



## Effect of Cognitive Behaviour Therapy (CBT) on Adolescents' Aggressiveness among Senior Secondary School Students in Yobe State, Nigeria

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### Abstract

*The rise in the popularity of adolescence aggressiveness comes with identifies characterized symptoms such as stress and storm; and unresolved identity crisis. Doubt may arise as to some factors such as gender, parenting styles and parental socio-economic status to influence aggressive behaviour among students. Therefore, this study investigated the effect of Cognitive Behaviour Therapy (CBT) on adolescents' aggressiveness among senior secondary school students in Yobe State, Nigeria. Using a sample of 300 aggressive adolescent students purposively selected, a cohort quasi-experimental research was conducted. The study uses Conduct Disorder Scale, Parental Socio-Economic Scale and Parenting Styles Scale as data collection instruments with reliability coefficient of .82; .78; .72 respectively. Data collected was analyzed using t-test for independent sample for research hypotheses 1 and 2 while ANCOVA was used to test hypotheses 3 and 4. The findings reveals that there was significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State ( $t=-7.227, p=.000, p<.05$ ); a significance difference between male and female senior secondary school adolescents' student treated with CBT was also found ( $t=3.391, p=.002, p<.05$ ); there was significance difference between students from authoritative parenting style and students from permissive parenting style ( $F=7.537, p=.003, p<.05$ ) and there was significance difference between students from low socio-economic status and those from high socio-economic status with respect to the effect of CBT on their aggressive behaviour ( $F=2.604, p=.002, p<.05$ ). The study therefore recommends among others that counsellors, psychologists, social workers at the secondary schools and other helping professionals should use CBT since it was found effective in the treatment of aggression on adolescents and that counselling psychologists and social workers at the secondary schools should endeavor to attend conferences, workshops and be acquainted with current and relevant literatures on CBT and more research should be intensified in order to proffer solution to the challenges that are faced by the adolescents' students in secondary schools.*

**Keyword: Adolescents, Aggressiveness, Cognitive Behaviour Therapy and Gender**

## INTRODUCTION

Aggression is a serious behavioural and emotional syndrome that can occur on adolescents. Adolescents with this disorder may parade a pattern of disruptive and violent behaviour and have problems of ensuing rules and regulations (Hinshaw & Lee, 2003). It is not rare for adolescents to have behaviour-related problems at some time during their development. However, the aggression is considered to be a conduct disorder when it is long-lasting and when it violates the rights of others, when it goes against accepted norms of behaviour and disrupts the child's or family in everyday life (Hinshaw & Lee, 2003; Goldberg, 2012).

In another vein, the word adolescence comes from a Latin word “adolescence” which means to grow or to grow to maturity (Oladele, 1994; Martins, Carlson & Buskist, 2007). Psychologists have given different definitions of adolescence. Some define it as the transitional period of life between childhood and adulthood; while at other times it is called the period of teenage which is marked by changes in the body, mind and social relationships. This means that the transition is as much social as it is biological. Adolescence is the time between the beginning of sexual maturation (puberty) and adulthood. It is a time of psychological maturation during which a person becomes "adult-like" in behaviour. According to Sacks (2003) adolescence begins with the onset of physiologically normal puberty and ends when an adult identity and behaviour are accepted. This period of development corresponds roughly to the period between the ages of 10 and 19, which is consistent with the World Health Organization definition of adolescence (WHO, 2013).

Martins, Carlson and Buskist (2007) opined that adolescence starts from teen age and ends in the early twenties, while Gutgesell and Payne (2004) describe adolescence as a prolonged developmental stage that lasts approximately ten (10) years, technically it is described as between the ages of eleven (11) and twenty-one (21). It is also noted that an adolescent progresses through stages of biological development as well as changes in psychological and social functioning. Developing proper emotions and controlling them is very essential during adolescence. Meeting social demands as well as eliminating the damaging effects of the emotions on attitudes, habits, behaviour and physical well-being, as well as control of emotions is essential. Control does not mean repression but learning to approach a social situation with a rational attitude and repression of those emotions

which are socially unacceptable.

