error rejecting a true null hypothesis was set at 5%.

In anticipation of potential issues such as incomplete or missing responses, a total of 220 questionnaires were prepared. These questionnaires were read aloud to participants due to their inability to see, ensuring that all participants could fully engage in the survey. However, the final sample for the study was 191. This retrieval rate was influenced by the number of participants available at the time of the study, as well as the unique challenges associated with conducting research in a population that is both small and specialized.

The study utilized a convenience sampling technique to select participants. As a non-probability sampling method, convenience sampling involves choosing individuals who are easiest for the researcher to access, making it a practical choice for studies where the target population is both specific and challenging to reach. This approach is particularly beneficial when time, resources, and accessibility are limited, as it allows for the rapid collection of data without the need for complex sampling frames or random selection processes. Thus, convenience sampling was deemed appropriate for this study.

The sampling technique also aligned with the logistical constraints of the research, ensuring that data could be collected efficiently within the available timeframe and budget. Moreover, the nature of the study's focus on a rare and specific population made probability sampling methods, such as random sampling, less feasible. Blind adolescents, particularly those in educational institutions, represent a small and unique demographic, and the ability to access a larger, more randomized sample would have required significant resources and time. Convenience sampling allowed the researcher to engage participants who were already within a controlled environment, reducing the barriers to participation.

This careful approach to sampling, combined with efforts to accommodate the needs of the participants, ensured that the study was both inclusive and methodologically sound. The chosen sample size, coupled with the statistical power, effect size, and significance level,

enhances the reliability and validity of the study's findings, providing valuable insights into this under-researched population.

3.4 Measures

The primary method of data collection for this study was the administration of questionnaires, which were distributed and collected for three months. The use of questionnaires was essential to ensure that the results were both interpretable and generalizable. This method was particularly advantageous for gathering data from a large sample within a relatively short timeframe. The questionnaire was divided into six sections, labeled A through F, each focusing on different aspects relevant to the study.

Section A captured the socio-demographic information of the participants. This section included variables such as gender, age, blindness status (born blind and/or became blind after birth, age at blindness, presence of blind siblings, parental blindness, family structure, living arrangements, and religious affiliation (see appendix 1).

Section B focused on measuring the participant's health status, specifically anxiety and depression, using the Patient Health Questionnaire (PHQ-4), which has a Cronbach alpha of ($\alpha \geq 0.75$), developed and validated by Kroenke et al. (2009), this four-item scale assesses the frequency of symptoms over the past two weeks, using a 4-point Likert scale ranging from 0 ("not at all") to 3 ("nearly every day"). Sample items include questions such as, "Over the last two weeks, how often have you been bothered by the following problems?" followed by statements like "feeling nervous, anxious, or on edge" and "feeling down, depressed, or hopeless." The total score is calculated by summing the responses, with scores of 0-2 considered normal, 3-5 indicating mild symptoms, 6-8 indicating moderate symptoms, and 9-12 indicating severe symptoms. Scores greater than or equal to 3 on the first two items suggest anxiety, while the same cutoff applies to the last two items for depression. The

Cronbach alpha for this study was ($\alpha = 0.89$) demonstrating good internal consistency and reliability of PHQ-4 scale.

Section C assessed participants' reasons for living using the Brief Reasons for Living Inventory for Adolescents (BRFL-A), a scale specifically designed to evaluate a range of adaptive beliefs and expectations for living if suicide is considered. This 14-item scale asks respondents to rate the importance of each reason for living on a 6-point scale, where 1 represents "not at all important" and 6 represents "extremely important." The inventory has six subscales: Survival and Coping Beliefs (e.g., "I believe I can find a purpose in life, a reason to live"), Responsibility to family (e.g., "My family depends on me and needs me"), Child-related concerns ("I want to watch my children as they grow"), Fear of Suicide (e.g., "I am afraid of death"), Fear of Social Disapproval (e.g., "I am concerned about what other people think of me"), and Moral Objections (e.g., "I consider it morally wrong") Higher scores indicate stronger reasons for living. The Cronbach alpha for this study was ($\alpha = 0.91$).

Section D explored the individual, familial, school, and interpersonal factors associated with suicidal behaviours among school-going blind adolescents in Ghana. This section utilized items adapted from the World Health Organization's Global School-based Student Health Survey (WHO-GSHS), measuring variables such as parental divorce or separation, conflict with parents, parental understanding and monitoring, number of siblings, food insecurity, schoolwork difficulties, bullying victimization, physical abuse, romantic breakups, sexual abuse, alcohol use, and the number of close friends.

Section E evaluated suicidal behaviours using the Suicidal Behaviour Questionnaire-Revised (SBQ-R) with a Cronbach alpha of ($\alpha = 0.87$). The SBQ-R consists of four items, each addressing a different aspect of suicidal behaviour. The first item examines lifetime suicide ideation or attempts, while the second item assesses the frequency of suicidal thoughts over the past twelve months. Response options for this item range from "never" to

"very often (5 or more times)." The third item assesses the severity of suicide attempts, and the fourth item evaluates the likelihood of future suicidal behaviour, with responses ranging from "never" to "very likely." The total score is calculated by summing the responses, with scores ranging from 3 to 18. Twelve months' suicidal ideation and attempt was measured as "how often have thought about or attempted to kill or end your life in the past twelve months". The Cronbach alpha for this study was ($\alpha = 0.88$), indicating good and internal consistency and reliability of the SBQR-4 scale.

Section F focused on identifying motivational factors for attempting suicidal behaviours among the participants. This section presented items as a checklist, derived from three standardized questionnaires namely: Motivations for Suicidal Behaviour Scale (MSBS), Motivations for Attempting Suicide Questionnaire (MASQ), and the Motivational Interview for Suicidality (MIS). This allowed participants to select multiple reasons for considering or attempting in suicidal behaviour, if applicable. This structured and comprehensive questionnaire allowed for the collection of detailed and nuanced data on the various factors influencing suicidal behaviours among school-going blind adolescents, ensuring that the study's objectives could be met effectively.

3.5 Procedure

Data collection for this research was conducted at the Akropong School for the Blind, a well-known institution located in Akropong, a town in the Akuapim North District of the Eastern Region of Ghana. The school happens to be the largest School for the Blind providing a valuable setting for studying the specific population of interest. Also, it has more students coming from nearly all the varied socio-economic backgrounds in the country. This is because there are only two recognized Schools for the Blind in Ghana, one in the Northern part of the country and the other in the Southern part; which is Akropong.

Data collection was done in two phases. First, a pilot study was conducted to test whether participants would understand the terminologies used after which the finalized questionnaires were administered to participants in the main study. Some of the terminologies such as suicide ideation, suicide attempt, and suicide prevalence were translated into the “Twi” language for easy comprehension after the pilot study because majority of the participants did not understand nor had heard what suicide was about. The translations were done first by the research assistants from English to Twi and the lead researcher did a back translation from Twi to English. The research assistants comprised a male and a female, who were both teaching and research assistants from the School of Social Sciences of the University of Ghana. They have participated in similar surveys and are familiar in administering one-to-one questionnaires.

The questionnaires were researcher-administered which meant the surveys were read to the participants. The lack of funding for the research did not allow for the questionnaires to be put on a braille thus the use of a researcher-administered mode where the researchers sat with each participant and read out the questionnaire to them and they chose their responses.

The researcher sought consent from the school and participants. After approval was given and informed consent was sought, the participants took 30-40mins each to answer the questionnaire. Due to the sensitive nature of the study, participants had one-to-one time alone with the primary researcher and the research assistants in one of the classrooms designated for the purpose of the research. The school agreed to allow the primary researcher and the research assistants access to this designated room for the period of the data collection. This was done before lessons started, during lunch breaks, and after school.

3.6 Data Analysis

Data collected for this study was analysed using the Statistical Package for the Social Sciences (SPSS software version 27 for windows). The analysis was conducted in three

distinct steps. The first step involved presenting the data descriptively by applying frequencies, proportions. The second was the Pearson's Chi-square tests (χ^2), Fisher's Exact test and point-biserial correlation (r_{pb}) tests to examine the bivariate relationships between suicidal behaviours and the exposure variables and socio-demographic factors. Fisher's Exact test performed for some variables with less than five expected cell count. Thirdly, adjusted and unadjusted multivariable logistic regression analyses examining the possible associations between suicidal behaviours and the specified correlates and socio-demographic variables were performed. The study did not record any missing data.

To analyse the Brief Reason for Living scale (BRFL-A), the composite score for all the values was calculated (added all the items and divided by the number of items). Then the composite score was used against the dependent variables (12-month suicidal ideation and attempt) as values for each point and calculated the chi-square of it. Responses were recoded to binary – “Not important and Important” after which chi-square tests were performed.

The reported motivations for attempted suicide were items presented as a checklist where the participants checked as many motivations that apply to them. Each response was analysed against the items chosen or checked.

The covariates in the logistic regressions were the socio-demographic characteristics. They include gender, age, religious affiliation, blindness status (born blind and/or became blind after birth), living arrangement, family structure and parental blindness. The model for table 4.5 was adjusted, but in the table 4.6, the model was not adjusted.

3.7 Ethical Considerations

The research followed the laid down principle for ethical considerations. The researcher sought approval from the Ethics Committee for Humanities, University of Ghana (ECH 272/22-23, see appendix 2). Also, the research was conducted following the ethical code of

the American Psychological Association (APA, 2017) to ensure that ethical issues related to human participants particularly young people and other ethical concerns were not violated.

The research emphasized ethical concerns around informed consent, confidentiality, voluntary participation, and withdrawal from the study.

3.7.1 Informed consent

The participants were informed about the goal of the study and the estimated time it will take them to complete the questionnaire. They were also made to understand potential benefits, and possible risks associated with participating in this research. They were made informed that the services of a psychologist had been secured to attend to participants who may suffer psychological distress as a result of partaking in the study. However, since participants are blind and could not read and understand the consent form themselves, it was read to them and their teachers signed on their behalf as witnesses.

For participants who were below 18 years, an additional guardian consent form was completed by their teachers on their behalf to partake in the research since they were in school and their parents were at home. The researcher was available to answer any additional questions that the participants had regarding the research.

3.7.2 Confidentiality

Participants were made to understand that their details as participants' identity would be kept confidential and anonymous. They had the option of requesting their responses and sharing it with whoever they wanted to share with. They were also made to understand that the researcher and her supervisors will have access to their responses. The researcher created an excel sheet to keep their responses and were securely stored in a google drive. Additionally, no personally identifiable information such as names was collected to ensure privacy.

3.7.3 Voluntary participation and withdrawal from study

Participants were made aware that their participation in this study was completely voluntary, and they were free to opt out at any point in the process. They were also made to understand that their withdrawal from the study would not incur any repercussion on them. Participants were informed of any accessible information that could affect their decision to participate in or withdraw from the study. The Guardians and witnesses were also made to understand that if at any point they wanted their ward, to decline from participating, they were free to do so and they or their ward will not be adversely affected in any way. However, the participants were informed that the researcher also reserved the right to disengage them from participating in the study once she discovered that they do not fully meet the criteria.



CHAPTER FOUR

RESULTS

4.1 Introduction

The research aimed to examine suicidal behaviours among blind adolescents in Ghana. Four key goals have driven the research, which were to; i) to estimate the 12-month prevalence of suicidal behaviours among school-going blind young adolescents in Ghana, ii) to investigate the individual, familial, school and interpersonal factors associated with suicidal behaviours among school-going blind adolescents in Ghana, iii) to explore reasons for living among school-going blind young people in Ghana, and iv) to examine motivations for engaging in suicidal behaviours among school-going blind young people in Ghana. This chapter begins with a description of procedures used in data screening and preliminary assessment. The reliability and validity of measures used to assess variables in this study are also discussed. The chapter further describes the correlations among variables and there is also an interpretation of preliminary analysis. The chapter ends with a summary of the findings of the study.

4.2 Socio-Demographic characteristics of the Respondents

The distributions of socio-demographic characteristics of the respondents are provided in table 4.1 below. It captures the gender, age, blindness status, age at acquired blindness, sibling blindness, parental blindness, their living arrangements, family structure, presence of additional physical challenge and their religious groupings.

Table 4.1 Socio-Demographic Characteristics of Respondents

Variable	Category	Frequency	Percentage
Gender	Male	111	58.1
	Female	80	41.9

Age	10-15	89	46.6
	16-20	69	36.2
	21-25	33	17.2
Blindness status	Congenital Blindness	74	38.7
	Non-Congenital Blindness	117	61.3
Age at blindness	0-5	131	68.6
	6-10	21	11
	11-15	24	12.6
	16 and above	15	7.9
Sibling blindness	Yes	17	8.9
	No	174	91.1
Parental blindness	Mother	6	3.1
	Father	9	4.7
	None	176	92.1
Living arrangement	Both Parents	100	52.4
	One Parent	72	37.7
	No Parent	19	9.9
Family structure	Monogamous	162	84.8

	Polygamous	29	15.1
Religious group	Christian	164	85.9
	Muslim	27	14.1

The sample population in this study comprised 58.1% males and 41.9% females, reflecting a gender distribution commonly observed in disability-related research. The age range of participants spanned 10 to 25 years, with the majority (89%) aged between 10 and 15 years. A significant proportion of the sample, 68.6%, reported becoming blind between the ages of 0 and 5 years, suggesting that early childhood is a critical period for the onset of blindness. Regarding the timing of blindness, 61.3% of participants experienced non-congenital blindness, while 38.7% were born blind (congenital blindness). Additionally, smaller proportions of participants became blind between the ages of 6 and 10 years (11%), 11 and 15 years (12.6%), and after 16 years (7.9%).

4.3 Prevalence of suicidal behaviours among school-going blind adolescents

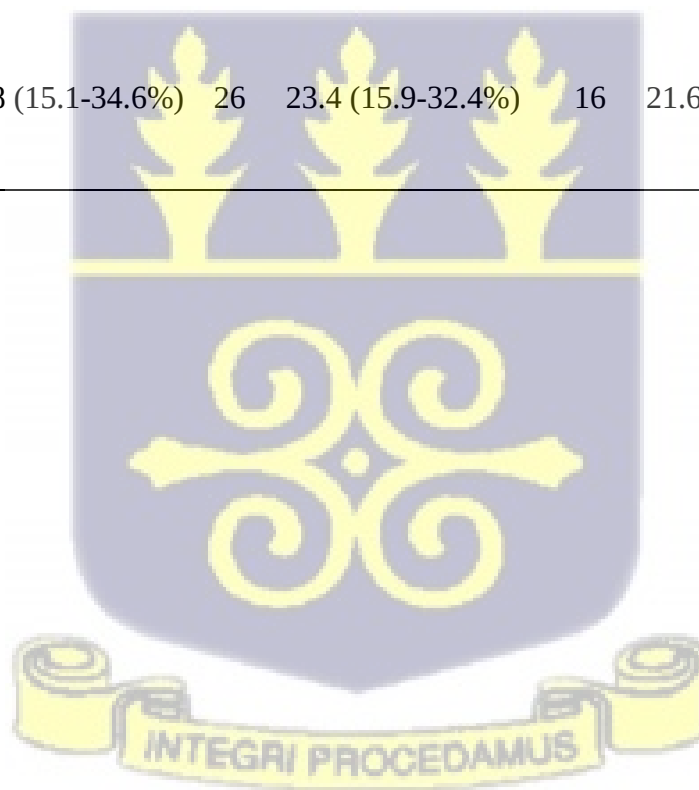
The prevalence of suicidal ideation in the overall sample was 24.6% (95% CI: 18.7–31.3%) as presented in Table 4.2. There were no statistically significant differences between genders, though females reported a slightly higher prevalence of 25.0% (95% CI: 16.0–36.0%) compared to males at 24.3% (95% CI: 16.7–33.4%). Similarly, there were no significant difference among individuals with post-natal blindness and being born blind. The prevalence of suicidal ideation was significantly higher among those with congenital blindness at 26.5% (95% CI: 18.8–35.4%) compared to those with non-congenital blindness (21.6%; 95% CI: 12.9–32.7). The prevalence of suicide attempts in the overall sample was 23.6% (95% CI: 17.7–30.2%). Gender differences were minimal and not statistically significant, with females

reporting a prevalence of 23.8% (95% CI: 15.1–34.6%) and males 23.4% (95% CI: 15.9–32.4%). The 95% confidence intervals overlapped indicating that the differences are insignificant. Adolescents with post-natal blindness had a higher prevalence of suicide attempts at 24.8% (95% CI: 17.2–33.6%) compared to 21.6% (95% CI: 12.9–32.7%) among those with congenital blindness; however, this difference was not statistically significant.



Table 4.2 Prevalence of suicidal behaviours among school going blind adolescents.

Overall sample			Gender				Blindness Status			
			Female		Male		Congenital		Non-congenital	
Suicidal behaviour	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)	n	% (95%CI)
Suicidal ideation	47	24.6 (18.7–31.3%)	20	25.0 (16.0-36.0%)	27	24.3 (16.7 33.4%)	16	21.6 (12.9-32.7%)	31	26.5 (18.8-35.4%)
Suicidal attempt	45	23.6 (17.7–30.2%)	19	23.8 (15.1-34.6%)	26	23.4 (15.9-32.4%)	16	21.6 (12.9-32.7%)	29	24.8 (17.2-33.6%)



4.4 Relationships between socio-demographic variables, and suicidal behaviours among school-going blind adolescents

The chi-square analysis in Table 4.3 examines the relationships between socio-demographic variables, exposure factors, and suicidal behaviours among school-going blind adolescents with Fisher's Exact test performed for some variables with less than five expected cell count. The findings reveal notable patterns regarding the prevalence and factors of suicidal ideation and attempts. Gender differences in suicidal ideation and suicide attempts were not statistically significant. The results, ($\chi^2(1) = 0.01, p = .915$) for ideation and ($\chi^2(1) = 0.003, p = .958$) for attempts, indicate that males and females in this population exhibit similar rates of these behaviours. Similarly, blindness status (congenital or non-congenital) showed no significant association with either suicidal ideation ($\chi^2(1) = 0.58, p = .446$) or suicide attempts ($\chi^2(1) = 0.252, p = .616$). These findings suggest that the timing of being blind does not play a significant role in influencing suicidal behaviours.

This analysis examined whether the number of siblings (≤ 4 and more than 4) was significantly associated with suicidal ideation and attempts in the sample population. The results were evaluated using chi-square tests (X^2) and their corresponding p-values. The data showed no significant association between sibling age and suicidal ideation ($X^2=0.15, p=0.6$). The proportion of individuals reporting suicidal ideation was comparable across the two sibling groups. Specifically, 24.44% of individuals with siblings above 4 and 27.40% of those with siblings less than 4 and below reported suicidal ideation. These findings suggest that number of siblings does not independently influence the likelihood of suicidal ideation within this sample.

Similarly, the association between number of siblings and suicidal attempts was not statistically significant ($X^2=0.04, p=0.835$). The proportion of individuals who attempted suicide was nearly identical across the groups, with 25.53% in the more than four siblings

group and 27.08% in the less than or equal to 4 siblings group reporting suicidal attempts. This shows that number of siblings does not serve as a determinant for suicidal attempts in this context. The findings indicate no significant relationship between the number of siblings and either suicidal ideation or attempts.

Family structure also showed no significant relationship with suicidal ideation ($\chi^2 (1) = 1.2, p = .272$) or attempts ($\chi^2 (1) = 0.59, p = .443$). Additionally, living arrangements were not statistically significant, with ($\chi^2 (2) = 3.84, p = .146$) for ideation and ($\chi^2 (2) = 2.23, p = .329$) for attempts. These results suggest that familial characteristics and living situations do not have a strong influence on suicidal behaviours among this population.

In contrast, exposure to adverse experiences emerged as a significant factor in predicting suicidal behaviours. Sexual abuse showed a strong association with both suicidal ideation ($\chi^2 (1) = 12.26, p < .001$) and suicide attempts ($\chi^2 (1) = 13.76, p < .001$). Similarly, physical abuse victimization was significantly related to suicidal ideation ($\chi^2 (1) = 16.71, p < .001$) and attempts ($\chi^2 (1) = 15.71, p < .001$). These findings highlight the critical impact of abuse on the mental health of blind adolescents.

