REFLECTION, ACADEMIC HARDINESS AND SUICIDAL IDEATION AMONG IN-SCHOOL ADOLESCENTS IN IBADAN, OYO STATE, NIGERIA

BY:

IMISIOLUWA OLUMIDE

MATRIC NUMBER: 217405

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DECLARATION

I hereby declare that this research project is my original work and that it has not been

submitted in part or whole to any other institution for the attainment of a degree or diploma.

Where other sources of information have been used, the authors were duly acknowledged and

listed in the references.

…………………………….   ……………………..
Olumide Imisioluwa
Signature   Date

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SUPERVISORS' CERTIFICATION

I hereby certify that this research project was written by Mr Olumide, Imisioluwa a student of

Centre for Child and Adolescent Mental Health, University of Ibadan under our supervision.

…………………………………….

Supervisor

Dr. Tolulope Bella- Awusah
MBBS (Ibadan), FWACP M.Sc. CCAMH (Ibadan)
Department of psychiatry
College of Medicine
University of Ibadan, Nigeria

…………………………………..

Supervisor

Dr. Kehinde Lawal
MBBS (Ibadan), FWACP, CCAMH (Ibadan)
Department of psychiatry
College of Medicine
University of Ibadan, Nigeria

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DEDICATION

This work is dedicated to the almighty God for his inspiration and guidance. To my lovely parent Pastor and Pastor (Mrs) Olumide who ensured that I attain this height.

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Key of Abbreviations

SI   Suicidal Ideation

JSS   Junior Secondary School

RAH   Reversed Academic Hardiness

SSS   Senior Secondary School

SIQ   Suicidal Ideation Questionnaire

SPSS   Statistical Package Social Science

SSI   Suicide Ideation Scale

ABSTRACT

Background: Suicide is a serious and growing public health problem, and it remains a serious cause of death in the world today; therefore, it is essential to increase our knowledge concerning the etiology of suicidal ideation among adolescents. However, there are many factors of suicidal ideation among adolescents. An adolescent who doesn't have family support is more likely to have negative hardiness in academics and become less productive. The study was aimed at reflection, academic hardiness and suicidal ideation among in-school adolescents in Ibadan, Nigeria.

Methods: This was a cross sectional survey carried out in selected schools in Ibadan Southwest Nigeria. Four government schools were selected randomly from Ibadan north and Ibadan north-west local government. A consecutive recruitment of 400 participants was carried out at the selected schools. Becks Depression Inventory (BDI) was used to screen respondent for suicide. Ruminative Response Scale was used to screen reflection and Revised Academic Hardiness Scale was used to assess overall academic hardiness and the individual components of commitments, challenges, and control.

Using SPSS version 23, percentage and frequency count was used to describe the socio-demographic characteristics of the respondents as well as the prevalence of emotional disorders in the study population. Chi- square test of association was used to investigate the association between the independent and categorical variables such as the categories on the BECKS, RSES and socio-demographic variables. Independent t-test and Analysis of Variance (ANOVA) was used in comparing the mean values of continuous variables such as the BECKS and RSES scores, as it relates to respondents' categories on the RAH. Level of significant was set at 5%.

Results: Four hundred students were recruited into this study from the various selected schools. The mean age of the respondents was 15.6± 2.20 years while majority were female (57.4%). The prevalence of suicide was 14.8% and more than one-fifth (21.4%) have lost morale for work. Four (5.9%) out of 68 of respondents less than 14 years had suicidal behaviour compared to 7.8% of respondents who were aged between 15-19 years and 255 of respondents aged greater than 20 years. (p=0.16). One out of 22(4.3%) respondents whose mothers had no formal education compared with 14 out of 147(8.7%) respondents whose mothers had post-secondary level of education in the socio-demographic correlates of participant with and without suicidal behaviour: this difference was however not statistically significant (x^2=1,75, p=0.67).

One-third (32%) almost ever think of how passive and unmotivated they were. 67.4% respondents showed a positive association between reflection responses and suicide, although this fails to attain statistical significance (OR=1.03;p=0.17;CI=0.99-1.06). There is a negative association between academic hardiness and being depressed as participants who were depressed were 0.88 times as likely as to have a higher academic hardiness(P=0.001; CI=0.81-0.95).

Conclusion: This study reveals the adverse effects of reflection, academic hardiness and suicidal ideation on in-school adolescents. Association between academic hardiness and suicidal ideation is quite high. This study then identifies the need for CAMH training of health care provider and educational settings to ensure routine screening, identify academic hardiness and suicidal thoughts and attempts before is too late. Psychosocial support should be carried out in various schools, their roles as an adolescents and school counsellors needed to be trained and be informed. Thus consideration should be given to adolescent well-being and awareness program.

Keywords: Psychological disorder; Environmental factors; Educational environment; suicidal ideation.

Word count: 523

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CHAPTER ONE

INTRODUCTION

1.1 Background

The word suicide is derived from the Latin word '*suicidium*', from *suicaedere*, which means "to kill oneself". Suicide has a worldwide mortality rate of 16 per 100,000 which translates to one death every 40 seconds. The total death attributable to suicide is about a million people every year (WHO, 2011) and as such constitutes an important public health concern. Suicide is also the leading cause of death among adolescents. Suicidal behaviour is said to exist on a continuum from suicidal ideations -thoughts that one's life is not worth living which may range in intensity from fleeting thoughts to actual well figured-out plans for killing oneself or a total fixation with self-annihilation. These suicidal behaviours and thoughts are common among adolescents. The World Health Organization has noted that suicide as a phenomenon is influenced by many factors such as psychological, social, biological, cultural and environmental factors. However, studies on suicidal behaviour in Africa have been scarce and this may be due to cultural beliefs that perceive suicide to be an abomination, and the fact that Nigerian Law still criminalizes it. However, recent study by Omigbodun, Dogra, Esan and Adedokun, (2008) in Nigeria indicates suicidal behaviour is relatively common in Nigeria.

Reflection can be defined as the ability to reflect on one's actions and engage in a process of continuous learning. It involves paying critical attention to the practical values and theories which inform everyday actions (Dewey 1933). Rogers and Joiner (2017) reported a modest positive relationship between reflection and suicidal ideation across 12 studies (Crane et al., 2007).

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Miranda and Nolen-Hoeksema (2007) proposed that inconsistent findings in the possible link between reflection and suicidal ideation may be attributable to the possibility that reflection has a stronger link with suicidal ideation under specific conditions. Specifically, "attempts to understand the reasons for one's depressed mood may result in suicidal ideation when individuals are not successful in generating solutions during their problem-solving attempts, or when their attempts at reflection turn into brooding". Therefore, it is possible that reflection is associated with suicidal ideation when an individual's ability to use adaptive problem solving or coping methods is impaired. Three studies lend support to this possibility. In a cross-sectional sample of college students, Tucker and colleagues (2013) found that lower levels of hope and optimism were associated with a stronger relationship between reflection and suicidal ideation.

Another factor that may predicts suicidal ideation among adolescents is academic hardiness. Hardiness is a personality characteristic (Suzanne C. Kobasa, 1979). It helps individuals enhance the way they tolerate and cope with stressful life situations. The construct of hardiness was first introduced by Kobasa (1979), and he defined it as a resistance resource in the encounter with stressful situations. Sezgin (2009) asserted that hardy adolescents possess important characteristics such as judging potentially stressful events as less threatening, have better work behaviours and possess better coping ability in stressful conditions. Benishek, Feldman, Wolf-Shipon, Mecham, and Lopez (2005) proposed a 4-factor version of academic hardiness, and attempted to develop a scale to assess the four dimensions. However, their study only found three factors, with the main factor containing a mixture of commitment and control variables. Additionally, this scale contains 40-items, and, thus, is not suitable for situations where a brief measure is required.

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As important as academic hardiness (AH) is, Karimi and Venkatesan (2009), reported that it may be influenced by some environmental factors. Environmental factors have a marked influence on the students' emotional states, thereby affecting their personality. These factors may be social environments, which is the students' relationship with others at school and in the community, economic factor which is the family inability to provide financially for the family. The students may spend many years in an educational environment where the peer relationships often provide adequate buffer to counteract any unfavourable emotional patterns of behaviours established in the life of an adolescent may be from home.

Therefore, adolescents with academic hardiness may be able to cope with the impacts of different environmental stressors associated with various school activities.

1.1 Statement of the problem

Suicide is of major public health importance. It is the fourth leading cause of death globally among youths 15 to 19 years and the tenth leading cause of death for adolescents 10-14 years of age (WHO, 2014). However, these figures do not include suicidal attempts, which could be up to 20 times more frequent than completed suicide (WHO, 2011).This implies that suicidal ideation or thoughts could be more frequent than attempted suicide. People may experience major shifts in social and psychological aspects of lives and may experience different levels of difficulties in academic pressures, occupational choices, and life goal decisions. With regards to the above mentioned, adverse socioeconomic factors may affect vulnerable family making some adolescents in Nigeria from more likely to experience suicidal ideation. (Handley, *et al* 2012). Considerably, most adolescents who experience suicidal ideation will not go on to take their lives initially.

In Africa, it was believed that suicidal actions are considered rare, but recent studies suggest that it now represents a significant public health concern. Studies carried out among

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adolescents from different countries of low and middle revenues recorded: 17.8% in China, 17.1% in the Philippines, in Lebanon 16%, and in the rate in some African countries are 19.6% in Uganda, 23.1% in Botswana, 27.9% in Kenya, and 31.9% in Zambia, respectively.

Adolescents lack agency and typically depend on others to access healthcare for psychological issues or problems as suicidal ideation increases, their intention to seek help further decreases. Therefore, it was important to know the relationship between suicidal ideation on the one hand, and reflection and academic hardiness on the other in this environment. Such information can help direct scarce mental health resources appropriately.

1.2 Justification and relevance of the study

Despite increasing evidence of an association between reflection, academic hardiness and suicidal ideation, hardly or nothing is known in Nigeria. It is hence to prove whether the subject matter described above is accordant with what has been in other countries.

Lotrakul noted that in Thailand, suicide rates increased in 1999 by 8.6 per 100,000 people and then in 2003, it decreased to 7.1 per 100,000. He also discovered that male suicide showed higher variation with age than female suicide. Nevertheless, the two most common methods of committing suicide seem to be death by hanging and consumption of agricultural toxic materials. It was also found out that due to HIV infection, the prevalence of suicide was most common in the upper northern region. Studies conducted in Nigeria, South Africa, Zambia and Uganda indicated that acts of suicide are common but varies across countries. (Lautrakul,2006).

The prevalence of suicidal behaviour was reported to be 20% in a study on prevalence of suicidal behaviour among a sample of adolescents aged 10-17 years (Omigbodun, Dogra, Esan&Adedokun, 2008). High rate of death increases among adolescents because they could not properly manage their thought. It is widely known that adolescents are faced with many

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problems like academic stress, relationship difficulties, financial constraints, parenting and peer influences. These mentioned factors can constitute stress on the part of the adolescents, the consequence of which may be suicidal ideation.

1.3 Research questions

This study was conducted with the following research questions;

1) What is the prevalence of suicidal behaviours among in-school adolescents in Nigeria?

2) What is the correlate of suicidal behaviours among in-school adolescents in Nigeria?

3) What is the association between reflection and suicidal ideations among secondary school students in Nigeria?

4) What is the association between academic hardiness and suicidal ideation among secondary school students in Nigeria?

1.4 Aims and objectives

This study aimed to examine how reflection and academic hardiness are associated with suicidal ideation among Nigerian adolescents.

The specific objectives are to:

1) To determine the prevalence of suicidal behaviours among in-school adolescents in Nigeria

2) To determine the correlates of suicidal behaviours among in-school adolescents in Nigeria

3) To determine the association between reflection and suicidal ideations among secondary school students in Nigeria.

