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# Incidents of Depression among Female Adolescent Students in Mixed and Non-Mixed Boarding Secondary Schools in Anambra State: A Comparative Study

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#### **Abstract**

The devastating impacts of different levels of depression on adolescents expose them to life-altering consequences that increase the risk for future depressive episodes. Depression among adolescents is often left unmanaged because it is under-reported and unrecognized for it is usually perceived as normal mood swings typical of the adolescence stage. This study investigated the prevalence of different levels of depression among female adolescent students. Participants were 220 senior secondary school female students that were selected using total population sampling technique from a mixed (110 students) and non-mixed (110 students) boarding secondary schools, in Anambra State, Nigeria. Their age ranged from 15 years to 18 years, with a mean age of 15.05 and a standard deviation of 1.07. Beck Depression Inventory (BDI) was used for data collection, and the four hypotheses postulated were tested using descriptive statistics. The result revealed that female adolescent students in non-mixed school had higher prevalence rate of minimal depression (17.7%), while those in mixed school had higher prevalence rates of mild (11.8%), moderate (16.4%), and severe (16.85) depression. The result did show that female adolescent students in mixed school had lower prevalence rate of minimal depression (5.0%,), while those in non-mixed school had lower prevalence rate of mild (9.5%), moderate (13.6%), and severe (9.1%) depression. Accordingly, we recommend that female adolescent students in boarding schools should be provided with psychological services that will assist them in managing experiences that may lead to depression.

**Keywords:** Depression, Adolescence, Boarding Secondary School



## Introduction

Depression is the most common psychological disorder that interrupts an individual's thought processes, emotional response, and daily life activities (Sharma & Pandey, 2017). Many and varied factors, including biological, physical disease, gender, and psychosocial and socioeconomic factors, play different role in its development and sustenance. The report of World Health Organization (WHO) noted that the severity of depression can be classified as mild, moderate or severe (WHO, 2018). For example, a study carried out in Saudi Arabia showed that among 490 secondary school students, 33.9% of them were found to have mild depression, 22.4% have moderate depression, and 11% have severe depression (Asal & Abdel-Fattah, 2007). Saluja et al., (2004) noted that studies estimated the prevalence of depression among older adolescents to be as high as 8.3 percent, with much less known about prevalence of, and risk factors for, depression among younger adolescents of age 11-15 years. Similarly, Oderinde et al., (2018) stated that different prevalence rates of depression among adolescents in Nigeria have been reported and that one-month prevalence rates of depression among adolescents in developed countries range between 3% - 20%, with lifetime prevalence rates estimated to range from 15% -35% by late adolescence.

Often, depressive symptoms among adolescents are attributed to the normal stress of adolescence; misdiagnosed as conduct, attentional, or substance use disorders; or seen as a stage the teenager is going through (Saluja et al., 2004). Seligman (1975) argued in the theory of learned helplessness that people become depressed because they tend to decide or make attributions that stressors in their lives are beyond their control. Taking such position makes them vulnerable to adopt helplessness perspective that became generated due to the negativity in their thinking process. Such a thinking process shuts them off from attempting to use any effective coping style since they believed that the supposed stressors



are beyond their capacity to handle. It was on such a premise that Barlow (2002) noted that this could lead to a stage when the individual will extend this perspective of being incapacitated to handle the supposed stressors to a wide variety of other issues in their life.

Beck's (1967) cognitive theory of depression equally shared the view that the primary cause of depression is negative thoughts generated by dysfunctional beliefs. Accordingly, the amount of and severity of someone's negative thoughts translates to the severity of their depressive symptoms. Such negative thoughts, Beck observed, lead to schemas of automatic, spontaneous and seemingly uncontrollable negative thoughts about self, the world or environment, and the future. In a situation like this, they engage in faulty information processing which makes them pay selective attention to aspects of their environment that confirm their negative thoughts and do so even when evidence to the contrary is before them. Besides, Saluja et al. (2004) asserted that depression among adolescence is often under-recognized by families and physicians, because it may be viewed as normal mood swings typical of the adolescent stage. Observation revealed that some adolescents who are depressed are not aware that depression is the basis for the changes in their emotions, inability to interact with others, and poor school performance. These changes can have serious, life-altering consequences that increase the risk for future depressive episodes, especially if the depression is not recognized or treated (Pachaiyappan & Siranjeevi, 2018). Pachaiyappan and Siranjeevi (2018) found that most of the older adolescents in higher secondary schools have moderate level of depression.