School-related factors also demonstrated significant relationships with suicidal behaviours. Bullying was strongly associated with both suicidal ideation ($\chi^2 (1) = 11.23, p = .001$) and suicide attempts ($\chi^2 (1) = 11.14, p = .001$). Additionally, difficulties with schoolwork showed significant associations, with ($\chi^2 (1) = 11.57, p = .001$) for ideation and ($\chi^2 (1) = 9.53, p = .002$) for attempts. These results emphasize the role of school-related stressors in contributing to suicidal behaviours in this population.

Furthermore, the Fisher's Exact test was performed on the variables such as sibling blindness, parental blindness, alcohol use, breakup, number of close friends, parental divorce and absence from school. It revealed that there were no significant associations between these

variables and suicidal ideation ($p > .05$) or attempts ($p > .05$). These findings suggest that these demographic variables do not independently predict suicidal Behaviours in this sample.



Table 4.3 Socio-demographics and Experiential variables- Chi-square

	Total sample	Suicidal Ideation			Suicidal Attempt		
		Yes	No	X^2 (p)	Yes	No	X^2 (p)
	n (%)	n (%)	n (%)		n(%)	n(%)	
Socio-demographics							
Gender:				0.01 (.915)			.03 (.958)
Male	111 (58.1)	27 (24.3%)	84 (75.7%)		26 (23.4%)	85 (76.6%)	
Female	8 (41.9)	20 (25.0%)	60 (75.0)		19 (23.8)	61 (76.3%)	
Blindness status:				.58 (.446)			.25 (.616)
Congenital blindness	74 (38.7)	16 (21.6%)	58 (78.4%)		16 (21.6%)	58 (78.4%)	
Post-natal blindness	117 (61.3)	31 (26.5%)	86 (73.5%)		29 (24.8%)	88 (75.2%)	
Sibling blindness:				0.77			0.77
Yes	17 (8.9)	3 (17.6%)	14 (82.4%)		3 (17.6%)	14 (82.4%)	
No	174 (91.1)	44 (25.3)	130 (74.7)		42 (24.1)	132 (75.9)	
Parental blindness:				0.31			0.42

Mother	6 (3.1)	-	6 (100%)	7 (25.0)	21 (75.0)
Father	9 (4.7)	1 (11.1%)	8 (88.9%)	38 (23.3)	125 (76.7)
None	176 (92.1)	46 (26.1)	130 (73.9)	45 (23.6)	146 (76.4)

Living arrangement: 3.84 (.146) 2.25 (.329)

Both parents	100 (52.4)	21 (21.0)	79 (79.0)	37 (22.8)	125 (77.2)
One parent	72 (37.7)	18 (25.0)	54 (75.0)	8 (29.6)	19 (70.4)
No parents	19 (9.9)	8 (42.1)	11 (57.9)	45 (23.8)	144 (76.2)

**Individual
/Interpersonal
factors**

Number of siblings 0.15 (0.696) 0.04 (0.835)

≤ 4	140 (73.30)	34 (75.56)	106 (72.60)	35 (74.47)	105 (72.92)
> 4	51 (26.70)	11 (24.44)	40 (27.40)	12 (25.53)	39 (27.08)

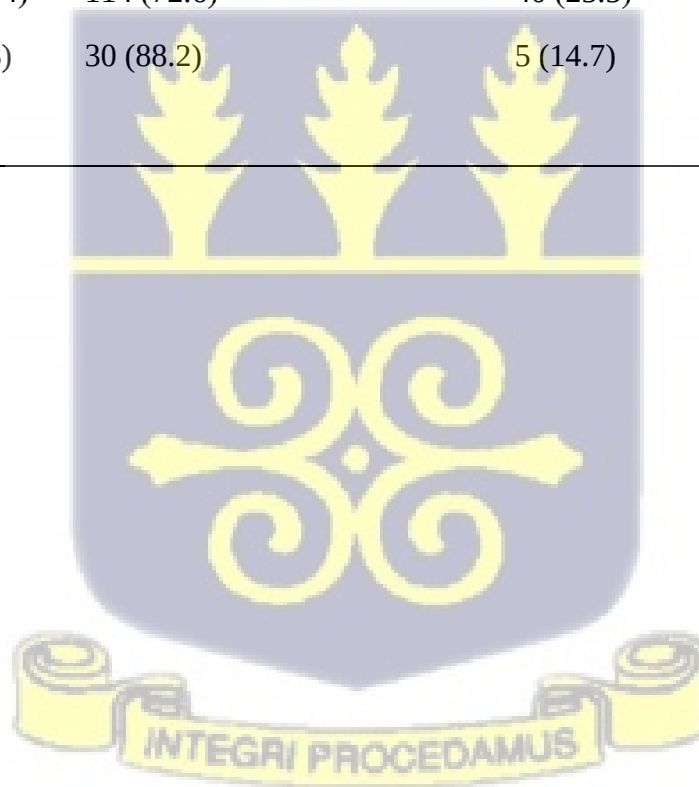
Sexual abuse:

Yes	33 (17.3)	16 (48.5)	17 (51.5)	16 (48.5)	17 (51.5)
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No	158 (82.7)	31 (19.6)	127 (80.4)	29 (18.4)	129 (81.6)
Alcohol use:			0.16		0.14
Never drink	185 (96.9)	44 (23.8)	141 (76.2)	42 (22.7)	143 (77.3)
One or more	6 (3.1)	3 (50)	3 (50)	3 (50)	3 (50)
Breakup:			1.00		1.00
Yes	16 (8.4)	4 (25.0)	12 (75.0)	4 (25.0)	12 (75.0)
No	175 (91.6)	43 (24.6)	132 (75.4)	41 (23.4)	134 (76.6)
Family –level factors					
Parental divorce:			0.41		0.42
Yes	20 (10.5)	3 (15.0)	17 (85.0)	3 (15.0)	17 (85.0)
No	171 (89.5)	44 (25.7)	127 (74.3)	42 (24.6)	129 (75.4)
Parental conflict:			.003 (.958)		.038 (.846)
Yes	28 (14.7)	7 (25.0)	21 (75.0)	7 (25.0)	21 (75.0)
No	163 (85.3)	40 (24.5)	123 (75.5)	38 (23.3)	125 (76.7)

Parental fight:			.23 (.630)		.36 (.551)	
Yes	17 (8.9)	5 (29.4)	12 (70.6)	5 (29.4)	12 (70.6)	
No	174 (91.1)	42 (24.1)	132 (75.9)	40 (23.0)	134 (77.0)	
Physical abuse Victimization:			16.71 (<.001)		15.71 (<.001)	
Yes	50 (26.2)	23 (46.0)	27 (54.0)	22 (44.0)	28 (56.0)	
No	141 (73.8)	24 (17.0)	117 (83.0)	23 (16.3)	118 (83.7)	
School-related factors						
Bullying:			11.23 (.001)		11.14 (.001)	
Yes	78 (40.8)	29 (37.8)	49 (62.8)	28 (35.9)	50 (64.1)	
No	113 (59.2)	18 (15.9)	95 (84.1)	17 (15.0)	96 (85.0)	
School work problems:			11.57 (.001)		9.53 (.002)	
Yes	89 (46.6)	32 (36.0)	57 (64.0)	30 (33.7)	59 (66.3)	
No	102 (53.4)	15 (14.7)	87 (85.3)	15 (14.7)	87 (85.3)	

Number of close Friends			0.039		0.026
No close friend	12 (6.3)	4 (33.3)	8(66.7)	4 (33.3)	8 (66.7)
One or more close friends	179 (97.3)	43 (24.0)	136 (76.0)	41 (22.9)	138 (77.1)
Absence from school			0.261		0.770
Zero days	157 (82.2)	43 (27.4)	114 (72.6)	40 (25.5)	117 (74.5)
One or more days	34 (17.8)	4 (11.8)	30 (88.2)	5 (14.7)	29 (85.3)



4.5 Association between some experiential and suicidal behaviours among school-going blind adolescents.

The chi-square analysis in Table 4.4 above shows a significant association between some experiential factors and suicidal behaviours among school-going blind adolescents. Adolescents who reported involvement in physical fights one or more times were significantly more likely to experience suicidal ideation ($\chi^2 (1) = 8.68, p = .003$) and to attempt suicide ($\chi^2 (1) = 10.32, p = .001$). In comparison, adolescents who did not engage in physical fights had lower rates of suicidal ideation (18.9%) and suicide attempts (17.4%). Among those who engaged in physical fights, 39.3% reported experiencing both suicidal ideation and attempts. This finding suggests that participation in physical altercations correlates with a higher likelihood of suicidal behaviours in this population.

The analysis further reveals no significant association between the number of close friends and either suicidal ideation ($\chi^2 (1) = 0.53, p = .468$) or suicide attempts ($\chi^2 (1) = 0.68, p = .410$). Although adolescents without close friends exhibited slightly higher rates of suicidal ideation (33.3%) and attempts (33.3%) compared to those with one or more close friends (24.0% for ideation and 22.9% for attempts), these differences were not statistically significant. This outcome implies that the presence of friends does not show a statistically significant impact on suicidal behaviours in this sample.

Additionally, the results indicate no statistically significant association between school attendance and suicidal ideation ($\chi^2 (1) = 3.68, p = .055$) or suicide attempts ($\chi^2 (1) = 1.80, p = .180$). Adolescents who missed school for one or more days had lower rates of suicidal ideation (11.8%) and attempts (14.7%) than those who attended school regularly, who reported rates of 27.4% for suicidal ideation and 25.5% for suicide attempts. Despite these observed trends, the differences did not reach statistical significance, suggesting that school absence alone does not provide a conclusive prediction of suicidal behaviours within this group.

Lastly, no significant association was found between the number of siblings and suicidal ideation ($\chi^2 (1) = 2.73, p = .099$) or suicide attempts ($\chi^2 (1) = 2.57, p = .109$). Adolescents with no siblings exhibited a 100% prevalence of suicide attempts, but the presence of one or more siblings did not significantly change the overall prevalence of suicidal behaviours. This result indicates that the number of siblings does not significantly affect the likelihood of suicidal behaviours among school-going blind adolescents.

4.6 Associations between specific risk factors and suicidal behaviours among school-going blind adolescents

The chi-square analysis in Table 4.4 highlights significant associations between specific risk factors and suicidal behaviours among school-going blind adolescents. Several adverse experiences, such as sexual and physical abuse, bullying, academic challenges, and involvement in physical fights, show statistically significant links to increased rates of both suicidal ideation and suicide attempts. However, other factors like alcohol use, school absences, and the number of siblings does not exhibit statistically significant associations with suicidal behaviours.

Sexual abuse presents a strong correlation with both suicidal ideation ($\chi^2 (1) = 12.26, p < .001$) and suicide attempts ($\chi^2 (1) = 13.76, p < .001$). Adolescents who reported experiencing sexual abuse had considerably higher rates of suicidal ideation (48.5%) and attempts (48.5%) compared to those who had not experienced such abuse (19.6% for ideation and 18.4% for attempts). Physical abuse also shows a significant association with suicidal behaviours, with victimized adolescents reporting suicidal ideation at 46.0% and attempts at 44.0%, compared to much lower rates among those without such experiences (17.0% for ideation and 16.3% for attempts). These findings are supported by bullying, which is also significantly associated with suicidal behaviours. Adolescents who reported being bullied had suicidal ideation and attempt rates of 37.8% and 35.9%, respectively, compared to non-bullied peers (15.9% for ideation and 15.0% for attempts).

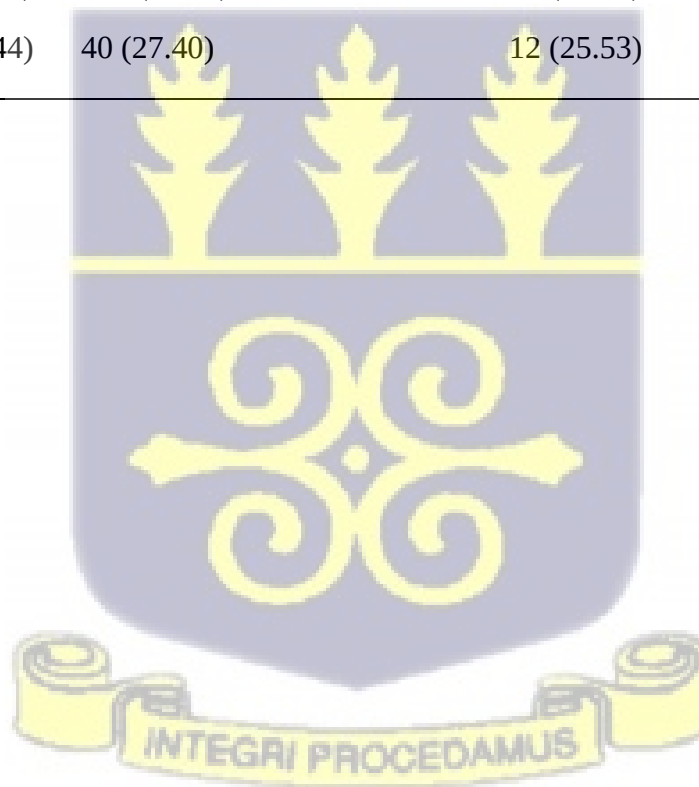
Academic difficulties and involvement in physical fights are also significant predictors of suicidal behaviours. Adolescents facing academic struggles show higher rates of suicidal ideation (36.0%) and attempts (33.7%) than those without such challenges (14.7% for both). Similarly, those involved in physical fights reported suicidal ideation and attempts at rates of 39.3% compared to 18.9% and 17.4%, respectively, among those who did not engage in physical altercations. In contrast, factors such as alcohol use, school absences, and the number of siblings does not show significant associations with suicidal behaviours in this sample. While adolescents who consumed alcohol or missed school days had slightly elevated rates of suicidal ideation and attempts, these differences were not statistically significant ($p > .05$). The number of siblings similarly does not appear to have a substantial impact on suicidal behaviours in this population.



Table 4.4 Chi-Square Significance

	Total sample	Suicidal Ideation			Suicidal Attempt		
	n (%)	Yes n (%)	No n (%)	X^2 (p-value)	Yes n (%)	No n (%)	X^2 (p-value)
Sexual abuse:				12.26 (<.001)			13.76 (<.001)
Yes	33 (17.3)	16 (48.5)	17 (51.5)		16 (48.5)	17 (51.5)	
No	158 (82.7)	31 (19.6)	127 (80.4)		29 (18.4)	129 (81.6)	
Alcohol use:				2.15 (.142)			2.41 (.121)
Never drink	185 (96.9)	44 (23.8)	141 (76.2)		42 (22.7)	143 (77.3)	
One or more	6 (3.1)	3 (50)	3 (50)		3 (50)	3 (50)	
Physical abuse Victimization:				16.71 (<.001)			15.71 (<.001)
Yes	50 (26.2)	23 (46.0)	27 (54.0)		22 (44.0)	28 (56.0)	
No	141 (73.8)	24 (17.0)	117 (83.0)		23 (16.3)	118 (83.7)	
Bullying:				11.23 (.001)			11.143(.001)
Yes	78 (40.8)	29 (37.8)	49 (62.8)		28 (35.9)	50 (64.1)	
No	113 (59.2)	18 (15.9)	95 (84.1)		17 (15.0)	96 (85.0)	
School work problems:				11.57 (.001)			9.52 (.002)
Yes	89 (46.6)	32 (36.0)	57 (64.0)		30 (33.7)	59 (66.3)	
No	102 (53.4)	15 (14.7)	87 (85.3)		15 (14.7)	87 (85.3)	

Physical Fight				8.68 (.003)		10.32 (.001)
Zero times	132(69.8)	25 (18.9)	107(81.1)		23 (17.4)	109 (82.6)
One or more times	57 (30.2)	22 (39.3)	34 (60.7)		22 (39.3)	34 (60.7)
Absence from school				3.67 (.055)		1.81 (.180)
Zero days	157(82.2)	43 (27.4)	114(72.6)		40 (25.5)	117 (74.5)
One or more days	34 (17.8)	4 (11.8)	30 (88.2)		5 (14.7)	29 (85.3)
Number of siblings				0.15 (0.696)		0.04 (0.835)
≤ 4	140 (73.30)	34 (75.56)	106 (72.60)		35 (74.47)	105 (72.92)
> 4	51 (26.70)	11 (24.44)	40 (27.40)		12 (25.53)	39 (27.08)



4.7 Point-biserial correlation analysis of the relationships between psychosocial variables and suicidal behaviours.

The point-biserial correlation analysis presented provides insight into the relationships between psychosocial variables and suicidal behaviours—specifically suicidal ideation and suicide attempt among school-going blind adolescents. Parental monitoring shows a weak positive correlation with suicidal ideation ($r_{pb} = .135, p > .05$) and a slightly stronger, statistically significant correlation with suicide attempts ($r_{pb} = .144, p < .05$). This suggests that while higher levels of parental monitoring might reduce the likelihood of suicide attempts, its association with suicidal ideation is less conclusive. The nuanced nature of parental monitoring in this context indicates that the protective effects may vary, especially given the complexities of adolescent autonomy and family dynamics.

In contrast, parental understanding displays a notably stronger positive correlation with both suicidal ideation ($r_{pb} = .256, p < .01$) and suicide attempts ($r_{pb} = .263, p < .01$), with both relationships being statistically significant. This implies that adolescents who feel greater parental understanding are significantly less likely to engage in suicidal behaviours. The findings suggest that emotional support from parents, marked by empathy and effective communication, may serve as a critical buffer against the emotional turmoil that often leads to suicidal ideation and attempts in blind adolescents.

Peer support, however, does not show a significant association with either suicidal ideation ($r_{pb} = .083, p > .05$) or suicide attempts ($r_{pb} = .089, p > .05$). The weak and non-significant correlations indicate that, in this population, peer support might not have a direct protective effect on suicidal behaviours. This could be attributed to the unique social experiences of blind adolescents, who may encounter barriers in establishing and maintaining peer relationships, possibly reducing the influence of peer support on their mental well-being.