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4) To determine the association between academic hardiness and suicidal ideation among secondary school students in Nigeria.

Word count: 1,460

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CHAPTER TWO

LITERATURE REVIEW

2.1   Definitional issues in the study of suicidal behaviours

Suicidology encompasses several related, overlapping phenomena including non-fatal suicide attempts, suicide ideation and self-destructive behaviours. This spectrum of behaviours has been studied from multiple disciplinary standpoints drawing on neurobiological, cognitive, psychoanalytic and socio-biological theories. The aetiology of suicidal behaviours involves a complex interaction of many factors, at various levels, from individual to cultural. Thus, a variety of theoretical models are proposed, and suicidal phenomena are variously defined (Maris et al., 2000).

Researchers agree that suicide, suicide attempts, and suicidal thoughts do not simply represent a single continuum of severity. Stengel (1964) posited that there was only a small degree of overlap between suicide completers and suicide attempters. Kreitman (1977) also favoured the view that attempters were not just failed completers but were subgroups that had little or no intention to die. However, the distinction between completers, attempters and ideators is complicated by the fact that since intention to die cannot be operationalized or measured easily; it proves to be an unsatisfactory criterion for suicide attempt (Kreitman, 1977). In recognition of this ambiguity, Kreitman, *et al* (1969) proposed the term "parasuicide" to refer to behaviours ranging from suicide ideation and gestures to suicide attempts, regardless of intent. Several studies adopted similar umbrella terms for a large range of non-fatal behaviours considering the difficulties inherent in the ascertainment of intent (De Leo, *et al* 2006). The International Classification of Diseases and Causes of Death - Version 10, developed by the World Health Organization (1992), created a category of

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"Intentional Self-Harm" to include "purposely self-inflicted poisoning or injury" and "attempted suicide". The interchangeable use of "parasuicide" and "attempted suicide", the lack of consistent definitions (Santa Mina & Gallop, 1998) and the use of idiosyncratic definitions in studies (Ivanoff, 1989, cited in De Leo et al., 2006) have hindered advances in research and practice. Also, in a study conducted by Omigbodun, Dogra, Esan and Adedokun to establish the prevalence and associated psychosocial correlates of suicidal ideation and attempts among young Nigerians. The study revealed that of the 1, 429 youths who were assessed, over 20% suicidal ideation and approximately 12% reported that they had attempted suicide in the preceding year. A national representative epidemiological study, covering 21 out of 36 states in Nigeria among 6,752 adults to evaluate for suicide related outcomes, and their association with mental disorders and a history of childhood adversity. The study revealed that prevalence of suicidal ideation; plan and attempts were 3.2%, 1% and 07% respectively. The present of mental disorders, especially mood problems significantly correlated with suicide outcomes, while a history of early childhood adversity was identified as a risk factor for lifetime suicide attempts accounts for at least 12% of all deaths reported for youth annually, with an estimated ratio of 50 suicide attempts for every 1 completed suicide reported. Sabari and Shashkiran reported that in India, an average of 269 suicides takes place every day, and family problems and illness are the main causes of suicides in India. Nearly 70% of suicides in all countries of the world have been reported in the age group of 15-34 years, and poisoning, hanging, self-immolation, and drowning are the most commonly reported methods suicide and suicidal attempts

2.1   The problem of classification

Several researchers have offered terms and definitions or classification systems to overcome the over-inclusive character of the term "parasuicide" (Ellis, 1988; Maris, 1992; O'Carroll, Berman, Maris, Moscicki, Tanney et al., 1996; Silverman, Berman, Sanddal, O'Carroll, &

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Joiner, 2007). O'Carroll et al. (1996) proposed a nomenclature that sought to clearly define terms used in suicidology and provide a conceptual structure to demarcate the terms. This nomenclature distinguished suicidal behaviours by three features: intent to die, evidence of self-inflicted injury, and outcome (injury, no injury, or death). Silverman et al. (2007) further refined this nomenclature by focusing on suicide-related ideation, communication (suicide threats and suicide plans) and behaviours (self-harm, suicide attempts and suicide), demarcating and defining subsets of these categories. Within this schema, the first distinction based on suicidal intent, allows for a distinction between suicidal and self-harm behaviours. The terms "self-harm" and "deliberate self-harm", mostly favoured in Europe, have been used to describe a range of behaviours from substance abuse and self-poisoning to eating disorders, and non-fatal suicidal acts (Hawton & James, 2005; Santa Mina & Gallop, 1998). However, with a growing corpus of literature on habitual, non-suicidal self-harm acts such as self-mutilation ("the deliberate non-suicidal destruction of one's own bodily tissue" [Favazza, 1998]), it is increasingly clear that such behaviours are qualitatively different from suicidal behaviours (Bille-Brahe, Schmidtke, Kerkhof, De Leo, Lonnqvist et al., 1994; Favazza & Rosenthal, 1993; Linehan, 1997).

The definition of suicidal behaviours used for the current study was adapted from De Leo et al. (2006) to refer to "a non-habitual act with nonfatal outcome that the individual, expecting to, or taking the risk to die, initiated and carried out with the purpose of bringing about wanted changes". In contrast, behaviours that involves the deliberate destruction of body tissue, or deliberate ingestion of substances, that is not socially sanctioned and is not accompanied by suicidal intent, is referred to as non-suicidal self-injury (Prinstein, 2008). In the following review of literature however, this distinction is not always present as the use of "deliberate self-harm" in many studies has been used to variously describe a range of self-injurious behaviours.

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The situation in Nigeria is rather unnerving; this is because issues pertaining to suicidal ideation are often under-reported and less investigated because of the stigma attached to persons who belong to this category. Cultural superstition is often attached to issues pertaining to suicidal ideation and often considered a taboo among cultures in Nigeria. Moreover, recent studies have highlighted the importance of cognitive and personality factors (Janet Olaseni 2018), but only a handful of research studies have been carried out among Nigerian adolescents. Researches on suicidal ideation have focused on correlates of suicide ideation and attempt among youths, correlates of suicidal ideation and factors predicting suicidal ideation. This study would attempt to assess, using a well-structured instrument, reflection and academic hardiness as a predicator among secondary school in Nigeria.

At the end of this study, the findings would provide a better understanding for the dynamics of reflection and academic hardiness to predict suicidal ideation. This would go a long way to provide basis for an intervention to promote mental health for students experiencing suicidal ideation and improve their living conditions by enabling them to make conscious decisions to prevent suicide.

This study would enlighten professional health workers in understanding that the variables could be responsible or influence suicidal ideation and show where the need for an intervention would be required among students.

2.2   Longitudinal Course of suicidal ideation

Thoughts and behaviours about suicide are a substantial issue among adolescents (Hawton & Fortune, 2008). It has been noted also among adolescents that suicidal acts have a serious impact on both families and communities at large. Records have shown that in 2010, the hospitalization rate on intentional self-harm of young people who are between the ages of 15 years and 19 years was higher than any other age range.

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Studies among students who attend high school in Thailand showed 4.0% suicidal thoughts and 6.1% attempted suicide among students in Bangkok. Also, it was found in a study among students in high schools in Chiang Mai, that boys (5.7%) and girls (7.4%) attempted suicide in the past 12 months.

Positive link has been found between reflection and suicidal thoughts by some researches. However, some other studies noticed that reflection may serve as protective factor against suicide. Yet, other findings have demonstrated in significant relationship between reflection and suicidal thinking. In their meta-analysis of the literature on self-focused attention, Mor and Winquist (2002) confirmed that rumination is consistently related to depression.

Liu *et al* (2005) reported in their research that there exists a lesser prevalence of suicidal ideation among males compared to females. Similar report of female predominance in suicidal thoughts was also reported by Ovuga *et al* (2005). in Uganda. Nevertheless, it has been reported that adolescents who are females are the majority callers of suicide toll hotline. Holder reported that globally, less suicidal deaths occur among females than males.

Abdollahi *et al* (2015). in a research among students and found out that lower scores on hardiness dimensions combined with higher perceived stress significantly predicted suicidal ideation. Benishek and Lopez (2001) submitted that adolescents who achieve academic excellence and emotional self-regulation (control) make personal expenses to shine in their academics (commitment) and purposely seek out difficult course work because of the long-term personal growth (challenge) and tend to do better when they use a learning-based orientation.

2.3   Cultural specificity of suicidal behaviours

While social facts influence patterns of suicidal behaviours in societies, it is also clear that individual's do not all respond to social circumstances in the same manner. The influence of

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social conditions is mediated by not only individual level differences but the "cultural context of evaluation and cognition, partly formed as a response to and defence against the social forces" (Mäkinen, 1997). The role of culture in human development was recognized a century ago but the study of culture within a developmental psychopathology framework has only burgeoned over the past three decades (Coll, Akerman, Cicchetti, 2000). In the normal course of development, dramatic transformations take place, for example in the transition from adolescence to young adulthood. From a developmental perspective, negative outcomes such as poor mental health, including suicidal behaviours are determined by not only individual level vulnerabilities but by the transaction of youth with their larger ecologies such as their society and culture (Masten & Obradović, 2007). Young people's outcomes are thus intrinsically linked to the culture in which their lives are embedded, and it is of paramount importance to understand which factors in their context are the most relevant in negative outcomes such as suicidal behaviours.

Culture is what emerges when a collective of ideas, thoughts, habits, traditions, norms and values manifest as a shared pattern in a group of people living in a community at a specific point in time (Bille-Brahe, 2000). A cultural vantage point in suicidology focuses on the interaction of the individual and his larger context. In every culture, the meaning of suicide reflects specific historical or mythic symbolism and affective significance (Boldt, 1988). Cultural, religious and legal institutions all give rise to cultural meanings and normative values that individuals use to assess their behaviours and action (Boldt, 1988; Mäkinen, 1997).

Culture shapes not only the nature and perception of stressful conditions but also the responses to stressors. Kral (1994) proposed that suicidal responses to stress or "perturbation" can eventually become prototypes that an individual access during periods of heightened

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distress. The notion that ideas of suicide can be internalized through culturally inherited schemas (Kral, 1998), has gained support from several cross-cultural and cross-ethnic studies that have shown differences in sociocultural correlates of suicidal behaviors (Aubert, Daigle & Daigle, 2004; Bhui & McKenzie, 2008; Eshun, Chang, & Owusu, 1998; Etzersdorfer, *et al* 1998; Morris & Maniam, 2001; Pritchard & Hean, 2008). These studies show that the same risk factors across cultures are of varying relevance for individuals who engage in suicidal behaviours. However even within each culture there may be large differences in the number of individuals who do and don't think about or attempt suicide. It is important to note that the presence of a salient risk factor in a culture does not invariably lead to suicidal behaviours for all individuals in that culture.

Studies within specific cultures across the globe have highlighted the need to understand suicide and suicidal behaviour with reference to the socio-cultural context. In Western developed nations, for example, youth suicide has been shown to be associated with cultural measures of social attachment and integration, especially individualism (Eckersley & Dear, 2002). These cultural correlations have been shown to be even stronger than those between suicide and socioeconomic variables. Within North America there are striking differences in the rates of suicide of the general population and Native peoples, especially among youth. A long history of oppression from colonization, forced assimilation, loss of culture, and the manifestations of these realities in social and psychological problems increases the vulnerability to suicide in Aboriginal communities (Chandler & Lalonde, 1998; Kirmayer, 1994; Wexler, 2006). Even within Aboriginal communities there are vast differences in suicide rates with some communities reporting zero suicides and others reporting as high as 633 suicides per 100, 000. Suicidal behaviour in other racial and ethnic groups in North America is also influenced by each group's unique context. For instance, African Americans' experiences of racism, discrimination, and social disadvantages brought about by

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deindustrialization of inner-city areas are associated with elevated levels of depression, substance abuse and hopelessness. These factors increase vulnerabilities to suicidal behaviour among African Americans, although they have lower rates than the mainstream population (Goldston, Molock, Whitbeck, Murakami, Zayas, et al., 2008; Kubrin, Wadsworth, & DiPietro, 2006). Among Latinos, who have higher rates of suicidal behaviour compared to non-Latino groups, stresses of immigration experiences and acculturation, decreased familism, differential rates of acculturation within a family, and parent-child conflicts over traditional values, are among the factors related to distress and suicidal behaviour (Zayas & Pilat, 2008).

