Depression among adolescents attending secondary schools in South East Nigeria

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Abstract

Background: Depression among adolescents is an uncommon and frequently unrecognized issue in pediatrics. Children and adolescents however suffer from both depression and associated symptoms.

Methods: The study was carried out among adolescents in secondary schools from two states; Enugu and Ebonyi metropolises within the age range of 9-18 in Enugu metropolis. The instrument employed for data collection was a structured self-administered questionnaire developed from the Goldberg Depression Questionnaire, a Screening Test for Depression. It is particularly suited for students in this age group. The families were assigned socio-economic classes using the recommended method (modified) by Oyedel.

Objectives: The aims and objectives of this study were to determine the prevalence of several levels of depression among adolescents attending secondary schools in two states.

Results: A total of 453 adolescents who are attending secondary schools from two states were recruited in this study. Depression is non-existent before the age of 10 years according to this study. The prevalence of moderate depression was lowest (2.3%) at the age of 10 and highest at (6.2%) the age of 13. The prevalence of severe depression was lowest (1.9%) at the age of 11 and highest (7.4%) at the age of 12. Female gender is a risk factor for depression. Children whose parents are separated showed higher incidences of depression in all the spectra studied.

Conclusion: Adolescents exhibit different levels of depression with a female preponderance.

Keywords: Adolescents, depression, secondary schools

Résumé

Contexte: Dépression chez les adolescents est un problème rare et souvent méconnu en pédiatrie. Enfants et adolescents souffrent cependant de dépression et de symptômes associés.

Méthodes: L’étude a été réalisée chez les adolescents dans les écoles secondaires de deux États ; Enugu et Ebonyi métropoles dans la tranche d’âge des 9-18 à Enugu métropole. L’instrument utilisé pour la collecte de données était un questionnaire structuré mis au point de le Questionnaire est associé à la dépression de Goldberg, un Test de dépistage pour la dépression. C’est particulièrement adapté pour les élèves de ce groupe d’âge. Les familles ont été assignées des classes socioéconomiques à l’aide de la méthode recommandée.

Résultats: Un total de 453 adolescents qui fréquentent les écoles secondaires de deux États ont été recrutés dans cette étude. La dépression n’existe pas avant l’âge de 10 ans, selon cette étude. La prévalence de la dépression modérée était le plus bas (2,3 %) à l’âge de 10 et plus haut (6,2 %) à l’âge de 13. La prévalence de la dépression sévère a été plus faible (1,9 %) à l’âge de 11 et le plus élevé (7,4 %) à 12 ans. Sexe féminin est un facteur de risque pour la...
Introduction

Depression is defined as a state of low mood and aversion to activity.[1] It is noted that several controversies characterize the literature on depression in adolescents. For instance, some studies noted that children and young adolescents did not have the psychological structure (e.g., superego functions) to truly experience depression.[2,3] Indeed, the classic characterization of adolescence as a time of “storm and stress” led many researchers to view depression during adolescence as a normal developmental stage. [4] In fact, most adolescents progress through life without undue emotional turbulence.[2]

In contrast, it is known and documented that children and adolescents do indeed suffer from both depressive symptoms and depressive disorders.[3] In fact, adolescence is a critical period for the development of depressive disorders.[3]

As unrecognized as depression is among the adult population, it is even more so among children and adolescents.[3] Studies have estimated that depression affects up to 8.3% of older adolescents in the United States.[3] In addition, it is noted that on any single day, about 2% of school-aged children and about 8% of adolescents meet the criteria for major depression.[5] In the long run, the numbers are even higher, for example, one in five adolescents have experienced depression at some point.[7] In primary care settings, the rates of depression are as high as 28% for adolescents.[7]

Depressive symptoms among adolescents are often attributed to the normal stress seen at this stage of life.[9] This is often misdiagnosed as primarily conduct or substance abuse disorders. Neglecting depression among adolescents can have a tragic and deleterious effect. [9] Depression is associated with an increased risk of suicide and it is well-known that suicide rates among adolescents have nearly tripled in the last 50 years.[9] Regrettably, adolescents who experience depression at an early age often struggle with depression throughout their lives.[10] Furthermore early onset of depression predicts more severe depression during adulthood.[10] Even subclinical depression during adolescence increases the risk of major depression disorders 2- to 3-fold as an adult.[10]