Khalid et al., (2016) found that among other factors, depression influenced academic performance and shows the largest effect on the mental health problem that influenced the academic performance of adolescent students, compared to other factors. To this effect, there is need to checkmate the presence of depression among adolescent students and attend to such to reduce vulnerability of presenting with major depressive disorder (MDD) later in life during adulthood.



Khasakhala et al (2012) noted that depressive episodes in childhood and adolescence are recurrent and may persist into adulthood if the contributing factors remain unchanged. Early depressive vulnerability seems to be one of the predictive factors for depression in adulthood. This makes it important to determine the prevalence rate of levels of depression among adolescents in secondary schools, considering that depression at this age could either be under reported or totally neglected. As such, the reality that these students cannot offer themselves the required expert assistance fostered the campaign that prophylactic measures be adopted to professionally assist them. However, Samargia et al. (2006) found that only 30% of adolescents who have depression receive the needed mental health treatment. Untreated depression during adolescence carries severe and devastating short- and long-term consequences (Pinto-Foltz et al., 2010).

Studies linked untreated depression during adolescence with chronic health problems of infectious diseases, respiratory problems, and difficulty maintaining a healthy weight (Aarons et al., 2008; Schinke et al., 2008). Adolescents with untreated depression have impaired functioning in all domains, lower academic achievement, more unintended pregnancies, increased incidence of suicide, and are more likely, than adolescents without depression, to use substances like tobacco, alcohol, and illegal drugs (Kuehn, 2005; McCarthy, et al., 2008). Depression causes disability and constitutes a risk factor for suicidal behaviours in adolescents (Eskin et al., 2007; Gröholt et al., 2000; Liu & Tein, 2005; Sourander et al., 2001). When depression is untreated in adolescence, the long-term consequences involve high health care utilization, poor overall health, and increased work impairment related to low physical health in young adulthood (Keenan-Miller et al., 2007).

Depression has different trajectories and poses huge cost to the needs of these students. Looking at whether attending a single-sex school or mixed-sex school could translate to having higher prevalence of levels of depression, therefore, becomes a matter of interest. Observation was made by Ekaette et al. (2019) that single-sex schools are more preferred



to mixed-sex schools. This becomes suggestible that either way the population of a school is constituted can contribute to the overall outcome of the students, including the quality of their mental health.

Ekaette et al. (2019), Schmuck (2005), and Smyth (2010) maintained that girls-only schools are unnatural social settings which isolate girls from boys. Bailey et al. (2007) found that girls trend toward more severe depression on negative mood scales, anhedonia, and negative self-esteem scales, while boys trend toward more interpersonal problems. Adolescent girls, according to Breslau et al. (1998), can experience higher rates of depression compared to boys due to differences in biological, psychological, family upbringing and socio-cultural factors. Afifi (2006) found that the rate of having depressive symptoms in girls was almost double than in boys. Also, among girls, depression becomes markedly apparent between the ages of 13–15 and peaks at the ages 17–18 (Global Commission on Women's Health, 1997; Fleming & Offord, 1990). Consequently, not only could it be suspected that experiences that play out in single-sex school or mixed-sex school could predispose to depression, Mburu (2013) did report, also, that the type of school attended affected students' academic performance.

Moreover, although there are various reports on the prevalence of depression among adolescents, it majorly depends on which symptoms and degree of severity was used for the assessment. While research on the course and correlates of depression have identified important similarities across development, they have also highlighted age-related variations. As a result, researchers continue to evaluate the extent to which childhood, adolescent and adult depression onset reflects the same underlying condition (Kaufman et al., 2001).