2.4   Academic hardiness

Hardiness is also considered as a personality characteristic that comprise three conjointly related dispositions:

(i) Challenge

(ii) Control

(iii) Commitment.

The traits are known as the 3Cs. The first "C" of hardiness is challenge. It means obtaining both trials and opportunities in any kind of stressors. An individual with this type of trait admit and believe in transformation or change as part of human existence. Control is the second "C". The control trait is the ability of imagining oneself as somebody who is not a victim of helplessness and hopelessness, having an internal locus of control, generally optimistic and feeling of a sense of distinct power. The last C of the conjointly related dispositions of hardiness represents commitment. Commitment involves having dedication

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and significance in life. Individuals with commitment trait of hardiness survive by going through life with 'little' direction but they usually succeed.

Academic hardiness has been investigated also as a correlate of students' self-reflection. Cole, Field, and Harris (2004), for example, found overall hardiness scores to be positively associated with university student learning motivation, and Maddi et al. (2009) found higher levels of hardiness to be associated with academic self-efficacy. Similar results have been found for high school students. For example, Benishek and Lopez (2001) found positive associations between academic hardiness and perceptions of academic self-worth, interest in maths, maths anxiety, and maths efficacy in secondary school students. Typically, stronger associations have been found between hardiness and self-evaluations than between hardiness and actual academic performance.

Hardiness also has been found to predict persistence, longevity, and educational choice in student samples. Bartone et al. (2008) found that US Army Special Forces trainees with high hardiness scores were more likely to graduate from their course. Lifton et al. (2006) reported that university students who graduated in minimum time had above-average academic hardiness scores, whereas students who dropped out recorded the lowest hardiness scores. Eccles, Vida, and Barber (2004) have shown that high school students high on resilience, a construct like hardiness, which they defined as persistence in the face of academic difficulty, were more likely to choose more demanding courses in high school. These results support the predictive validity of hardiness, finding that hardiness is associated with "real world" outcomes.

Academic hardiness has been found to be positively associated with age, suggesting that it might emerge developmentally, possibly following transitions during the life course (Sheard, 2009; Tisdall, 2001). Also, some studies have found academic hardiness to be associated with

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gender (Benishek & Lopez, 2001), but not all (e.g., Maddi, Harvey, Khoshaba, Lu, Persico, & Brow, 2006). Benishek and Lopez (2001) found high school girls to have higher commitment scores than boys. This is consistent with studies investigating psychological hardiness more generally, which have shown that men and women use the appraisal processes of commitment, challenge, and control in different ways (Vogt et al., 2008). Nevertheless, the literature is divided on the findings in relation to gender and hardiness.

Some researchers represent hardiness as a one-dimensional construct and operationalize it as a total hardiness score (e.g., Cole et al., 2004; Vogt et al., 2008). Others represent it as a multidimensional trait with separate measures for commitment, challenge, and control (e.g., Funk & Houston, 1987; Rhonewalt & Zone, 1989). The conceptual representation of hardiness as a single dimension has been criticized, as information is lost concerning the effect of the different components on any outcome variable (e.g., Carver, 1989; Sinclair & Tetrick, 2000). In an early review of the hardiness construct, Hull, van Treuren, and Virnelli (1987) reported that there were different associations between the three dimensions and the outcome variables examined, and that there was little evidence to support the single dimension conceptualization. This evidence suggests that the practice of summing the sub-domain scores to form a composite hardiness score is problematic, and should not be pursued, although some researchers persist with it (e.g., Cole et al., 2004).

The different measurement approaches used to assess academic hardiness might have contributed to the inconsistent results found when studies tested the associations between academic hardiness, academic achievement, and academic self-evaluations. There have been two general approaches to assessing academic hardiness: (a) tests that measure hardiness as a global construct, such as the Personal Views Survey (Maddi, 1997; Maddi et al., 2009), and (b) tests that measure the three specific domains of challenge, commitment, and control

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(Benishek & Lopez, 2001; Benishek et al., 2005), although some studies using this approach only report an overall hardiness score (e.g., Karimi & Venkatesan, 2009).

The main tool available to assess the three domains of academic hardiness is the 18-item Academic Hardiness Scale developed by Benishek and Lopez (2001). Some researchers have adapted general measures of hardiness for student populations that were originally devised for adult populations (e.g., Cole et al., 2004), but these were not developed specifically for young people, and have not been able to reliably produce measures of academic commitment, challenge, and control. Benishek, Feldman, Wolf-Shipon, Mecham, and Lopez (2005) proposed a 4-factor version of academic hardiness and attempted to develop a scale to assess the four dimensions. However, their study only found three factors, with the main factor containing a mixture of commitment and control variables. Additionally, this scale contains 40-items, and, thus, is not suitable for situations where a brief measure is required.

Benishek and Lopez's (2001) 18-item Academic Hardiness Scale was based on Kobasa's (1979a, 1979b) conceptualization of hardiness, and designed to assess overall academic hardiness and the individual components of commitment, challenge, and control. Commencing with an initial pool of 40 items, and using a sample of 481 US high school students (mean age = 16 years), the authors used item analysis (e.g., item-total correlations), exploratory factor analysis (principle axis), and confirmatory factor analysis to identify unsuitable items for removal.

The Academic Hardiness Scale can be criticized on several grounds. First, Benishek and Lopez (2001) identified two potential factor structures in their exploratory factor analysis: two factors based on 18 items, and three factors based on 24 items (all items had factor loadings > .40). However, when they tested these solutions in a confirmatory factor analysis, they only used the 18 items from the 2-factor solution, despite eventually settling on three

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factors from these 18 items. Second, the control factor has only three items, which raises doubts about its stability (Hair, Black, Babin, & Anderson, 2010). Third, the internal reliability coefficient for the control subscale is unsatisfactory, at .64. Fourth, in the confirmatory factor analysis, one item cross-loaded on two factors, and one item was retained despite it not having a statistically significant factor loading. The hardiness theory (Kobasa et al., 1982) presents two types of appraisals in relation to suicidality. The first appraisal must be performed whenever there is a threatening and uncontrollable situation (the likelihood of suicidal ideation increases). The second appraisal involves the relationship between hopelessness and suicidal ideation, where the positive assessment of event may prevent suicidality. In addition, Garrosa et al. (2008) concluded that individuals with strong hardiness have the courage, motivation, and strategies to turn stressful circumstances into growth opportunities.

2.5   Reflection and Brooding

In an attempt to specify the active types of rumination, Treynor, Gonzalez & Nolen-Hoeksema (2003) performed secondary analyses of data from Nolen-Hoeksema, Larson & Grayson (1999) and identified two distinct aspects of reflection which explained the relationship between rumination and depression (separate from those items which were concerned with ruminating about the symptoms of depression). The first, reflection, is defined as "purposeful turning inward to engage in cognitive problem-solving to alleviate one's depressive symptoms" (Treynor et al., 2003,). Whereas the second factor, brooding, reflects "passive comparison of one's current situation with some unachieved standard" (Treynor et al., 2003, p.256) or dwelling on the negative consequences of one's mood (Miranda & Nolen-Hoeksema, 2007). Although there is evidence for a differential relationship between brooding/reflection and depression (e.g., Fresco, Frankel, Mennin, Turk, & Heimberg, 2002; Treynor et al., 2003) to our knowledge only three studies have looked at

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brooding and/or reflection within the context of suicidality. The first, a case control study (Crane, Barnhofer & Williams, 2007), compared three groups of participants with a history of depression (i.e., non-suicidal group versus suicidal 'ideator' group versus suicidal attempter group) on their responses on the RRS. They reported that suicidal 'ideators' and attempters reported reduced reflection compared to the non-suicidal group, but they did not show increased brooding. In addition, the groups also differed in terms of the balance of the two factors. Suicidal attempters endorsed brooding more strongly than reflection whereas the non-suicidal group endorsed reflection more strongly than brooding.

Second, in a short-term follow-up, O'Connor et al. (2007, Study two) reported that brooding predicted suicidal ideation at two months, however this study did not measure reflection. Finally, Miranda and Nolen-Hoeksema (2007) examined brooding and reflection as predictors of suicidal ideation in a community sample at baseline and at 1-year follow-up. They found that brooding was more strongly correlated with degree of ideation at baseline than was reflection. However, both brooding and reflection predicted suicidal ideation at the 1-year follow-up after controlling for demographics and baseline ideation.

2.6 Reflection and problem-based learning

Problem-based learning (PBL) tend to be characterized by students working collaboratively in small groups, with learning centred on problems relevant to the students' domain of study and much time spent on self-directed learning. In PBL, students learn by solving problems and reflecting on their experiences (Hmelo-Silver 2004). Reflecting on the relationship between problem solving and learning is a critical component of PBL and is needed to support the construction of extensive and flexible knowledge (Salomon and Perkins 1989). According to Salomon and Perkins, self-reflection helps students to (a) review the group process and their own personal functioning in the group, (b) understand how their learning

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and problem-solving strategies might be reapplied, and (c) relate new knowledge to prior understanding (i.e. contents that were discussed and taught). PBL incorporates reflection several times throughout the learning process and when completing a problem. At the completion of a problem, students reflect on what they have learned, how well they collaborated with the group, and how effectively they directed their learning. As such, students learn self-reflection when they become proficient in assessing their own progression in learning.

In her work, Hmelo-Silver (2004) highlighted that while a tutor can support self-reflection in PBL, other techniques may also be helpful. One approach to improving self-reflection is by reflection journals.

Word count: 3,944

CHAPTER THREE

METHODOLOGY

3.1 Study Area

The study was carried out in the city of Ibadan, Southwest Nigeria. Ibadan is the capital of Oyo state and the largest indigenous city in Nigeria, with a population of about 6 million (World Population Review, 2018). Ibadan city comprises of 5 urban local governments area (LGAs). There is a larger area described as Greater Ibadan, made up of eleven (11) LGAs consisting of the 5 urban LGAs (Ibadan city) and 6 semi-urban LGAs. According to the Nigerian Urban Reproductive health initiative (NURHI), the city is dominated by people of Yoruba ethnicity (NURHI, 2018). However, given its cosmopolitan nature, the city also comprises people from many other ethnicities and nationalities (Adedire and Olofinlua, 2017). The system of education in Ibadan city follows the general pattern in the country. Typically, children begin education at about 6 years of age, and spend 6 years in primary school, before proceeding to junior secondary school (JSS). Three years are spent in JSS and another three years in senior secondary school (SSS), after which students may proceed to tertiary institutions. Ibadan northwest LGA was purposively selected from the 5 urban LGAs. The headquarters of Ibadan Northwest LGA has an area of 26km^2 and a population of about 173,359.