Table 4.5 Multivariate Logistic regression of the socio-demographic and other exposure variables icon Suicidal Ideation and Suicidal Attempt (Unadjusted)

	12-month Suicidal Ideation			12-month Suicidal Attempt		
	Unadjusted OR	95% CI	p-value	Unadjusted OR	95% CI	p-value
Socio-demographics						
Gender						
Male	Ref			Ref		
Female	0.96	0.49-1.88	0.915	0.98	0.50-1.94	0.958
Age in Category						
10-14	Ref			Ref		
15-19	0.41	0.18-0.95	0.036	0.38	0.16-0.90	0.028
20-25	0.30	0.11-0.80	0.016	0.26	0.09-0.72	0.009
Religious group						
Christian	Ref			Ref		
Muslim	0.74	0.30-1.83	0.515	0.86	0.33-2.20	0.755
Blindness status						
Congenital blindness	Ref			Ref		
Non-congenital blindness	0.77	0.38-1.53	0.448	0.84	0.42-1.68	0.617
Sibling blindness:						

Yes	Ref			Ref		
No	0.63	0.17-2.32	0.490	0.67	0.18-2.47	0.550

Parental blindness:

Either Mother or Father	Ref			Ref		
None of them	0.20	0.03-1.59	0.128	0.21	0.03-1.69	0.143

Living arrangement

Both parents	Ref			Ref		
One parent	0.80	0.39-1.64	0.538	0.86	0.42-1.78	0.685
No parents	0.37	0.13-1.03	0.056	0.46	0.16-1.31	0.143

Individual /Interpersonal factors

Number of siblings

≤ 4	Ref			Ref		.
> 4	1.08	0.51-2.30	0.835	1.17	0.54-2.53	0.696

Sexual abuse

Yes	Ref			Ref		
No	3.86	1.75-8.49	0.001	4.19	1.89-9.27	<.001

Alcohol Use

Never drink	Ref			Ref		
1 or more	0.31	0.06-1.61	0.164	0.29	0.06-1.52	0.143

Break up

Yes	Ref			Ref		
No	1.02	0.31-3.35	0.970	1.09	0.33-3.57	0.888
<i>Physical Fight</i>						
0 time	Ref			Ref		
1 time	0.36	0.18-0.72	0.004	0.33	0.16-0.66	0.002
<i>Peer support</i>						
Never	Ref			Ref		
Rarely	2.39	0.51-11.12	0.268	2.54	0.54-11.83	0.236
<i>Number of Close Friends</i>						
No Friend	Ref			Ref		
Just a Friend	1.58	0.45-5.53	0.473	1.68	0.48-5.89	0.420
<i>Family –level factors</i>						
<i>Parental Divorce</i>						
Yes	Ref			Ref		
No	0.51	0.14-1.83	0.301	0.54	0.15-1.95	0.348
<i>Conflict with parents</i>						
Yes	Ref			Ref		
No	1.03	0.41-2.60	0.958	1.10	0.43-2.78	0.846
<i>Fight with parent</i>						
Yes	Ref			Ref		

No	1.31	0.44-3.94	0.632	1.40	0.46-4.21	0.554
Parental Monitoring						
Never	Ref			Ref		
Rarely	2.86	0.91-9.03	0.072	3.06	0.97-9.65	0.057
Physical Abuse						
Yes	Ref			Ref		
No	4.15	2.04-8.45	<.001	4.03	1.97-8.26	<.001
Food insecurity						
Moderate	Ref			Ref		
Severe	0.45	0.21-0.98	0.044	0.45	0.20-0.99	0.046
None	5.73	1.21-27.24	0.028	3.35	0.87-12.87	0.079
Bullying						
Yes	Ref			Ref		
No	3.12	1.58-6.19	0.001	3.16	1.58-6.33	0.001
School work problems						
Yes	Ref			Ref		
No	3.26	1.62-6.56	0.001	2.95	1.46-5.96	0.003
Absence from School						
0 days	Ref			Ref		
1-5days	2.83	0.94-8.53	0.065	1.98	0.72-5.49	0.187

The findings from the multivariate logistic regression analysis provide crucial insights into the factors significantly associated with suicidal ideation and attempts. The unadjusted odds ratio (OR) helps to assess the association between independent variables and the outcomes (suicidal ideation and attempt) without accounting for potential confounding variables. Age was significantly associated with both suicidal ideation and suicidal attempt. Adolescents aged 15–19 had significantly lower odds of suicidal ideation (OR = 0.41, 95% CI = 0.18–0.95, $p = 0.036$) and attempts (OR = 0.38, 95% CI = 0.16–0.90, $p = 0.028$) compared to those aged 10–14. Similarly, those aged 20–25 exhibited even lower odds of ideation (OR = 0.30, 95% CI = 0.11–0.80, $p = 0.016$) and attempts (OR = 0.26, 95% CI = 0.09–0.72, $p = 0.009$).

Sexual abuse emerged as a significant risk factor for both suicidal ideation and attempts. Those who had not experienced sexual abuse had significantly higher odds of suicidal ideation (OR = 3.86, 95% CI = 1.75–8.49, $p = 0.001$) and attempts (AOR = 4.19, 95% CI = 1.89–9.27, $p < 0.001$) compared to those who experienced abuse. These findings underline the profound psychological impact of sexual abuse and the importance of providing psychological support to victims. Engaging in a physical fight once was associated with significantly reduced odds of suicidal ideation (OR = 0.36, 95% CI = 0.18–0.72, $p = 0.004$) and attempts (OR = 0.33, 95% CI = 0.16–0.66, $p = 0.002$) compared to those who did not engage in fights.

The absence of physical abuse was significantly associated with increased odds of both suicidal ideation (OR = 4.15, 95% CI = 2.04–8.45, $p < 0.001$) and attempts (OR = 4.03, 95% CI = 1.97–8.26, $p < 0.001$) compared to those who experienced physical abuse. This result highlights the detrimental impact of physical abuse on mental health and underscores the need for preventive measures and psychosocial interventions for survivors. Food insecurity showed a complex relationship with suicidal behaviours. Severe food insecurity was associated with reduced odds of suicidal ideation (OR = 0.45, 95% CI = 0.21–0.98, $p = 0.044$) and attempts (OR = 0.45, 95% CI = 0.20–0.99, $p = 0.046$) compared to moderate food insecurity.

Interestingly, individuals with no food insecurity had significantly higher odds of suicidal ideation (OR = 5.73, 95% CI = 1.21–27.24, $p = 0.028$). This finding may reflect the complex interplay between socioeconomic factors, psychological resilience, and risk Behaviours, warranting further exploration. Bullying and problems with schoolwork were significant risk factors for suicidal ideation and attempts. Those who had not been bullied had higher odds of suicidal ideation (OR = 3.12, 95% CI = 1.58–6.19, $p = 0.001$) and attempts (OR = 3.16, 95% CI = 1.58–6.33, $p = 0.001$). Similarly, individuals without schoolwork problems were at increased risk of ideation (OR = 3.26, 95% CI = 1.62–6.56, $p = 0.001$) and attempts (OR = 2.95, 95% CI = 1.46–5.96, $p = 0.00$

4.8 Objective Two: The associations between individual, familial, school, and interpersonal factors and suicidal behaviours

The multivariate logistic regression in Table 4.5 analysis, presents significant findings related to the socio-demographic, interpersonal, and contextual factors associated with 12-month suicidal ideation and suicide attempts. While several factors were analysed, only a few emerged as statistically significant predictors, shedding light on the complex interplay of influences contributing to these Behaviours. Among the predictors of suicidal ideation, the age category of 15-19 years showed a marginally significant association ($p=0.095$). Adolescents in this age group were less likely to experience suicidal ideation compared to those aged 10-14 years, with an adjusted odd ratio (AOR) of 0.37 (95% CI: 0.11-1.19). While not reaching conventional significance, the lower likelihood suggests developmental or social factors that may mitigate risk within this age group.

A notable finding from the multivariate analysis was the strong association between food insecurity and suicidal ideation. Interestingly, participants who reported no food insecurity were significantly more likely to experience suicidal ideation compared to those with

moderate food insecurity (AOR = 13.79, 95% CI: 1.62–117.25, $p = 0.016$). Although this result appears counterintuitive, it may reflect model sensitivity to sample size and category distribution or the influence of unmeasured confounding variables. For instance, adolescents who are not food insecure might experience different psychosocial pressures such as academic or social expectations that are not directly linked to material deprivation but nonetheless increase vulnerability to mental distress. This suggests the need for cautious interpretation and further exploration of the contextual and psychosocial mechanisms linking food security and suicidality among blind adolescents in Ghana. Future research should include this variable in both bivariate and multivariate models to enable more consistent comparison across analyses. The relationship between bullying and suicidal behaviour presented some inconsistencies between bivariate and multivariate analyses. In the bivariate analysis, adolescents who experienced bullying reported higher rates of suicidal ideation and attempts compared to their non-bullied peers, aligning with extensive evidence that bullying increases psychological distress and suicide risk (Lereya et al., 2019; van Geel et al., 2014). However, the multivariate model indicated that adolescents who reported being bullied were less likely to exhibit suicidal ideation compared to those who had not been bullied (AOR = 3.09, 95% CI: 1.05–9.05, $p = 0.040$), suggesting a protective effect.

This apparent contradiction may stem from the reference category coding in the logistic regression model or the influence of confounding variables that attenuated the effect of bullying after adjustment. It is also possible that adolescents who acknowledged bullying experiences received greater social or institutional support (for example, from teachers, peers, or counsellors), which might have mitigated their risk. Therefore, while bullying is widely recognized as a risk factor for suicidal behaviour, the direction of association observed in this study should be interpreted with caution and warrants further investigation. Future analyses

should carefully verify the reference category used and consider potential mediating or moderating factors, such as social support and coping mechanisms, to clarify this relationship.

For suicide attempts, the age category of 15-19 years was significantly associated with a reduced likelihood of attempting suicide compared to the reference group aged 10-14 years (AOR = 0.32, 95% CI: 0.11-0.98, $p=0.046$). This highlights a potentially higher vulnerability among younger adolescents in engaging in suicidal Behaviours, necessitating targeted interventions for this group. While food insecurity showed a near-significant trend for suicidal attempts, participants with no reported food insecurity had an elevated risk of attempting suicide compared to those with moderate insecurity (AOR = 4.93, 95% CI: 0.77-31.62, $p=0.093$). Though not statistically significant, this finding parallels the ideation results and warrants further exploration.

The model explained a considerable proportion of the variance in suicidal ideation and attempts, with Nagelkerke pseudo- R^2 values of 0.48 and 0.46, respectively. The Hosmer-Lemeshow goodness-of-fit test indicated an adequate fit for both models ($p=0.599$ for ideation, $p=0.100$ for attempts). The classification accuracy of the models was also high, with 84.57% of cases correctly classified for suicidal ideation and 83.51% for suicide attempts.

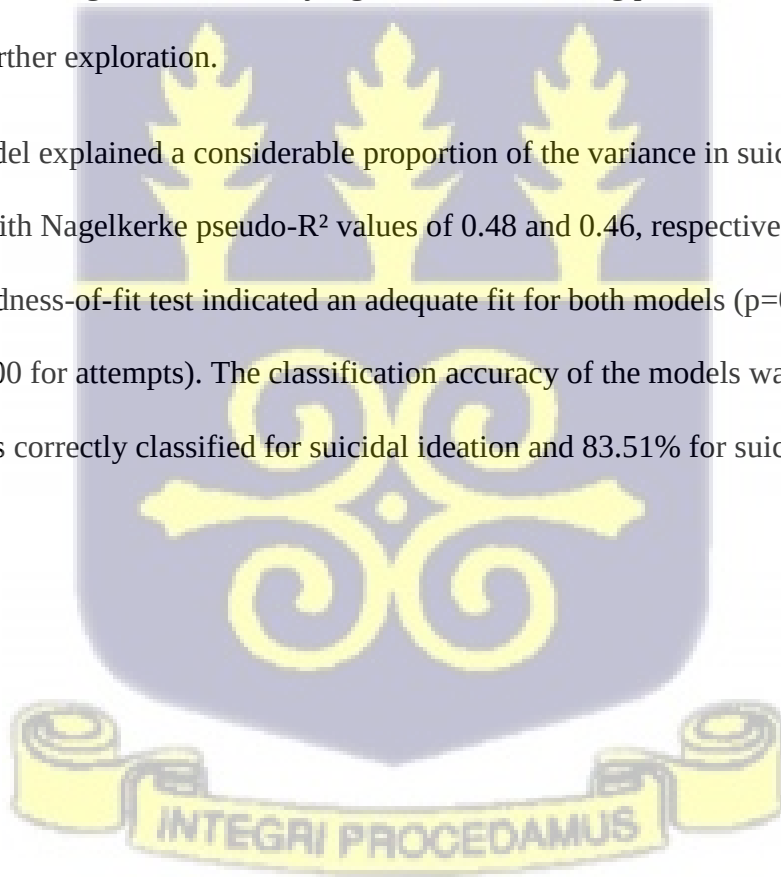
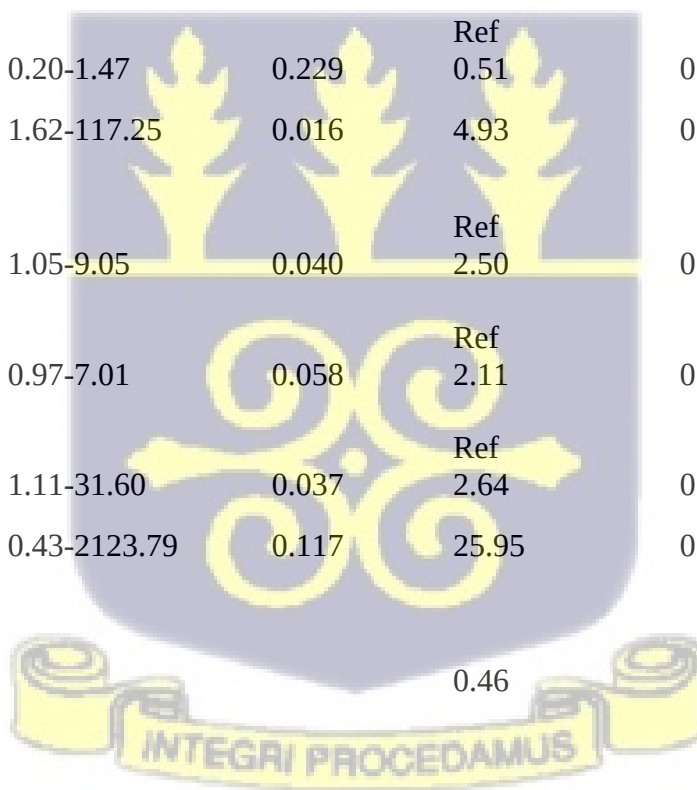


Table 4.6 Multivariate Logistic regression of the socio-demographic and other exposure variables icon Suicidal Ideation and Suicidal Attempt (Adjusted)

	12-month Suicidal Ideation			12-month Suicidal Attempt		
	Adjusted OR	95% CI	p-value	Adjusted OR	95% CI	p-value
Socio-demographics						
Gender						
Male	Ref			Ref		
Female	0.57	0.19-1.75	0.328	0.61	0.21-1.77	0.365
Age in Category						
10-14	Ref			Ref		
15-19	0.37	0.11-1.19	0.095	0.32	0.11-0.98	0.046
20-25	0.38	0.08-1.86	0.233	0.27	0.06-1.21	0.087
Religious group						
Christian	Ref			Ref		
Muslim	1.06	0.27-4.19	0.931	1.31	0.38-4.55	0.672
Blindness status						
Congenital blindness	Ref			Ref		
Post-natal blindness	0.40	0.14-1.14	0.087	0.59	0.21-1.69	0.326
Sibling blindness:						
Yes	Ref			Ref		
No	1.15	0.30-4.44	0.836	1.19	0.32-4.40	0.798
Parental blindness:						
Either Mother or Father	Ref			Ref		
None of them	0.20	0.03-1.14	0.070	0.20	0.03-1.25	0.085
Living arrangement						
Both parents	Ref			Ref		
One parent	1.14	0.39-3.34	0.818	1.42	0.53-3.82	0.482

No parents	0.27	0.06-1.22	0.090	0.60	0.14-2.54	0.483
Individual /Interpersonal factors						
Number of siblings						
≤ 4	Ref			Ref		.
> 4	1.27	0.45-3.55	0.655	1.41	0.55-3.59	0.477
Sexual abuse						
Yes	Ref			Ref		
No	1.42	0.45-4.47	0.547	1.66	0.57-4.84	0.351
Alcohol Use						
Never drink	Ref			Ref		
1 or more	0.10	0.01-1.07	0.057	0.27	0.03-2.35	0.234
Break up						
Yes	Ref			Ref		
No	0.36	0.06-2.01	0.243	0.40	0.08-2.03	0.269
Physical Fight						
0 time	Ref			Ref		
1 time	0.48	0.16-1.44	0.189	0.39	0.14-1.07	0.067
Peer support						
Never	Ref			Ref		
Rarely	0.65	0.06-7.24	0.722	0.70	0.07-6.62	0.753
Number of Close Friends						
No Friend	Ref			Ref		
Just a Friend	5.30	0.45-62.26	0.185	3.92	0.38-40.11	0.250
Family –level factors						
Parental Divorce						
Yes	Ref			Ref		
No	0.22	0.04-1.24	0.086	0.34	0.08-1.49	0.152
Conflict with parents						

Yes	Ref			Ref		
No	0.51	0.09-2.92	0.452	0.42	0.07-2.52	0.341
Fight with parent						
Yes	Ref			Ref		
No	0.69	0.12-3.91	0.672	0.79	0.15-4.13	0.783
Parental Monitoring						
Never	Ref			Ref		
Rarely	3.04	0.37-24.81	0.299	3.06	0.45-20.68	0.252
Physical Abuse						
Yes	Ref			Ref		
No	2.53	0.80-7.97	0.114	1.97	0.72-5.39	0.189
Food insecurity						
Moderate	Ref			Ref		
Severe	0.54	0.20-1.47	0.229	0.51	0.20-1.30	0.158
None	13.79	1.62-117.25	0.016	4.93	0.77-31.62	0.093
Bullying						
Yes	Ref			Ref		
No	3.09	1.05-9.05	0.040	2.50	0.91-6.88	0.076
School work problems						
Yes	Ref			Ref		
No	2.61	0.97-7.01	0.058	2.11	0.84-5.33	0.115
Absence from School						
0 days	Ref			Ref		
1-5days	5.92	1.11-31.60	0.037	2.64	0.51-13.61	0.245
Constant	30.05	0.43-2123.79	0.117	25.95	0.51-1311.22	0.104
Model Specification						
Nagelkerke pseudo R ²	0.48			0.46		



Cox & Snell R ²	0.32	0.34
Hosmer-Lemeshow GOF test (sig.)	6.43 (0.599)	13.35 (0.100)
Overall percentage correctly classified	84.57%	83.51%

Note: β =beta value; AOR=Adjusted odds ratios; CI= Confidence Interval; GOF=goodness of fit



4.9 Objective Three: Reasons for living among school-going blind young people in Ghana

The exploration of reasons for living among school-going blind young people in Ghana reveals important insights into their motivations for resisting suicidal ideation and attempts over the past 12 months. The data indicates statistically significant associations between specific reasons for living and suicidal ideation or attempts, highlighting the role of social, moral, and familial considerations in deterring suicidal thoughts and behaviours.

Fear of social disapproval emerged as a significant protective factor for both suicidal ideation and attempts, with those without suicidal behaviours attributing greater importance to this concern. Among those who reported suicidal ideation, 76.60% cited FSD as an important reason to live, compared to 89.58% among those without ideation ($\chi^2 = 5.08$, $p = 0.024$). A similar pattern was observed for suicidal attempts, where 75.56% of those with attempt history considered FSD important, compared to 89.73% among those without attempts ($\chi^2 = 5.87$, $p = 0.015$). This suggests that while fear of social disapproval provides some protection across both groups, those who did not experience suicidal ideation or attempts placed significantly higher importance on social consequences, indicating that stronger concern about social disapproval may serve as a more robust protective factor against suicidal behaviour.

Moral objections showed the strongest inverse relationship with suicidal ideation and attempts among all reasons for living examined. In the ideation group, only 42.55% considered moral objections important, compared to 80.56% among those without ideation ($\chi^2 = 24.96$, $p < .001$). This substantial difference was consistent for suicidal attempts, where 42.22% of those with attempts considered MO important, compared to 80.14% of those without attempts ($\chi^2 = 24.12$, $p < .001$). These findings indicate that strong moral convictions against suicide serve as

a powerful deterrent, with individuals who hold firm moral objections being significantly less likely to experience suicidal ideation or engage in suicidal behaviour.

A sense of responsibility to family emerged as another powerful protective factor, with marked differences between groups. Among those with suicidal ideation, 82.98% cited responsibility to family as important, compared to 97.22% among those without ideation ($\chi^2 = 12.21$, $p < .001$). Similarly, for suicidal attempts, 82.22% of those with attempts marked RF as important, compared to 97.26% of those without attempts ($\chi^2 = 13.21$, $p < .001$). While responsibility to family was valued highly across both groups, those without suicidal behaviours demonstrated near-universal recognition of this protective factor, underscoring the critical role that family obligations and connections play in providing meaningful reasons to continue living.

Survival and coping beliefs showed high endorsement across both groups but with subtle differences. For suicidal ideation, 87.23% of those with ideation considered SCB important compared to 95.14% without ideation, though this difference approached but did not reach conventional statistical significance ($\chi^2 = 3.49$, $p = 0.062$). However, for suicidal attempts, the difference became statistically significant, with 86.67% of those with attempts endorsing SCB as important compared to 95.21% without attempts ($\chi^2 = 3.95$, $p = 0.047$). This suggests that while survival and coping beliefs may not be as strong a deterrent as moral objections or family responsibility, they still provide a relevant source of resilience, particularly in preventing the progression from ideation to actual suicide attempts.

Interestingly, fear of suicide itself did not show significant associations with either ideation or attempts. Among those with suicidal ideation, 93.62% considered fear of suicide important, compared to 96.53% among those without ideation ($\chi^2 = 0.75$, $p = 0.387$). Similarly, for suicidal attempts, 93.33% of those with attempts versus 96.58% without attempts rated FS

as important ($\chi^2 = 0.90$, $p = 0.343$). The high endorsement rates across both groups (exceeding 93%) suggest that while nearly all participants recognize the gravity and fear associated with suicide, this intrinsic fear may not differentiate those who experience suicidal thoughts or behaviours from those who do not. This could imply that fear of the act itself, though universally acknowledged, may not hold as much protective value as externally-oriented concerns such as social consequences, moral beliefs, and family responsibilities.

