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# Patterns of Childhood and Adolescent Disorders at the University of Port Harcourt Teaching Hospital: A 3 Year Review

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## Abstract

**Objective:** The study was designed to study the patterns of childhood and adolescent psychiatric disorders at University of Port Harcourt teaching Hospital (UPTH), Rivers State, Nigeria.

**Materials and Method:** Case files of all psychiatric patients aged between 0-19 years who attended the psychiatric clinic of UPTH from March 2015 – March 2018 were reviewed.

**Results:** A total of 149 children and adolescents were seen within the study period. The mean age of the participants is 11.6913 + 5.55306 years. The range of their ages was between 2 and 19 years. The largest prevalence rates were recorded for ADHD (22.1%), and Depression (20.8%). Most of the subjects were males (61.1%), adolescents (51.7%), students (61.7%), Ibo (43.3%) and Christians (94.6%). A greater percentage of ADHD patients (54.6%), Anxiety disorder (66.7%), schizophrenics (89.5%), Autism Spectrum Disorder (100%) were males. A greater percentage of ADHD patients (78.8%) and those with learning disability were 3-8 years while a greater portion of the subjects diagnosed with anxiety disorders (66.7%), depression (61.0%) and substance use disorder (100%) were adolescents. There was significant association between diagnosis and gender ($X^2$=24.288, df=8, p=0.002) as well as between diagnosis and age ($X^2$=158.013, df=32, P=0.000).

**Conclusion:** Childhood and adolescence are critically vulnerable periods of human development. Therefore the need to step up clinical and policy approaches specifically tailored to address the need of this special segment of our society is imperative.

**Keywords:** Childhood; Adolescence; Psychiatric; disorder; Patterns; Prevalence

## 1. Introduction

Psychiatric disorders remain one of the major causes of disability globally and despite how common childhood psychiatric disorders are in our society, a relatively small percentage of children with these disorders receive appropriate medical attention [1].

In specific terms, according to the Diagnostic and Statistical Manual of mental disorders, (DSM V), 25-33% of adolescents are estimated to meet the lifetime criteria for childhood psychiatric disorder [2]. Childhood is an important period of life when personality is being formed and the adolescence is a critical period of transition between childhood and adulthood. In view of the foregoing, childhood and adolescent mental illness remain a key risk factor for emergence and sustenance of latter psychiatric problems [3]. This sentiment was aptly summarized by Bhalk et al, who opined that 'youth is the peak period of onset of mental illness' [4]. Inspite of the number of studies that have been carried out in the developed world on childhood psychiatric disorders, not much has been done in sub-Saharan Africa, more especially in Nigeria. Furthermore, there is paucity of cases done involving children below the age of 3 years because the personality is not yet fully developed sufficiently to permit internal conflicts of pathological significance [4].

This retrospective study is a 3 year review of the patterns of childhood psychiatric disorders that presented at the University of Port Harcourt Teaching Hospital between March 2015 and March 2018. Results of this study will not only expand our knowledge of child and adolescent psychiatric disorders, prevalent in the Niger Delta Region of Nigeria, it will help health care providers to know how to prioritize to enable the efficient management of these patients for better outcome.

## 2. Subjects and Method

### 2.1 Study location

The study was conducted at the psychiatry department of the University of Port Harcourt Teaching Hospital between March and June 2018.

### 2.2 Study design

This is a retrospective cross-sectional study in which all case files of children and adolescents who presented with psychiatric disorders between March 2015 and March 2018 were reviewed. All patients aged 19years and younger were included in the study. Their socio-demographic and clinical variables including psychiatric diagnoses of the patients' conditions were derived from the case files studied. Diagnosis was made using the ICD-10 diagnostic criteria. Approval of the ethical committee of the University of Port Harcourt Teaching Hospital was sought before the commencement of the study. The data was analyzed using the statistical package for social sciences (SPSS), version 16 at 5% level of significance and 95% confidence interval.

## 3. Results

A total of one hundred and forty nine (149) children and adolescents were seen within the study period and therefore assessed. The minimum age of the participants is 2 years and the maximum is 19 years.