Schools are open for academic work for three terms in a year, consisting of three months each. Schools in Ibadan are open for academic work within the hours of 8am-2pm, five days a week (Mondays- Fridays). Most secondary schools in Ibadan have both junior secondary section, which typically consist of children between age 11 and 16 years, and a senior secondary section, which typically consist of children between ages 16-19 years

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3.2 Study Design

A cross-sectional survey design was carried out in selected schools in Ibadan

3.3 Study Population

Adolescent secondary school students aged 10-19 years in Ibadan metropolis was recruited for this study. The participants were recruited from three public secondary schools in Ibadan using purposeful selection. They are Abadina Comprehensive Senior Secondary School, Abadina College, Emmanuel College Bodija, and Methodist Grammar School. These secondary schools were selected because they have large population of adolescents.

Inclusion Criteria

- Adolescent secondary school students between the ages of 10-19 years, who gave informed consent, were recruited for this study.

Exclusion Criteria

- Adolescents who met the inclusion criteria but who declined to participate in the study and/or whose parents or caregivers did not give their informed consent
- Students who are too ill to participate
- Students with previous history of mental health problems

3.4 Sample Size Calculation

The minimum sample size was calculated using the formula for the estimation of a single proportion.

$$n = Z_a^2 pq/d^2 \qquad \text{(Kish, 1965)}$$

Where;

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N= the minimum calculated sample size

p= prevalence of emotional problem in adolescents set at 20% (0.2)

d= degree of precision (5%)

q= (1-p)

z= standard deviation for 95 % confidence interval in a normal curve

n= $1.96^2 {}^x 0.2 \times 0.8/5^2$

n= 245.88

So using a non-response rate of 20%, n=307.5 (approximately 308)

Thus, a sample of 500 adolescents was recruited in order to increase the precision of the estimates of the study.

3.5 Sampling Technique

A stratified sampling technique with proportional allocation was used to get the number of patients which was recruited from each randomly selected schools based on the students load of the attendance. 3 Secondary schools in Ibadan northwest local government was purposively selected from a list of schools in the local government obtained from the ministry of education Oyo state. The total student population and student distribution according to classes was obtained from each school to calculate the proportion of students to sample for the school. The class register for each class was also obtained. Samples were then drawn from all classes in each school using systematic sampling. Number of students recruited for each schools selected = (students load of population/ total selected schools 'N') * sample size.

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3.6 Operational definition of terms

Suicidal ideation: Suicidal ideation refers to thoughts that life is not worth living, ranging in intensity from fleeting thoughts through to concrete, well thought-out plans for killing oneself, or a complete preoccupation with self-destruction.

Reflection: Reflection means the process of continuously thinking about the same thoughts, such as assignments, poor academic performance etc. which tends to be sad or dark.

Academic hardiness: Academic hardiness is referring to a personality characteristic that may differentiate students who avoid challenging academic course work from others who are willing to pursue these types of challenges. It can be developed by students.

3.7 STUDY INSTRUMENTS

Data was collected using the following instruments:

- ❖ The Socio – Demographic Questionnaire……………………..Appendix 2A
- ❖ The Becks Depression Inventory…………………………....Appendix 2C
- ❖ The Ruminative Responsive Scale …………………………...Appendix 2E
- ❖ The Revised Academic Hardiness Scale………………….…...Appendix 2B

3.7.1 Modified Socio-Demographic Questionnaire

An adapted version of the questionnaire used by (Omigbodun *et al*., 2008) in a study conducted among adolescents in rural and urban Ibadan was employed in collecting information about relevant socio-demographic variables of relevance to the study. The questionnaire originally seeks to elicit personal, family and school-related information from the participants. This is a 44-item questionnaire designed to collect socio-demographic information of respondents adapted from a 40-item socio-demographic questionnaire used in a Nigerian study on Child and Adolescent Mental Health (Omigbodun *et al*, 2008).

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3.7.2 Becks Depression Inventory

The Beck Depression Inventory version 11 is a 21-item multiple choice self-report inventories used for the assessment of depression. It is designed for adolescents as well as adults. It consists of items related to sadness, loss of interest, difficulty in concentration, and appetite change (Becks et al., 1996) which are all symptoms of depression. According to Groth-Marnat, 1990, Becks depression inventory requires 5 to 6 year's formal education and takes approximately 10 minutes to complete. Scores on each of the 21 items range from 0-3. The BDI -11 is the latest version of the inventory published in 1996. It has been used as an assessment tool by health care professionals and researchers in different population samples. At a cut off score of 18 and above, BD1-11 has a sensitivity of 0.91, specificity of 0.97, positive predictive value (PPV) of 0.88 and negative predictive value (NPV) of 0.98. The BDI-11 has been validated for use in Nigeria and has been used to screen for depression in adolescents, with a standardized cut off point of 18 and above (Adewuya *et al.,* 2007)

3.7.3 Ruminative Responses Scale

In 2018, a questionnaire for assessing ruminative response scale and intent was validated and standardised for the use in the Nigeria population (Olaseni (2018).

Ruminative Responses Scale was developed by Nolen-Hoeksema and Morrow (1991). The Ruminative Response Scale is a self-report measure. It contains twenty-two items which measure an individual's overall tendency to ruminate. Measurement of responses are based on a 4-point Likert scale and range from 1 (almost never) to 4 (almost always). The RRS was initially developed as a subscale of the Response Styles Questionnaire (RSQ) by Nolen-Hoeksema and Morrow (1991).

3.7.4 Revised Academic Hardiness Scale.

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The Revised Academic Hardiness Scale was developed by Benishek and Lopez (2001). The 18-item scale was based on Kobasa's conceptualization of hardiness, and designed to assess overall academic hardiness and the individual components of commitment, challenge, and control (Kobasa, 1979a; Kobasa, 1979b). It is an 18-item scale, using a 4-point Likert scale, with 1 corresponding to completely false and 4 corresponding to completely true. Sample items include-"I work hard for my grades, I enjoy the challenge of a difficult class, and I become less motivated to study when I don't get the grades I want right away". Although the scale was originally developed for use among adults, it has been validated for use among elementary and high school students in Burkina Faso (Kamtsios & Karagiannopoulou, 2013) and Nigeria (Olaseni et al., 2018). It is quick to administer taking about 10–15 minutes to complete.

Validity of the instrument

The English and Yoruba version of the socio-demographic questionnaire have been validated among secondary school students. The English version will therefore be back translated by a competent linguist into Yoruba language and two independent physiatrists will examine it to ascertain its face and content validities. In addition, a pre-test of the questionnaire was conducted among secondary school students in a local government different from the participating local government, and the necessary amendments would be made based on the findings from the pre-test.

Translation of the Instruments

All interview instruments was translated into Yoruba language using the back-translation method

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3.8 STUDY PROCEDURE

Data Collection

Permission for the study was obtained from the ministry of education and the authorities of each of the participating schools. Only participants with signed informed consent were allowed to participate in the study. The researcher ensures that in each of the schools, a well-lit and ventilated hall (or class, as the case may be) with adequate chairs and tables, is secured for the administration of questionnaires Two research assistants, who were adequately trained on administration of the study instruments, was employed to assist in administering the questionnaires to study participants and providing clarification that may be needed. A modified self-report approach was employed, whereby the items are read out to the students and explained, and they are then allowed to complete it as it best applies to them.

Administration of Study Instruments

A self- report method was used in obtaining the relevant from study participants. Two research assistants who were properly trained assisted in administering the questionnaires. Adequate preparation was made in conjunction with the school authorities to ensure that suitable time and venue for this activity are secured. Respondents will not be asked to provide their names or any other identifying details, as this should help to allay fears bordered on issues of confidentiality, thus allowing for more honest responses.

3.9 DATA MANAGEMENT AND ANALYSIS

Each questionnaire was given a unique number and each item on the questionnaire was appropriately coded before entering them into the data analysis software. Data was analyzed using Statically Package for Social Sciences (SPSS) version 23 and was cleaned at running frequencies. Percentage and frequency count was used to describe the socio-demographic characteristics of the respondents (e.g. sex, type of school), as well as the prevalence of

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emotional disorders in the study population. Descriptive statistics of mean and standard deviation was used to present data such as the age and network of relationship inventory scores of respondents. Chi- square test of association was used to investigate the association between the independent and categorical variables such as the categories on the BECKS, RSES and socio-demographic variables. Independent t-test and Analysis of Variance (ANOVA) was used in comparing the mean values of continuous variables such as the BECKS and RSES scores, as it relates to respondents' categories on the NRI.

3.9 Data Analysis

The data were collected, and was entered into a SPSS containing different variables. Errors were checked before analysing using SPSS version 21. To avoid data corruption and storage device, information was backed up into different devices. Data were categorized in categories and variables were presented as mean and standard deviations.

4.0 ETHICAL CONSIDERATIONS

Ethical approval was obtained from the Oyo state ministry of health ethical review board (ERB), and permission was obtained from the state ministry of education. Assent was obtained from participants below the age of 18, and the informed consent of the legal guardians of the assenting ones was subsequently sought. Informed consent will also be sought from all study participants who are between 10-19 years of age. The fundamental principles of ethical research: Beneficence, Autonomy, Non-maleficence and Justice was adhered throughout the course of the study.

4.0.1 Respect for autonomy

The study was explained to all participants in detail: the nature and risks of the study.

4.0.2 Confidentiality

The data of each participant was properly kept from other participants to see.

4.0.3 Justice

All participants were treated fairly and equally

Word count: 1,806

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CHAPTER FOUR

RESULTS

Data collection for this study was carried out between the 27th of January 2020 and the 2nd March 2020. During this period, 400 students were enrolled into the study and 373 had completely and validly filled questionnaire to yield a response rate of 98.5%. For those who did not participate, the reasons were, questionnaires not validly filled, some students refuse to submit, limited and incomplete questionnaires. (See figure 2).
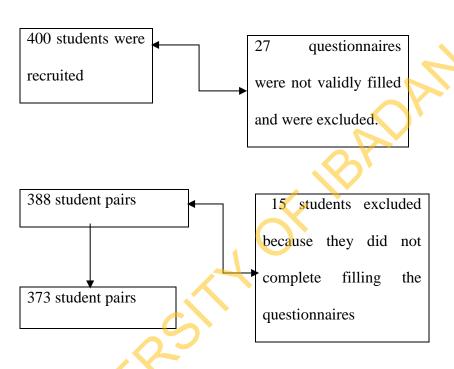
400 students were recruited	→	27 questionnaires were not validly filled and were excluded.

388 student pairs	←	15 students excluded because they did not complete filling the questionnaires
↓		
373 student pairs		

Figure 2: Selection of student-pairs

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4.1 Socio-demographic and general health characteristics of respondents

4.1.1 Socio-demographic characteristics: Personal Information

The mean age of the respondents was 17 ± 3.15years. With the ranging from 11-20 years. Two hundred and fourteen (57.4%) were female and 159(42.6%) were males aged 11-20 years. Two hundred and three (65.3%) were senior secondary school two. Thirty nine (12.5%) respondents were senior secondary school three.

One hundred and seventy six (55.9%) were Christians, 134(42.5%) were Muslims, and 5(1.6%) were traditional worshippers. (See Table 4.1.1)

Tables 4.1.1: Personal characteristics of respondents

Variables	Frequency	Percentage (%)
Age of respondents		
11-14 years	68	21.1
15-19 years	247	76.5
20 and above years	8	2.5
Gender		
Male	159	42.6
Female	214	57.4
Class		
SSS1	69	22.2
SSS2	203	65.3
SSS3	39	12.5
Religion		
Islam	134	42.5
Orthodox	44	14.0
Pentecostal	132	41.9
Traditional	5	1.6

*SSS (Senior Secondary School)

Socio-demographic characteristics of the study population: Family related

Two hundred and twenty six (66.4%) of the respondents were from monogamous marriage, while 7 (2%) were raised by single parents. Three hundred and twenty (87.4%) respondents' parents were married, while 33(9.0%) were separated. Three hundred and five (81.6%) respondents do not earn income, while three hundred and forty-eight (95.9%) respondents reported liking their parents. One hundred and eighty three (52.1%) respondents reported that their parents love and care for them.

