Birth Order, Categories of Hearing Loss, and Conduct Disorders of Adolescent Students with Hearing Impairment in Ibadan, Nigeria

Bolanle O. Olawuyi
Department of Social Sciences Education, University of Ilorin, Nigeria

Mary O. Esere
Department of Counsellor Education, University of Ilorin, Nigeria
eserem@unilorin.edu.ng

Phebe B. Oluwawole
Department of Social Sciences Education, University of Ilorin, Nigeria

Hyginus C. Okonkwo
School of Education, Federal College of Education (Technical), Nigeria

Abstract

This study investigated the influence of birth order and categories of hearing loss on the conduct disorders of adolescent students with hearing impairment in Ibadan, Nigeria. The research was a descriptive survey involving 200 participants selected from three basic secondary schools for the deaf in Ibadan via purposive sampling and random sampling techniques. Rank order and chi-square statistical tools were used to analyse data. The results revealed that aggression, destruction of property, deceitfulness or theft and serious violations of rules are the commonest conduct disorders found among adolescents with hearing impairment and that birth order and categories of hearing loss did not have any influence on conduct disorders. The researchers recommended that more attention should be paid to the students with hearing impairment by educational psychologists, school guidance counsellors, parents, teachers and school administrators and they should not be discouraged from expressing themselves anytime they want to as they tend to become more aggressive when they cannot express themselves.

Introduction

Professional experience has shown that adolescents encounter behaviour related problems in their lives. This is because adolescence is described as a period of 'storm and stress' and also a time of psychological maturation during which a person becomes "adult-like" in behaviour (Adegoke, 2003). The adolescence stage is one of the most fascinating and complex transitions in the life span as adolescents are unquestionably at a vulnerable developmental stage as they attempt to navigate the difficult transition from childhood to adulthood (Laura, 2002). Young people manage this transformation successfully but many do experience major stress and find themselves engaging in behaviours that place their well-beings at risk (Adegoke, 2003). Laura (2002) defined adolescence as beginning with the onset of physiological normal puberty and ends when an adult identity and behaviour are accepted. It can also be seen at one time as the developmental period of transition between childhood and adulthood that involves biological, social, and cognitive changes; characterized by physical, social, cognitive, and moral changes.

Typical behaviour of adolescents include more attachment to their friends and preference for spending quality time with them and going against parental decisions when contrary to those of their friends. They see denial of their desires as challenging their rights and good choices (Hinshaw & Lee, 2003). With respect to these changes, adolescents are diagnosed with behavioural problems. These behaviours can only be considered to be a conduct disorder when they are repeated, resilient, long-lasting and when they violate the rights of others (National Institute for Health & Clinical excellence, 2007). Additionally, such behaviour-related problems are considered to be conduct disorder when they disrupt the everyday life of the child or family.

Conduct disorder, refers to a group of behavioural and emotional problems often differentiated from other psychiatric disorders diagnosed in children by the following criteria: persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated (American Psychiatric Association, 2000). Adolescents misbehave from time to time for a variety of reasons; maybe they feel that they need to gain their own independence

or they wish to reduce the limits imposed on them (Pruitt, 2000). In addition, adolescents are inclined to deviance when they are lost in the search for self. Sometimes they basically feel involvement in deviance is normal (Adegoke, 2003). They are also influenced by other factors like peer group, socio-economic status, family background or delinquent sub-culture. In addition, sometimes adolescents misbehave because they are experiencing internal distress, anger, frustration, disappointment, anxiety, or hopelessness (Pruitt, 2000). Conduct disorder can affect all categories of adolescents with or without hearing impairment (David & Alexandra, 2009).