This analysis highlights that moral convictions, fear of social disapproval, responsibility to family, and survival beliefs play crucial protective roles against suicidal ideation and attempts among blind adolescents in Ghana. Notably, the strength of these protective factors varies, with moral objections showing the most substantial differences between groups, followed by family responsibility and fear of social disapproval. The pattern suggests that externally-focused protective factors (moral values, social consequences, family obligations) and adaptive coping beliefs may be more effective deterrents than intrinsic fears about suicide itself.

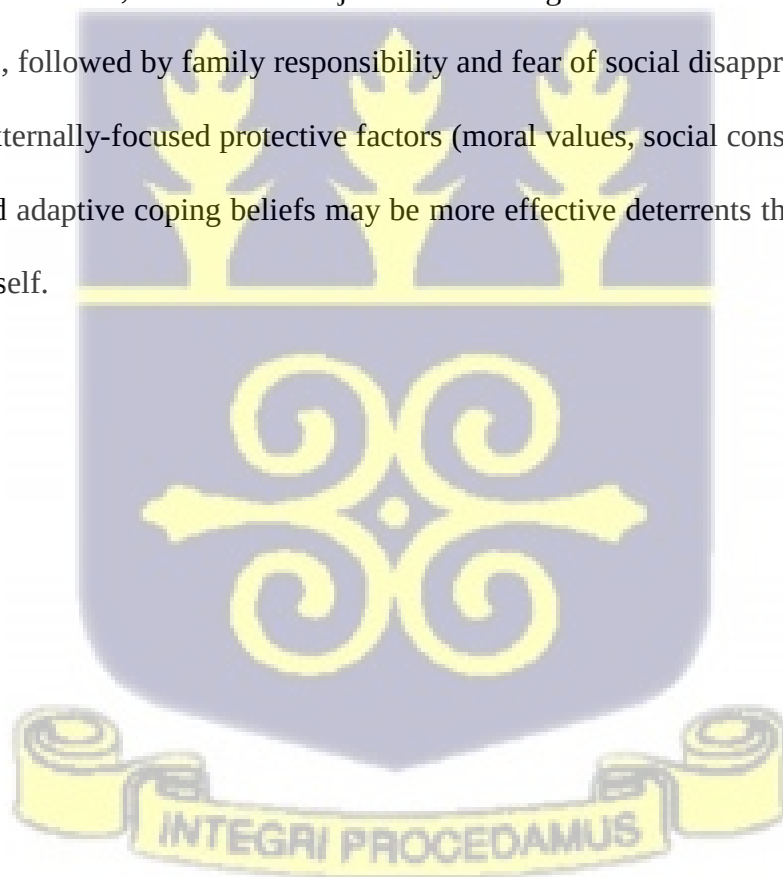


Table 4.7 Reasons for living among school-going blind young people in Ghana.

	12-month Suicidal Ideation				X^2 (p-value)	12-month Suicidal attempt				X^2 (p-value)
	Yes (Obs=47)		No (Obs=144)			Yes (Obs=45)		No (Obs=146)		
	Not important n (%)	Important n (%)	Not important n (%)	Important n (%)		Not important n (%)	Important n (%)	Not important n (%)	Important n (%)	
1. FSD	11 (23.40%)	36 (76.60%)	15 (10.42%)	129 (89.58%)	5.08 (0.024)	11 (24.44%)	34 (75.56%)	15 (10.27%)	131 (89.73%)	5.87 (0.015)
2. MO	27 (57.45%)	20 (42.55%)	28 (19.44%)	116 (80.56%)	24.96 (<.001)	26 (57.78%)	19 (42.22%)	29 (19.86%)	117 (80.14%)	24.12 (<.001)
3. SCB	6 (12.77%)	41 (87.23%)	7 (4.86%)	137 (95.14%)	3.49 (0.062)	6 (13.33%)	39 (86.67%)	7 (4.79%)	139 (95.21%)	3.95 (0.047)
4. RF	8 (17.02%)	39 (82.98%)	4 (2.78%)	140 (97.22%)	12.21 (<.001)	8 (17.78%)	37 (82.22%)	4 (2.74%)	142 (97.26%)	13.21 (<.001)
5. FS	3 (6.38%)	44 (93.62%)	5 (3.47%)	139 (96.53%)	0.75 (0.387)	3 (6.67%)	42(93.33%)	5 (3.42%)	141 (96.58%)	0.90 (0.343)

Note: Fear of Social Disapproval = FSD, Moral Objections = MO, Survival and Coping Beliefs = SCB, Responsibility to Family = RF, Responsibility to Family = RF.
First value in the row has frequencies and second value in parenthesis has percentages excluding the chi-square test



4.10 Objective Four: Motivation for attempted suicide

Participants who reported to have attempted suicide were 45. The analysis of motivations for attempted suicide among these 45 individuals reveals compelling insights into the psychological and situational factors driving these actions. Among the respondents, 26 were male, and 19 were female, allowing for a comparison of gender-based differences in motivations. The findings suggest distinct patterns in how males and females perceive and respond to unbearable thoughts, situations, and emotional distress. One prominent motivation reported by participants was the inability to endure unbearable thoughts, with 28.9% of the overall sample identifying this as a driving factor. Interestingly, males were more likely to cite this reason (34.6%) compared to females (21.1%), suggesting that men may struggle more intensely with internal cognitive pressures leading to their attempts. Similarly, 13.3% of the participants reported losing control and being unsure of why they attempted suicide. However, this reason was significantly more common among females (21.1%) than males (7.7%), indicating a potential gender difference in experiencing impulsivity or dissociation during times of crisis.

A major finding was the overwhelming role of intolerable external circumstances in motivating suicide attempts. Overall, 37.8% of participants cited that their situation was so unbearable that no alternative seemed viable. This motivation was particularly prevalent among females, with 63.2% of them endorsing this reason compared to only 19.2% of males. Furthermore, 20.0% of the participants reported attempting suicide to “get away for a while from an unacceptable situation.” Once again, this was more frequently observed among females (31.6%) than males (11.5%). These findings suggest that females may perceive their actions as a temporary escape from external pressures more often than males do. While external stressors were prominent among females, the desire to die was an equally significant motivation for both genders. Approximately 22.2% of the participants reported explicitly

wanting to die, with a relatively balanced distribution between males (19.2%) and females (26.3%). This suggests that while situational and cognitive triggers may differ by gender, the fundamental intent to end one's life is shared across both groups.

Another noteworthy motivation was the desire to “make things easier for others,” reported by 46.4% of participants, making it the most commonly cited reason. Interestingly, males were slightly more likely to report this altruistic motive (50.0%) compared to females (42.1%). This finding highlights a possible tendency among males to frame their actions as a means to relieve others of perceived burdens, whereas females more frequently focused on escaping their own unbearable situations. Less commonly reported motivations included seeking help or attention, with 13.3% attempting suicide to express desperation to others and 6.6% hoping to receive help. Both genders expressed these motives in nearly equal proportions, reflecting a shared desire to communicate their distress. Additionally, a small percentage of females (2.2%) reported attempting suicide to make someone feel guilty or because they believed it was the “work of the devil.” No participants reported motivations such as punishing themselves, showing love, or testing whether others cared about them.

The findings reveal significant gender patterns in motivations for attempted suicide. Females were more likely to attribute their actions to unbearable external circumstances and the desire for temporary escape, while males leaned toward motivations rooted in unbearable thoughts and altruism. These gendered differences underscore the complexity of suicidal behaviour and highlight the need for tailored interventions. Addressing cognitive pressures, especially among males, and providing support for managing external stressors in females, could help mitigate these motivations.

In conclusion, the motivations for attempted suicide are deeply intertwined with both psychological and situational stressors, with notable variations across genders. The high prevalence of reasons linked to unbearable situations and thoughts emphasizes the critical

need for mental health interventions that address both cognitive and external stressors. By understanding these nuanced motivations, mental health professionals and support systems can better design targeted strategies to prevent future suicide attempts.

Table 4.8 Motivations for attempted suicide

	Overall	Sex	
		Male	Female
	n (%)	n (%)	n (%)
My thoughts were so unbearable; I could not endure them any longer	13 (28.9)	9 (34.6)	4 (21.1)
It seemed that I lost control of myself, and I do not know why I did it	6 (13.3)	2 (7.7)	4 (21.1)
The situation was so unbearable that I could not think of any other alternative	17 (37.8)	5 (19.2)	12 (63.2)
I wanted to get away for a while from an unacceptable situation	9 (20.0)	3(11.5)	6 (31.6)
I wanted to sleep for a while	0 (0)	0 (0)	0 (0)
I wanted to punish myself	0 (0)	0 (0)	0 (0)
I wanted to die	10 (22.2)	5 (19.2)	5 (26.3)
I wanted to show someone how much I loved him/her	0 (0)	0 (0)	0 (0)
I wanted others to know how desperate I felt	6 (13.3)	3 (11.5)	3 (15.8)
I wanted to get help from someone	3 (6.6)	2 (7.7)	1 (5.3)
I wanted to know if someone really cared about me	0 (0)	0 (0)	0 (0)
I wanted others to pay for the way they treated me	1 (2.2)	0 (0)	1 (5.3)
I wanted to make someone feel guilty	1 (2.2)	0 (0)	1 (5.3)
I wanted to persuade someone to change his/her mind	2 (4.4)	2 (7.7)	0 (0)
I wanted to make things easier for others	21 (46.4)	13 (50)	8 (42.1)
It was the work of the devil	1 (2.2)	0 (0)	1 (5.3)

Note: Denominator for overall sample size is 45, denominator for male is 26 and denominator for female is 19.



CHAPTER FIVE

DISCUSSION

5.1 Prevalence of suicidal ideation and attempts among adolescents with non-congenital blindness compared to those with congenital blindness

The higher prevalence of suicidal ideation and attempts among adolescents with post-natal blindness compared to those with congenital blindness provides further insights into the psychological impact of blindness. Adolescents who lose their sight later in life often face unique adjustment challenges, such as grieving the loss of a previously familiar sensory experience (Kamp et al., 2020). This adjustment process can exacerbate feelings of isolation, frustration, and hopelessness, as highlighted by Wahl et al. (2019). These findings align with the Ecological Systems Theory, which emphasizes the interplay of environmental and personal factors in shaping psychological outcomes (Bronfenbrenner & Morris, 2020). Adolescents with post-natal blindness may struggle with adapting to new ways of navigating their environment, contributing to increased rates of suicidal behaviours.

The timing of blindness onset further emphasizes the need for targeted interventions. Adolescents with post-natal blindness require support systems that address the psychological adjustment to vision loss, including grief counselling and coping strategies, while those with congenital blindness may benefit from programs fostering emotional resilience and social inclusion from an early age (Shakespeare et al., 2019). Moreover, the systemic challenges in low- and middle-income countries, where early-onset blindness often stems from preventable causes such as untreated infections, highlight the importance of strengthening public health infrastructure (Foster & Gilbert, 2021). Addressing these systemic factors could significantly reduce the burden of blindness and its associated psychological consequences.

5.2 Socio-demographics and Exposure variables

The absence of statistically significant gender differences in suicidal ideation and attempts suggests that the psychological burden of blindness may outweigh gender as a determinant of suicidal behaviours in this population. This finding contrasts with studies such as Nock et al. (2018), which identify gender as a significant factor in adolescent suicidal behaviours. It emphasizes the importance of considering disability-related factors over demographic ones in this context. Similarly, the non-significant relationship between blindness status (congenital vs. post-natal) and suicidal behaviours aligns with Bambara et al. (2020), who suggest that coping mechanisms and social support may play a more critical role than the timing of blindness onset. This finding indicates that interventions should focus on enhancing coping skills rather than the origin of the disability.

The lack of significant associations with socio-demographic factors, including the presence of blind siblings, parental blindness, family structure, and living arrangements, suggests that interpersonal and environmental stressors may be more influential in determining suicidal behaviours than familial characteristics. This aligns with Gunnell et al. (2020), emphasizing the need to prioritize external risk factors over internal family dynamics. The strong associations between exposure to abuse (sexual and physical) and suicidal behaviours highlight the urgent need for trauma-informed care within this vulnerable group. Sexual abuse victimization, a known risk factor as indicated by Angelakis et al. (2019), contributes significantly to suicidal ideation and attempts. Physical abuse also demonstrates a significant relationship with suicidal behaviours, consistent with Miller et al. (2020). These findings underline the importance of addressing abuse and providing psychological support to affected adolescents.

School-related stressors, such as bullying and academic difficulties, were examined as potential predictors of suicidal behaviours among blind adolescents in Ghana. Interestingly,

while the bivariate analyses indicated a positive association between bullying and suicidal behaviours consistent with previous research linking peer victimization to heightened psychological distress (Lereya et al., 2019) the multivariate analysis revealed a contrasting pattern. After controlling for other covariates such as family support, emotional well-being, and physical altercations, bullying appeared to play a protective role against suicidal behaviour.

This unexpected finding suggests that the relationship between bullying and suicidal behaviour among blind adolescents may be context-dependent and influenced by social or environmental buffering factors. One possible explanation is that, within some inclusive or special school settings, experiences labeled as “bullying” may sometimes reflect peer teasing or social interactions that, while negative, still indicate social inclusion rather than isolation. In this sense, students who report being bullied might also be more socially engaged and less socially withdrawn conditions that, paradoxically, reduce suicide risk compared to total social exclusion (Menesini & Salmivalli, 2017).

Another plausible interpretation is that the protective association observed in the multivariate model reflects statistical suppression effects, where controlling for stronger risk factors such as family conflict or emotional distress reveals an inverse relationship between bullying and suicidality. This phenomenon has been documented in previous adolescent studies, where bullying loses its direct positive effect or reverses after accounting for mediating psychosocial variables such as perceived social support or resilience (Arango et al., 2016; Holt et al., 2015).

Furthermore, the Ghanaian cultural context may also moderate the bullying–suicidality relationship. In collectivist school environments, mild teasing or disciplinary peer interactions are often normalized as part of social adjustment rather than perceived as severe

victimization. Blind adolescents who have adapted to these interactions may therefore develop stronger coping skills, resilience, and peer-connectedness that buffer against suicidal thoughts. This aligns with resilience-based frameworks suggesting that social connectedness even within imperfect or conflictual peer networks—can mitigate suicide risk (Masten, 2014).

Conversely, academic difficulties maintained a consistent positive relationship with suicidal behaviours in both bivariate and multivariate analyses. This reinforces prior evidence that academic stress and poor school performance constitute critical psychological stressors among adolescents with disabilities (Putra et al., 2019). Similarly, involvement in physical altercations remained a significant risk factor for suicidal ideation and attempts, supporting earlier findings that link aggressive encounters with emotional dysregulation and heightened vulnerability to self-harm (Gunnell et al., 2020). The elevated rates of suicidal ideation and attempts observed among adolescents involved in physical fights highlight a potential need for targeted interventions focusing on anger management, conflict resolution, and emotional support to mitigate these risks.

In contrast, the analysis found no significant association between social support, as measured by the number of close friends, and suicidal behaviours. While friendships are often considered protective against suicide, this finding aligns with other studies that suggest the quality of social relationships may play a more critical role than the number of friends (Hawton et al., 2020). For blind adolescents, the complexities of social interactions may mean that having friends alone is insufficient to alleviate emotional struggles that contribute to suicidal behaviours. These results imply that interventions should focus on building meaningful connections and emotional resilience rather than solely increasing social circles.

The absence of a significant relationship between school attendance and suicidal behaviours could indicate that, for blind adolescents, absenteeism does not operate as a straightforward predictor of suicide risk. Previous studies have associated school absenteeism with social isolation and psychological challenges (Wang et al., 2020). However, the unique experiences of blind adolescents in school, including potential barriers to full participation and inclusion, may influence how school attendance impacts their mental health. This finding suggests that future research should consider the broader context of the school environment and support systems available to blind adolescents when examining school-related risk factors for suicidal behaviours.

Finally, the lack of significant association between sibling presence and suicidal behaviours highlights the possibility that family structure, in terms of the number of siblings, may not be a key determinant of suicide risk among blind adolescents. Although siblings can often serve as sources of emotional and social support, this may not hold for all family dynamics, especially in families with a disabled member (Gunnell et al., 2020). For some blind adolescents, the expected protective benefits of sibling presence may be limited, possibly due to family challenges or a lack of meaningful support within sibling relationships. This underscores the need to consider other family-related factors, such as the quality of familial relationships and the level of support from parents or caregivers, in understanding suicide risk in this population.

5.3 Influences of Psychosocial Factors on Suicidal Behaviours of school-going blind Adolescents.

The findings reveal important insights into how psychosocial factors, particularly familial dynamics, influence the suicidal behaviours of school-going blind adolescents. Parental monitoring, while showing a weak protective effect against suicidal behaviours, may play a complex role. Existing literature indicates that both excessive and insufficient parental

monitoring can have varied effects on adolescents, depending on their need for autonomy and the overall family environment (Dishion & McMahon, 1998). In this study, it appears that moderate parental monitoring could potentially lower the risk of suicide attempts, though its weaker association with suicidal ideation suggests that it may not be sufficient on its own to prevent ideation. This highlights the importance of balanced parental involvement, where adolescents feel guided yet not overly restricted, allowing them to develop autonomy within a supportive structure (Muñoz-Silva et al., 2020).

Parental understanding emerges as a more significant protective factor, as evidenced by its strong negative correlations with both suicidal ideation and suicide attempts. This aligns with research underscoring the value of emotional support and understanding from parents in fostering resilience and emotional intelligence (King & Merchant, 2008; Steele et al., 2022). For blind adolescents who often rely heavily on family for emotional and logistical support, parental understanding may serve as a foundation for psychological stability. Feeling understood and accepted by parents can alleviate feelings of isolation and hopelessness, which are commonly associated with suicidal behaviours (Robinson & Caele, 2020). These findings underscore the potential for family-based interventions that enhance communication and empathy to effectively reduce suicide risk among school-going blind adolescents (Miller et al., 2020).

The lack of significant correlation between peer support and suicidal behaviours may reflect the unique social landscape experienced by blind adolescents. Blindness can pose social challenges, such as limited access to peer interactions, which might diminish the impact of peer support on suicidal behaviours. Additionally, blind adolescents may place greater reliance on their families for both emotional and practical support, leading to a reduced emphasis on peer relationships as protective factors against suicide (Harter et al., 2003; Steele et al., 2022). This finding also suggests that individual resilience and coping skills factors, which were not

directly measured in this study could play a more pivotal role in suicidal outcomes within this group (Ciarrochi et al., 2018). Future research might explore how these personal attributes, alongside family dynamics, contribute to the suicidal behaviours of blind adolescents, potentially offering a more comprehensive understanding of the factors that protect against suicidal behaviours.

The analysis reveals a clear association between specific adverse experiences and increased suicidal behaviours among school-going blind adolescents, emphasizing the complex role that trauma and social stressors play in their suicidal behaviours. Sexual abuse, which has one of the strongest associations with both suicidal ideation and attempts, is well-documented in the literature as a profound risk factor for issues such as depression, anxiety, and suicidality. The high rate of suicidal behaviours among those who have experienced sexual abuse underscores the importance of targeted psychological interventions and early support to prevent the lasting psychological effects of trauma (Chen et al., 2010; Molnar et al., 2018). The findings suggest that trauma-informed care and counseling services are vital for this vulnerable group, offering critical support to mitigate the risk of suicide (Miller et al., 2020).

Similarly, physical abuse is closely linked to suicidal behaviours, aligning with research indicating that abuse contributes to feelings of worthlessness and despair, which are known precursors to suicidal ideation and attempts (Gilbert et al., 2009; Murray et al., 2020). Addressing physical abuse through preventive programs and providing therapeutic support for victims are essential measures to reduce the suicide risk among these adolescents. Bullying, which also shows a significant association with suicidal behaviours, has been widely recognized as a major risk factor, especially for vulnerable populations like adolescents with disabilities. Bullying often leads to social isolation, self-blame, and hopelessness, all of which increase the risk of suicidality (Kim & Leventhal, 2008). These findings suggest that anti-

bullying initiatives and support systems are crucial in educational settings to reduce bullying's impact for blind adolescents who may already feel marginalized (Swearer et al., 2019).

