

PREVALENCE OF PSYCHOSOCIAL DYSFUNCTIONAL BEHAVIOURS AMONG IN-SCHOOL ADOLESCENTS IN IKERE-EKITI, EKITI STATE, NIGERIA

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ABSTRACT

Psychosocial disorders affect people across all ages in both high and low income countries. Unfortunately, information on psychosocial functioning among children and adolescents are practically scarce in Nigeria. However, local studies can provide remote strategies to identify the risk factors, increase awareness, remove stigma and improve access to mental health services. In this work, prevalence of psychosocial disorders across participants' demographic and background characteristics were examined. A self-administered Rosenberg Self-esteem Scale (RSS) and Strengths and Difficulties Questionnaire (SDQ) were used to screen for psychosocial symptoms among in-school adolescents. Participants were selected from six (6) secondary schools within Ikere Ekiti. The reliability of the scales were using Cronbach's alpha. Preliminary data analyses were performed using descriptive statistics while independent t-test and ANOVA were used to compare psychosocial scores across selected background and demographic characteristics of the participants. The participants comprised 480 students, aged 11 to 19. Cronbach's alpha showed a moderate reliability estimate of 0.60 for the SDQ and 0.43 for the RSS. It was observed that higher mean scores on self-esteem and prosocial behavior correlate with lower mean scores on psychosocial disorder symptoms. Moreover, male participants significantly ($t=2.810$, $P=0.01$) exhibited conduct problems more than their female counterparts while those from polygamous families also have higher inattention problems compared to their counterparts from monogamous homes ($t= -2.980$, $p=0.003$). The study revealed that boys are more exposed to externalizing behavioural problems while girls possess more prosocial features. Also, it was found that self-esteem and family type have an important role to play in adolescent psychosocial dysfunction.

Keywords: Adolescent; psychosocial functioning; self-esteem; secondary school; strengths; difficulties questionnaire.

INTRODUCTION

Psychosocial dysfunctions have been shown globally to significantly impact on children's ability to fulfil their potentials both in academic and other areas of life (Andrade, Brown and Tannock, 2014; Bakare, Ubochi, Ebigo and Orowigbo, 2010; Cortina, Sodha, Fazel, Ramchandani, 2012). In sub-Saharan Africa, the rate of psychological disorders among adults are particularly elevated while prevalence of psychosocial dysfunctions among children and adolescents are yet to be extensively diagnosed (WHO, 2010). However, the burden of psychosocial disorders and mental illnesses have been reported to be about 75% higher among youths in the developing countries compared to youths in the developed countries (WHO, 2010).

Also, previous studies have shown that peer relationship disorders, conduct problems and emotional symptoms are among the most prevalent chronic psychosocial conditions of childhood and often have serious negative consequences for a child's overall quality of life and wellbeing (Pastor, Reuben, and Duran, 2012). Unfortunately, psychosocial disorder is seen as unimportant and isolated issue in most African countries where higher percentage of burden of diseases have been undoubtedly attributed to mental health (Amuyunzu-Nyamongo, 2013). As a result of insufficient data on adolescent psychosocial problems in sub-Saharan African countries, a weighted average prevalence of mental disorders has been estimated for six countries, including Nigeria. The results show that 14.3% of adolescents in the regions are suffering from mental disorders (Cortina, Sodha, Fazel, Ramchandani, 2012) while in another cross-sectional community based study conducted among adolescents in Ibadan, Oyo states (South-western region, Nigeria), 15.2% of the participants had psychosocial disorders (Taiwo, 2011).

Although there is a dynamic and complex interplay between clinical and psychosocial factors that could lead to disorders, factors like residential location and disparity in parental socio-

economic status have been reported to also influence children's behaviours (Taiwo, 2011; Emler, 2001). In spite of the wide spread awareness on the detrimental effects of psychosocial problems among adolescents in the developed countries, little has been done in this part of the world. Most African countries do not maintain vital statistics and comprehensive data on psychosocial problems and or mental health of the population. In Nigeria, definite structure and research arrangements that could aid gathering of information on mental disorders in the population are practically unavailable. This makes evaluation of the extent of the problems as well as further investigations or interventions a difficult venture. Local studies such as the present one can provide remote strategies to identify risk factors, increase awareness, remove stigma and improve access to mental health services especially in populations that are disproportionately affected. In the present report, we examined the prevalence of psychosocial disorders across the demographic characteristics of the participants. Potential correlates of psychosocial disorders including sex (or gender), family background etc. (Akpa and Bamgoye, 2015) were also examined.