Okuoyibo (2006) described hearing impairment as a generic term, which describes any condition that reduces the hearing acuity of an individual and makes it impossible for him or her to perceive and interpret auditory signals. Hearing impairment is also described as impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance. The impairment may occur during or shortly after birth (congenital or early onset or may be late onset) caused, post-natal, by genetically motivated factors, trauma or disease. People who have mild or severe hearing loss may have trouble with understanding, especially in a noisy environment. They may also experience speech-language deficits and exhibit lower academic achievement and poorer social-emotional development than their peers with normal hearing (Okuoyibo, 2006).

Among the conditions that affect the development of communication skills by persons with hearing impairments are personality, intelligence, nature and degree of deafness, degree and type of residual hearing, degree of benefits derived from amplification by hearing aid, family environment, and age of onset (Bakare, 2013). Age of onset such as pre-lingual and post-lingual and the various types of hearing impairments, which include conductive hearing loss, sensorineural hearing loss, and Auditory Processing Disorder (APD) play a crucial role in the development of language (Bakare, 2013). This is why adolescent conduct disorder is also important to note at this point because even though students with hearing impairment have difficulties with communication, it does not affect their transition into the adolescent stage as they equally behave like other adolescents.

Adolescents' involvement in deviant behaviours has caused a significant impediment to their social, academic, moral, and family functioning. Most children show traces of poor judgment and deviant behaviour at least one time during their childhood but the distinction is that children with conduct disorder break the rules over and over again (Bakare, 2013). Therefore, the behaviour is not considered conduct disorder if it has not been repeatedly exhibited. Conduct disorder in adolescents may be expressed in the form of any of a range of diverse behavioural patterns, from the frequent and intense temper tantrums and persistent disobedience of the difficult child to the delinquent's serious acts of aggression, such as theft, violence, and rape.

Many factors contribute to a child developing conduct disorder. Such factors may include brain damage, child abuse or neglect, genetic vulnerability, school failure, traumatic life experiences (Hinshaw & Lee, 2001), and family dynamics (Anokam, 2002). However, this study is interested in the way in which birth order and categories of hearing loss may contribute to conduct disorder. Since birth order, which is the rank of siblings by age is believed to have a profound and lasting effect on psychological development of the child, it is arguable too that birth order can contribute to conduct disorders.

A hearing loss can be classified as a conductive, sensorineural or mixed hearing loss, based on the anatomic location of the problem (site of lesion, i.e., middle or inner ear). A hearing loss may also be labelled as unilateral or bilateral, depending on whether the loss is in one (unilateral) or both (bilateral) ears (Ajibade, 2013). The degree of loss might be the same in both ears (symmetrical hearing loss) or it could be different for each ear (asymmetrical hearing loss) (Shemesh, 2010). Shemesh said conductive hearing loss is characterized by an obstruction to air conduction that prevents the proper transmission of sound waves through the external auditory canal and/or the middle ear. It is marked by an almost equal loss of all frequencies. The auricle (pinna), external acoustic canal, tympanic membrane, or bones of the middle ear may be dysfunctional. Conductive hearing loss may be congenital or caused by trauma, severe otitis media, otosclerosis, neoplasms, or atresia of the ear canal.

Sensorineural hearing loss occurs when the sensory receptors of the inner ear are dysfunctional. Sensorineural deafness is a lack of sound perception caused by a defect in the cochlea and/or the auditory division of the vestibule or cochlear nerve. This type of hearing loss is more common than conductive hearing loss and is typically irreversible. It tends to be unevenly

distributed, with greater loss at higher frequencies (Shemesh, 2010). Shemesh stated that many patients with sensorineural hearing loss could be habilitated or rehabilitated with the use of hearing aids. Patients with profound bilateral sensorineural hearing loss (e.g., at least 90 dB) who derive no benefit from conventional hearing aids may be appropriate candidates for the cochlear implant device, which bypasses the damaged structures of the cochlea and stimulates the function of the auditory nerve.