#### **Statement of the Problem**



Presence of depression among any given population calls for apt intervention to ameliorate the effect and improve the quality of life of such persons. Depression have been found present among adolescents in Nigeria (Oderinde et al., 2018), and mild, moderate, and severe levels of depression also found present among adolescents in secondary schools in Saudi Arabia (Asal & Abdel-Fattah, 2007). Observation and literature have revealed a dearth of local studies comparing the prevalence rate of levels of depression between female adolescent students in mixed and non-mixed secondary schools. With learning being an emotional exercise, female adolescent students appear more vulnerable to myriad of associated impacts of presenting with higher rates of depression (Afifi, 2006; Breslau et al., 1998), levels of which pose different challenges to their academic performance, as well as to other domains of their life, if untreated. Therefore, presenting with minimal, mild, moderate or severe depression, should be a source of worry to parents and school officials managing these students, considering the trajectories that give rise to the depression and the unforeseen effects such will have in the interpersonal relationship between such students and their peers, and that of their family members and teachers. Considerably, no level of depression should be seen as acceptable, especially when the chances that it can predispose to increase in frustration and vulnerability to more severe psychological disturbances, are recognized. As students relate with themselves in their hostels and classrooms, they keep becoming exposed to factors militating against their ability to cope with any level of depression. Therefore, making investigation to find out the prevalence rate of levels of depression among the participants becomes imperative, in line that it is being suspected that how the school population is constituted, with their associated different human activities, like dating, bullying, expression of compassion and empathy, etc., with their attendant effects, may be experienced differently in mixed and non-mixed schools. Hence, the following objective were postulated:

## **Research Objectives**



- To examine if adolescent girls in mixed secondary school would report more incidents of minimal depression compared with their counterparts in non-mixed secondary school.
- **2.** To assess of the incidents of mild depression would be more among adolescent girls in mixed and non-mixed secondary schools.
- **3.** To examine if the incidents of moderate depression would be more for adolescent girls in mixed secondary school and their counterparts in non-mixed secondary school.
- **4.** To find out if Adolescent girls in mixed secondary school would report more severe depression compared to adolescent girls in non-mixed secondary school.

#### Method

# **Participants**

The participants consisted of 220 senior secondary school female adolescent students in a mixed and non-mixed secondary school. Both are boarding schools situated in Oyi Local Government Area of Anambra State, Nigeria. Their age ranged from 15 years to 18 years, with a mean age of 15.05 and a standard deviation of 1.07. Total population sampling technique was used for participants' selection, and 110 (50.0%) students were selected from each of the schools. 104 (47.3%) of the participants were in SS1 class while 116 (52.7%) were in SS II class.

#### Instrument

The Beck depression inventory (BDI-II), developed by Beck (1961) to assess the degree and severity of depressive symptoms, and has been revised twice, with the most recent edition published in 1996, was used for data collection. The instrument has 21 groups of statements used to determine the level of depressed feeling an individual is having. Each of the statements has a response pattern ranging from 0 to 3, with the associated meaning given to each response differing from one statement to another. The level of depression a



participant was classified at is determined by the total number obtained by that participant after the final addition. As such, in line with the BDI manual, a total score within the range of 1–13 was classified as minimal depression, 14–19 was classified as mild depression, 20–28 was classified as moderate depression, and 29–68 was classified as severe depression.

## **Procedure**

An oral approval was given by the school principal of each school when approached by the researchers. Detailed presentation of how the study would be carried out was presented to each principal who thereafter assigned a teacher to assist. Following a good rapport created with the teachers and the students, the instrument, after due explanation of their rights as participants and how to attend to the instrument truthfully, was fully attended to and immediately returned by the participants.

# **Design and Statistic**

This is a survey study that adopted descriptive design. For the analysis of the data collected, descriptive statistic was used to analyse the data of this study.