METHODS

Study Area

Ikere-Ekiti is one of the 16 Local Government Areas (LGAs) in Ekiti-State (South-west), Nigeria. With an average population of about 160,000 inhabitants, the LGA has twenty five (25) secondary schools (both public and private) located in different part of the LGA. Also, the Ikere-Ekiti town has 11 Political wards and the inhabitants are predominantly Christians.

Study Design and Sampling Techniques

This study is a cross sectional study. Six political wards were randomly selected by balloting from a sampling frame consisting the names of the eleven wards in the LGA. In order to capture information from children with a variety of family background and social orientations, the most populated secondary school in each ward was purposively selected for the study. Participants were from randomly selected classes from the selected schools.

Study Instruments

The socio-demographic questionnaire

The socio-demographic characteristics of the adolescents included age (at the time of data collection), participants' sex, ethnicity, religion and other background variables such as place of residence and parental factors.

Rosenberg self-esteem scale

Rosenberg self-esteem scale is a self-reported instrument that measures general feelings about oneself. The 10-item scale with a 4-point scoring scale (i.e. 'Strongly Agree', 'Agree', 'Disagree', and 'Strongly Disagree') asks questions like "At times, I think am no good at all", "I am able to do things as well as most other people". The items are scored ranging from 3 to 0 with negative statements reversed in valence i.e. 0 to 3. Moreover, the maximum achievable score is 30 and an aggregate below 15 suggest low self-esteem while scores between 15 and 25 are within normal. The suitability of the Rosenberg self-esteem scale have been reported in sub-Saharan African setting (Westaway, Jordaan and Tsai, 2015)

The Strength and Difficulties Questionnaire (SDQ)

The SDQ is a brief and short screening instrument that can be used to screen for behavioral problems in children and adolescents; it has also been documented to have good psychometric properties (Goodman, 1997). The SDQ contains twenty-five questions grouped into five sub-scales namely: Emotional Symptoms, Conduct Problems, Hyperactivity, Peer Problems and Pro-social Behavior. The total scores on Emotional Symptoms, Conduct Problems, Hyperactivity and Peer Problems usually account for Total Difficulties score which can range from 0 to 40 (Goodman, 1997, Akpa et al., 2015). A total difficulty means scores

of 0-15, 16-19 and 20-40 signify Normal, moderate and abnormal behavior respectively. Different cut-offs for determining normal or clinical case exists for the different subscales of the SDQ. Previous use of the SDQ among adolescents in Benue State, Nigeria yielded an overall reliability estimate of 0.83 (Akpa et al., 2015).

Study Procedures All eligible participants and the selected schools' gave informed consent (the principal provided consent on behalf of parents for adolescents under the age of 18 years) to participate in the study after the objectives of the study was explained to them. Confidentiality of participants' was ensured by excluding student's name and registration number from the questionnaire. Though questionnaires were filled in a class room setting, participants were not allowed to assist or share their responses with one another and it was made known that they were at liberty to withdraw from the study if they desire to do so at any time without being penalized. Ethics approval for the study was obtained from the Ethics and Research Committee of the Ekiti State University Teaching Hospital, Ado-Ekiti with the protocol number: EKSUTH/A67/2013/07/01.

Data were collected from participants using a self-administered questionnaire with a section for obtaining socio-demographic characteristics of participants and two standardized self-reported instruments i.e. Rosenberg self-esteem scale, and Strength & Difficulty Questionnaire (SDQ). The questionnaires were used to collect data from students in selected schools and although students filled the self-reported questionnaires in their respective classes, they were encouraged not to share their responses with one another. Moreover, research assistants were physically stationed during questionnaire administration to ensure that participants filled their questionnaires under strict confidence. All questionnaires were prepared and administered in English language.