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Tables 4.1.2a: Family related socio-demographic characteristics of Secondary Students (N=374)

Variables	Frequency (n)	Percentage (%)
Family type		
Monogamous	233	66.4
Polygamous	118	33.6
Parent marital status		
Married	320	87.4
Separated/divorced	33	9.0
Widowed mother	7	1.9
Widowed father	6	1.6
Earn money from work		
Yes	69	18.4
No	305	81.6
Like your family		
Yes	69	18.4
No	305	81.6
Reasons for liking Family		
Peace and love exist in the family	87	24.8
Give me good trainings	4	1.1.
Enrol me in school	3	0.9
Don't abuse me	2	0.6
They love God	6	1.7
Provides my needs	28	8.0
Just like them	38	10.8
Loving and caring	183	52.1

N<374 indicates missing data

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Table 4.2.1b: Family related socio-demographic characteristics of Secondary Students

Variables	Frequency (n)	Percentage (%)
Reasons for a dislike		
Too strict	1	9.1
Divorced/separated	3	27.3
Do not live with them	3	27.3
Not caring	4	36.4

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4.1.3: Socio-demographic characteristics of the study population: School related

Three hundred and forty eight (97.2%) respondents like their school, 10 (2.8%) respondents do not perform well in their academic. Three hundred and nine (86.8%) respondents have difficulties with their teachers. The most commonly reported difficulty experienced by respondents was poor explanation and teaching method 8 (33.3%), followed by poor understanding of Mathematics and English 7(29.2%). Two hundred and fourteen (61.8%) respondents had not by any reason visit the school counsellor, one hundred and thirty two (38.2%) respondents have one reason or their other to visit school counsellor. 66(69.5%) respondents visited the school counsellor for education and career discussion, 3(3.1%) respondents visited school counsellor for result related issues. (See Table 4.1.3)

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Tables 4.1.3: School related Information: General Information

Variables	Frequency (n)	Percentage (%)
Like your school		
Yes	348	97.2
No	10	2.8
Do you perform well academically?		
Yes	344	97.2
No	10	2.8
Do you have difficulties with teachers?		
Yes	47	13.2
No	309	86.8
Types of difficulties		
Beating	4	16.7
Poor explanation	8	33.3
Beg for money	1	4.2
Poor understanding of Math/English	7	49.2
Cursing	1	12.5
Personal reasons	3	12.5
Ever gone to see counsellor		
Yes	132	38.2
No	214	61.8
Reason for visiting counsellor		
Educational/career discussion	66	69.5
Result related	3	3.2
School fee related	6	6.3
Report an incidence	5	5.3
Health related	2	2.1
Personal reasons	11	11.6
Just to greet	2	2.1

4.2 Suicidal Behaviors among in-school adolescents

4.2.1 Suicidal Behavior

Using the beck depression inventory, majority (85.5%) did not feel sad, were not particularly discouraged by the future (81.9%), did not feel like a failure (84.3%), get as much as satisfaction from things they do (81.3%), don't feel particularly guilty (61.2%), don't feel they are being punished (77.6%), about nine percent feel disappointed or hate themselves, less than one-tenth(9.6%) blame themselves for bad occurrences and suicidal tendencies was reported by more than one-tenth(14.8%).

About one-quarter (25.9%) reported that they have either become less interested or lost all interest in other people, less than one-fifth (17.7%) reported that they have issues relating to decision making, majority (82.7%) appreciates their appearance and only a few (4.5%) believe that they look ugly and more than one-fifth (21.4%) have lost or started to loose morale for work.

After the collection using beck depression inventory, 27 students were depressed and thought of suicidal ideation, giving a prevalence of 7.2%. (See figure 2)

Table 4.2.1a: Students response to questions on suicidal ideation using BECK Scale

Variables	Frequency (n)	Percentage (%)
Do not feel sad	313	85.5
Feel sad	26	7.1
Sad all the time and can't snap out of it	12	3.3
So sad and unhappy that I can stand it	15	4.1
Not particularly about the future	295	81.9
Feel discouraged about the future	43	11.9

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Table 4.2.1b: Students response to questions on suicidal ideation using BECK Scale

Variables	Frequency (n)	Percentage (%)
Feel I have nothing to look forward to.	11	3.1
Feel the future is hopeless and that things cannot improve	11	3.1
Don't feel like a failure.	307	84.3
Feel failure more than the average person.	19	5.2
As I look back on my life, all I can see is a lot of failures	28	7.7
Feel complete failure as a person	10	2.7
Get as much satisfaction out of things as I used to.	269	81.3
Don't enjoy things the way I used to.	35	9.6
Don't get real satisfaction out of anything anymore.	24	6.6
Dissatisfied or bored with everything.	9	2.5

Table 4.2.1c: Students response to questions on suicidal ideation using BECK Scale

Variables	Frequency (n)	Percentage (%)
Don't Feel particularly guilty	219	61.2
Feel guilty a good part of the time.	66	18.4
Can work about as well as before.	271	78.6
Takes an extra effort to get started at doing something.	32	9.3
Have to push myself very hard to do anything.	33	9.6
Can't do any work at all.	9	2.6

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4.2.2 Correlates of suicidal behaviour

4.4.2.1 Socio-demographic correlates of participants with and without suicidal behaviour

Table 4.4.2.1 below shows the factor of participants with and without suicidal behaviour.

Four (5.9%) out of 68 of respondents less than 14 years had suicidal behaviour compared to 7.8% of respondents aged between 15-19 years and 255 of respondents aged greater than 20 years. (p=0.16)

Twenty two (22) out of 296 (93.1%) respondents whose parents were married had suicidal behaviour compared to 3 out of 30(9.1) of respondents who were from divorced or separated homes: this difference was however not statistically significant (x²=0.77, p=0.89).

Sixteen (16) out of 209(7.1%) respondents who were from monogamous homes had suicidal behaviour compared to 9 out of 109(7.6%) of respondents who were from polygamous homes: this difference was however not statistically significant (x²=0.67, p=1.0).

Twenty one (21) out of 263(7.1%) respondents living with their parents had suicidal behaviour compared to 4 out of 52(7.1%) of respondents who lives with either father or mother: this difference was however not statistically significant (x²=0.09, p=1.0).

Nineteen (19) out of 267 (6.6%) respondents were brought up by parents compared with 4 out of 56(9.7%) of respondents who were brought up by father or mother: this difference was however not statistically significant (x²=1.76, p=0.59).

One (1) out of 36(2.7%) respondents whose fathers had no formal education compared with 10 out of 152 (6.2%) respondents whose fathers had post-secondary: this difference was however not statistically significant (x²=2.48, p=0.45).

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One (1) out 22(4.3%) respondents whose mothers had no formal education compared with 14 out of 147(8.7%) respondents whose mothers had post-secondary level of education: this difference was however not statistically significant (x^2=1,75, p=0.67). (See Table 4.2.2.1)

Table 4.2.2.1: Socio-demographic correlates of participant with and without suicidal behaviour

Characteristics	Suicidal behaviour		Total	X^2	P-value
	Yes n(%)	**No n(%)**			
Age group					
≤14 years	4 (5.9)	64 (94.1)	68 (100)		
15-19 years	19 (7.8)	226 (92.2)	245 (100)	3.64	0.16
≥20 years	2 (25.0)	6 (75.0)	8 (100)		
Religion					
Islam	13 (9.8)	120(90.2)	133 (100)	1.80	0.18
Christianity	10 (5.7)	165(94.3)	175 (100)		
Gender					
Male	15 (9.6)	142 (90.4)	157 (100)	2.05	0.15
Female	12 (5.6)	210 (94.4)	213 (100)		
Parent Marital status					
Married	22 (6.9)	296 (93.1)	318 (100)		
Divorced/separated	3 (9.1)	30 (90.9)	33 (100)	0.77	0.89
Widowed	1 (8.3)	11 (91.7)	12 (100)		
Family type					
Monogamous	16 (7.1)	209 (92.9)	225 (100)	0.67	1.0
Polygamous	9 (7.6)	109 (92.4)	118(100)		
Widowed father	0(0.0)	2 (100)	2 (100)		
Widowed mother	0 (100)	4(100)	4(100)		

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Table 4.2.2.1b: Socio-demographic correlates of participant with and without suicidal behaviour

Characteristics	Suicidal behaviour		Total	X^2	P-value
	Yes n(%)	**No n(%)**			
Current living circumstances					
Parent	21 (7.4)	263	284 (100)	0.09	1.00
Mother/father	(92.6)		56 (100)		
Relatives/guardian	4 (7.1)	52 (92.9)	28 (100)		
	2 (7.1)	26 (92.9)			
Who brought you up					
Parent	19 (6.6)	267(93.4)	286 (100)	1.76	0.56
Mother/father	6 (9.7)	56(90.3)	62 (100)		
Relatives/guardian	2(11.8)	15(88.2)	17 (100)		
Fathers level of education					
No formal	1 (4.3)	36 (97.3)	37 (100)	2.48	0.45
Primary	2(13.3)	13(86.7)	14 (100)		
Secondary	6 (6.0)	94 (94.0)	99(100)		
Post-secondary	14(8.7)	147(91.3)	161(100)		
Mothers level of education					
No formal	1 (4.3)	36 (97.3)	37 (100)		
Primary	2 (13.3)	13 (86.7)	15 (100)		
Secondary	6 (6.0)	94 (94.0)	100 (100)	1.75	0.67
Post-secondary	14(8.7)	147(91.3)	161 (100)		

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4.2.3 Patterns of reflection

About one-quarter almost never thinks of how hard it is to concentrate and less than one-third (32%) almost ever thinks about how passive and unmotivated they were. About twenty percent almost alway thinks why they can't get going, write down what they are thinking and made analysis of their written thoughts. More than one-third (36.8%) almost always think they had done better in their recent academic evaluations while about two-fifth (40.3%) sometimes feels thinking about it can hinder them from concentration.

A little above two-fifth (42.5%) don't consider themselves as having a unique problem others don't have and more than one-quarter (27.8%) don't think about how sad they feel.

More than one-fifth (22%) almost always think of shortcomings, failures, mistakes, majority (73.7%) have once or more times gone someplace alone to do some reflections and about one-third(33.2%) have never thought of how angry they are with themselves. (See Table 4)

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Table 4.2.3a: Frequency distribution of responses on reflection

Questions	Almost Never	Sometimes	Often	Almost Always
Thinks about how hard it is to concentrate(n=357)	89(24.9)	171(47.9)	38(10.6)	59(16.5)
Thinks about how passive and how unmotivated you feel (n=350)	112(32)	138(39.4)	57(16.3)	43(12.3)
Thinks "Why can't I get going (n=358)	117(32.7)	112(31.3)	59(16.5)	70(19.6)
Think "Why can't I get going(n=354)	117(33.1)	121(34.2)	49(13.8)	67(18.9)
Go away by oneself and think about why one feel that way(n=357)	114(31.9)	143(40.1)	34(9.5)	66(18.5)
Write down what you are thinking about and analyze it(n=361)	131(36.3)	119(33.0)	36(10.0)	75(20.8)
Think about a recent academic performance, wishing it had gone better(n=356)	54(15.2)	110(30.9)	61(17.1)	131(36.8)
Think "I won't be able to concentrate if I keep feeling this way(n=357)	105(29.4)	144(40.3)	41(11.5)	67(18.8)

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Table 4.2.3b: Frequency distribution of responses on reflection

Questions	Almost Never	Sometimes	Often	Almost always
Think "You have problems other people don't have(n=358)	152(42.5)	102(28.5)	36(10.1)	68(19.0)
Think "Why can't I handle things better" (n=355)	80(21.4)	141(39.7)	63(17.7)	71(20.0)
Think about how sad you feel(n=345)	96(27.8)	146(42.3)	49(14.2)	54(15.7)
Think about all your shortcomings, failings, faults, mistakes(n=350)	92(26.3)	139(39.7)	42(12.0)	77(22.0)
Think about how you don't feel up to doing anything(n=349)	105(30.1)	132(37.8)	55(15.8)	57(16.3)
Went to someplace alone to think about your feelings(n=353)	97(27.5)	128(36.3)	43(12.2)	85(24.1)
Think about how angry you are with yourself(n=354)	117(33.2)	126(35.8)	42(11.9)	67(19.0)

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4.2.4 Patterns of academic hardiness

Majority (62.4%) almost always take their work serious and work hard for grades. About sixty three per cent put their best into their academic regardless of class, a little above one-tenth (12.3%) never made any sacrifice to get good grades, and majority(55.6%) almost never reports that grade weren't important to them.