Result

Table 1 Descriptives for minimal, mild, moderate and severe depression

School	Levels of Depression	Number of Participants	%



Okpala et al.,

	Minimal	11	5.0
Mixed Secondary School	Mild	26	11.8
	Moderate	36	16.4
	Severe	37	16.8
	Minimal	39	17.7
Non-Mixed Secondary School	Mild	21	9.5
•	Moderate	30	13.6
	Severe	20	9.1

The first objective examined if adolescent girls in mixed secondary school would differ in their report of minimal depression compared with their counterparts in non-mixed secondary school. On the table above, students at mixed secondary school obtained a lower rate of minimal depression of 5.0% (11 participants) compared to the higher rate of 17.7% (39 participants) of students of non-mixed secondary school. Therefore, on the basis that students at non-mixed secondary school had 12.7% higher prevalence rate on minimal depression than students at mixed secondary school, hypothesis one was accepted.

The second objectives assesses if mild depression would differ for adolescent girls in mixed than for girls in non-mixed secondary schools. Result on the above table revealed a higher prevalence rate of 11.8% (26 participants) for students of mixed secondary school and lower prevalence rate of 9.5% (21 participants) for students of non-mixed secondary school. Therefore, on the basis that students of mixed secondary school had 2.3% higher prevalence rate on mild depression than students of non-mixed secondary school, hypothesis two was accepted.

The third objective examined if the incidents of moderate depression would be more for adolescent girls in mixed secondary school when compared with their counterparts in non-mixed secondary school. From the above table, the result revealed a higher prevalence rate of 16.4% (36 participants) on moderate depression for students of mixed secondary school compared to a lower prevalence rate of 13.6% (30 participants) for students of non-mixed



secondary school. Therefore, on the basis that students of mixed secondary school had 2.8% higher prevalence rate on moderate depression than students of non-mixed secondary school, hypothesis three was accepted.

The last object was to ascertain if adolescent girls in mixed secondary school would report more severe depression compared to adolescent girls in non-mixed secondary school. The result from the above table showed that students in mixed secondary school obtained a higher prevalence rate of 16.8% (37 participants) on severe depression compared to their counterparts in non-mixed secondary school who obtained a lower prevalence rate of 9.1% (20 participants). Therefore, on the basis that students of mixed secondary school had a 7.7% higher prevalence rate on severe depression than students of non-mixed secondary school, hypothesis four was accepted.

# **Summary of the Findings**

- **1.** Female adolescent students in mixed secondary school reported lower incidents of minimal depression than those of them in non-mixed secondary school.
- **2.** The incidents of mild depression among female adolescent students was higher in mixed secondary school than in non-mixed secondary school.
- **3.** Moderate depression was found to be more among female adolescent students in mixed secondary school than those of them in non-mixed secondary school.
- **4.** The incidents of severe depression were reported more among female adolescent students in mixed secondary school than those of them in non-mixed secondary school.

## **Discussion**

Presenting with depression is associated with different trajectories, with the experiences of female adolescent students in mixed and non-mixed secondary schools, perceived to be



contributory. Accordingly, the classification of depression in line with the severity of occurrence, as reported by WHO (2018), was further confirmed in this study. The findings therein concurred with WHO's report in line that minimal, mild, moderate, and severe levels of depression were found present among the participants. Thus, just as a similar finding was obtained by Asal and Abdel-Fattah (2007), it suggests that secondary school activities and interpersonal experiences of the students, therein, could be predisposing to depressive feelings, especially when unchecked.

Generally, references have been made that adolescent girls experience higher rates of depression (Afifi, 2006; Breslau et al., 1998), this informed the basis of evaluating the prevalence rate of levels of depression among female adolescent students. The result of such prevalence rate on minimal depression revealed that such students in mixed secondary school reported a lower prevalence rate than those in non-mixed secondary school. A finding as this suggests that being in a mixed secondary school could predispose one to more factors that may increase one's likelihood of having a higher level of depression. It could be that interacting with male gender is stressful or debilitating for female students in mixed secondary school than for female students in non-mixed secondary school who have no such opportunity. However, although that Ekaette et al., (2019), Schmuck (2005), and Smyth (2010), by recognizing that girls-only schools are unnatural social settings which isolate girls from boys, suggested that such setting could be filled with unusual experiences which seems capable of predisposing to depressive feelings, the finding made in the current study disagrees.