When an individual reaches adolescence, he/she knows what type of behaviour is expected of him or her and which behaviour are unacceptable. Adolescents however misbehave from time to time for a variety of reasons. Perhaps, they feel that they need to assert their own independence or they wish to test the limits imposed on them. Sometimes, adolescents misbehave because they are experiencing internal distress, anger, frustration, disappointment, anxiety, or hopelessness. There are also those whose behaviour is consistently of concern to others. In such cases, the adolescents' behaviour is clearly outside the range of what is considered normal or acceptable. Perhaps, most alarming is that many of them show little remorse, guilt, or understanding of the damage and pain inflicted on people by their behaviour (Pruitt, 2000). Therefore, the future of any nation is largely determined by the well-being of adolescents. Dealing with adolescents has always been a challenge for both parents and helping professionals. Behavioural disorders typically develop in childhood and adolescence. While some behavioural issues may be normal, those who have behavioural disorders develop chronic patterns of aggression, defiance, open refusal to laws or regulations, disruption and hostility. Adolescents' behaviour can cause problems at home or school and can interfere with relationships. Adolescents with behavioural disorders may develop personality disorders, depression, or bipolar disorder as adults (Richard & Harrington, 2008).

Cognitive Behaviour Therapy (CBT) is a type of psychotherapeutic treatment that helps understand the influence of thoughts and feelings on human behaviour. CBT begins with a careful behavioural analysis, examining the symptom and stimuli or thought associated with it. It then tailors' procedures to address problematic behaviour, cognitive and emotional responses. Therefore, negative and unrealistic thought can cause distress and result into problem, such as the thought experience by students having low self-esteem. One example could be a student who, after making mistake may think he/she is useless and cannot do anything right. This may impact negatively on their moods, making the students feel worst about themselves, and the problem may be worsened if the students react by avoiding school activities.

Reinecke, Dattilow and Freeman (2003) in their views, noted that the use of CBT has been extended to children and secondary school students with good result. It has often been used to treat depression, aggression,

anxiety disorder, and symptom related to trauma and post-traumatic stress disorder with good success. For example, Ojogbane and Amalia (2016) found out that the used of CBT reduces examination misconduct in secondary schools, and also found that the used of CBT reduces examination misconduct of females more than male students in secondary schools. Olufunmilola (2013) study revealed there is no significant difference in the order of prominence in conduct disorder of the followings: prevalence of paternal and maternal parenting styles, cognitive restructuring and behavioural rehearsal and cognitive restructuring and behavioural rehearsal on the basis of gender and parental SES. Others include parenting styles, age, educational level, and length of stay at the correctional centers. There was a significant difference in the followings: degree of severity of conduct disorder before and after treatment, treatment of conduct disorder of participants in the two experimental groups when compared with the control group and cognitive restructuring and behavioural rehearsal on the basis of religion.

In addition, empirical evidence by Cohen, Cohen, Kasen, Velez, Hartmark, Johnson, Rojas, Brook and Streuning (1993) has shown that sex differences exist in the age of onset of conduct disorder. The median age of onset for this disorder has been found in the 8 to 10-year-old range. Most boys had an onset before the age of 10, while girls had onset ranging from the ages of 14 to 16. The study of Cohen et'al. (1993) revealed that conduct disorder was about twice as prevalent for boys than girls. However, the prevalence for boys was highest at younger ages (10-12) and higher for girls at older ages (14-16). These results suggest that developmental trends in boys and girls differ throughout the pre-adolescence and adolescence stages and may directly impact the rates of behaviour problems for children at the school, district, and the governmental levels. Melgosa (1997); Gidden (2004) and Agnew (2005) accounts that the prevalence of conduct disorder is estimated at about 2% for girls and 9% in boys. APA (1994) reports that conduct disorder is more common in boys (6-16%) compared to girls (2-9%).