More than half (51.4%) have one or more times avoided classes that require extra work. A quarter almost always doubt their ability when they perform poorly and majority (60.2%) believe it is difficult to bounce back from academic disappointment and becomes less motivated to study(69.9%). (See Table 4.2.4)

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Table 4.2.4: Frequency distribution of response on academic hardiness

Questions	Almost Never	Sometimes	Often	Almost Always
Take my work as a student seriously(n=363)	26(7.2)	55(15.2)	34(9.4)	226(62.4)
Working hard for grades(n=362)	21(5.8)	60(16.6)	55(15.2)	226(62.4)
Doing my best regardless of the class(n=360)	20(5.6)	65(18.1)	48(13.3)	227(63.1)
Made personal sacrifices to get good grades(n=357)	44(12.3)	66(18.5)	46(12.9)	201(56.3)
Believe grades aren't important to me(n=358)	199(55.6)	66(18.4)	30(8.4)	63(17.6)
Believe doing well is important to him/her and his/her parents(n=360)	37(10.3)	48(13.3)	42(11.7)	233(64.7)
Avoid classes that require extra work(n=356)	173(48.6)	77(21.6)	43(12.1)	63(17.7)
Doing poorly makes me doubt my ability as a student (n=358)	102(28.5)	126(35.2)	38(10.6)	92(25.7)
Believe it is difficult to bounce back from academic disappointment(n=354)	141(39.8)	96(27.1)	49(13.8)	68(19.2)
Become less motivated to study by not getting the desire grade right away(n=355)	107(30.1)	131(36.9)	40(11.3)	77(21.7)

Table 4.2.5: Association between Suicidal behaviour, Reflection response and academic hardiness

There is a negative association between academic hardiness and being depressed as those depressed were 0.88 times less likely to have a higher academic hardiness(P=0.001; CI=0.81-0.95) while a positive association was found between ruminative responses and depression, although this fails to attain statistical significance(OR=1.03;p=0.17;CI=0.99-1.06). (See table 5)

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Table 4.2.5: Association between Suicidal behaviour, Reflection response and academic hardiness

Variable	Suicidal present	Suicidal absent	OR	P - value	95% CI
Ruminative response {(mean(SD)}	32.3(10.4)	35.1(8.1)	1.03	0.17	0.99-1.06
Academic hardiness {(mean(SD)}	27.1(4.8)	30.9(5.3)	0.88	0.001	0.81-0.95

Word counts: 2,650

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CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.1 Discussion

The study was a cross-sectional survey design carried out in four (4) selected schools in Ibadan North. The study aimed to examine how reflection and academic hardiness are associated with suicidal ideation among Nigerian adolescents.

In this session, the results are discussed in light of the socio-demographic characteristics of students, the prevalence of suicidal behaviours among in-school adolescents, and correlates of suicidal behaviours among in-school in Nigeria. Association between reflection and suicidal ideations among secondary school students, and the association between academic hardiness and suicidal ideation among secondary school students are also discussed.

5.1.1 Socio-demographic characteristics of participants

The study participants' age ranged from 10 to 19 years, with a mean age of 17±3.15 years age. A study conducted to determine the association between rumination and academic hardiness as predictors of suicidal ideation among Nigerian students obtained a mean age of 15.14 (SD=1.77) with most of study respondents within the age group 10-19years (Olaseni 2018). This similar age range in the two studies may be due to the fact that the age range of 10-19years is the approved period for adolescents according to World Health Organization (WHO 2011). This finding also in keeping with a study carried out by Adewuya *et al* (2019) in Nigeria, which showed the mean age years of respondent associated with suicidal behaviour was 15.61(SD 1.49) with the range 11-29years in the study were 4757(50.4%) female. A study carried out in the United also showed almost similar findings as the mean age of the respondents was 16.96(SD=1.26) with the range of 15-28 years (Holdaway *et al* 2018).

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The observation that just one third of the respondents in this study were from a polygamous home reveals lower rates than that found in other studies in sub-Saharan Africa. In Nigeria, a study of adolescent associated with suicidal behaviour has an average of 4 siblings from same mother with (19.2%) from polygamous family (Adewuya *et al* 2019).

Two hundred and twenty six (64.4%) of the respondents were from monogamous marriages. This is contrary with a study carried out by Mark in Ivory Coast (2017), which showed that 38.1% of the respondents were from monogamous marriages. This could be explained by religious affiliation of the Buea community. Buea is a predominant Christian community with most of the population being Catholics and polygamous marriages is not permitted in Christianity and the Catholic church in particular (CCUC, 2016), whereas the population of Sierra Leone is predominantly Muslim which accepts polygamous marriages (Luke Ronita, 2017).

Just 5.8% of parents of respondents had no formal education in contrary with study carried out by Darius *et al* in Tanzania 2016 where 12.6% of respondent parents had no formal education. Tenibiaje (2015) in study carried out in Ekiti state, obtained a higher proportion of respondents parents with no formal education (18.0%) (Tenibiaje, 2015). This difference can be explained by the respondent's parent literacy rate in Nigeria of 76.1% which is much higher than that in Tanzania (66.5%) (Tanzania Institute of Statistics, 2018,. Nigerian National Institute for Statistics, 2015).

Almost all the respondents parents was reported that they do not earn money from work though about (60%) of the respondent parent are artisans. In a study of rumination and suicide risk, ideation and attempts in the United State, Holdaway found that 62% of the participant's parents are artisans (Holdaway 2018). This is similar to the finding of Camlon *et al* (2016) where 17.5% of respondents reported that their parents do not earn money from

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work (Camlon *et al* 2016). Statistics shows that the rate of unemployment in the country is 50%, while the national poverty rate is over 70% of the population (Tijani Yakubu 2020). In addition, the study done in Edo State Nigeria to examine the risk factors that could influence suicide behaviour revealed that (55%) of the respondent parent were artisans (Okoedion *et al* 2019).

In this study, at least (13.2%) of the respondents have difficulties with teachers. Mayegun *et al* (2013) in a study carried out Lagos state Nigeria obtained a higher proportion of respondent having difficulties with teachers (15.2%) (Mayegun., 2013). This difficulty may include beating, poor explanation and teaching method, poor understand of English and Mathematics, cursing, and other personal reason (Mayegun 2013).

5.1.2 Suicidal behaviour

In this study suicidal tendencies was reported by more than one-tenth (14.8%). This is lower than 22.2% reported by Santos Silva *et al* in a systematic review involving all socio political zones inclusive in Brazil. This is also lower than previously reported prevalence of 6.6% in Australia (Schweitzer *et al* 1995), 13.2% in Mexico (Medle et al 2005) and 15% in Canada. The estimates however falls within rates of suicidal thoughts ranging from (7.2-34.5%) reported among African adolescents (Lamis et al 2012; Er Carr *et al* 2013; Looman *et al* 2014). The higher the suicide recorded in this study could be attributed to the economy instability presently going on in the country. More than one- fifth (21.4%) of the respondents have lost or started to loose morale for work which could attributed to beating, cursing, begging for money, result related, school fee related, health related and personal reasons. Higher suicide behaviour in this study could be settings where the studies were carried out. Suicidal behaviour is very contextual and it varies across cultures and settings (Adewuya *et al*., 2005). In addition, one other factor that could account for the high suicide behaviour in

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this study could be the screening instruments used and the cut-off values used to classify adolescents as suicidal. The Beck Depression Scale is a widely used tool for screening of depression and suicide and the cut-offs varies from 7 to 13. In this study the cut-off of 7, a lower cut-off compared to that used in the other studies were used thereby reaching adolescents with suicide for counselling and psychotherapy.

On the other hand, suicidal behaviour recorded in this study is lower than was previously reported in studies carried out in neighbouring countries in Nigeria. In one study, Nyundo *et al* reported that suicidal ideation/behaviour is common, with the greatest burden Ethiopia (6.1%) (Nyundo *et al* 2020). This is a low report due to the fact that the study by Nyundo *et al* comprises eight countries and so adolescents who were suicidal and who could not visit a counsellor. This could also be due to the difference in instruments used. Nyundo *et al* used the Beck Suicide Scale and Beck Depression Scale was used for screening in order not to miss any adolescent who were suicidal and depressed. This could have led to generating more accurate diagnosis leading to the higher suicidal rates recorded in this study.

The thought of suicidal behaviour in this study was (7.5%). These findings are consistent with a study carried out by Angela *et al* in Ibadan Nigeria, showed that most respondents developed depressive symptoms which can lead to suicidal ideation. (Angela *et al* 2020). Several theories have been postulated as regards why suicide is the third leading cause of death among adolescents (Anderson & Smith, 2005). Over 20% reported suicidal ideation and approximately 12% reported that they had attempted suicide; adolescents living in urban areas had higher rates of suicidal behaviour due to multiple psychosocial factors such as sexual abuse, physical attack and involvement in physical fights (Omigbodun *et al* 2008). In addition, other low-income countries, socioeconomic status was associated with depression in

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adolescents. Other studies showed that living with the single parents is a risk of suicide (Abbas 2020). Although this was a finding in high-income countries.

5.1.3 Correlates of Suicidal Behaviour

In this study, (5.9%) adolescents were four times more likely to have the thought about committing suicidal less than fourteen years compared to 7.8% of respondents who aged between 15-19 years. The results shows that severity depression and thoughts of suicide positively and significantly correlates with each other. It means that by increasing this factor the suicidal thoughts also increases which is in line with the results of the previous researches (Gould, et al., Wagner, 1997; Pinquart, 2009). Also (7.1%) of the respondents feel sad which one of the major factors of depression is. The results of this study suggest that anxiety, daily stress, and mental health have positive and significant correlation with the thought of suicide which corresponds to the result of previous researches carried out in the sub-Saharan Africa and developed countries (Levine, 2008; Waldvogel, et al., 2008; Philips et al., 2002).