Table 1 shows the frequencies of the socio-demographic and clinical variables studied. The largest percentage of the cohort (22.1%) was diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), followed by Depression (20.8%). The least common diagnosis made was Learning disability (2%). Most of the subjects were adolescents (51.7%), followed by children in the early childhood category (26.2%), then middle childhood (18.1%). Infants were last seen (4.0%). Males (61.1%) were more than females (38.9%) in the cohort studied. A greater percentage of the subjects are students (61.7%), of the Ibo ethnic nationality (42.3%) and Christians (94.6%).

| **Variable** | **Frequency** | **%** |
|---|---|---|
| **DIAGNOSIS** | | |
| ADHD | 33 | 22.1 |
| Anxiety Disorder | 18 | 12.1 |
| Conversion disorder | 9 | 6.0 |
| Depression | 31 | 20.8 |
| Schizophrenia | 19 | 12.8 |
| Autism spectrum Disorder | 12 | 8.1 |
| Learning Disorder | 3 | 2.0 |
| Seizure | 12 | 8.1 |
| Substance use disorder | 12 | 8.1 |
| **AGE (IN YEARS)** | | |
| Infancy (0-2yrs) | 6 | 4.0 |
| Early childhood (3-8years) | 39 | 26.2 |
| Middle childhood (9-12years) | 27 | 18.1 |
| Adolescence (13-19years) | 77 | 51.7 |
| **GENDER** | | |
| Male | 91 | 61.1 |
| Female | 58 | 38.9 |
| **OCCUPATION** | | |
| Pupil | 27 | 18.1 |
| Student | 92 | 61.7 |
| Not going to school | 30 | 20.1 |
| **TRIBE** | | |
| Ibo | 63 | 42.3 |

| | | |
|---|---|---|
| Ikwerre | 15 | 10.1 |
| Ogoni | 12 | 8.1 |
| Yoruba | 20 | 13.4 |
| Other tribes in Rivers state | 24 | 16.1 |
| Tribes in Cross River/Akwa Ibom States | 9 | 6.0 |
| Hausa | 3 | 2.0 |
| Others | 3 | 2.0 |
| **RELIGION** | | |
| Christian | 141 | 94.6 |
| Moslem | 8 | 5.4 |

**Table 1:** Frequency table of scocio demographic and clinical variables.

Table 2 shows the relationship between psychiatric diagnosis and socio-demographic variables. In this study a greater percentage of ADHD patients (54.6%), anxiety disorder patients (66.7%), schizophrenic (89.5%), Autism spectrum disorder patients (100%) are males. Similarly a greater percentage of the ADHD patient (78.8%) and learning disability patients (100%) were aged before 3-8 years.

| | **GENDER** | | |
|---|---|---|---|
| | **Male** | **Female** | **Total** |
| **DIAGNOSIS** | n(%) | n(%) | |
| ADHD | 18(54.6) | 15(45.4) | 33 |
| Anxiety Disorder | 12(66.7) | 6(33.3) | 18 |
| Conversion disorder | 3(33.3) | 6(66.7) | 9 |
| Depression | 14(45.2) | 17(54.8) | 31 |
| Schizophrenia | 17(89.5) | 2(10.5) | 19 |
| Autism spectrum Disorder | 12(100.0) | 0(0.0) | 12 |
| Learning Disorder | 3(100) | 0(0.0) | 3 |
| Seizure Disorder | 6(50.0) | 6(50.0) | 12 |
| Sustenance abuse | 6(50.0 | 6(50.0) | 12 |
| **Total** | **91** | **58** | **149** |
| $X^2$=24.288 df=8, p=0.002 | | | |

(a) Diagnosis and Gender

| | AGE (in years) | | | | Total |
|---|---|---|---|---|---|
| | **0-2** | **3-8** | **9-12** | **13-19** | |
| **DIAGNOSIS** | n(%) | n(%) | n(%) | n(%) | |
| ADHD | 4(12.1) | 26(78.8) | 3(9.1) | 0(0.0) | 33 |
| Anxiety Disorder | 0(0.0) | 0(0.0) | 6(33.3) | 12(66.7) | 18 |
| Conversion disorder | 0(0.0) | 1(11.1) | 8(88.9) | 0(0.0) | 9 |
| Depression | 3(9.7) | 6(19.4) | 3(9.7) | 19(61.3) | 31 |
| Schizophrenia | 0(0.0) | 0(0.0) | 0(0.0) | 19(100) | 19 |
| Autism spectrum Disorder | 0(0.0) | 4(33.3) | 3(25.0) | 5(41.7) | 12 |
| Learning Disorder | 0(0.0) | (3(100) | 0(0.0) | 0(0.0) | 3 |
| Seizure Disorder | 0(0.0) | 0(0.0 | 3(25.0) | 9(75.0) | 12 |
| Substance use disorder | 0(0.0) | 0(0.0) | 0(0.0) | 12(100) | 12 |
| **Total** | **7** | **40** | **26** | **76** | **149** |
| $X^2$=158.013, df =32, p=0.00 | | | | | |