Academic difficulties emerged as a significant predictor of suicidal behaviours, indicating that academic stress may lead to anxiety and hopelessness in adolescents, particularly among those with disabilities (Gunnell et al., 2004; Putra et al., 2019). Schools can play a supportive role by offering resources such as tutoring and counselling services to alleviate academic pressures, potentially reducing suicidal ideation and attempts in struggling students. Engagement in physical fights also correlates with suicidal behaviours, reflecting underlying aggression, emotional distress, or social conflicts that exacerbate anxiety and depression. Interventions focused on conflict resolution and emotional regulation within school programs could help reduce both aggression and suicide risk among adolescents (Swahn et al., 2008; Wang et al., 2020).

In contrast, the lack of significant associations between factors such as alcohol use, school absences, and the number of siblings with suicidal behaviours suggests that these factors may not directly contribute to suicidality in this population. While alcohol use and school absences may sometimes relate to emotional stress, they do not appear to be direct predictors of suicidal ideation or attempts in this sample (Miller et al., 2020).

The findings indicate that gender does not significantly impact the likelihood of suicidal ideation or attempts among school-going blind adolescents in Ghana. This aligns with recent studies, by Mortier et al. (2018) and Wong et al. (2018), which suggest that when adolescents face unique life challenges, such as disabilities, gender may not play a decisive role in suicidal behaviours. The comparable risks for both genders imply that interventions aimed at addressing suicidal behaviours should focus on shared stressors rather than gender-specific factors. The non-significant effect of blindness type on suicidal ideation and attempts suggests that whether

an individual was born blind or acquired blindness later in life does not significantly influence their likelihood of engaging in these behaviours. This finding aligns with research indicating that external support systems, coping mechanisms, and resilience may mitigate the impact of disability-related stressors on suicidal behaviours (Vinkers et al., 2020; Wong et al., 2018).

Thus, providing psychological resources and supportive networks for all blind adolescents, regardless of blindness onset, appears critical for promoting psychological well-being. Age, however, shows a clear association with suicidal behaviours, with younger adolescents at greater risk. This finding aligns with prior studies emphasizing early adolescence as a period of heightened vulnerability psychological issues, partly due to developmental and social challenges unique to this age group (Roh et al., 2018). Younger adolescents, particularly those aged 10–14, might struggle more with identity formation, social pressures, and emotional regulation, contributing to higher risks of suicidal thoughts and behaviours. Age-specific programs focusing on resilience and coping skills for younger adolescents could be effective preventive measures.

Also, religious affiliation, though often cited as a protective factor against suicidal behaviours, did not show a significant effect in this study. While other research has highlighted the role of religion in providing a sense of community and belonging (Braam et al., 2018; King et al., 2021), it appears that religious affiliation alone is insufficient as a protective factor in this context. This suggests that further exploration into the depth of religious engagement or community support within religious groups may provide more nuanced insights. The model's moderate explanatory power reflects the complexity of suicidal behaviours, which are influenced by a myriad of factors that often interact in unpredictable ways (Franklin et al., 2017). While the model does not account for all potential influences on suicidal behaviour, its predictive accuracy suggests it can reasonably estimate risk factors within this population. Future research could enhance these findings by integrating additional psychosocial variables,

such as social support quality, life satisfaction, or specific coping strategies, to better understand and address the unique needs of blind adolescents at risk of suicide.

The findings offer insights into factors influencing suicidal behaviours among school-going blind adolescents, with some results aligning with previous studies and others presenting novel, unexpected associations. Gender's non-significant effect on suicidal ideation and attempts aligns with the view that suicidal behaviour determinants may transcend gender, emphasizing the role of broader psychosocial factors in this demographic (Mortier et al., 2018). Similarly, blindness status does not significantly impact suicidal behaviour, suggesting that the duration or timing of vision loss may be less influential than factors such as family support and coping resources (Wong et al., 2018).

Furthermore, the analysis reveals a significant positive association between family structure and reduced suicidal ideation and attempts. Extended family networks in polygamous settings might provide additional emotional and social support, potentially buffering against stressors that could lead to suicidal behaviours (Al-Naggar et al., 2020). This finding highlights the importance of family dynamics and the unique support structures within different family compositions in influencing suicidal behaviours.

Living arrangements show a marginal association with suicidal ideation, with those not living with parents reporting lower ideation rates. This may indicate the presence of alternative support networks, which could offset the absence of parental involvement. Physical aggression, such as fighting, surprisingly correlates with reduced ideation and attempts, possibly reflecting that adolescents who externalize distress through aggression may not internalize it to the extent that it leads to suicidal thoughts (Holt et al., 2020). While this may suggest that such behaviours serve as coping mechanisms, they remain concerning due to their potential to escalate into other behavioural problems.

Finally, the protective role of alcohol use warrants further investigation. While some adolescents may use alcohol as a temporary escape, it can mask underlying mental health issues and exacerbate them over time (Esang & Ahmed, 2018). The association between having multiple close friends and increased suicidal ideation and attempts might reflect the complex social pressures that friendships can introduce, particularly if adolescents face relational conflicts (Prinstein et al., 2019). The absence of physical abuse significantly protects against suicidal behaviour, underscoring the detrimental effects of abuse on adolescents (Miller et al., 2020). Counterintuitively, adolescents' food insecurity shows higher ideation odds, suggesting complex socioeconomic dynamics where food security alone may not indicate overall well-being. Lastly, school absenteeism's association with suicidal behaviours suggests that disengagement from educational settings may reflect or exacerbate underlying distress, highlighting a need for early intervention (Thompson et al., 2018).

5.4 Influences of Psychosocial Factors on Suicidal Behaviours of school-going blind Adolescents (Adjusted and Unadjusted Odd Ratio).

The analysis of suicidal ideation and attempts among adolescents reveals a complex interplay of socio-demographic, interpersonal, and contextual factors, which align well with Bronfenbrenner's Ecological Systems Theory. This theory provides a robust framework for understanding the dynamic interactions within and across various environmental systems that shape individual behaviours. By integrating findings from both adjusted and unadjusted odds ratios, this discussion emphasizes the multifaceted nature of suicidal behaviours and the need for multi-level interventions. The age group 15–19 years consistently emerged as a protective factor against suicidal ideation and attempts compared to the younger group aged 10–14 years. This finding highlights early adolescence as a critical period of vulnerability, aligning with the ontogenic development component of Ecological Systems Theory, which underscores the role of developmental transitions in shaping coping mechanisms and emotional resilience

(Bronfenbrenner, 1979). Early adolescents often lack mature coping skills and may struggle with heightened stressors from their immediate environments, such as family or school transitions (Gulliver, Griffiths, & Christensen, 2010). The statistically significant reduction in suicide attempts among older adolescents (AOR = 0.32, 95% CI: 0.11–0.98, $p=0.046$) underscores the importance of interventions tailored to the unique challenges of early adolescence, such as fostering emotional regulation, resilience, and peer support systems within schools and communities.

Bullying was a significant indicator of suicidal ideation, with adolescents who reported bullying experiences exhibiting higher odds of suicidal ideation (AOR = 3.09, 95% CI: 1.05–9.05, $p=0.040$). This aligns with extensive literature linking victimization to mental health challenges, as bullying disrupts the microsystem by eroding the stability of peer relationships and fostering feelings of worthlessness (Arseneault, Bowes, & Shakoor, 2010). Similarly, school absenteeism for 1–5 days was associated with a higher likelihood of suicidal ideation (AOR = 5.92, 95% CI: 1.11–31.60, $p=0.037$). Absenteeism may reflect avoidance of stressful environments or signal underlying emotional distress, highlighting the mesosystem's role in linking school dynamics to mental health.

In conclusion, by situating the findings within the Ecological Systems Theory, this study highlights the intricate interactions across developmental, relational, and systemic domains influencing suicidal ideation and attempts. Age, bullying, food insecurity, and school-related factors emerge as critical areas of focus, each shaped by the broader ecological context. Comprehensive, multi-level interventions tailored to the unique needs of adolescents within their ecological settings are essential to mitigating suicide risks and promoting mental health. Further research is warranted to deepen our understanding of these dynamics and refine intervention strategies, ensuring that they remain responsive to the evolving challenges faced by adolescents.

5.5 Reasons for living among school-going blind young people in Ghana.

The findings highlight crucial factors that contribute to reasons for living among school-going blind adolescents in Ghana, especially in the context of suicidal ideation and attempts. The significance of "Fear of Social Disapproval" (FSD) among those with suicidal ideation ($p = 0.024$) and attempts ($p = 0.015$) aligns with studies showing that social stigma and fear of judgment strongly impact mental health and serve as protective factors against suicide in vulnerable populations (Wong et al., 2019). Adolescents may avoid suicide attempts to escape social disapproval, especially in collectivist cultures where social perceptions significantly influence individual behaviours.

"Moral Objections" (MO) emerged as a highly significant factor ($p = 0.000$) for both suicidal ideation and attempts, suggesting that deeply held moral or religious beliefs deter suicide. This aligns with research indicating that moral or religious convictions can be effective protective factors for individuals contemplating suicide, as they offer ethical and existential grounding (Curtin et al., 2020). Additionally, "Survival and Coping Beliefs" (SCB) and "Responsibility to Family" (RF) were also significant, highlighting the role of resilience and familial obligations in preventing suicide attempts. Responsibility to family, for instance, can provide a sense of purpose, consistent with family attachment theories which emphasize the protective effect of close family bonds on the overall well-being of adolescents (Miller et al., 2018).

Interestingly, "Fear of Suicide" (FS) was not statistically significant, indicating that fear alone may not be sufficient to prevent suicidal behaviours. This is consistent with findings that suggest fear-based approaches are less effective than resilience-building strategies in suicide prevention (Smith & Cukrowicz, 2018). This analysis underscores the need for targeted

interventions focusing on moral values, family support, and social stigma reduction to foster resilience among blind adolescents at risk of suicide in Ghana.

5.6 Motivations for engaging in attempted suicide among school-going blind young people in Ghana.

The motivations for suicidal behaviours identified in this study reflect deep emotional and cognitive distress among blind adolescents, with gender differences offering insight into distinct psychological processes. The finding that males were more likely to report unbearable thoughts as a primary motivator aligns with research suggesting that societal norms encouraging emotional suppression among males can lead to internalized distress and intrusive thoughts (Joiner et al., 2018). This suggests the need for interventions that provide males with safe spaces to express emotions and develop coping mechanisms to address cognitive distress.

In contrast, females were more likely to report a sense of losing control or perceiving their situations as hopeless. This aligns with studies indicating that females are more prone to emotional distress and dissociative states, which may lead to impulsive actions, including suicide attempts (Nock et al., 2008). The significant prevalence of motivations related to escaping unbearable situations and perceived hopelessness among females emphasizes the importance of fostering resilience and teaching problem-solving skills to help them navigate challenging circumstances. The explicit desire to die, reported by both genders, highlights the severity of suicidal intent in this population. While this motivation was less frequent than others, its presence underscores the urgency of addressing psychological needs among blind adolescents. Interventions targeting this group must address underlying cognitive patterns, such as perceived burdensomeness and thwarted belongingness, as described in the Interpersonal-Psychological Theory of Suicide (Van Orden et al., 2010).

The role of cultural and religious beliefs in framing suicidal behaviours, particularly among females, is also noteworthy. The attribution of suicidal behaviours to external forces, such as spiritual influences, reflects the interplay between traditional beliefs and psychological issues. This finding highlights the need for culturally sensitive interventions that incorporate these beliefs while addressing the emotional and psychological challenges faced by blind adolescents. Finally, the motivations related to interpersonal dynamics, such as the desire to show love or make things easier for others, emphasize the importance of addressing relational stressors. The absence of these motivations among females suggests potential differences in how males and females navigate social and relational pressures, likely influenced by gendered expectations and roles (Hawton et al., 2020).

By applying Ecological System Theory (EST) to the findings of this study, the high prevalence of suicidal ideation and attempts among school-going blind adolescents in Ghana can be understood in the context of the intricate relationships between individuals and their surrounding environments. The theory's conceptualization of development across five levels—microsystem, mesosystem, exosystem, macrosystem, and chronosystem—provides valuable insights into the factors contributing to the observed trends.

At the microsystem level, which encompasses immediate settings such as family, peers, and school, the study found that physical abuse significantly predicted suicidal ideation and attempts. Adolescents who experienced physical abuse were over twice as likely to report suicidal behaviours as their peers who had not been abused. This finding underscores the critical impact of negative interactions within close relational environments. Such hostile microsystems create conditions of distress and hopelessness, exacerbating the psychological vulnerabilities of blind adolescents. In contrast, involvement in physical fights was associated with lower odds of suicidal behaviours. This counterintuitive finding aligns with the cathartic potential aggression theory, which posits that outward expressions of aggression may serve as

temporary coping mechanisms for internalized distress. These dynamics highlight the dual role of immediate relational interactions in either amplifying or mitigating suicidal tendencies.

The mesosystem, representing the interconnections between different microsystems (e.g., home and school), further contextualizes the study's findings. Adolescents who struggled with schoolwork or experienced absenteeism were more likely to report suicidal ideation and attempts. This association highlights how stressors in one microsystem, such as academic challenges, can interact with family pressures to compound feelings of despair.

For blind adolescents, the added layer of navigating disability-related challenges may intensify these stressors, underscoring the need for school-based interventions that address both academic and psychological well-being.

At the exosystem level, which encompasses broader societal influences that indirectly affect adolescents, the study identified protective effects associated with polygamous family structures. Adolescents from polygamous families were less likely to report suicidal Behaviours than their peers from monogamous families. This finding suggests that the extended family networks often found in polygamous households may provide additional emotional and social support, buffering against the isolation and distress that blind adolescents may experience. These supportive exosystemic structures highlight the importance of broader community networks in mitigating mental health risks.

The macrosystem, which encompasses the broader cultural and societal values, norms, and beliefs, provides critical insights into several findings. For instance, the attribution of suicidal Behaviours to external forces, such as "the work of the devil," reflects the significant influence of cultural and religious narratives in shaping adolescents' understanding of their mental health struggles. This underscores the importance of designing interventions that are sensitive to cultural and religious contexts to ensure their effectiveness. Furthermore, the

absence of significant gender differences in suicidal Behaviours, as observed in this study, may be a reflection of cultural dynamics where disability-related challenges overshadow traditional gender-related psychological disparities. This finding suggests that, within this context, disability-related vulnerabilities are more salient determinants of mental health outcomes than gender.

Finally, the chronosystem, which considers the dimension of time and developmental transitions, aligns with the finding that younger adolescents (aged 10–14 years) are more likely to experience suicidal ideation and attempts compared to their older counterparts. This stage of early adolescence is marked by heightened sensitivity to environmental pressures, including familial expectations and school demands, which may overwhelm their still-developing coping mechanisms. The heightened vulnerability of this developmental period underscores the need for early interventions tailored to the unique challenges faced by blind adolescents in this age group.

In conclusion, the application of Ecological Systems Theory to this study's findings illuminates the complex interplay of individual, relational, societal, and cultural factors influencing suicidal behaviours among school-going blind adolescents in Ghana. By framing these behaviours within a multi-level ecological context, the theory underscores the need for comprehensive interventions that address immediate relational dynamics, such as preventing abuse, while also tackling broader systemic and cultural influences. This multi-level approach is essential for effectively mitigating the risk of suicidal Behaviours and promoting the mental health and well-being of this vulnerable population.

5.7 Summary of Findings

This study examined the prevalence and factors associated with suicidal ideation and attempts among school-going blind adolescents in Ghana. This study examined the prevalence and

factors associated with suicidal ideation and attempts among school-going blind adolescents in Ghana. The findings revealed that 24.6% of participants reported experiencing suicidal ideation, while 23.6% reported attempting suicide. These high prevalence levels highlight the significant mental health challenges faced by this population. Younger adolescents (aged 10–14 years) were more likely to experience these behaviours compared to older adolescents, reflecting the vulnerability of early adolescence. This aligns with previous research indicating that early adolescence is a particularly sensitive period for psychological issues (Patton et al., 2018). The Ecological Systems Theory further contextualizes these findings by illustrating how younger adolescents are more susceptible to environmental pressures, such as school and family demands, which may lead to feelings of distress and hopelessness.

Contrary to some existing literature, the study found no significant gender differences in suicidal ideation and attempts. Both boys and girls in the study exhibited comparable rates of suicidal behaviours. This finding suggests that, in the context of disability, traditional gender-related psychological disparities may be overshadowed by disability-related challenges (Canetto & Sakinofsky, 1998). However, further research is needed to explore whether specific gendered experiences within the blind adolescent population may still influence suicidal behaviours.

Physical abuse emerged as a significant predictor of suicidal ideation and attempts. Adolescents who experienced physical abuse were more than twice as likely to report suicidal behaviours as those who were not abused. This result is consistent with prior studies linking physical abuse to issues such as depression and suicidal tendencies (Miller et al., 2020). Interestingly, involvement in physical fights was associated with lower odds of suicidal behaviours. This counterintuitive finding aligns with the cathartic potential aggression theory. This theory suggests that acting aggressively can help people who are experiencing internalized distress relieve pent-up emotional tension and may even act as an outward coping technique.

Some people find that physically expressing rage temporarily eases psychological anguish or frustration, which lessens the desire to participate in more dangerous activities, such as suicidal thoughts or attempts. Though this could provide temporary respite, it's crucial to understand that persistent aggressiveness can have negative long-term consequences, including aggravating emotional dysregulation and encouraging unhealthier coping mechanisms. However, this behaviour remains problematic and highlights the need for interventions that address both externalizing and internalizing behaviours among adolescents (Swahn et al., 2018).

The study found that alcohol consumption was associated with lower odds of suicidal ideation and attempts. This finding contradicts much of the existing literature, which often links alcohol use to higher risks of suicidal behaviours (Esang & Ahmed, 2018). It is possible that, within this population, alcohol serves as a temporary coping mechanism for distress, though further research is required to better understand this dynamic situation. Adolescents from polygamous families were less likely to report suicidal behaviours compared to those from monogamous families. This suggests that the extended family networks inherent in polygamous family structures may provide additional emotional and social support, which can mitigate the risk of suicidal ideation and attempts (Crosnoe & Elder, 2019).

Adolescents who struggled with schoolwork or missed school were more likely to report suicidal ideation and attempts. This finding underscores the significant role that academic difficulties play in adolescent behaviours. The pressure to perform academically, combined with the challenges of living with a disability, may contribute to feelings of hopelessness and despair, which are strongly linked to suicidal behaviours (Putra et al., 2019). Some adolescents attributed their suicidal behaviours to external forces such as "the work of the devil." This finding highlights the role of cultural and religious beliefs in shaping how suicidal behaviours are understood and experienced. Such beliefs must be considered when

designing interventions to ensure that they resonate with the cultural context of blind adolescents in Ghana (Colucci & Martin, 2018).

5.8 Limitations of the Study

The researcher- administered approach can lead high levels of socially desirable responses which may influence the study. Also, the researcher- administered mode that was adopted perhaps created a sense of compulsion on the part of the participants to answer every question and this might have led to the lack of missing data even though the researcher ensured that there was an atmosphere of voluntarism where participants could voluntarily respond.

The study focused on school-going blind adolescents in Ghana, which may limit the generalizability of the findings to all blind adolescents, including those who are not in school or those in other regions. Additionally, given how stigmatized attempted suicide is in Ghana, some participants may have given socially acceptable answers in addition to the strong propensity of non-disclosure among youth in suicide studies. Finally, the study's cross-sectional design limits the ability to establish causal relationships between the variables. The findings indicate associations, but not necessarily the directionality or causality of those relationships.

5.9 Recommendations

The researcher recommends that the government and policymakers prioritize interventions tailored to the developmental needs of blind adolescents, particularly those aged 10–14. Schools and healthcare providers should implement early and regular health screenings, support systems, and peer support networks. Collaboration with the Ministry of Education, Ministry of Health, school administrators, and local NGOs can facilitate the operationalization of these interventions. While these measures are feasible within existing frameworks, challenges such as resource allocation and staff training must be addressed to ensure sustainability.