In this study, we found that male were more likely to have suicidal ideation and attempted suicide than females. Findings from other studies regarding gender differences in suicidal ideation are not consistent Pandey et al. On the other side, studies conducted in Lebanon, Tanzania, and Thailand have shown that there's no statistical difference of suicidal ideation between male and females in society (Pandey et al 2018). Studies conducted in Canada, Uganda have shown higher rate of suicidal ideation among boys while other studies in Malaysia, China, and Guyana have shown higher rates among girls (Pandey et al 2018; Sandler 2005). This is contrary with the Dendup *et al* data in Bhutan, other studies also supports the results in an earlier study from Bhutan. Females may be more likely to feel sad, helpless, and hopeless, and such mental conditions are associated with suicidal thoughts and behaviour (Dendup *et al* 2020). Furthermore, in some of the above studies the suicidal

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ideation might have been underreported by males thereby showing lower suicide rate. In Africa, it was believed that suicidal actions are considered rare, but recent studies suggest that it now represents a significant public health concern. Studies carried out among adolescents from different countries of low and middle revenues recorded: 17.8% in China, 17.1% in the Philippines, in Lebanon 16%, and in the rate in some African countries are 19.6% in Uganda, 23.1% in Botswana, 27.9% in Kenya, and 31.9% in Zambia, respectively. Studies among students who attend high school in Thailand showed 4.0% suicidal thoughts and 6.1% attempted suicide among students in Bangkok. Also, it was found in a study among students in high schools in Chiang Mai, that boys (5.7%) and girls (7.4%) attempted suicide in the past 12 months (Lotrakul *et al* 2003). Social and cultural context specific to a country concerning the status of girls and women in society may help elucidate the gender differences in suicidal thoughts and behaviour. Although the role of women in society and development is increasingly being recognized, traditionally Bhutan was and is still a patriarchal society. Owing to male dominance, the issues women and girls are facing might have received less attention that in turn, could adversely impact their mental health. The finding that those who were single had higher odds of suicidal ideation is in agreement with data in the literature (Nock 2008; Borges *et al* 2017). Divorced or separated Bhutanese also had an increased risk of having mental conditions (Sithey *et al* 2010).

There was no significant association between students living in polygamous settings and suicidal ideation. Tucker *et al* obtained a similar result in the Midwestern school located in the United States (Tucker et al 2017). The results are however not similar to other studies carried out in sub-Saharan Africa. Regan *et al* in Ibadan found out that more than half (55.2%) of participants in their study who were living in a polygamous homes (Regan et al 2015). Other studies were more likely to report contemplating suicide when they lacked support and encouragement to share their feelings and thoughts especially during stressful

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events, which could reduce emotional or mental disturbance (Wagner 2018). Those living alone do not have the opportunity to share their feelings and social support is poor which may be stressful leading to suicide attempts (Wagner 2018).

In this study, we categorized religion into Islam and Christianity and there was no statistically significant difference in the rate of suicidal ideation between the two groups. This is similar to a study carried out by Asante *et al* in a neighbouring district in Ghana which showed that there were no significant associations between students who were Christians or Muslim and suicidal ideation (Asante *et al* 2017).this is however contrary to a study carried out by Woldeyhannes *et al* (2018) in Ethiopia which showed that students in Islamic schools were 3 times more likely to have suicidal thoughts (Woldeyhannes *et al* 2018). Recent studies by Nyundo *et al* in sub-Saharan Africa also showed significant associations between students in Islamic schools and suicide. (Nyundo *et al* 2020).

The level of family support in this study was a prominent risk factor for suicide ideation at this developmental stage of adolescents, irrespective of the presence of high depressive symptoms.

5.1.4 Association between Reflection and Suicidal ideation

There was a positive association between reflection response and suicidal ideation although this fail to attain statistical significance in this study. Positive link has been found between reflection and suicidal thoughts by some researchers (Hoeksema et al 2008; Pengpid (2014). However, some other studies noticed that reflection may serve as a protective factor against killing oneself (Anderson et al 2002). Miranda et al in a longitudinal study carried out in California showed that there insignificant relationship between reflection and suicidal thinking; found out among adolescents that reflective thinking was linked with suicidal thoughts (Miranda, Nolen-Hoeksma 2007). It was also supported by another study made by

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smith et al where they discovered the relationship between reflection and suicidal thoughts in a prospective study on teenagers. Smith *et al* also found that since there is relationship between reflection and suicide, risk of fantasy behaviours (escape from present circumstances) e.g., self-regulatory deficits in the teenagers were predicted by rumination (Smith *et al* 2006). In their meta-analysis of the literature on self-focused attention, Mor and Winquist (2002) confirmed that rumination is consistently related to depression. This means that suicidal thoughts might be present in adolescents who described themselves as having sadness or being worried.

5.1.5 Association between academic hardiness and suicidal ideation

There was a negative significant association between academic hardiness and suicidal ideation as those suicidal were 0.88 times less likely to have a higher academic hardiness (P=0.001; CI=0.81-0.95) which respondent were likely to have a higher academic hardiness. This is contrary to what had been previously reported as an association between academic hardiness and suicidal ideation had been recorded mainly in school based studies while population based studies had shown no association. Olaseni (2018) in a longitudinal study carried out in Nigeria showed that, there was a negative significant association between academic hardiness and suicidal ideation, and found out that academic hardiness significantly predict suicide. Abdollahi et al did a research among students and found out that there was lower scores on hardiness dimensions combined with higher perceived stress significantly predicted suicidal ideation (Abdollai et al 2014). Benishek and Lopez (2001) submitted that adolescents who achieve academic excellence and emotional self-regulation (control) make personal expenses to shine in their academics (commitment) and purposely seek out difficult course work because of the long-term personal growth (challenge) and tend to do better when they use a learning-based orientation. This study was contrary to Ajidahun et al finding who

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posited that adolescents who are able to face and cope with the challenges caused by academic stress do not have suicidal ideation (Ajidahun et al 2003). This means that they are able to cope and control the challenges ensued from academics. According to him, issues (negative) relating to attending schools could also expose adolescents to depressive factors. Depression is more common in the adolescent years than in elementary school and it may lead many of them to think about suicide. This study was also supported by a research involving 400 high school students made by Smith and Sinclair (2000). It was discovered that more than half of their respondents had unusual levels of anxiety, depression and stress. Amen and Reglin (1992) also found that high school students usually worry when they have problems with their academic performance, in their interactions with family members or friends. These issues might spring up different thoughts including suicidal thoughts in them. This research also supported the present study. Also supporting the hypothesis is the result of Plotnik and Kouyoumdjian (2008) research that failure in school work, sometimes triggers depression and can lead to suicidal ideation. In another research carried out by Abdollahi et al (2014) among students on decreasing stress and suicidal thoughts through hardiness, their findings demonstrated that thinking about suicide might be caused by decreased hardiness and increased perception of stress. It was, however, found by this current research that both reflection and suicidal ideation are associated among adolescents.

5.1.6 Study limitations

1) One of the limitations of our study was that results were based on questionnaires and this might not ensure complete honest from the adolescents. Future research should gather more information on suicidal ideation.

2) The present study is relatively limited due to the sample size. Future research in this area should increase the number of participants (Adolescents) which may aid in finding more results on reflection and academic hardiness and suicidal ideation.

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3) In addition, the largest portion of the adolescents was Yoruba; this may limit the extrapolation of the findings to adolescents from other tribes in Nigeria. It is suggested that researches should utilize a more diverse sample.

5.2 Conclusion

This study was the first attempt to assess the reflection, academic hardiness and suicidal ideation among adolescents in Nigeria. Suicidal ideations and attempts cut across all ages but occur mostly in adolescents (Ajidahun., 2012). Suicidal ideations need to be taken seriously because Nigerian youths are not impervious to suicidal ideation. Any problem or challenge shared is half-solved. Adolescents should not feel overpowered by pain and life issues to the extent that killing oneself is the only solution. We should be aware of all the risk factors either from home or school that can make any adolescents develop suicidal ideation. This study also found a strong association between reflection, academic hardiness and suicidal ideation among adolescents. This emphasises the need for providing adolescents with psychosocial support.

5.3 Recommendations

5.3.1 Recommendation to the Ministry of Education in Nigeria

1) Parents, teachers, guardians and counselors should be aware of the threatening markers of suicidal behaviors in youngsters (adolescents). Especially after traumatic life happenings whether in the family or at school.

2) Special attention should be paid to teenagers and children who frequently come to see counsellors for consultation due to their academics or other related issues. They should be closely monitored and screened for depression.

3) Parents should deal with their adolescents with supervision. Objects that might be used to harm one-self should be removed. Guns, weapons or medications should be

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kept away from adolescents. Parents and teachers should learn to validate their adolescents' feelings.

4) Adopting effective coping strategies to tackle stresses among adolescent may help in reducing ruminative thoughts that lead to suicidal ideation

5.3.2 Recommendations to the Ministry of Health in Nigeria

1) Other studies should be carried out in other regions of the country and investigate whether the results in this research emerge as a consistent finding or as an artefact of the present sample

2) Association between academic hardiness and suicidal ideation is high, hence the ministry of health should design a strategies advanced toward the prevention of suicide and academic hardiness.

Wordcount:3,345

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INFORMED CONSENT

REFLECTION AND ACADEMIC HARDINESS AS PREDICATORS OF SUICIDAL IDEATION AMONG NIGERIAN ADOLESCENTS

I am a student of the Centre for Child and Adolescent mental health, University of Ibadan. The purpose of this study is to examine how reflection and academic hardiness predict suicidal ideation among Nigerian adolescents.

In the course of this study, you was asked some personal and family related questions as well as symptoms that may suggest emotional problems; you will also be asked to complete some series of questionnaire.

Your participation in this research was at no cost, but if we discover any sign of emotional problem, you wasnefit from psychotherapy session and appropriate referral where and which necessary.

All questions to be used was coded in such a way as to provide confidentiality of information gotten from participant. There was no name writing on any of the research instruments.

Note that your participation in this research is voluntary and you have the right to withdraw at any time if you choose to, it will not affect your interaction with your teachers, colleagues or interviews in any way. However, I will appreciate your assistance in responding and taking part in the study.

Consent: Now that the study has been well explained to me and I understand fully all that is written therein and the content of the process, I was willing to participate in the study.

_____   _____

Participant signature Date interviewed

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Questionnaire

Serial Number: __ __ __ __   Today's Date: __ __/__ __/__ __

SCHOOL HEALTH QUESTIONNAIRE IN ENGLISH & YORUBA

Please write the answers to the questions or draw a circle where it applies to you. This is not an examination it is only to find out about you and your health.

Jọwọkọidahunsiawọnibeereti o jẹmọ ọ, tabiki o faigisiabẹeyi to o jẹmọ ọ. Eleyiikiişeidanwo; a kanfẹmọnipaṛẹatiilerarẹni.

SECTION I

Personal Information

1. Name of School (1. Orukọile-iwe):

2. Class (2. Kilaasi):

3. Where do you live? (Address of Present Abode):

3. Nibonio ngbe? (Ibugbe):

4. What is your date of birth? Date of Birth: _____ _____ _____

4. Kiniọjọibirẹ?   Ọjọibi: Day   Month   Year

ọjọoşuọdun

5. How old are you?

 5. Ọmọọdunmeloni ọ? ____

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6. Are you a boy or a girl?   (a) boy   (b) girl

6. Şeọkunrintabiobinrin?   (a) Ọkunrin   (b) Obinrin

7. Do you practise any religion? No   Yes

7. Njẹ ẹ manse ẹsinkankan?   BẹẹkọBẹẹni

8. Please write down the exact place you attend for worship

8. Kọibiti o timaanjọsin

_____

(a) Islam   (b) Orthodox Christian   (c) Pentecostal Christian   (d)   Traditional
religion   (e) Other

9. How much does the teaching of your religion guide your behaviour?

9. Bawoniigbagbọrẹşentọihuwasirẹ?

(a) Very much   (b) much   (c) Just a little   (d) Not at all

(a) O ntọ ọ gan an (b) O ntọ ọ   (c) O ntọ ọ diẹ (d) Kotọ ọ rara

10. How much does the teaching of your religion guide your family life?

10. Bawoniẹsinnaa se sepataki to niẹbi ẹ?

(a) Very much   (b) much   (c) Just a little   (d) Not at all

(a) O şepatakigan-an (b) O şepataki   (c) O şepatakidiẹ   (d) Koşepataki

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Family Information

11. Family Type:

11. Iruẹbi:

 (a) Monogamous   (b) Polygamous

 (a) Oniyawokan   (b) Oniyawomejitabijubẹẹlọ

12. Number of Mother's Children:

12. ỌmọmeloniIyarẹni?:

13. Number of Father's Children:

13. Ọmọmeloni Baba rẹni?:

14. What is your position among your father's children?

14. Ipowo lo waninuawonọmọ baba rẹ?

15. What is your position among your mother's children?

15. Ipowo lo waninuawọnọmọiyarẹ?

16. Marital Status of Parents:

16. Ibagbepọawọn obi rẹ:

 (a) Married (b)Separated/Divorced (c) Father is dead (d) Mother is dead (e) Mother & Father
are dead

 (a) Şewọngbepọ?   (b)   Şewọntikọrawọnsilẹ? (c) Baba tiku   (d) Iyatiku (e) Iyaati Baba
tiku

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17. How many husbands has your mother had?