Data management and Statistical Analysis

All completed questionnaires were serially numbered with the participant's study ID and participants' response to the questionnaire were extracted, coded and entered into the computer using Microsoft EXCEL version 2007. Initial data checking and editing were completed on the Microsoft EXCEL software. Data were transferred into IBM SPSS Statistics version 20 where preliminary analysis including frequency distribution, charts etc. were carried out as strategies to further aid the data cleaning and editing.

Descriptive statistics and charts were used to explain the distribution of participants' characteristics as well as prevalence of psychosocial dysfunctions. Independent t-test was used to assess disparities in psychosocial functioning across participants' gender, family type and whether or not they had had disappointment from friends of the opposite sex. Analysis of Variance (ANOVA) was used to investigate differences in psychosocial outcomes across family status. Pearson's moment correlation coefficient was also used to assess the strength of the inter-relationships between all quantitative variables covered in the study. All analyses were performed with probability of type-one error set at 5% significance level.

RESULTS

Demographic Distribution

A total of 480 adolescents aged 11-19 years from six secondary schools participated in the study among which 40.9% were males while 59.1% were females with an overall mean age of (15.22±1.38) years. Averagely, female participants (15.00±3.25 years) were significantly ($p < 0.001$) younger than their male (15.56±3.47 years) counterparts. More than half (57%) of the adolescents reside in the rural areas while more than two-third (77.5%) were from monogamous families with majority (83.8%) having parents living together. Participants whose mothers had a formal education were more than two-third (76.9%) while only (23.1%) had mothers with no formal education.

Table 1. Frequency distribution of the respondents by their demographic data

Variables	Frequency	Percentage
Age		
10-12 years	8	1.7
13-17 years	436	92.8
18-19 years	26	5.5
Sex		
Male	195	40.9
Female	282	59.1
Religion		
Christianity	461	96.2
Islam	18	3.8
Area of residence		
Rural	179	42.1
Urban	246	57.9
Ethnicity		
Yoruba	447	93.3
Others	30	6.7
Family type		
Monogamy	354	77.5
Polygamy	103	22.5
Family status		
Parents are together	402	83.8
Parents are divorced	10	2.1
Parents are separated	32	6.7
Single mother	32	6.7
Father's education		
No formal education	111	25
Pry/sec education	120	27
Tertiary education	213	48
Father's occupation		
Farming/Trading	127	30.8
Civil servant	184	44.6
Employee of private org	102	24.7
Mother's education		
No formal education	104	23.1
Pry/sec education	131	29.1
Post sec education	215	47.8
Mother's occupation		
Farming/trading	224	51.1
Civil servant	173	39.5
Employee of private org.	41	9.4

Inter-relationship between Age, Self-esteem and Subscales of the SDQ

In Table 2, participants age did not correlate with the SDQ subscales' scores except prosocial behaviour where higher age correlated significantly ($r=-0.124$, $P<.01$) with lower prosocial scores. However, higher self-esteem correlated ($p<.001$) with lower scores on the subscales of SDQ (and total difficulty scores) except prosocial behaviour while higher self-esteem correlated ($r=0.11$, $P <.05$) with lower prosocial behaviour scores. Similarly, higher prosocial behaviour correlated with lower scores of other SDQ scores whilst higher scores of the remaining SDQ subscales correlated with higher scores on one another.

Table 2. Inter-correlation between the SDQ subscales, Age of adolescents and Self-esteem

	1	2	3	4	5	6	7	8
1. Age	1							
2. Self-esteem	0.03	1						
3. Emotional symptoms	-0.03	-0.14**	1					
4. Conduct problem	0.05	-0.18***	0.43***	1				
5. Hyperactivity	0.05	-0.19***	0.34***	0.34***	1			
6. Peer problem	0.01	-0.20***	0.42***	0.42***	0.27***	1		
7. Pro-social behavior	-0.12**	0.11*	-0.11*	-0.13**	-0.19**	-0.32***	1	
8. Total difficulty	0.02	-0.24***	0.76***	0.73***	0.74***	0.68***	-0.31***	1

* $P < .05$, ** $P < .01$, *** $P < .001$

Prevalence and Difference of Psychosocial Disorders

Using the definitions provided in the methods, 36(17.5%) of the respondents had abnormal conduct problems while 48(10.1%) had peer relationship problem. Similarly, 31(6.5%) of the participants had abnormal emotional symptoms while abnormal inattention problem was observed in 17(3.6%) of the participants (See Fig.1).