Programs aimed at preventing physical abuse should be strengthened in both schools and homes. Public awareness campaigns, teacher training, and accessible support services for victims will be crucial in reducing suicidal behaviours among blind adolescents. Effective implementation will require coordination between social services, community leaders, and child protection agencies, particularly in under-resourced areas where coverage may be limited.

Schools should also introduce comprehensive academic support mechanisms, including tutoring and mental health counselling, to alleviate stress associated with academic challenges. These interventions can be operationalized through partnerships between school counsellors, special education teachers, and NGOs. Limitations, such as insufficient counselling staff, can be mitigated by training existing educators and incorporating peer mentoring programs to enhance accessibility.

Psychological services should integrate culturally relevant frameworks that consider the spiritual and cultural beliefs of blind adolescents in Ghana. Community leaders, mental health practitioners, and school counsellors can collaborate to design interventions that respect local norms while addressing mental health needs. Although large-scale implementation may face challenges due to limited trained personnel and resources, pilot programs can provide models for future scaling.

Family-centred interventions should focus on fostering open communication, emotional support, and strong family bonds. These programs can be delivered through family counselling sessions, workshops, and support groups facilitated by community health workers and psychologists. Targeting high-risk families initially can enhance the feasibility and effectiveness of these interventions, even where systemic constraints exist.

Finally, schools should implement programs aimed at improving conflict resolution skills and managing aggressive behaviours. Addressing both externalizing behaviours, such as

physical fights, and internalized distress can reduce suicidal ideation and attempts. Teachers, counsellors, and NGOs can collaborate to support these programs, with pilot initiatives helping to refine approaches before scaling up to broader school populations.

5.10 Conclusion

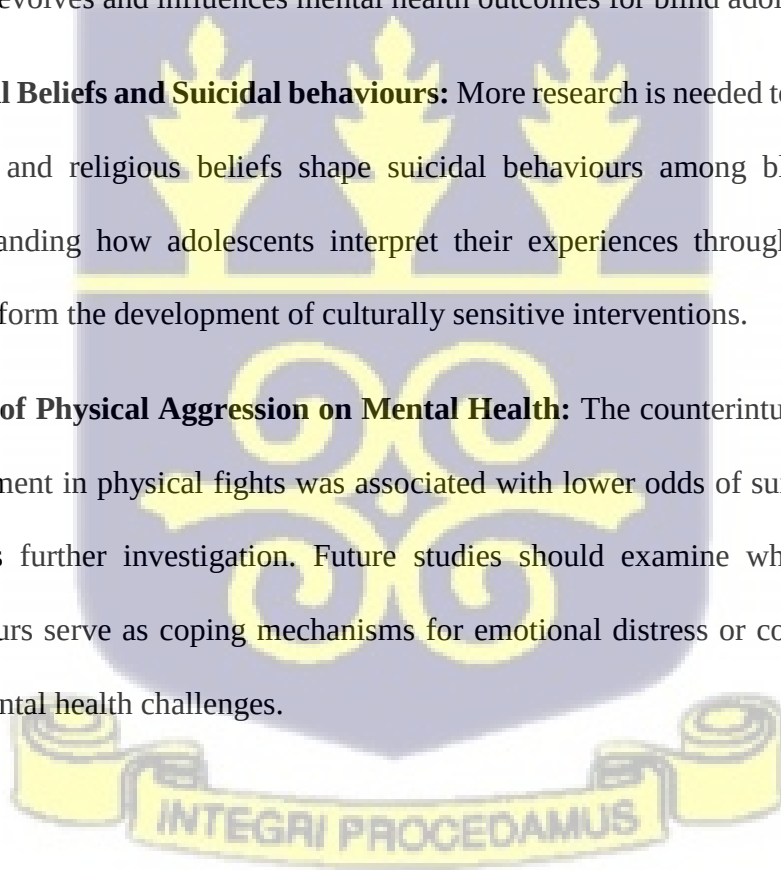
This study has provided a comprehensive analysis of the factors contributing to suicidal behaviours among school-going blind adolescents in Ghana. The findings revealed that suicidal ideation and attempts were relatively prevalent within this population, highlighting an urgent public health concern that requires targeted intervention. Multiple correlates including age, physical abuse, and academic difficulties emerged as significant predictors of suicidal ideation and attempts, while factors such as gender, family structure, and alcohol use also influenced suicidal behaviours.

Beyond identifying correlates, the study explored the underlying reasons for living among blind adolescents and found that strong family connections, religious faith, and personal aspirations served as important protective factors that discouraged suicidal thoughts and actions. Similarly, motivations for suicidal behaviour were linked to experiences of abuse, social rejection, academic frustration, and feelings of hopelessness, underscoring the emotional and relational struggles that contribute to vulnerability.

Grounded in the Ecological Systems Theory, the study emphasizes the complex interplay between individual, family, school, and cultural systems that collectively shape suicidal behaviours. The results reinforce the need for multi-level interventions that not only mitigate risk factors but also strengthen protective mechanisms such as social support, resilience, and inclusive education environments.

5.11 Suggestions for Further Research

1. **Investigating the Role of Alcohol Use:** Given the surprising protective effect of alcohol consumption on suicidal behaviours in this population, future research should delve deeper into understanding the complex relationship between alcohol use and mental health among blind adolescents. Longitudinal studies could help clarify whether alcohol serves as a coping mechanism or exacerbates suicidal behaviours over time.
2. **Longitudinal Studies on Family Dynamics:** Further research should explore how family structure, particularly in polygamous versus monogamous households, impacts suicidal behaviours over time. Longitudinal data could provide insights into how family support evolves and influences mental health outcomes for blind adolescents.
3. **Cultural Beliefs and Suicidal behaviours:** More research is needed to investigate how cultural and religious beliefs shape suicidal behaviours among blind adolescents. Understanding how adolescents interpret their experiences through cultural lenses could inform the development of culturally sensitive interventions.
4. **Impact of Physical Aggression on Mental Health:** The counterintuitive finding that involvement in physical fights was associated with lower odds of suicidal behaviours warrants further investigation. Future studies should examine whether aggressive behaviours serve as coping mechanisms for emotional distress or contribute to long-term mental health challenges.



REFERENCES

- Adeyemo, S., Olorunkoya, O. G., Chinelo, O. L., Babalola, G., Abojei, C. O. (2019). Prevalence and psychosocial correlates of suicidal ideation among adolescents living with HIV in Southwestern Nigeria, West Africa. *HIV & AIDS Review*, 18(4), 273-278. <https://doi.org/10.5114/hivar.2019.85949>
- Aggarwal, S., Patton, G., Reavley, N., Sreenivasan, S. A., & Berk, M. (2017). Youth self-harm in low- and middle-income countries: Systematic review of the risk and protective factors. *International Journal of Social Psychiatry*, 63(4), 359–375. <https://doi.org/10.1177/0020764017700175>
- Álvarez-Delgado, J., León-Del-Barco, B., Polo-Del-Río, M. I., & Mendo-Lázaro, S. (2020). Questionnaire for adolescents to evaluate their attitudes towards disability. *Sustainability (Switzerland)*, 12(21), 1–11. <https://doi.org/10.3390/su12219007>
- Akaranga, S. I., & Makau, B. K. (2018). Ethical considerations and their applications to research: A case of the University of Nairobi. *Journal of Educational Policy and Entrepreneurial Research*, 5(12), 1–9.
- Akram, B., & Batool, M. (2020). Suicidal behaviour among the youth with and without sensory impairment: Prevalence and comparison. *Omega (United States)*, 81(3), 393–403. <https://doi.org/10.1177/0030222818779711>
- Angelakis, I., Austin, J. L., & Gooding, P. A. (2019). Association of childhood maltreatment with suicide behaviours among young people: A systematic review and meta-analysis. *JAMA Network Open*, 2(9), e1910091. <https://doi.org/10.1001/jamanetworkopen.2019.10091>

- Anum, P. (2011). *Living with a disabled child: Experiences of families with disabled children in the Dangme West District (Ghana)* (Master's thesis, Norwegian University of Science and Technology). Retrieved from <https://brage.bibsys.no/xmlui/handle/11250/270680>
- Asante, K. O., Kugbey, N., Osafo, J., Quareshi, N. E., & Sarfo, J. O. (2017). The prevalence and correlates of suicidal behaviours (ideation, plan, and attempt) among adolescents in senior high schools in Ghana. *SSM-Population Health*, 3, 427–434. <https://doi.org/10.1016/j.ssmph.2017.06.002>
- Arat, G., & Wong, W. P. (2016). The relationship between parental involvement and adolescent mental health in six sub-Saharan African countries: Findings from Global School-based Health Surveys (GSHS). *International Journal of Mental Health Promotion*, 18(3), 144–157. <https://doi.org/10.1080/14623730.2016.1186396>
- Arseneault, L., Bowes, L., & Shakoor, S. (2010). Bullying victimization in youths and mental health problems: 'Much ado about nothing'? *Psychological Medicine*, 40(5), 717–729.
- Asfaw, H., Yigzaw, N., Yohannis, Z., Fekadu, G., & Alemayehu, Y. (2020). Prevalence and associated factors of suicidal ideation and attempt among undergraduate medical students of Haramaya University, Ethiopia. A cross sectional study. *PloS one*, 15(8), e0236398. <https://doi.org/10.1371/journal.pone.0236398>
- Baiden, P., Kuuire, V. Z., Shrestha, N., Tonui, B. C., Dako-Gyeke, M., & Peters, K. K. (2018). Bullying victimization as a predictor of suicidal ideation and suicide attempt among senior high school students in Ghana: Results from the 2012 Ghana Global School-Based Health Survey. *Suicide & Life-Threatening Behavior*, 48(5), 595–605. <https://doi.org/10.1080/15388220.2018.1486200>

Bambara, J. K., Wadley, V., Owsley, C., Martin, R. C., Porter, C., & Dreer, L. E. (2020).

Family functioning and low vision: A systematic review. *Journal of Visual Impairment & Blindness*, 114(1), 33–48. <https://doi.org/10.1177/0145482X19882193>

Batterham, P. J., Calear, A. L., & Christensen, H. (2019). The Suicidal behaviours

Questionnaire-Revised (SBQ-R): Measurement invariance across gender. *Archives of Suicide Research*, 23(2), 178–190. <https://doi.org/10.1080/13811118.2018.1449334>

Biswas, T., Scott, J. G., Munir, K., Renzaho, A., Rawal, L. B., Baxter, J., & Mamun, A. (2020).

Global variation in the prevalence of suicidal ideation, anxiety, and their correlates among adolescents: A population-based study of 82 countries. *EClinicalMedicine*, 82, 100395. <https://doi.org/10.1016/j.eclinm.2020.100395>

Braam, A. W., Visser, S., Smith, R., & Zubair, M. (2018). Religious coping and suicide prevention in a clinical setting. *Religions*, 9(10), 301.

<https://doi.org/10.3390/rel9100301>

Bronfenbrenner, U. (1979). *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.

Bronfenbrenner, U., & Morris, P. A. (2020). The ecology of developmental processes. In R. M. Lerner & M. E. Lamb (Eds.), *Handbook of child psychology and developmental science* (pp. 1–29). Wiley.

Canetto, S. S., & Sakinofsky, I. (1998). The gender paradox in suicide. *Suicide and Life-Threatening Behavior*, 28(1), 1–23.

<https://doi.org/10.1111/j.1943278X.1998.tb00623.x>

- Cammarata, C. M. (2020). About teen suicide. *KidsHealth*. Retrieved from <https://kidshealth.org/en/parents/suicide.html#:~:text=Things%20that%20increase%20the%20risk,of%20distress%2C%20irritability%2C%20or%20agitation>
- Campisi, S. C., Carducci, B., Akseer, N., et al. (2020). Suicidal behaviours among adolescents from 90 countries: A pooled analysis of the Global School-based Student Health Survey. *BMC Public Health*, 20, 1102. <https://doi.org/10.1186/s12889-020-09209-z>
- Castle, K., & Kreipe, R. (2007). Suicidal behaviour. In L. C. Garfunkel, J. M. Kaczorowski, & C. Christy (Eds.), *Pediatric Clinical Advisor* (2nd ed., pp. 544–545). Elsevier Inc. <https://doi.org/10.1016/B978-0-323-03506-4.10315-3>
- Chen, L. P., Murad, M. H., Paras, M. L., Colbenson, K. M., Sattler, A. L., Goranson, E. N., & Zirakzadeh, A. (2010). Sexual abuse and lifetime diagnosis of psychiatric disorders: Systematic review and meta-analysis. *Mayo Clinic Proceedings*, 85(7), 618–629. <https://doi.org/10.4065/mcp.2010.0179>
- Cheng, Q., Li, H., Silenzio, V., & Caine, E. D. (2018). Suicide contagion: A systematic review of definitions and research utility. *PLOS ONE*, 13(12), e0209741. <https://doi.org/10.1371/journal.pone.0209741>
- Chioqueta, A. P., & Stiles, T. C. (2020). Social support, depression, and suicide ideation in university students. *Journal of Clinical Psychology*, 76(3), 558–567. <https://doi.org/10.1002/jclp.22914>
- Ciarrochi, J., Morin, A. J., Sahdra, B. K., Litalien, D., & Parker, P. (2018). A longitudinal person-centered perspective on youth social support: Relations with psychological well-being. *Developmental Psychology*, 54(1), 172–185. <https://doi.org/10.1037/dev0000369>

Colucci, E., & Martin, G. (2018). Religion and spirituality along the suicidal path. *Suicide and Life-Threatening Behavior*, 38(2), 229–244.

<https://doi.org/10.1111/j.1943-278X.2008.00027.x>

Crosnoe, R., & Elder, G. H. (2019). Family dynamics, supportive relationships, and educational resilience during adolescence. *Journal of Research on Adolescence*, 29(3), 331–358.

<https://doi.org/10.1111/jora.12434>

Dahlberg, L. L., & Krug, E. G. (2002). Violence: A global public health problem. In E. Krug, L. L. Dahlberg, J. A. Mercy, A. B. Zwi, & R. Lozano (Eds.), *World Report on Violence and Health* (pp. 1–21). World Health Organization. Retrieved from

<https://www.cdc.gov/violenceprevention/about/socialecologicalmodel.html#:~:text=CDC%20uses%20a%20four%2Dlevel,%2C%20community%2C%20and%20societal%20factors>

Demesmaeker, A., Chazard, E., Hoang, A., Vaiva, G., & Amad, A. (2022). Suicide mortality after a nonfatal suicide attempt: A systematic review and meta-analysis. *Australian & New Zealand Journal of Psychiatry*, 56(6), 603–616.

<https://doi.org/10.1177/00048674221111811>

Dishion, T. J., & McMahon, R. J. (1998). Parental monitoring and the prevention of child and adolescent problem behavior: A conceptual and empirical formulation. *Clinical Child and Family Psychology Review*, 1(1), 61–75.

<https://doi.org/10.1023/A:1021804131297>

Do, T. H., Nguyen, N. C., & Pham, H. P. (2020). Factors affecting the quality of life of visually impaired children in Vietnam. *BMC Public Health*, 20(1), 1–8.

<https://doi.org/10.1186/s12889-020-08452-4>

Ebrahim, Z. T. (2012). Mental health and visual impairment: Peer perspectives.

<http://www.visionaware.org/blog/visually-impaired-now-what/mental-health-andvisualimpairment-peer-perspectives/12>

Epstein J.A, & Spirito A. (2009). Risk factors for suicidality among a nationally representative sample of high school students. *Suicide Life Threat Behave*; 39(3): pp241-245.

Evans, G. W., & Kim, P. (2013). Childhood poverty, chronic stress, self-regulation, and coping. *Child Development Perspectives*, 7(1), 43–48.

Fischer, M. E., Cruickshanks, K. J., Klein, B. E. K., Klein, R., Schubert, C. R., & Wiley, T. L. (2009). Multiple sensory impairment and quality of life. *Ophthalmic Epidemiology*, 16(6), 346–353. <https://doi.org/10.3109/09286580903312236>.

Fitzpatrick, K. K., Darcy, A., & Vierhile, M. (2021). Delivering cognitive behaviour therapy to young adults with symptoms of depression and anxiety using a fully automated conversational agent (WoeBot): A randomized controlled trial. *JMIR Mental Health*, 8(2), e23116.

Foster, A., & Gilbert, C. (2021). Childhood blindness and its prevention in the developing world. *Ophthalmic Epidemiology*, 28(3), 127-132.

Franklin, J. C., Ribeiro, J. D., Fox, K. R., Bentley, K. H., Kleiman, E. M., Huang, X., & Nock, Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. (2009). Burden and consequences of child maltreatment in high-income countries. *The Lancet*, 373(9657), 68–81. [https://doi.org/10.1016/S0140-6736\(08\)62229-4](https://doi.org/10.1016/S0140-6736(08)62229-4)

Graham, N., Bundy, D., Horton, S., et al. (2017). Disability in middle childhood and adolescence. In S. Bundy, S. Horton, et al. (Eds.), *Child and adolescent health and development* (3rd ed.). https://doi.org/10.1596/978-4648-0423-6_ch17

Ghana Statistical Service. (2021). *Ghana 2021 Population and Housing Census General Report Volume 3F: Difficulty in Performing Activities*. Ghana Statistical Service. Retrieved from <https://www.statsghana.gov.gh/>

Glenn, C. R., Kleiman, E. M., Kellerman, J., Pollak, O., Cha, C. B., Esposito, E. C., Porter, A. C., Wyman, P. A., & Boatman, A. E. (2020). Annual research review: A meta-analytic review of worldwide suicide rates in adolescents. *Journal of Child Psychology and Psychiatry*, 61(3), 294–308. <https://doi.org/10.1111/jcpp.13106>

Gulliver, A., Griffiths, K. M., & Christensen, H. (2010). Perceived barriers and facilitators to mental health help-seeking in young people: A systematic review. *BMC Psychiatry*, 10(113).