Hard of hearing refers to a person with a hearing loss who relies on residual hearing to communicate through speaking and lip-reading. Residual hearing refers to the hearing that remains after a person has experienced a hearing loss (Okuoyibo, 2006). Children who are diagnosed with conduct disorder judge the world as an antagonistic and intimidating place. They may rattle on friends or blame others for the harm they have caused. They have few if any friends because of their limited interpersonal skills. Peers and family members may view them as irritating because of their indifference to their actions. They often have low self-esteem internally but externally they appear tough, cocky or self-assured (Evans, 2003).

The Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV) and the International Classification of Diseases, Tenth Revision (ICD-10) agree on the global definition of conduct disorder and on the value of differentiating childhood-onset and adolescent-onset. However, there are differences. While ICD-10 emphasises the socialisation aspect and classifies ODD as a subtype of conduct disorder, DSM-IV sees ODD as a distinct, strictly personalised diagnostic category. In ICD-10, attention-deficit/hyperactivity disorder is called hyperkinetic disorder and there is a special mixed category for those in whom hyperkinetic disorder and conduct disorder co-occur. DSM-IV-TR recognizes two types of Conduct Disorders. They are childhood onset and adolescent onset. The childhood onset type presents at least one symptom before age 10 and the adolescent onset type does not display any symptoms prior to age 10 (Hughes, Crother & Jimerson, 2008).

The exact cause of conduct disorder is not known, but it is believed that a combination of biological, genetic, environmental, psychological, and social factors play a role. According to Laura (2002), genetic factors, family interactions, peer groups, and environmental factors influence the development and maintenance of conduct disorder. These factors develop and influence each other across time and situations and cannot be separated from one another. Conduct disorders such as violence, substance abuse, fighting, bullying, cheating, smoking, lying, rape, and murder are also associated with peer influence and society (Cicely, 2011).

Children with Conduct Disorder display difficulties adjusting to the classroom environment. They also show social skill deficits, low academic achievement, and aggressive behaviour. In addition, such children are often dismissed from school because of disciplinary problems and have a higher probability of dropping out of school because of their behaviour (Hughes et al., 2008). A study by Rowe (2010) demonstrated that previous antisocial or aggressive behaviour displayed in children including property destruction, theft, or sexual intercourse increases the risk of involvement in further negative behaviour. There are also different psychiatric disorders that are linked to conduct disorders such as substance abuse, depression; mania, schizophrenia, and ASPD (Cook, 2005).

Considering the cross cultural implications of these issues, there is a scanty literature and a notable lack of in-depth study on the influence of birth order and hearing loss on conduct disorders of adolescent students with hearing impairment in Ibadan. Hence, the following research questions were generated for the purpose of this study:

1. What are the conduct disorders that can be found among adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?
2. What are the different categories of hearing loss found among adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?
3. Is there any relationship between birth order and conduct disorders among adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?
4. Is there any relationship between categories of hearing loss and conduct disorders of adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?

Method

Design

The study employed the descriptive survey design. The descriptive survey involves gathering information on people's opinion, beliefs attitude, motivation, and behavior (Daramola, 2006)

Participants and Sampling

The population for the study consisted of all adolescent students with hearing impairment in the three secondary schools for the hearing impaired in Ibadan. The sample comprised 200 adolescent students with conduct and non-conduct disorders. Purposive sampling technique was employed to identify 38 students with conduct disorders through the records of the school counsellors, disciplinary committee, and class teachers while random sampling technique was used to select 162 students without conduct disorders.

Instrumentation

The major instrument for this study was a researcher-designed questionnaire titled "Adolescent Conduct disorder Scale" (ACDS) which was adapted from a Self-Report Survey Questionnaire developed by Zenzile in 2008. Test retest method was used to establish the reliability of the instrument. The reliability coefficient of the instrument was found to be 0.72. Rank order and Chi-square statistical tools were used to test the research questions.

Results

What are the various conduct disorder that can be found among adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?