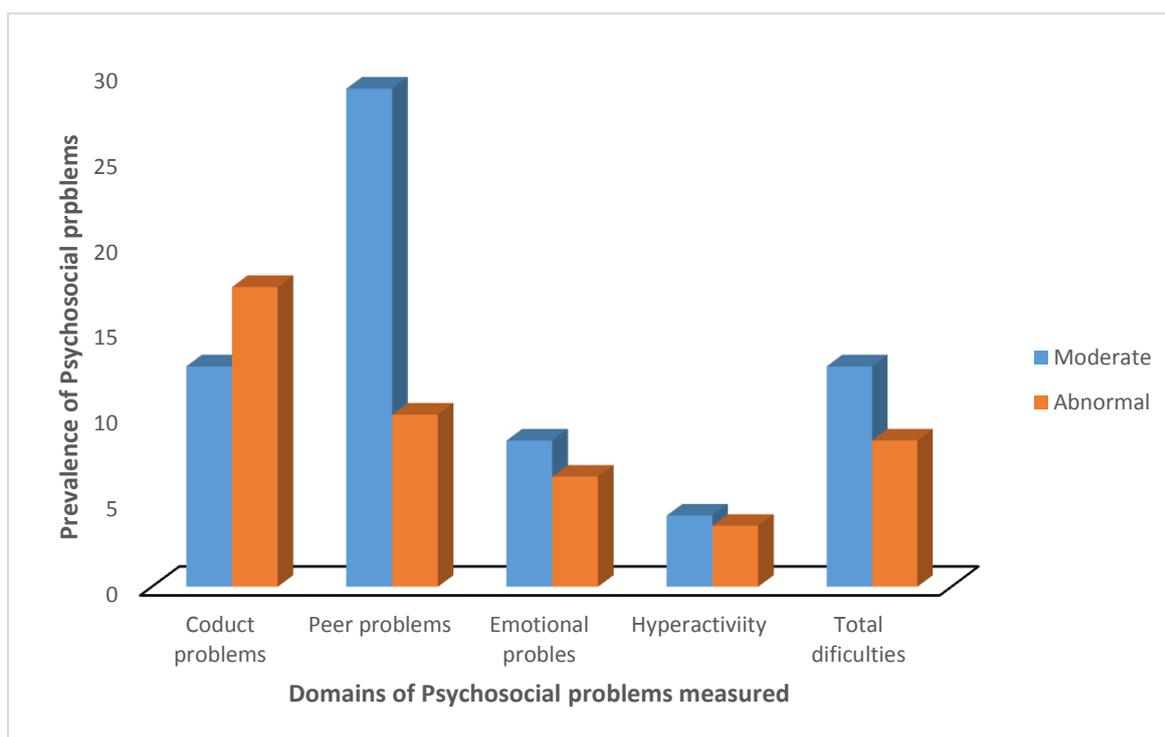


Figure 1. Prevalence of moderate and abnormal psychosocial problems among in-school adolescents in Ikeri-Ekiti

Conduct problem scores were significantly higher among male (2.89 ± 2.14) than female participants (2.36 ± 1.98). Also, scores on hyperactivity were significantly higher among male participants (2.44 ± 2.16) than female (1.93 ± 1.98) while female (8.33 ± 2.29) were more pro-social than male (7.79 ± 3.00) (Table 3). Although no significant difference was observed, participants from separated homes (12.88 ± 5.54) scored highest on the total difficulty than those belonging to any other family status (Table 4).