Gunnell, D., Harbord, R., Singleton, N., Jenkins, R., & Lewis, G. (2004). Factors influencing the development and amelioration of suicidal thoughts in the general population: Cohort study. *The British Journal of Psychiatry*, 185(5), 385–393. <https://doi.org/10.1192/bjp.185.5.385>

Gunnell, D., Appleby, L., Arensman, E., Hawton, K., John, A., Kapur, N., & Caine, E. D. (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry*, 7(6), 468–471. [https://doi.org/10.1016/S2215-0366\(20\)30171-1](https://doi.org/10.1016/S2215-0366(20)30171-1)

Gunnell, D., Caul, S., Appleby, L., John, A., Hawton, K., & Kapur, N. (2020). The incidence of suicide in university students. *The Lancet Psychiatry*, 7(4), 297–298. [https://doi.org/10.1016/S2215-0366\(20\)30076-9](https://doi.org/10.1016/S2215-0366(20)30076-9)

Hawton, K., Saunders, K. E. A., & O'Connor, R. C. (2020). Self-harm and suicide in adolescents. *The Lancet*, 379(9834), 2373–2382. [https://doi.org/10.1016/S0140-6736\(20\)30322-5](https://doi.org/10.1016/S0140-6736(20)30322-5)

- Hilas, O. (2022). Suicide mortality and attempts among adolescents. *US Pharmacist*. Retrieved from <https://www.uspharmacist.com/article/suicide-mortality-and-attempts-among-adolescents>
- Huntington, D. D., & Bender, W. N. (2015). Adolescents with learning disabilities. *Learning Disabilities Research & Practice*, 26(3), 159–166.
- Hurre, T. M., & Aro, H. M. (1998). Psychosocial development among adolescents with visual impairment. *European Child & Adolescent Psychiatry*, 7(1), 73–78. <https://doi.org/10.1007/s007870050041>
- Ilic, M., & Ilic, I. (2022). Worldwide suicide mortality trends (2000-2019): A joinpoint regression analysis. *World Journal of Psychiatry*, 12(8), 1044–1060. <https://doi.org/10.5498/wjp.v12.i8.1044>
- Jones, L., et al. (2012). Prevalence and risk of violence against children with disabilities: A systematic review and meta-analysis of observational studies. *The Lancet*, 380(9845), 899–907. [https://doi.org/10.1016/S0140-6736\(12\)60705-6](https://doi.org/10.1016/S0140-6736(12)60705-6)
- Joiner, T. (2005). *Why people die by suicide*. Harvard University Press.
- Joiner, T. E., Van Orden, K. A., Witte, T. K., & Rudd, M. D. (2018). *The interpersonal theory of suicide: Guidance for working with suicidal clients*. American Psychological Association.
- Karthick, S., & Barwa, S. (2017). A review on theoretical models of suicide. *International Journal of Advances in Scientific Research*, 3(9), 101–109. Retrieved from www.ssjournals.com
- Khurana, M., Shoham, N., Cooper, C., & Pitman, A. L. (2021). Association between sensory impairment and suicidal ideation and attempts: A cross-nationally

- representative English household data. *BMJ Open*, 11(4), e043179.
<https://doi.org/10.1136/bmjopen-2020-043179>
- Kim, Y. I., Kwak, Y., & Kim, J. S. (2015). The association between suicide ideation and sensory impairment among elderly Koreans. *Aging & Mental Health*, 19(7), 658–665.
<https://doi.org/10.1080/13607863.2014.966261>
- Kim, Y. S., & Leventhal, B. (2008). Bullying and suicide: A review. *International Journal of Adolescent Medicine and Health*, 20(2), 133–154.
<https://doi.org/10.1515/IJAMH.2008.20.2.133>
- King, C. A., & Merchant, C. R. (2008). Social and interpersonal factors relating to adolescent suicidality: A review of the literature. *Archives of Suicide Research*, 12(3), 181–196.
<https://doi.org/10.1080/13811110802269252>
- Khurana, M., Shoham, N., Cooper, C., & Pitman, A. L. (2021). Association between sensory impairment and suicidal ideation and attempts: A cross-nationally representative English household data. *BMJ Open*, 11(4), e043179.
<https://doi.org/10.1136/bmjopen-2020-043179>
- Klonsky, E. D., May, A. M., & Saffer, B. Y. (2016). Suicide, suicide attempts, and suicidal ideation. *Annual Review of Clinical Psychology*, 12, 307–330.
<https://doi.org/10.1146/annurev-clinpsy-021815-093204>
- Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Löwe, B. (2019). The Patient Health Questionnaire-4 (PHQ-4) – Ultra-brief screening for anxiety and depression. *Psychosomatics*, 50(6), 613–621. <https://doi.org/10.1176/appi.psy.50.6.613>
- Kuper, H., Polack, S., Mathenge, W., Eusebio, C., Wadud, Z., & Foster, A. (2021). Demographic characteristics and health outcomes of people with disabilities in low

- and middle-income countries: Results from the World Health Survey. *Disability and Rehabilitation*, 43(2), 215–220. <https://doi.org/10.3109/09638288.2019.1610349>
- Lee, O. E., Park, D., & Park, J. (2022). Association of vision impairment with suicide ideation, plans, and attempts among adults in the United States. *Journal of clinical psychology*, 78(11), 2197–2213. <https://doi.org/10.1002/jclp.23437>
- Lereya, S. T., Copeland, W. E., Zammit, S., & Wolke, D. (2019). Bullying involvement and adult mental health: The moderating role of intelligence. *British Journal of Psychiatry*, 214(1), 47–53. <https://doi.org/10.1192/bjp.2018.238>
- Lim, K.-S., Wong, C. H., McIntyre, R. S., Wang, J., Zhang, Z., Tran, B. X., Tan, W., Ho, C. S., & Ho, R. C. (2019). Global lifetime and 12-month prevalence of suicidal behaviour, deliberate self-harm and non-suicidal self-injury in children and adolescents between 1989 and 2018: A meta-analysis. *International Journal of Environmental Research and Public Health*, 16(22), 4581. <https://doi.org/10.3390/ijerph16224581>
- Liu, X. Q., & Wang, X. (2024). Adolescent suicide risk factors and the integration of social-emotional skills in school-based prevention programs. *World journal of psychiatry*, 14(4), 494–506. <https://doi.org/10.5498/wjp.v14.i4.494>
- Maxey, M., & Beckert, T. E. (2017). Adolescents with disabilities. *Adolescent Research Review*, 2(2), 59–75. <https://doi.org/10.1007/s40894-016-0043-y>
- Mbwilo, G. S. K., Smide, B., & Aarts, C. (2010). Family perceptions in caring for children and adolescents with mental disabilities: A qualitative study from Tanzania. *Tanzania Journal of Health Research*, 12(1), 1–10. <https://doi.org/10.4314/thrb.v12i1.57309>

- McKinnon, B., Garipey, G., Sentenac, M., & Elgar, F. J. (2016). Adolescent suicidal behaviour in 32 low- and middle-income countries. *Bulletin of the World Health Organization*, 94(5), 340–350. <https://doi.org/10.2471/BLT.15.162706>
- McNeish, D. (2018). Thanks, coefficient alpha, we'll take it from here. *Psychological Methods*, 23(3), 412–433. <https://doi.org/10.1037/met0000095>
- Meyer-Rochow, V. B., Hakko, H., Ojamo, M., Uusitalo, H., & Timonen, M. (2015). Suicides in visually impaired persons: A nationwide register-linked study from Finland based on thirty years of data. *PLOS ONE*, 10(10), e0139856. <https://doi.org/10.1371/journal.pone.0139856>
- Miller, A. B., Esposito-Smythers, C., Weismore, J. T., & Renshaw, K. D. (2020). The relation between child maltreatment and adolescent suicidal behaviour: A systematic review and critical examination of the literature. *Clinical Child and Family Psychology Review*, 16(2), 146–172. <https://doi.org/10.1007/s10567-013-0144-1>
- Milner, A., Bollier, A.-M., Emerson, E., & et al. (2019). The relationship between disability and suicide: Prospective evidence from the Ten to Men cohort. *Journal of Public Health*, 41(4), 707–713. <https://doi.org/10.1093/pubmed/fdy104>
- M.K. (2017). Risk factors for suicidal thoughts and behaviours: A meta-analysis of 50 years of research. *Psychological Bulletin*, 143(2), 187-232.
- Molnar, B. E., Buka, S. L., & Kessler, R. C. (2018). Child sexual abuse and subsequent psychopathology: Results from the National Comorbidity Survey. *American Journal of Public Health*, 91(5), 753–760. <https://doi.org/10.2105/AJPH.91.5.753>
- Montelli, L., & Hurst, M. (2022). Family systems theory overview and examples. *Study.com*. <https://study.com/learn/lesson/family-system-theory-overview-examples-what-is->

familyssystemstheory.html#:~:text=Family%20systems%20theory%20is%20important,influences%20individual%20behaviour%20through%20interaction

Moses, T. (2018). Suicide attempts among adolescents with self-reported disabilities. *Child Psychiatry and Human Development*, 49(3), 420–433.
<https://doi.org/10.1007/s10578-018-0761-2>

Muñoz-Silva, A., Lago-Urbano, R., Sánchez-García, M., & Parra-Moreno, A. I. (2020). Adolescents' perceived parental acceptance and Internet use. *Psicothema*, 32(1), 61–68.
<https://doi.org/10.7334/psicothema2018.216>

Murray, L. K., Nguyen, A., & Cohen, J. A. (2020). Child sexual abuse. *Child and Adolescent Psychiatric Clinics of North America*, 13(2), 431–447.
<https://doi.org/10.1016/j.chc.2013.01.003>

Naghavi, M., & Global Burden of Disease Self-Harm Collaborators. (2019). Global, regional, and national burden of suicide mortality 1990 to 2016: Systematic analysis for the Global Burden of Disease Study 2016. *BMJ*, 364, 194. <https://doi.org/10.1136/bmj.194>

Nagraj, D., & Omar, H. A. (2015). Disability and suicide. *Pediatrics Faculty Publications*, 229.
https://uknowledge.uky.edu/pediatrics_facpub/229

Niederkrotenthaler, T., Gunnell, D., Arensman, E., Pirkis, J., Appleby, L., Hawton, K., John, A., Kapur, N., Khan, M., O'Connor, R. C., Platt, S., & International COVID-19 Suicide Prevention Research Collaboration (2020). Suicide Research, Prevention, and COVID-19. *Crisis*, 41(5), 321–330. <https://doi.org/10.1027/0227-5910/a000731>

Nock, M. K., Millner, A. J., Joiner, T. E., Gutierrez, P. M., Hwang, I., King, A., & Kessler, R. C. (2018). Suicide ideation and attempts among adolescents: A longitudinal study.

Journal of Abnormal Psychology, 127(7), 553–563.

<https://doi.org/10.1037/abn0000343>

Nock, M. K., Millner, A. J., Joiner, T. E., Gutierrez, P. M., Han, G., Hwang, I., King, A., Naifeh, J. A., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2018). Risk factors for the transition from suicide ideation to suicide attempt: Results from the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS). *Journal of Abnormal Psychology*, 127(2), 139–149. <https://doi.org/10.1037/abn0000300>

Nock, M. K., Green, J. G., Hwang, I., McLaughlin, K. A., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2013). Prevalence, correlates, and treatment of lifetime suicidal behaviour among adolescents. *JAMA Psychiatry*, 70(3), 300–310.

<https://doi.org/10.1001/jamapsychiatry.2013.137>

Nock, M. K., Millner, A. J., Joiner, T. E., Gutierrez, P. M., Hwang, I., King, A., & Kessler, R. C. (2008). Suicide ideation and attempts among soldiers: Results from the Army Study to Assess Risk and Resilience in Service members (Army STARRS). *American Journal of Psychiatry*, 175(10), 905–913.

<https://doi.org/10.1176/appi.ajp.2018.17101250>

Nock, M. K., Borges, G., Bromet, E. J., Cha, C. B., Kessler, R. C., & Lee, S. (2008). Suicide and suicidal behaviour. *Epidemiologic Reviews*, 30(1), 133–154.

<https://doi.org/10.1093/epirev/mxn002>

Oppong, A., Nuworza, K., Osafo, J., Quarshie, E. N. B., & Owusu, J. S. (2017). The prevalence and correlates of suicidal behaviours (ideation, plan, and attempt) among adolescents in senior high schools in Ghana. *SSM - Population Health*, 3, 427–435.

<https://doi.org/10.1016/j.ssmph.2017.05.005>

- Oppong Asante, K., & Meyer-Weitz, A. (2017). Prevalence and predictors of suicidal ideations and attempts among homeless children and adolescents in Ghana. *African Journal of AIDS Research*, 16(4), 307–315. <https://doi.org/10.2989/17280583.2017.1287708>
- Osman, A., Bagge, C. L., Gutierrez, P. M., Konick, L. C., Kopper, B. A., & Barrios, F. X. (2020). The Reasons for Living Inventory for adolescents: Development and psychometric properties. *Journal of Clinical Psychology*, 58(4), 459–472. <https://doi.org/10.1002/jclp.20751>
- Osafo, J., Akotia, C. S., Andoh-Arthur, J., & Quarshie, E. N. B. (2015). Attempted suicide in Ghana: Motivation, stigma, and coping. *Death Studies*, 39(5), 274–280. <https://doi.org/10.1080/07481187.2014.991955>
- Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., & Viner, R. M. (2018). Our future: A Lancet commission on adolescent health and well-being. *The Lancet*, 387(10036), 2423–2478. [https://doi.org/10.1016/S0140-6736\(18\)30239-2](https://doi.org/10.1016/S0140-6736(18)30239-2)
- Patton, G. C., Coffey, C., Romaniuk, H., Mackinnon, A. J., Carlin, J. B., Degenhardt, L., & Moran, P. (2009). The prognosis of common mental disorders in adolescents: A 14-year prospective cohort study. *The Lancet*, 383(9926), 1404–1411. [https://doi.org/10.1016/S0140-6736\(13\)60203-1](https://doi.org/10.1016/S0140-6736(13)60203-1)
- Pinquart, M., & Pfeiffer, J. P. (2014). Associations of being bullied with psychosocial and health-related adjustment in children who are deaf or hard of hearing. *Journal of Deaf Studies and Deaf Education*, 19(1), 1–14. <https://doi.org/10.1093/deafed/ent047>
- Putra, I. E., Hikmat, R., & Triana, M. (2019). School climate and academic stress in adolescents: The mediating role of teacher-student relationships. *Journal of Adolescence*, 74, 92–102. <https://doi.org/10.1016/j.adolescence.2019.05.002>

- Putra, I. G. N. E., Davis, C., & Clough, A. R. (2019). Factors associated with suicidal ideation, suicide planning, and suicide attempts among school-going adolescents in Indonesia. *International Journal of Adolescence and Youth*, 24(2), 238–248.
<https://doi.org/10.1080/02673843.2019.1588743>
- Quarshie, E. N., Onyeaka, H. K., & Asante, K. O. (2020). Suicidal behaviours among adolescents in Liberia. *International Journal of Adolescence and Youth*, 25(1), 1–12.
<https://doi.org/10.1080/02673843.2020.1729654>
- Quarshie, E. N. B., Waterman, M. G., & House, A. O. (2020). Self-harm with suicidal and non-suicidal intent in young people in sub-Saharan Africa: A systematic review. *BMC Psychiatry*, 20(234), 1–26. <https://doi.org/10.1186/s12888-020-02712-6>
- Quarshie, E. N. B., & Andoh-Arthur, J. (2020). Suicide attempts among 1,437 adolescents aged 12-17 years attending junior high schools in Ghana. *Psychology, Health & Medicine*, 25(6), 725–734. <https://doi.org/10.1027/0227-5910/a000746>
- Quarshie, E. N. B., & Odame, S. K. (2021). Suicidal ideation and associated factors among school-going adolescents in rural Ghana. *Journal of Social and Personal Relationships*, 38(5), 505–518. <https://doi.org/10.1007/S12144-021-01378-3>
- Quarshie, E. N. B., Fobi, D., Acheampong, E. K., Honu-Mensah, C. M., Fobi, J., Appau, O., Andoh-Arthur, J., & Oppong Asante, K. (2021). Suicidal behaviours among deaf adolescents in Ghana: A cross-sectional study. *Journal of Public Health*, 44(1), 10–19.
<https://doi.org/10.1093/pubmed/fdab076>
- Quarshie, E. N. (2023). Suicidal ideation and associated factors among school-going adolescents in rural Ghana. *Journal of Adolescent Health*, 72(3), 505–518.
<https://doi.org/10.1016/j.jadohealth.2023.02.003>

Quarshie, E. N., Eugene, N., & Dey, Y. (2021). Adolescent suicidal behaviour in Namibia: A cross-sectional study of prevalence and correlates among 3,152 school learners aged 12–17 years. *Journal of Youth and Adolescence*, 50(9), 1–12.

<https://doi.org/10.1007/s10964-021-01378-3>

Quarshie, E. N., Dey, N. E. Y., & Oppong Asante, K. (2023). Adolescent suicidal behaviour in Namibia: a cross-sectional study of prevalence and correlates among 3,152 school learners aged 12-17 years. *BMC psychiatry*, 23(1), 169.

<https://doi.org/10.1186/s12888-023-04646-7>

Rajeshkannan, S., Yenuganti, V. V., Solomon, M. A. T., Rajsri, T. R., & Janana Priya, G. (2022). Association of visual impairment with suicidal ideation and suicide attempts: A systematic review and meta-analysis. *Indian Journal of Psychological Medicine*, 44(6), 1–7. <https://doi.org/10.1177/02537176221087124>

Robinson, J., & Cleave, A. L. (2020). Preventing suicide in young people: A systematic review. *Australian & New Zealand Journal of Psychiatry*, 54(1), 3–4.

<https://doi.org/10.1177/0004867419872080>

Sawyer, S. M., Azzopardi, P. S., Wickremarathne, D., & Patton, G. C. (2018). The age of adolescence. *The Lancet Child and Adolescent Health*, 2(3), 223–228.

[https://doi.org/10.1016/S2352-4642\(18\)30022-1](https://doi.org/10.1016/S2352-4642(18)30022-1)

Shakespeare, T., Bright, T., & Kuper, H. (2019). Access to health for people with disabilities in low- and middle-income countries: A systematic review. *Tropical Medicine & International Health*, 24(3), 259–275. <https://doi.org/10.1111/tmi.13227>

Schomberg, J., Teismann, T., Bussmann, S., Vaganian, L., Gerlach, A. L., & Cwik, J. C. (2021). The significance of the interpersonal-psychological theory of suicide in an

- oncological context: A scoping review. *European Journal of Cancer Care*, 30(1), 1–11. <https://doi.org/10.1111/ecc.13330>
- Sheftall, A. H., Asti, L., Horowitz, L. M., Felts, A., Fontanella, C. A., Campo, J. V., & Bridge, J.A. (2016). Suicide in elementary school-aged children and early adolescents. *Pediatrics*, 138(4), e20160436. <https://doi.org/10.1542/peds.2016-0436>
- Sightsavers. (2022). *Reducing disability stigma and discrimination in Ghana*. Sightsavers. <https://www.sightsavers.org/blogs/2022/04/reducing-disability-stigma-and-discrimination-ghana/>
- Smith, L., Shin, J. I., Barnett, Y., et al. (2022). Association of objective visual impairment with suicidal ideation and suicide attempts among adults aged ≥ 50 years in low/middle-income countries. *British Journal of Ophthalmology*, 106(10), 1610–1616. <https://doi.org/10.1136/bjophthalmol-2021-319070>
- Steele, H., Bate, J., Steele, M., D’Anna, L., Knafo, H., & Iacoboni, M. (2022). Parent-child attachment and adolescent suicide ideation and attempts. *Journal of Youth and Adolescence*, 51(1), 112–124. <https://doi.org/10.1007/s10964-021-01482-x>
- Stevenson, J., Kreppner, J., Pimperton, H., et al. (2015). Emotional and behavioural difficulties in children and adolescents with hearing impairment: A systematic review and meta-analysis. *European Child & Adolescent Psychiatry*, 24(5), 477–496. <https://doi.org/10.1007/s00787-015-0739-2>
- Sullivan, G. M., & Feinn, R. (2012). Using Effect Size-or Why the P Value Is Not Enough. *Journal of graduate medical education*, 4(3), 279–282. <https://doi.org/10.4300/JGME-D-12-00156.1>

- Svetaz, M. V., Ireland, M., & Blum, R. (2000). Adolescents with learning disabilities: Risk and protective factors associated with emotional well-being: Findings from the National Longitudinal Study of Adolescent Health. *Journal of Adolescent Health*, 27(5), 340–348. [https://doi.org/10.1016/S1054-139X\(00\)00153-9](https://doi.org/10.1016/S1054-139X(00)00153-9)
- Swahn, M. H., Bossarte, R. M., & Sullivent, E. E. (2018). The relationship between alcohol use and suicidal behaviour in adolescents. *Addictive Behaviours*, 30(2), 367–374. <https://doi.org/10.1016/j.addbeh.2004.06.010>
- Swahn, M. H., Bossarte, R. M., & Sullivent, E. E. (2008). Age of alcohol use initiation, suicidal behaviour, and peer and dating violence victimization and perpetration among high-risk, seventh-grade adolescents. *Pediatrics*, 121(2), 297–305. <https://doi.org/10.1542/peds.2007-0060>
- Swearer, S. M., Espelage, D. L., Vaillancourt, T., & Hymel, S. (2019). What can be done about school bullying? Linking research to educational practice. *Educational Researcher*, 39(1), 38–47. <https://doi.org/10.3102/0034654314558499>
- Turecki, G., & Brent, D. A. (2016). Suicide and suicidal behaviour. *The Lancet*, 387(10024), 1227–1239. [https://doi.org/10.1016/S0140-6736\(15\)00234-2](https://doi.org/10.1016/S0140-6736(15)00234-2)
- Turecki, G., Brent, D. A., Gunnell, D., O'Connor, R. C., Oquendo, M. A., Pirkis, J., & Stanley, B. H. (2019). Suicide and suicide risk. *Nature Reviews Disease Primers*, 5(1), 1–22. <https://doi.org/10.1038/s41572-019-0121-0>
- Turner, O., Windfuhr, K., & Kapur, N. (2007). Suicide in deaf populations: A literature review. *Annals of General Psychiatry*, 6(26), 1–9. <https://doi.org/10.1186/1744-859X-6-26>
- UCLA Statistical Consulting Group. (n.d.). *Logistic regression*. UCLA Institute for Digital Research and Education. <https://stats.oarc.ucla.edu/stata/dae/logistic->