Gender is known to influence depression in adolescents. For instance, in childhood, the number of boys and girls affected are almost equal.[11] In adolescence, twice as many girls as boys are diagnosed.[11] It is surprising to note that more than half of depressed adolescents have a recurrence within 7 years. Several factors increase the risk of depression, including a family history of mood disorders and stressful life events.[11]

Methods

Study area

The study was carried out among adolescents in secondary schools from two states: Enugu and Ebonyi metropolises within the age range of 9-18 in Enugu metropolis. These states have almost similar socio-demographic characteristics when compared to other states in Nigeria. Multistage sampling was carried out where we selected the two eastern states, Enugu and Ebonyi.

Study population

The questionnaire was self-administered to the students, but outside class and lesson hours. The school proprietress was asked for permission to recruit students. Consent was obtained from the head of the institutions after they had been told that their participation was completely voluntary in nature and that they could discontinue their involvement at any time. Enugu has a population of 3.5 million while Ebonyi state has a population of 126,837 people according to the national population census.[12] Anonymity and confidentiality of responses were also conveyed, we also assure them that teachers and caretakers would not be given access to the data. The subjects were children who attend secondary school in Enugu and Ebonyi metropolises. The secondary school provides a complete school health program. They have qualified teachers and health instructors.

Study procedure

The instrument employed for data collection was a structured self-administered questionnaire developed from the modified Goldberg Depression Questionnaire, a Screening Test for Depression.[13] It is particularly suited for students in this age group.

The questionnaire contains 18 items with each item bearing 5 sub questions. These questions are graded. A total score of 0-9 shows: No depression likely, moderate depression: 36-5 and severe depression: 54 and up. The higher number, the more severe the depression.
The families were assigned socio-economic classes (SEC) using the recommended method (modified) by Oyedeji.[14] The parents’ occupation and highest education attained were scored from 1 (highest) to 5 (lowest). The mean score for both parents gives social class falling within the 1-5 range. Those with the mean score of <2 were further reclassified into the upper class while those with the mean score of >2 were reclassified into lower social class. For the occupation score, those in upper social class included parents, such as senior public officers, large-scale traders, large-scale farmers and professionals. Lower class included artisans, primary school teachers, peasant farmers, laborers and the unemployed. For the education score, those with PhD, master degree, bachelor degree and higher national diploma were categorized as upper class. Those with ordinary national diploma, national certificate of education, technical education, Grade II teachers’ certificate, junior and senior secondary school certificate, primary school certificate and those with no formal education were classified as lower social class.[14]

The aims and objectives of this study were to determine the prevalence of several levels of depression among adolescents attending secondary schools in two states; to describe the correlation between gender, SEC and depression.

Data analysis
Data was analyzed with Statistical Package for Social Sciences (SPSS)(Chicago II, USA)) software, version 17. Data presentation was in form of tables and charts. Frequencies, proportions and percentages were calculated for categorical variable. Results of continuous variables were expressed as medians. Pearson’s Chi-square was used to test for relationship between categorical variables while Student’s t-test was used to test significant relationship between continuous variables. Test of significance was set at $P < 0.5$.

Results

Demography
A total of 453 adolescents who are attending secondary schools from two states were recruited in this study. Of these 198 (43.7%) were males while 255 (56.3%) were females, giving a female: male ratio of 1:1. The children were aged 9-18 years. The mean age of the children was $13.36 \pm 2.5$ years.

A total of 453 subjects responded to the questions on SEC. 139 (30.7%) belong to the high SEC, 312 (68.9%) belong to the middle class and 2 (0.4%) belong to the lower class [Table 1].

<table>
<thead>
<tr>
<th>Table 1: Socio-demographic characteristics</th>
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<td>Do parents live together?</td>
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<td>No</td>
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<td>Yes</td>
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</table>

SEC=Socio-economic class

Totally 432 (95.4%) of the subjects live with both parents while 21 (4.6%) live with single parents.

Depression is non-existent before the age of 10 years according to this study. The prevalence of moderate depression was lowest (2.3%) at the age of 10 and highest at (6.2%) the age of 13. The prevalence of severe depression was lowest (1.9%) at the age of 11 and highest (7.4%) at the age of 12 [Table 2].