(b) DIAGNOSIS AND AGE (in years)

**Table 2:** Relationshp between psychiatric diagonsis and sociodemographic variables (Gender and Age).

Furthermore, a greater percentage of the patients diagnosed with anxiety disorder (66.7%), depression (61.3%), schizophrenia (100%), Autism Spectrum Disorder, (41.7%), seizure disorder (75.0%) and substance use disorders (100%), belong to the adolescence age range. Most cases of conversion disorder (88.9%) were suffered by patients between the ages of 9-12 years. There is significant association between diagnosis and gender ($X^2$=24.288, df=8, p=0.002) as well as between diagnosis and age ($X^2$=158.013, df=32, p=0.000).

## 4. Discussion

The period of childhood spans from age 1 to 12 years and is characterized by rapid development in body and psyche while adolescence refers to the period marking the transition from childhood to adulthood. Age 12-18 years encompasses the adolescent period and it corresponds to the time from specific hormonal changes signaling pubertal onset to guardian independence [5]. The period of puberty is characterized by a plethora of events that are driven by elaboration of adrenal and gonadal hormones as well as the development of secondary sexual characteristics and increase in muscle bulk and fat deposit [6]. The period of adolescence is associated with a period of increased risk taking behaviours as well as increased emotional reactivity [7, 8].

In this study, the largest percentage of the cohort studied was diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) followed by Depression. This is similar to reports by Landge et al but is at variance with reports from other studies [9, 10]. Male preponderance is true for many developmental disabilities and males are generally more vulnerable than females through birth, infancy and childhood. Furthermore males tend to externalize their behaviours more than females [11, 12].

While Ogbogbodo et al. reported that schizophrenia was the largest psychiatric diagnosis made, depression was reported as the second most prevalent psychiatric diagnosis in that study [9]; the latter is in consonance with my finding. It was also noticed from this study that ADHD was more common among the males than female patients. This is similar to the finding by Petresco et al who reported that ADHD was more prevalent among boys [13]. However his finding is at variance with ours on the report of the prevalence of anxiety disorders among the genders. While we found a greater prevalence among the male patients, Petresco et al reported that anxiety disorders were more prevalent in girls than boys [13]. Gender difference in substance use disorders is inconsistent across various studies. While some reported equal prevalence rates similar to our finding, others reported a greater prevalence among males than females [14, 15]. Methodological differences, including different sample sizes, referral biases, differences in diagnostic procedures, and possible rater influences may be responsible for the varying reports from different researchers.

A greater percentage of the subjects in this study were males (61.1%). This is in keeping with results from other studies [16-18]. Apart from ADHD and Anxiety disorders, other disorders in which the males were more than the females include schizophrenia and autism spectrum disorders; and there is significant association between diagnosis and gender.

Furthermore, a greater percentage of the patients suffering from ADHD and learning disability were aged between 3-8 years. It is not surprising that ADHD is more preponderant in this age group because ADHD symptoms tend to change as children get older. It is estimated that about a third of children who are diagnosed with the attention deficit hyperactivity disorder will no longer meet the criteria by the time they reach young adulthood [19, 20]. ADHD patients whose illness continues into adulthood are those with very severe symptoms in childhood and those with co-morbid psychiatric disorder such as depression or anxiety disorder [20]. The largest percentage of the study cohort were adolescents and a greater percentage of those with anxiety disorder, depression, schizophrenia, autism spectrum disorder, seizure disorder and substance use disorders belong to this category. This study also identified a statistically significant association between diagnosis and age.

As Kessler et al. pointed out, adolescence is a distinct developmental period during which the incidence of many psychiatric illnesses rise dramatically; according to the National Co-morbidity Survey replication, three quarters of psychiatric illnesses will start by age 24 years [21]. As Jaworska et al pointed out, adolescence represents a period of strength and resilience, yet psychiatric illness often begin during this developmental time frame [8].

## 5. Conclusion

Childhood is a vulnerable period in the development of the human being and adolescence is a distinct period of neural development with different brain sensitivity and responsibility. The availability of evidence based documents is critical in guiding and influencing policy decisions regarding the efficient management of child and adolescent

psychiatric disorders. This is because, currently, only few clinical or policy approaches have been tailored to this important vulnerable segment of society, who constitute her future.