[regression/#:~:text=Logistic%20regression%2C%20also%20called%20a,use%20various%20data%20analysis%20commands.](#)

UNICEF. (2021). Invest more in mental health. *UNICEF*. Available online: <https://www.unicef.org/montenegro/en/stories/unicef-investmore-mental-health>

Vandenbroucke, J. P., Elm, E. V., Altman, D. G., Gøtzsche, P. C., Mulrow, C. D., Pocock, S. J., ... & Strobe Initiative. (2007). Strengthening the Reporting of Observational Studies in Epidemiology (STROBE): explanation and elaboration. *Annals of Internal Medicine*, 147(8), W-163-94. DOI: [10.7326/0003-4819-147-8-200710160-00010-w1](https://doi.org/10.7326/0003-4819-147-8-200710160-00010-w1)

Van Gent, T., Goedhart, A. W., & Treffers, P. D. (2011). Self-concept and psychopathology in deaf adolescents: Preliminary support for moderating effects of deafness-related characteristics and peer problems. *Journal of Child Psychology and Psychiatry*, 52(6), 720–728. <https://doi.org/10.1111/j.1469-7610.2010.02316.x>

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. (2010). The interpersonal theory of suicide. *Psychological Review*, 117(2), 575. <https://doi.org/10.1037/a0018697>

Van Orden, K. A., Witte, T. K., Selby, E. A., & Joiner, T. E. (2021). The interpersonal theory of suicide: A decade in review. *Journal of Clinical Psychology*, 77(10), 2270–2284. <https://doi.org/10.1002/jclp.23128>

Vidyasagar, N., & Koshy, S. (2010). Stress and coping in mothers of autistic children. *Journal of the Academy of Applied Psychology*, 36(2), 245–256. <https://doi.org/10.1177/097145061003600208>

Vijayakumar L. (2015). Suicide in women. *Indian journal of psychiatry*, 57(Suppl 2), S233–S238. <https://doi.org/10.4103/0019-5545.161484>

- Voss, C., Ollmann, T. M., Miché, M., Venz, J., Hoyer, J., Pieper, L., Höfler, M., & Beesdo-Baum, K. (2019). Prevalence, onset, and course of suicidal behaviour among adolescents and young adults in Germany. *JAMA Network Open*, 2(10), 1–15. <https://doi.org/10.1001/jamanetworkopen.2019.14386>
- Wahl, H. W., Oswald, F., Schilling, O., & Heyl, V. (2019). Vision loss in advanced age and its impact on the quality of life. *GeroPsych: The Journal of Gerontopsychology and Geriatric Psychiatry*, 32(1), 35–44. <https://doi.org/10.1024/1662-9647/a000218>
- Wahl, H. W., Schilling, O., Oswald, F., & Heyl, V. (2013). Aging in context: The role of social interactions and the environment in late-life cognitive functioning. *The Gerontologist*, 53(2), 205–215. <https://doi.org/10.1093/geront/gnt096>
- Wang, H., Devine, M. S., & O'Brien, C. (2020). Impact of absenteeism on adolescent mental health: A longitudinal analysis of school attendance and psychological distress. *Child Development*, 91(2), e307–e319. <https://doi.org/10.1111/cdev.13327>
- Wayo, R. (2022). Persons with disability and Ghana's economy today. *Ghana News Agency*. Retrieved from <https://gna.org.gh/2022/11/persons-with-disability-and-ghanas-economy-today/>
- Williams, J. M. G. (1997). Suicide and escape from self. *Cognition and Emotion*, 11(6), 697–721. <https://doi.org/10.1080/026999397379324>
- World Health Organization. (2014). *Preventing suicide: A global imperative*. Geneva: World Health Organization.
- World Health Organization. (2015). *WHO global disability action plan 2014-2021: Better health for all people with disability*. World Health Organization.

World Health Organization. (2019). *Suicide in the world: Global health estimates*. Retrieved from <https://apps.who.int/iris/handle/10665/326948> (accessed on 1 September 2022).

World Health Organization. (2021). *Suicide*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/suicide>

World Health Organization. (2022). *Disability*. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/disability-and-health#:~:text=An%20estimated%201.3%20billion%20people%20%E2%80%93%2025%20of%20the%20global,diseases%20and%20people%20living%20longer>

World Health Organization. (2023). *Adolescent health*. Retrieved from https://www.who.int/health-topics/adolescent-health#tab=tab_1



APPENDIX 1

QUESTIONNAIRE

This is a cross-sectional study which seeks to examine suicidal behaviours among blind young people. At the end, the information you provide will be used to develop strategic interventions in the study of suicidal behaviours in Ghana. Your name or special identifiable codes will not be taken in this survey. The answers you give will be kept confidential. **Sincerely** answer the questions based on what you do or know. There are no right or wrong answers. Completing this survey is voluntary and will take about 30 minutes or more. If you do not want to answer a question kindly feel free not to. Thank you for your time and participation in this research that contributes to our knowledge on suicidal behaviours among young adolescents who are blind.

SECTION A

Socio-demographics

1. **Are you a boy or girl?** Boy=0 ☐ Girl=1 ☐

2. **How old are you?** Please specify.....

3. **Were you born blind or became blind while you were growing up?**

I was born blind=0 ☐ I was not born blind; I became blind later=1 ☐

4. **If you were not born blind, at what age did you become blind?** Please specify.....

5. **Do you have a brother or sister who is also blind?** ☐ Yes=0; No=1 ☐

6. **Between your mother and father, who is blind?**

Mother=0 ☐ Father=1 ☐ Both parents=2 ☐ None=3 ☐

7. **How will you describe your family structure?**

My father has one wife=0 ☐ My father has more than one wife=1 ☐

8. **How will you describe your living arrangement?**

With both parents=0 ☐ With one parent=1 ☐ With no parents=2 ☐

9. **What is your religious group?**

Christian=0 ☐ Muslim=1 ☐ Other=2 ☐

10.

Over the last two weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day

1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Feeling down, depressed or hopeless	0	1	2	3
4. Little interest or pleasure in doing things	0	1	2	3

11.

Item Description	Factors					
	Not all important	Quite unimportant	Somewhat unimportant	Somewhat important	Quite important	Extremely important
1. I am concerned about what others would think of me	1	2	3	4	5	6
2. Other people would think I am weak and selfish						
3. I would not want people to think I did not have control over my life						
4. I believe only God has the right to end a life						
5. My religious beliefs forbid it						
6. I consider it morally wrong						
7. I believe I can find other solutions to my problems						
8. I believe everything has a way of working out for the best						
9. I have the courage to face life						

10. My family depends upon me and needs me						
11. I love and enjoy my family too much and could not leave them						
12. It would hurt my family too much and I would not want them to suffer						
13. I am afraid of death						
14. I am afraid of the unknown						

12.

STATEMENTS	Never	Once a year or less	A few times a year	A few times a month	Once a week	More than once/week
How often do you attend church, mosque, or other religious meetings?	1	2	3	4	5	6

13. Have your parents separated or divorced during the past 12 months? ☐ Yes=0; No=1 ☐

14. Have you had any serious argument with one or both of your parents during the past 12 months? ☐ Yes=0; No=1 ☐

15. Have you had any serious fight with one or both of your parents during the past 12 months?

☐ Yes=0; No=1 ☐

16. During the past 30 days, how often did your parents or guardians understand your problems or worries? Never=1 ☐ Rarely=2 ☐ Sometimes=3 ☐ Most of the time=4 ☐ Always=5 ☐

17. During the past 30 days, how often did your parents or guardians really know what you were doing with your free time? Never=1 ☐ Rarely=2 ☐ Sometimes=3 ☐
Most of the time=4 ☐ Always=5 ☐

18. How many brothers and sisters do you have? Please specify (write '0' if you have no sibling): _____

19. In the last 12 months, how often did you ever eat less than you felt you should because there wasn't enough food? Moderate=0 ☐ Severe=1 ☐ None=2 ☐

20. Have you had problems or difficulties with schoolwork during the past 12 months? ☐ Yes=0; No=1 ☐

21. Bullying can occur when someone teases, threatens, ignores, spreads rumors about, calls someone a bad name, makes sexual remarks, or hits, shoves, or hurts another person over and over again. It is not bullying when two people of about the same strength or power argue or fight or tease each other in a friendly way.

During the past 12 months have you been bullied at school? ☐ Yes=0; No=1 ☐

22. During the past academic year, on how many days were you absent from classes without permission? 0 day=0 ☐ 1-5days ☐ 5-20days ☐ More than 20days ☐

23. Have you been seriously physically beaten at home during the past 12 months? ☐
Yes=0; No=1 ☐

24. During the past 12 months, how many times were you in a physical fight?

0 times=1 ☐ 1 time=2 ☐ 2 or 3 times ☐ 4 or 5 times ☐ 6 or 7 times or more ☐

25. Have you had a break-up with a boyfriend or girlfriend during the past 12 months? ☐
Yes=0; No=1 ☐

26. Has anyone forced you (i.e. physically or verbally) to engage in sexual activities against your will during the past 12 months? ☐ Yes=0; No=1 ☐

27. How many alcoholic drinks do you have in a typical week? Never drink=0 ☐
1/more=1 ☐

28. How many close friends do you have?

0 friends=0 ☐ 1 friend=2 ☐ 2 friends=3 ☐ 3 or more friends ☐

29.. During the past 30 days, how often were most of the students in your class kind and helpful?

Never=1 ☐ Rarely=2 ☐ Sometimes=3 ☐ Most of the time=4 ☐ Always=5 ☐

30. Have you ever thought about or attempted to kill yourself?

☐

1. Never

☐

2. It was just a brief passing thought

☐

3a. I have had a plan at least once to kill myself but did not try to do it

☐

3b. I have had a plan at least once to kill myself and really wanted to die

☐

4a. I have attempted to kill myself, but did not want to die

☐

4b. I have attempted to kill myself, and really hoped to die

☐

31. How often have you thought about or attempted killing yourself in your lifetime?

Never=1 ☐ Rarely =2 ☐ Sometimes=3 ☐ Often=4 ☐ Very Often (5 or more times)=5 ☐

32. Have you ever told someone that you were going to end your life, or that you might do it?

☐

1. No

☐

2a. Yes, at one time, but did not really want to die

☐

2b. Yes, at one time, and really wanted to die

☐

3a. Yes, more than once, but did not want to do it

☐

3b. Yes, more than once, and really want to do it

33. How likely is it that you will attempt suicide someday?

☐

0. Never

☐

4. Likely

☐

1. No chance at all

☐

5. Rather likely

☐

2. Rather unlikely

☐

6. Very likely

☐

3. Unlikely

34. Have you ever thought about ending your own life in the past year? Yes=0 ☐

No=1 ☐

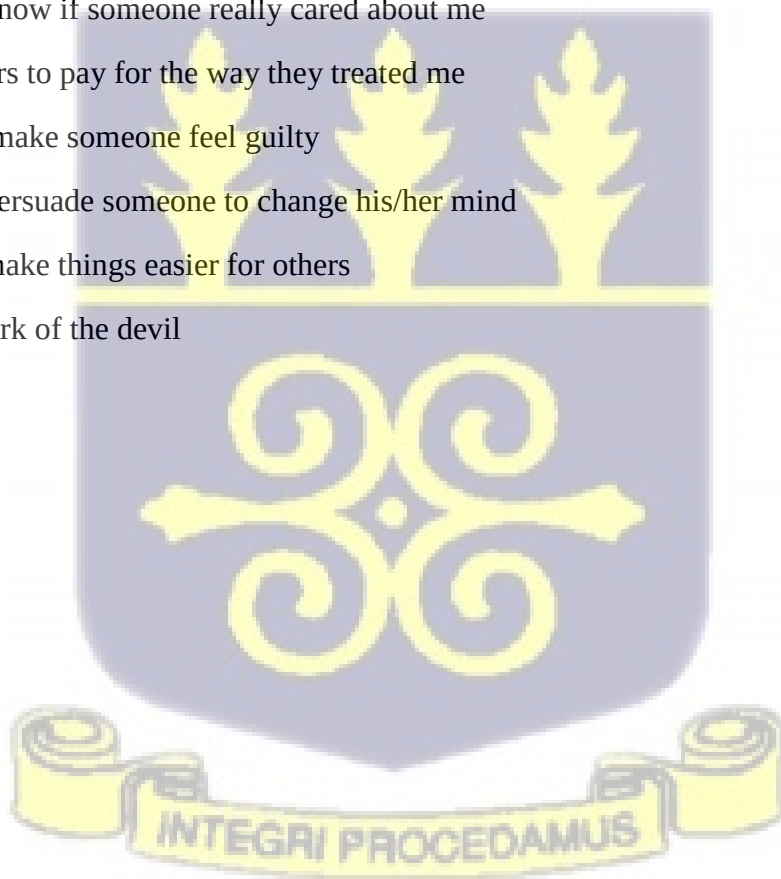
35. Have you ever attempted to end your own life in the past year? Yes=0 ☐

☐

No=1

36. What are your motivations for engaging in suicidal behaviours?

- a. My thoughts were so unbearable; I could not endure them any longer
- b. It seemed that I lost control of myself, and I do not know why I did it
- c. The situation was so unbearable that I could not think of any other alternative
- d. I wanted to get away for a while from an unacceptable situation
- e. I wanted to sleep for a while
- f. I wanted to punish myself
- g. I wanted to die
- h. I wanted to show someone how much I loved him/her
- i. I wanted others to know how desperate I felt
- j. I wanted to get help from someone
- k. I wanted to know if someone really cared about me
- l. I wanted others to pay for the way they treated me
- m. I wanted to make someone feel guilty
- n. I wanted to persuade someone to change his/her mind
- o. I wanted to make things easier for others
- p. It was the work of the devil



APPENDIX 2

ETHICAL COMMITTEE FOR HUMANITIES APPROVAL FORM



UNIVERSITY OF GHANA

Ethics Committee for Humanities (ECH)

Official Use only
 Protocol number
 ECH 272 22-23

PROTOCOL CONSENT FORM

Section A- BACKGROUND INFORMATION

Title of Study:	Suicidal Behaviours Among Blind Adolescents
Principal Investigator:	Rose Nana Akyere Bentil
Certified Protocol Number	ECH 272 22-23

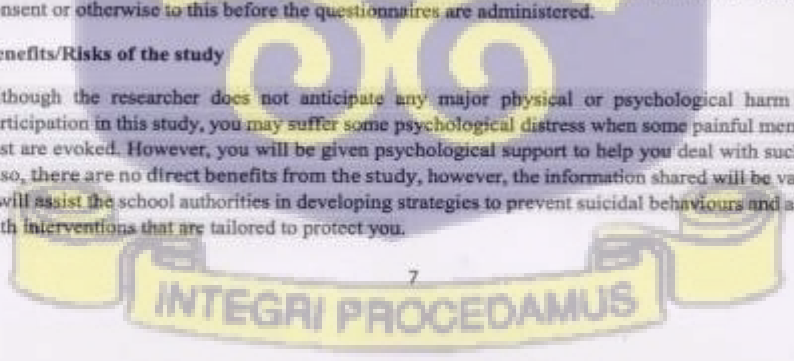
Section B- CONSENT TO PARTICIPATE IN RESEARCH

General Information about Research

The goal of this study is to examine suicidal behaviours among school-going blind adolescents. Data will be collected with the aid of a questionnaire for a proposed period of three months. The proposed duration for completing a questionnaire is estimated at forty-five minutes to an hour. Two hundred participants will be sampled for the study. The purpose of the study is to examine suicidal behaviours among blind adolescents. Information you provide will be helpful in our effort to develop strategic interventions for helping persons going through suicidal crises in Ghana. As a participant, you can be certain that your information will be kept private and your personal identifiable information will also not be collected. Kindly consent or otherwise to this before the questionnaires are administered.

Benefits/Risks of the study

Although the researcher does not anticipate any major physical or psychological harm because of participation in this study, you may suffer some psychological distress when some painful memories of the past are evoked. However, you will be given psychological support to help you deal with such distresses. Also, there are no direct benefits from the study, however, the information shared will be valuable since it will assist the school authorities in developing strategies to prevent suicidal behaviours and also come up with interventions that are tailored to protect you.



7

The psychologist's name and contact are below

Ethel Obeng (Fafanto Psych Consult) 0544461472 Email address- ethel.obeng@gmail.com

Confidentiality

Your details as a participant will be kept confidential and anonymous. You have the option of naming whoever you want to share this information with. Only the researcher and her supervisors will have access to your responses. As a result, signing this form signifies that you consent to have the researcher's supervisors involved.

Compensation

As a participant, you will be provided with refreshments, specifically biscuits.

Withdrawal from Study

You should be aware that participation in this study is completely voluntary, and you are free to leave at any moment. You will have no effect if you withdraw from the study. You will also be informed of any accessible information that could affect your decision to participate in or withdraw from the study. If the researcher discovers that you do not fully meet the criteria, you will not be engaged any further on this research.

Contact for Additional Information

Participants may contact the researcher with any concerns or clarifications:

Rose Nana Akyere Bentil
University of Ghana, Department of Psychology
P. O. Box LG 84, Legon
rnabentil001@st.ug.edu.gh
+233 (0) 271022254

- If you have any questions about your rights as a research participant in this study you may contact the Administrator of the Ethics Committee for Humanities, ISSER, University of Ghana at eck@ug.edu.gh or 00233- 303-933-866.



Section C- PARTICIPANT AGREEMENT

"I have read or have had someone read all of the above, asked questions, received answers regarding participation in this study, and am willing to give consent for me, my child/ward to participate in this study. I will not have waived any of my rights by signing this consent form. Upon signing this consent form, I will receive a copy for my personal records."

Name of Participant

Signature or mark of Participant

Date

If participant cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

Name of witness

Signature of witness / Mark

Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Name of Person who Obtained Consent

Signature of Person Who Obtained Consent

Date

INTEGRI PROCEDAMUS



UNIVERSITY OF GHANA



Official Use only
Protocol number

Ethics Committee for Humanities (ECH)

GUARDIAN /PARENTAL PROTOCOL CONSENT FORM

Section A- BACKGROUND INFORMATION

Title of Study:	Suicidal Behaviours Among Blind Adolescents in Ghana
Principal Investigator:	Rose Nana Akyere Bentil
Certified Protocol Number	

Section B- CONSENT TO PARTICIPATE IN RESEARCH

General Information about Research

This is a cross-sectional study that seeks to examine suicidal behaviours among blind adolescents. Completing this survey is voluntary and will take about 30 minutes or more. Your ward will be required to tick or circle the response that best fits his/her case. Your ward will sincerely answer the questions based on what he/she does or knows. There are no right or wrong answers.

Benefits/Risks of the study

The researcher does not anticipate any major physical or psychological harm because of the participation of your ward in this study, however, he/she may suffer some psychological distress when painful memories of the past are evoked through his/her responses. In such situations, your ward will be given psychological support to help him/her deal with the trauma. Also, there are no direct benefits from the study, however, the information shared will be valuable to develop strategic interventions to prevent such behaviours if any in Ghana.

Confidentiality

The responses of your ward as a participant will be kept confidential and anonymous. Only the researcher and her supervisors will have access to his/her responses. As a result, signing this form signifies that you consent to have the researcher's supervisors involved.

Compensation

As a participant, your ward will be provided with refreshments, specifically biscuits.

Withdrawal from Study

This research is completely voluntary. If you do not want your ward to answer a question, kindly feel free to let the researcher know. If at any point you want your ward to decline from participating, you are free to do so and you or your ward will not be adversely affected in any way.

Contact for Additional Information

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University of Ghana, Department of Psychology
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Section C- PARTICIPANT AGREEMENT

"I have read or have had someone read all of the above, asked questions, received answers regarding my child's participation in this study, and am willing to give consent for me, my child/ward to participate in this study. I will not have waived any of my rights by signing this consent form. Upon signing this consent form, I will receive a copy for my personal records."

Name of Participant

Signature or mark of Participant

Date

If participant cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

Name of witness

Signature of witness / Mark

Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

INTEGRI PROCEDAMUS

Name of Person who Obtained Consent

Signature of Person Who Obtained Consent

Date



INTEGRI PROCEDAMUS