Table 3. Differences in SDQ difficulty sub-scales mean scores across gender and family type

SDQ scales	Gender				Family type			
	Male	Female	t	P	Monogamy	Polygamy	t	p
Emotional symptoms	2.83±2.28	3.02±2.34	-0.88	0.38	2.89±2.29	3.30±2.43	-1.54	0.12
Conduct problem	2.89±2.14	2.36±1.98	2.81	0.01	2.60±2.06	2.63±2.10	0.13	0.9
Hyperactivity	2.44±2.16	1.93±1.98	2.60	0.01	1.98±2.01	2.67±2.26	-2.98	<0.001
Peer problem	2.92±2.00	3.05±1.89	-0.70	0.49	2.90±1.91	3.32±1.96	-1.96	0.02
Prosocial behavior	7.79±3.00	8.33±1.88	-2.72	0.01	8.23±2.01	7.90±2.26	1.39	0.17
Difficulty total score	11.02±6.22	10.36±6.10	1.15	0.25	10.38±6.14	11.92±6.21	-2.24	0.03

Table 4. SDQ scores difference across respondents' family status & disappointment experience by friends of opposite sex

SDQ scales	Ever being disappointed by a friend of opposite sex				Family status					
	Yes	No	t	p	Parents are together	Parents are divorced	Parents are separated	Single mother	F	p
Emotional symptoms	3.29±2.37	2.78±2.27	2.07	.04	2.85±2.30	3.50±3.24	3.55±2.27	3.43±2.19	1.622	.18
Conduct problem	3.18±2.12	2.32±1.97	3.97	<.001	2.51±2.02	3.00±2.49	3.39±2.13	2.44±2.09	1.984	.11
Hyperactivity	2.69±2.26	1.87±1.92	3.52	.001	2.06±2.05	2.23±2.06	2.69±2.17	2.48±2.19	1.250	.29
Peer problem	3.02±1.83	2.97±1.29	0.42	.81	2.95±1.97	3.10±1.52	3.25±1.56	3.29±1.97	0.513	.67
Prosocial behavior	7.88±2.29	8.28±1.94	-1.71	.09	8.12±2.06	8.50±2.46	8.34±1.89	7.87±2.32	0.392	.76
Total difficulty score	12.18±6.19	9.90±5.87	3.59	<.001	10.34±6.19	11.83±7.39	12.88±5.54	11.65±5.70	2.149	.09

DISCUSSION

In the present cross-sectional study, we assessed the psychosocial functioning of adolescents in schools in Ikere-Ekiti, in Ekiti state, Nigeria. It is hoped that results from the present study may be used to provide local surveillance on the psychosocial needs of the studied population in the LGA or the state at large. Among other things, the goal of this study was to estimate the prevalence of psychosocial functioning and to assess factors associated with it, among adolescents attending secondary schools in Ikere, Ekiti, Nigeria.

Overall, psychosocial (behavioural) disorders are prevalent in the current studied population with majority having conduct or peer relationship problems. Though it may be difficult to completely prevent such problems among adolescent, the situation observed in the current study calls for concern as the prevalence observed in the present study is quite higher than those observed in related studies elsewhere (Ravens-Sieberer, Wille, Erhart, Bettge, Wittchen, Rothenberger, et al., 2008; Kashala, Elgen, Sommerfelt, Tylleskar, 2005; . Ndetei, Khasakhala, Nyabola, et al., 2008). For instance, Bista, Thapa, Sapkota, Singh, and Pokharel (2016) revealed about one-fifth were screened for psychosocial dysfunction in a research conducted in Nepal among in-school adolescents. However, the prevalence was higher among boys than girls and among those from unsettled homes than their counterpart from peaceful homes (Bista, Thapa, Sapkota, Singh, and Pokharel, 2016). Moreover, Bhosale, Singru, and Khismatrao (2015) reported about twelve percent for a study population in a similar study in India. The duo results are a bit lower than the proportion of students screened for moderate to abnormal total difficulty score in our sampled students (Bista, Thapa, Sapkota, Singh, and Pokharel, 2016).