The study further saw evaluation of the prevalence rate of mild depression among female adolescent students in mixed and non-mixed secondary schools. Such evaluation becomes important considering that different levels of depression could have different emotional and behavioural implications, with the chances that the higher the degree of presentation, the more devastating the impact could be. Finding showed a higher prevalence rate of mild



depression in mixed secondary school than in non-mixed secondary school. Although it could be argued that a thin line separates minimal depression with mild depression, the observation made by Ekaette et al., (2019) that single-sex schools are more preferred to mixed-sex schools, could have the reason behind such view emanating from a finding like this. Hence, mixed secondary school appears to have more factors that can increase vulnerability to higher levels of depression above the mild level.

Moderate level of depression has been found to be the level most of the older adolescents in higher secondary school have. That finding was obtained by Pachaiyappan and Siranjeevi, (2018), thereby creating the need to look at the prevalence rate of this level of depression among the participants. Accordingly, it was obtained that more prevalence rate of moderate depression was present among female adolescent students in mixed secondary school than their counterparts in non-mixed secondary school. With this finding agreeing with Pachaiyappan and Siranjeevi (2018) report, it suggests that female adolescent students in mixed secondary school appear to have greater risk of being exposed to experiences that could lead to nearly devastating level of depression, compared to those of them in non-mixed secondary school.

Moreover, presence of severe depression among girls have been reported by Bailey et al. (2007), who found that girl's trend toward more severe depression on negative mood scales, anhedonia, and negative self-esteem scales. A test at the prevalence rate of severe depression among the study participants showed a higher rate among those in mixed secondary school than those in non-mixed secondary school. Severe level of depression is fraught with myriad of challenges that reflects the devastating impact of the severity. It is a level that appears or could make female students in mixed secondary school more vulnerable to chronic health problems (Aarons et al., 2008; Schinke et al., 2008), impaired functioning in all domains of their life, including lower academic achievement (Kuehn, 2005; McCarthy, et al., 2008), and suicidal behaviours (Eskin et al., 2007; Gröholt et al.,



2000; Liu & Tein, 2005; Sourander et al., 2001), than their counterparts in non-mixed secondary school. Possibly it could be for a reason as this that Ekaette et al., (2019) observed that single-sex schools are more preferred to mixed-sex schools.

# **Implications of the Study**

Impacts of different levels which depression can be classified are adjudged threatening. It could range from causing impaired functioning to vulnerability of having major depressive disorder. For female adolescent students in boarding secondary schools, it could lead to low academic performance and increased likelihood of presenting with major depression as adults. Being with such experience jeopardizes or sabotages the efforts being made to teach them as well as their efforts to learn. Such students will continue to experience unchecked impacts of depression in other domains of their life and will be left at their own peril if not professionally assisted.

#### Recommendations

The findings reported were very revealing. In consideration that teaching and learning are emotion-laden activities, it is recommended that female adolescent students in boarding secondary schools should be provided with the professional assistance of a mental health expert. Such an expert is to take the peculiarities and circumstances of such students into account, with a special attention given to identification of exposures that transpire in mixed and non-mixed secondary schools that predispose to depressive feelings. The aim of this should be to design a treatment plan that will foster the prevention of the impact of such exposure on the students. Doing so, more likely than not, will contribute in improving the academic involvement, participation, and overall school performance of such adolescents.

## **Limitations of the Study**



Notwithstanding the potentials associated with the findings made with respect to the need that female adolescent students should be professionally assisted, caution should be applied on how the findings are to be generalized because of these reasons:

The study employed secondary schools managed by Catholic Church. The findings are advised not be applied to secondary schools managed by Government or private school owners. The participants were all boarders. Therefore, it is encouraged that the findings made should not be applied to day students.

## Conclusion

Studies on depression among adolescents continue to beget the interest of researchers. Although studies have found different levels of depression among adolescents, a dearth of local studies on the prevalence rate of these levels among female adolescent students in mixed and non-mixed boarding secondary schools, was observed after literature search. This then left a gap in knowledge and literature which led to this investigation. In accordance with the findings made, the researchers are concluding that different levels of depression, ranging from minimal to severe, are present among the participants.

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