## 6. Acknowledgment

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## 7. Limitation

This is a retrospective study. Many of the patients were not seen and attended to firsthand by the researcher. This is a limitation.

## References

1. Landge AP, Kaur D, Ghildiyal RP. Patterns of child and adolescent psychiatric disorders and associated factors in out patients attending child psychiatric clinic; a hospital based study. Int J. Contemp Pediatr 4 (2017): 1083-1092.
2. Costello EJ, Mustillo S, Kller G, et al. Prevalence of psychiatric disorders in childhood and adolescence. In: Levin BL, Petrila J, Hennessy KD. Mental health Services: a public health perspectives. Second Edition. Oxford UK; Oxford University Press (2004): 111-128.
3. Copelan WE, Shanahan L, Costello EJ, Angolo a. Which childhood and adolescent psychiatric disorders predict which young adult disorders? Arc Gen. Psychiatry 66 (2009): 764-772.
4. Bhalk M, Bhalf JN, Mahendru RK, et al. Srivastava JR, Psychiatric disorders among children attending pediatric OPD. Indian Pediatrics 23 (1986): 623-626.
5. Dahl RE. Adolescent brain development; A period of vulnerabilities and opportunities. Keynote address. Ann NY Acad Sci 1021 (2004): 1-22.
6. Spear LP. The adolescent brain and age related behavioural manifestations. Nuerosc. Biobehav Rev 24 (2000): 417-463.
7. Casey BJ, Jones RM, Hare TA. The adolescent brain Ann NY Acad Sci 1124 (2008): 111-126.
8. Jaworska N, MacQueen G. Adolescence as a unique developmental period. J psychiatry Neurosc 4 (2015): 291-293.
9. Ogbogbodo EO, Omuemu VO. Obansiagbon OE, et al. Pattern of Psychiatric disorders among young persons attending psychiatric clinic in Benin City; Implications for health. Int. Comm Med Pub Health 5 (2018): 500-505.
10. Steel M, Shapiro J, Davidson B, et al. Survey comparing criteria used by rural and urban primary care physicians for referrals to child and adolescents psychiatrists and children's mental health agencies in Ontario J. Canadian Acad. Child Adolesc. Psychatr 19 (2010): 284-289.
11. Kraemer S. The fragile male. BMJ 23 (2000): 321.
12. Rucklidge JJ. Gender differences in attention-deficit/hyperactivity disorder Psychiatr Clin North Am 33 (2010): 357-373.

13. Petresco S, Auselim L, Santos IS, Barros AJ. et al. Prevalence and comorbidity of psychiatric disorders among 6 year-old children 2004 Pelotals Birth Cohort Soc. Psychatr. Psychiatric Epidemiol 49 (2014): 975-983.
14. Angold A, Erkanli A, Farmer EM. Psychiatric disorder. Impairment and service use in rural African, American and White youth. Arch Gen. Psychiatr 59 (2002): 893-901.
15. Roberts RE, Roberts CR, Xing Y. Rates of DSM-IV psychiatric disorders among adolescents in a large metropolitan area. J Psychiatr. Res 41 (2007): 959-967.
16. Chaudhry S, Prasad PL, Zacharias R. Madhusudan T, Saini R. Psychiatric Morbidity Pattern in a child guidance clinic Med J. Armed Forces India 3 (2011): 144-146.
17. Hinrichs S, Owens M, Dunn V, et al. General practitioner Experience and Perception of child and adolescent mental health Services (CAMHS) care pathways; a multimethod research study. BMJ Open 2 (2012).
18. Lee J, Karczark D. Factors associated with parental satisfaction with a paediatric crisis clinic (PCC). Journal of the Canadian academy of child and adolescent Psychiatry 23 (2014): 118-127.
19. Schubert I, Buitkamp M, Lehmkuhl G. et al. Versorgung bei ADHS im ubergang zum Erwaschsenalter ans Sicht der Betroffenen Gesundheitsmonitor 2013: Gutersloh: Verlag betelsmann – Stiftung (2013): 88-121.
20. Schubert I, Lehmkuhl G. The natural course and treatment of ADHD, and its place in adulthood. Dtsch Arzteble Int 114 (2017): 139-141.
21. Kessler RC, Berglund P, Demler O. Lifetime prevalence and age of onset distributions of DSM-IV disorders in the National Co-morbidity survey replication. Arch Gen. Psychiatry 62 (2005): 593-602.

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