17. ỌkọmeloniIyarẹtiniri?

18. Who do you live with presently?

18. Tanio ngbepẹlulọwọlọwọ?

 (a) Parents   (b) Mother   (c) Father   (d) Grandparents   (e) Grandmother

 (a) Awọn obi (b) Iyanikan   (c) Baba nikan (d) Iyaati Baba Agba (e) IyaAgbanikan

 (f) Grandfather   (g) Other [please specify] _____

 (f) Baba Agbanikan (g) AwọnIyoku [Jọwọsọnipato] _____

19. Who brought you up from your childhood?

19. Talotọ ẹ dagbalatikekere?

(a) Parents   (b) Mother   (c) Father   (d) Grandparents   (e) Grandmother

 (a) Awọn obi (b) Iyanikan   (c) Baba nikan (d) Iyaati Baba Agba (e) IyaAgbanikan

 (f) Grandfather   (g) other [please specify] _____

 (f) Baba Agbanikan(g) AwọnIyoku [Jọwọsọnipato] _____

20. How many different people have you left your parents to live with from your childhood?

20. Awoneniyanọtọọtọmeloni o fi awon obi rẹsilẹlatilọgbepẹluwọn?____

21. If more than one person, list the people, time spent and whether experience was good or
bad?

21. Ti o bajuẹnikanlọ, kawọn, akokoti o lo lọdọẹnikọọkanati bi o badaratabikodara**?**

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Person lived with	From which age to which age	Experience (good or bad)
Ẹniti o bagbe	Ọmọọdunmeloni ọ nigbanaa	Iririrẹnibẹ (O daratabikodara)

_____	_____	_____
_____	_____	_____
_____	_____	_____

22. Do you do any kind of work to earn money before or after school? Yes   No

22. Njẹ o maanşişẹlatiriowolẹhintabisaajuki o to lọsiileiwe?   (Bẹẹnitabibẹẹkọ)

23. If yes, please describe what you do _____

23.   Ti   o   ba   je   bẹẹni,   şealaayeohunti   o   şe
_____

24. Level of Father's Education

24. Iwemeloni baba rẹka?

 (a) No Formal Education   (b) Koranic School   (c) Primary School   (d)   Secondary School

(a) Kokawerara   (b) Ile-keu   (c) Ile-IweAlakọbẹrẹ   (d)   Ile iwegirama

(e) Post-Secondary (Non-University) (f) University Degree and above (e) I do not know

(e) Ile-iweagba (Yatọ fun yunifasiti) (f) Yunifasitiatijubẹẹlọ   (e) Nkomo

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25. Occupation of Father: [Write the exact occupation] _____/ I do not know

25. Işẹwoni Baba rẹ n şe: [Kọişẹtiwọnnşepatolẹkunrẹrẹ] _____/Nkomo

26. Level of Mother's Education

(a) No Formal Education   (b) Koranic School   (c) Primary School   (d)   Secondary School

(a) Kokawerara   (b) Ile-keu   (c) Ile-IweAlakobẹrẹ   (d)   Ile iwegirama

(e) Post Secondary (Non-University) (f) University Degree and above (e) I do not know

(e) Ile-iweagba (Yatọ fun yunifasiti) (f) Yunifasitiatijubẹẹlọ   (e) Nkomo

27. Occupation of Mother: [Write in the exact occupation] _____/   I do not know

27. Isẹwoniiyarẹnşe: [Kọişẹtiwọnnşepatolẹkunrẹrẹ] _____

28. Do you like your family? Yes   No

28. Şe o feranẹbirẹ?   Bẹẹni/Bẹẹkọ

29a. If Yes, Why? _____

29a. Bẹẹni, Şealaye? _____

29b. If No, Why?   _____

29b. Bẹẹkọ, Şealaye? _____

School-Related Questions

30. Do you like your school? Yes/ No

30. Ṣe o fẹranile-iwerẹ? Bẹẹni / Bẹẹkọ

31. How many children are there in your class? __

31. Akẹkọọmeloni o wanikilaasirẹ?_ _____

32. Do you do well academically? Yes   No

32. Njẹ o nṣedaadaninuekọrẹ? Bẹẹni/ Bẹẹkọ

33a. If Yes, explain_____

33a. Bẹẹni, Ṣealaye_____

33b. If No, explain_____

33b.Bẹẹkọ,Ṣe laye_____

34. Are you having difficulties with your teachers? Yes   No

34. Njẹ o niiṣorokankanpẹluawọnolukọrẹ? BẹẹniBẹẹkọ

35.   If   yes,   what   sort   of   difficulties?
_____

35.   Ti   o   bajẹbẹẹni,   iruiṣorowoni?
_____

36. Do you have guidance counsellors in your school? Yes   No

36. Njẹ ẹ niawonOludamọranAtọnisọnaniile-Ẹkọrẹ? BẹẹniBẹẹkọ

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37. Have you ever gone to see them?   Yes   No

37. Njẹ o ti lo sọdọwọnri? BẹẹniBẹẹkọ

38.   If   yes,   what   did   you   go   to   see   them   for?
_____

38.   Ti   o   bajẹbẹẹni,   kini   o   loriwọn
fun?_____

39. If you have a problem at school would you go to the guidance counsellor for help?   Yes
No

39. Ti o baniidaamuni Ile-Ẹkọ, njẹiwọ o loriOludamọranAtọnisọna? BẹẹniBẹẹkọ

40a. If yes, why would you go?

40a. Bẹẹni, Ṣealaye_____

40b. If no, why not?

40b.Bẹẹkọ,Ṣealaye_____

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Beck's Depression Inventory

Please carefully read each group of statements below. Circle the one statement in each group that best describes how you have been feeling for the past week, including today. Be sure to read all of the statements in each group before making a choice.

1.

    0 I do not feel sad.

    1 I feel sad

    2 I am sad all the time and I can't snap out of it.

    3 I am so sad and unhappy that I can't stand it.

2.

    0 I am not particularly discouraged about the future.

    1 I feel discouraged about the future.

    2 I feel I have nothing to look forward to.

    3 I feel the future is hopeless and that things cannot improve.

3.

    0 I do not feel like a failure.

    1 I feel I have failed more than the average person.

    2 As I look back on my life, all I can see is a lot of failures.

    3 I feel I am a complete failure as a person.

4.

    0 I get as much satisfaction out of things as I used to.

    1 I don't enjoy things the way I used to.

    2 I don't get real satisfaction out of anything anymore.

    3 I am dissatisfied or bored with everything.

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5.

   0 I don't feel particularly guilty

   1 I feel guilty a good part of the time.

   2 I feel quite guilty most of the time.

   3 I feel guilty all of the time.

6.

   0 I don't feel I am being punished.

   1 I feel I may be punished.

   2 I expect to be punished.

   3 I feel I am being punished.

7.

   0 I don't feel disappointed in myself.

   1 I am disappointed in myself.

   2 I am disgusted with myself.

   3 I hate myself.

8.

   0 I don't feel I am any worse than anybody else.

   1 I am critical of myself for my weaknesses or mistakes.

   2 I blame myself all the time for my faults.

   3 I blame myself for everything bad that happens.

9.

   0 I don't have any thoughts of killing myself.

   1 I have thoughts of killing myself, but I would not carry them out.

   2 I would like to kill myself.

   3 I would kill myself if I had the chance.

10.

0 I don't cry any more than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can't cry even though I want to.

11.

0 I am no more irritated by things than I ever was.

1 I am slightly more irritated now than usual.

2 I am quite annoyed or irritated a good deal of the time.

3 I feel irritated all the time.

12.

0 I have not lost interest in other people.

1 I am less interested in other people than I used to be.

2 I have lost most of my interest in other people.

3 I have lost all of my interest in other people.

13.

0 I make decisions about as well as I ever could.

1 I put off making decisions more than I used to.

2 I have greater difficulty in making decisions more than I used to.

3 I can't make decisions at all anymore.

14.

0 I don't feel that I look any worse than I used to.

1 I am worried that I am looking old or unattractive.

2 I feel there are permanent changes in my appearance that make me look unattractive

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3 I believe that I look ugly.

15.

 0 I can work about as well as before.

1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.

3 I can't do any work at all.

16.

0 I can sleep as well as usual.

1 I don't sleep as well as I used to.

2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

3 I wake up several hours earlier than I used to and cannot get back to sleep.

17.

 0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18.

 0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all anymore.

19.

0 I haven't lost much weight, if any, lately.

1 I have lost more than five pounds.

 2 I have lost more than ten pounds.

3 I have lost more than fifteen pounds.

20.

 0 I am no more worried about my health than usual.

1 I am worried about physical problems like aches, pains, upset stomach, or constipation.

2 I am very worried about physical problems and it's hard to think of much else.

3 I am so worried about my physical problems that I cannot think of anything else.

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 0 I have not noticed any recent change in my interest in sex.

1 I am less interested in sex than I used to be.

2 I have almost no interest in sex.

3 I have lost interest in sex completely.

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APPENDICE FOUR

RUMINATIVE RESPONSIVE SCALE

Please read each of the items below and indicate tick (√) whether you almost never, sometimes, often, or almost always think or do each one when you feel down, sad, or depressed. Please indicate what you generally do, not what you think you should do.

1 almost never   2 sometimes   3 often 4 almost always

S/N		Almost Never	Sometimes	Often	Almost Always
1.	Do you think about how hard it is to concentrate?				
2.	Do you think about how passive and unmotivated you feel?				
3.	Do you think "Why can't I get going?"				
4.	Do you think "Why can't I get going?"				
5.	Do you go away by yourself and think about why you feel this way?				
6.	Do you write down what you are thinking about and analyze it?				
7.	Do you think about a recent academic				

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	performance, wishing it had gone better?				
8.	Do you think "Iwon't be able to concentrate if I keep feeling this way?"				
9.	Do you think "You have problems other people don't have?"				
10.	Do you think "Why can't I handle things better?"				
11.	Do you think about how sad you feel?				
12.	Do you think about all your shortcomings, failings, faults, mistakes?				
13.	Do you think about how you don't feel up to doing anything?				
14.	Do you go someplace alone to think about your feelings?				
15.	Do you think about how angry you are with yourself?				

APPENDICE FIVE

Revised Academic Hardiness

S/N	Items	Almost Never	Sometimes	Often	Almost Always
1.	I take my work as a student seriously				
2.	I work hard for grades				
3.	Regardless of the class, I do my best				
4.	Make personal sacrifices to get good grades				
5.	Grades aren't important to me				
6.	Doing well is as important to me as to my parents				
7.	Avoid classes that require extra work				
8.	If I do poorly, I doubt my ability as a student				
9.	Difficult to bounce back from academic disappointment				
10.	Become less motivated to study when I don't get the grades I want right away				

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