Results in Table 1 reveal that the respondents exhibited all activities listed (in varying degrees). For instance "Beaten up another pupil in fight" was ranked first with the mean score of 2.72. "Made marks or wrote mean things on school desks" was ranked second with the mean score of 2.42 while "Disobeyed my teacher or other school Official" was ranked third with the mean score of 2.31. "Taken someone else's property" and "Intentionally throwing a stone(s) at someone's house or vehicle" was ranked 9th and 10th with the means score of 1.85 and 1.44 respectively (See Table 1).

This implies that conduct disorder, which include aggression to people or animals, destruction of property, deceitfulness or theft, and serious violations of rules were all found among adolescent students with hearing impairment in Ibadan. Beating and fighting, which is an example of 'Aggression to people and animal' was the most common conduct disorder found among adolescent students with hearing impairment in Ibadan while "Intentionally throwing a stone (s) at someone's house or vehicle" an example of 'Destruction of property' is found but rarely among them.

What are the different categories of hearing loss found among adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?

Results in Table 2 revealed the percentage level of the number of students according to their degrees/categories of hearing loss. The result showed 66 respondents representing 33.0% were hard of hearing while 134 respondents representing 67.0% were deaf. This implies that most of the respondents had no hearing at all and were therefore totally deaf while some others had partial hearing loss and were not completely deaf (See Table 2).

Is there any relationship between birth order and conduct disorders among adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?

Table 3 shows that the calculated Cal. X^2–value is 1.24 with calculated significance of 0.54 computed at critical alpha level of significance 0.05. Since the calculated significance (0.54) is greater than the critical alpha level of significance (0.05), this implies that there was no relationship between birth order and conduct disorder among adolescent students with hearing impairment in Ibadan, Nigeria (See Table 3).

Is there any relationship between categories of hearing loss and conduct disorders of adolescent students with hearing impairment in secondary schools in Ibadan, Nigeria?

Table 4 shows that the calculated Cal. X^2–value is 1.84 with calculated significance of 0.18

Table 1

Mean Ranking of the Conduct Disorder Found Among Hearing Impaired Secondary School Adolescents

S/N	Activities	Mean
1	Beaten up another pupil in fight	2.72
2.	Made marks or wrote mean things on school desks	2.42
3.	Disobeyed my teacher or other school Official	2.31
4.	Destroyed property belonging to my School	2.27
5.	Spread bad stories about another pupil (s) at school	2.23
6.	Stayed away from school without a valid reason	2.20
6.	Secretly watched a video or film reserved for adults only	2.20
8.	Drank beer, wine or hard liquor while with friends or alone	2.19
9.	Taken someone else's property	1.85
10.	Intentionally thrown a stone (s) at someone's house or vehicle	1.44

Table 2

Respondents by their Categories of Hearing Loss

Hearing loss	Non Conduct Disordered	Conduct Disordered	Frequency	Percentage
Hard of hearing	57	9	66	33.0
Deafness	105	29	134	67.0
Total	162	38	200	100.0

Table 3

Analysis Showing Birth Order and Conduct Disorder

			Birth order							
			First born	Middle born	Last born	Total	df	Cal. val	Cal. Sig.(2 sided)	Decision
Behaviour	CD	Observed	6	24	8	38	2	1.24	.54	Not rejected
		Expected	6.1	21.3	10.6	38.0				
	NCD	Observed	26	88	48	162				
		Expected	25.9	90.7	45.4	162.0				
Total		Observed	32	112	56	200				
		Expected	32.0	112.0	56.0	200.0				

Table 4

Chi-square Analysis Showing the Relationship between Categories of Hearing Loss and Conduct Disorder

			Hearing loss		Total	df	Cal. value	Cal. Sig.(2sided)	Decision
			Hard of hearing	Deaf					
Behaviour	CD	Observed	9	29	38				
		Expected	12.5	25.5	38.0	1	1.84	.18	Not rejected
	NCD	Observed	57	105	162				
		Expected	53.5	108.5	162.0				
Total		Observd	66	134	200				
		Expected	66.0	134.0	200.0				

Critical level of sig. = 0.05

computed at critical alpha level of significance 0.05. Since the calculated significance (0.18) is greater than the critical alpha level of significance (0.05), this implies that there was no relationship between categories of hearing loss and conduct disorder among adolescent students with hearing impairment in secondary school in Ibadan, Nigeria (See Table 4).