In concordance with what has commonly been reported in the in previous studies, conduct problem was the most prevalent among participants than any other behavioural problems included in this study and males rather than females were the most affected (Bakare, Ubochi, Ebigbo and Orovwigbo, 2010; Ravens-Sieberer, Wille, Erhart, Bettge, Wittchen, Rothenberger, et al., 2008). These findings appropriately represent our local observations and reports across schools in the studied area. In recent time, there have been reports of bullying, cheating, fighting and the acts of vandalism being perpetrated by school age boys in across communities. This finding is also related to findings in some of the literature reviewed in the course of the present study (Bakare et al., 2010; Barnow, Lucht, Freyberger, 2005; Colman, Muray, Abbott, Maughan, Kuh, D., Croudace and Jones, 2009). For instance, a research conducted in south eastern part of Nigeria among children in a special education facility where teacher's rated SDQ was used; it was found that boys scored higher on both Conduct and Hyperactive SDQ sub-scale than their female counterparts (Bakare et al., 2010). In the same vein, a 40years follow-up research, conducted among British adolescents concurred that males were more affected by externalizing behavioural problems and its further exploration showed that it propagates to adulthood if unchecked (Colman, Muray, Abbott, Maughan, Kuh, D., Croudace and Jones, 2009).

Moreover, disappointment in friendship with persons of opposite sex might also trigger misconducts (and vice versa) as explored in this study which could be a result of displacement of anger and bitterness. Gender difference in peer problem has not always been consistent. A research conducted in south-eastern part of Nigeria found that behavioural problem relating to peering was more prevalent among boys than girls [2] and this is in resonance with the findings in this present study. However, self-esteem has negative relationship with difficulty problems as found in other studies but age did not substantially correlate with the behavioural problems as documented in previous studies (Bakare, Ubochi, Ebigbo and Orovwigbo, 2010; Barnow, Lucht, Freyberger, 2005; Wallander, Dekker, and Koot, 2006).. There was a positive correlation between the behavioural difficulty subscales as observed in the previous studies (Stormshak, 1999); Ajidahun, 2001).

The impact of family background on child development cannot be over emphasized. In many African setting, adolescents are at risk of diverse psychosocial dysfunctions due to poor family settings accessioned by culture, beliefs, religion and a host of factors too numerous to mention. In the current study, adolescents from polygamous homes scored higher when



assessed for hyperactivity, peer problems and the overall difficulty. Though the current study was not designed to investigate why this was so, it is not unlikely for adolescents from polygamous home in the study location to have witnessed regular domestic violence, disharmony and other vices in various degrees. Such family violence has been implicated in psychosocial dysfunction among adolescents in a previous study. In a similar study conducted among adolescents in Australia, family history of domestic violence, physical abuse, and parental substance abuse are predominant risk factors for psychosocial dysfunctions among adolescents (Osborn, Delfabbro, and Barbe, 2008) Using the Strengths and Difficulties Questionnaire, Osborn et al (2008) found that over 75% of adolescents who participated in the study have clinical level of conduct disorder, about half of them are clinically anxious or depressed while two-thirds of them have peer relationship problems. In addition, adolescents with difficulties in parent-child relations have been reported to be more likely than those adolescents to have difficulties in peer relations and school performance than those without problems in family relations (Puig-Antich, Kaufman, Ryan, Williamson, Dahl, Lukens, Todak, Ambrosini, Rabinovich, and Nelson, 1993).

It is interesting to note that younger participants are more prosocial as revealed by the outcome of this study while participants with psychosocial dysfunctions have low self-esteem. This shows that low self-esteem is a risk factor for psychosocial disorders in this sample of adolescents. As one grows older, challenges increase, students get more involved in different form of competitions. It could be based on academic performance, friendship, parental independence or material things. However, when these targets are not timely met, they might feel disappointed. Hence, self-esteem diminished in the process.

The present study was conducted in only one of the 16 LGAs in Ekiti state. As such, the generalizability of the present study is limited. Also, as common with every cross-sectional study, it is difficult to determine causal relationship(s) in the present study. Notwithstanding, the current study provides local data that can inform a more robust study and intervention across the state/country.

It can be deduced from this study that boys are more exposed to externalizing problems than girls while family type, relationship with friends of the opposite sex, self-esteem and pro-social behaviours all has vital roles in the psychosocial functioning of adolescents. Parents, teachers, guardians and counsellors should encourage activities that would enhance mutual relationship among students and extra-moral activities could be helpful in this regard.

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Competing interests

Authors have declared that no competing interests exist.

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