Female gender is a risk factor for depression as they showed higher prevalence in all the spectrum of depression studied Table 2. There is a generally higher incidence of depression in the middle SEC, followed by high SEC [Table 2].

The factor of whether parents live together or are separated played a key role as those children whose parents are separated showed higher incidences of depression in all the spectra studied [Table 2].

There is a significant correlation between sleep and depression, correlation coefficient = 0.126, $P = 0.007$.

There is a significant correlation between weight and depression, correlation coefficient = 0.547, $P = 0.000$.

Discussion

The results of this study have shown that depression in adolescents does exist in our environment, though there is no cultural and social recognition
of this menace. The prevalence of depression among adolescent from this study is noted to increase slightly as the adolescents grow older but tends to be at its lowest ebb at extremes of ages. The prevalence of moderate depression was lowest (2.3%) at the age of 10 and highest at (6.2%) the age of 13 while that of severe depression was lowest (1.9%) at the age of 11 and highest (7.4%) at the age of 12. This is similar to the findings of Mathet et al.,[15] in their study noted that more than 10% children aged less than 13 years had a depressive disorder and that the prevalence in the adolescent sub-group was 5%. All depressive disorders were moderate.

Furthermore, Bansal et al.,[16] also noted that three to nine per cent of teenagers meet the criteria for depression at any one time and at the end of adolescence, as many as 20% of teenagers report a lifetime prevalence of depression. When we looked at total prevalence of depression among adolescents in our study, it far outweighs that of Bansal. One of the arguments against the construct of adolescent depression is the “general emotional roller coaster” state of adolescent change. This is probably the reason why we did not consider mild depression in adolescent.

We noted with interest, from this study, that depression of all forms is commonest among females. This is in tandem with the work of Hankin and Abramson[17] and Piccinelli et al.,[18] who noted that more than twice as many girls as boys are depressed, a proportion that persists into adulthood.[15] Reasons ranging from biological, genetic, psychosocial, hormonal to family factors have been pointed out as possible cause for this gender difference.[19] Bennett et al.,[19] in their study noted no gender difference of depression among adolescents. He noted that the experience of depression is highly similar for adolescent girls and boys. He concluded that some gender differences previously found among depressed adults appear to be present by adolescence, possibly suggesting somewhat distinct etiologies for depression among males and females.

Adolescents whose parents are separated showed higher incidences of depression in all the spectra studied. Parental separation experiences place the adolescent in an insecure situation. This may affect both their feelings of self-worth and their ability to establish stable and secure attachments with their peers.[20] In addition, some authors[21,22] have noted the link between parental separation/divorce and depressive symptoms among adolescents.

Apart from parental separation, other childhood stressors of depression include family history of depression and poor school performance.[23] Unfortunately, we did not find out if there is any history of parental depression neither did we look into the academic performance of the adolescents.

There is a generally higher incidence of depression in the middle SEC, followed by high SEC. This finding varies from other studies where parents
from low SEC are likely to have depressed adolescents. For instance, Gilman et al. [24] found that low parental SEC increased risk for depression among adolescent. Moreover, Ritsher et al. [25] noted that low parental socio-economic class does have an independent impact on offspring depression but the strength of this impact varies across groups.

We noted from this study that adolescents who are depressed (especially severe depression) sleep at fewer hours when compared with adolescents without depression or with mild depression. This finding is in tandem with Urrila et al. [26] who noted a close link between sleep disturbances and depression in adolescent outpatients with major depressive disorders. The possible reason for this strong correlation between depression and sleep problem could be due to some neuro-hormonal imbalance.

This study revealed a positive correlation between depression and weight gain among adolescents. Adolescents (especially those who are severely depressed) admitted that they are gaining weight. It is bewildering, if weight gain leads to depression or vice versa. However evidence abound to show that depression leads to weight gain, for instance depression releases some stress hormone; cortisol which stimulates and promotes fat storage, especially in the abdominal area. The hormone also leads to depressed affect, which then leads to excess weight gain. [27] This finding is also supported by Grossniklaus et al. [28] who noted that subjects who had severe depressive symptoms experienced a faster rate of increase in body mass index and waist circumference over time than those who reported fewer symptoms of depression.

Conclusion

Adolescents exhibit different levels of depression with a female preponderance.

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References


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