Discussion

The findings of this study revealed that aggression to people or animals, destruction of property, deceitfulness or theft, and serious violations of rules were the most common conduct disorders found among adolescent students with hearing impairment. This is in support of Bakare's (2013) opinion that children with hearing impairment may increase their tendency to aggression due to deprivation from the skills of understanding what is spoken and expressing what they think, depending on the degree of hearing loss. Many studies demonstrated that a child with impairment manifesting all these physical insufficiencies and disability have to deal with many problems. The deprivation of communication becomes influential on the development and emotional harmony of such a child and isolation starts as the child grows (Dagbo, 2010). Children with hearing impairment display many behaviour problems (emotional, relational, hyperactivity, peer relationship). The problems of children with hearing impairment generally emerge when they start to learn the words during pre-school; this is because, they can become aggressive when they cannot express themselves and may be more stubborn than their hearing and speaking peers. The child may be extremely angry, bad tempered and aggressive, since he/she has difficulty in expressing wishes, feelings and thoughts (Okuoyibo, 2006).

The study found no relationship between birth order and conduct disorders among adolescent students with hearing impairment in Ibadan, Nigeria. This corroborates the study by Smith (2003) who examined birth order and reactions to stimuli such as frustration. The research, however, revealed contradicting findings and consequently did not indicate any correlations between actual birth order and reactions to frustration. Contrary to findings of this study, Smith (2003) found correlations between perceived positions and characteristics that were assumed to be associated with that specific position and significant data provided strong support for connections between certain positions and characteristics. The findings of Eze, Catherine and Agulanna (2012) also indicated that birth order was a significant factor in conduct disorder of secondary school students.

In addition, there was no relationship between categories of hearing loss and conduct disorders among adolescent students with hearing impairment in Ibadan. This concurs with the findings of Erika (2005) that the degree of hearing impairment or hearing loss is not correlated with the range of mental health problems including behavioural disorders. The children with hearing impairment may have difficulties in concentrating

but their hearing loss alone is unlikely to have a profound effect on their development. In contrast, children with severe to profound (i.e., <70 dB hearing loss in the better ear) early onset (i.e., within the first year of life) bilateral sensorineural deafness will need significant special interventions and many aspects of their development may be affected, including their mental health.

The finding of this study lend credence to the fact that students with hearing impairments are not different from other children; therefore, they manifest all the characteristics of children with conduct disorders. Though their condition may predispose them to behaviours considered to be conduct disorders, it does not however mean that it is their hearing loss. The implication here is that they should be looked after like other children irrespective of the severity of the hearing loss, to provide preventive measures. The emphasis on inclusive education as the best option for educating students with special education needs, places premium on treating every students the same way in the same class environment. It is important to identify such conduct disorders that are common among children with hearing impairment so that teachers, counsellors and other caregivers would pay attention and provide the appropriate counselling services needed for them to survive in an inclusive environment.

Conclusion

Conduct disorder in students has been shown to be associated with disruptions within oneself, families, schools and the society. It has been reported that social, emotional and psychological problems affect the adolescents due to neglect from parents or caregivers. Educational psychologists and school counsellors should provide guidance services to parents and teachers on the effective management of conduct disorders. Teachers should be encouraged to develop positive characteristics and serve as good role models to the students. Equally, it has been revealed that adolescents with hearing impairment are prone to emotional and behavioural challenges as a result of difficulties in verbal expression. Parents and teachers should therefore endeavour to promote effective means of communication to reduce the risk of behavioural problems.

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