Similarly, ineffective parenting behaviours such as poor supervision, rejection, harsh and inconsistent discipline and poor parenting techniques may place adolescents at risk for developing aggression. Research reveals that adolescents are at risk of engaging in delinquent behaviours when they are exposed to ineffective pa-

renting techniques (Patterson, Reid & Dishion, 1992; Mmari, Blum & TeufelShone, 2010), parental rejection (Barnow, Lucht, & Freyberger, 2005); harsh and inconsistent discipline and poor family relationships (Conger & Simons, 1997; Edwards, Dodge, Latendresse, Lansford, Bates, & Pettit, 2010). Santrock (2007) explain that juveniles will return to future delinquent acts if their parents remain unchanged in the areas of consistent limit setting, rebuilding emotional attachments and improved communication. Previous studies evaluating programmes meant to reduce aggressiveness in adolescents have generally focused on adolescent behaviour as the outcome of interest (Greenwood, 2008). Few studies have evaluated juvenile justice interventions relative to parental involvement and readiness for change.

Moreover, Socio-Economic Status (SES) is an economic and sociologically combined total measure of a person's work experience and of an individual's or family economic and social position in relation to others, based on income, education, occupation, neighborhood and political power. When analyzing a family SES, the household income, earners' education, and occupation are examined, as well as combined income, as against that of an individual, when their own attributes are assessed (National Center for Educational Statistics, 2008). SES is typically divided into three categories, high SES, middle SES, and low SES. According to Aneshensel and Sucoff (1996) parental SES is seen as influencing the adolescents' exposure to stress and access to resources, which, in turn, affects the adolescent mental health (Depression, Anxiety, Oppositional Defiant Disorder, and Aggression). This relationship exists in part, because family SES physically places adolescents within neighborhoods that vary with regard to the presence of social stressors and resources. Thus, both family SES and neighborhood are seen as affecting adolescent emotional well-being by regulating exposure to stressors and access to resources. In similar vein, Aneshensel and Sucoff (1996) found that youths in low socioeconomic status (SES) neighborhoods perceive greater ambient hazards such as crime, violence, drug use, and graffiti than those in high SES neighborhoods. The perception of the neighborhood as dangerous, in turn, influences the mental health of the adolescents: the more threatening the neighborhood, the more common the symptoms of depression, anxiety, oppositional defiant disorder, and conduct disorder.

Demarest, Reisner, Anderson, Humphrey, Farquhar and Stein (1993) and Dada (2004) are of the view

that a family's SES is based on family income, parental education level, parental occupation, and social status in the community (such as contacts within the community, group associations, and the community's perception of the family). Hausman and Hammen (1993); American Academy of Pediatrics (1995) and Carr-Hill, Rice and Roland (1996) observed that social disadvantage, homelessness, low socio-economic status, poverty, overcrowding and social isolation are broader factors that predispose adolescents to aggression. It seems that the longer the child has been living in poverty within the first four years of his or her life, the more prevalent externalizing behaviour problems become (Duncan, Brooks-Gunn & Klebanov, 1994). According to Graham (2004) children from large families and those living in homes where divorce or separation has occurred are at greater risk of aggression. Children with aggressive behaviours are more likely to come from troubled neighborhood. It is based on the above evidence of CBT in treating other disorder, and to add more to the existing literature that the researchers examined the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State, Nigeria.

## **STATEMENT OF THE PROBLEM**

In recent time, the levels of aggressive behaviour have been on the increase all over Yobe State. There are no restrictions to where these behaviours are exhibited. Such have been witnessed in work places, markets, recreational parks, motor stations, churches/mosques, schools/colleges and universities, and so on. Almost on daily bases, reports of aggressive acts graced newspaper headlines in Nigeria. Aggression is a physical or verbal behaviour intended to hurt someone. Similarly, researchers opined that aggression is any behaviour directed toward another individual that is carried out with the proximate intent to cause harm.

Adolescents with behavioural disorder not only affect themselves, their families and schools negatively but also the society at large. Increase in adolescents' behavioural disorder has led to a leap in chaos, disorderliness, destruction of lives and properties, armed robbery, terrorist activities, kidnapping, and many more evils. The Nigerian government established Remand Homes (now Secondary schools), Approved Schools and Juvenile Courts to address these behavioural disorders in adolescents but mere admission of the latter is not sufficient to reduce or eradicate the aggression. For adolescents with aggression to be helped, there is, therefore, the

need to expose them to counselling interventions in order for them to become responsible individuals to themselves and their parents, the school community and worthy ambassadors of the nation as a whole. Various behavioural modification techniques like cognitive restructuring, self-management and token economy among others have been used to treat rebelliousness, disorderliness, depression, anxiety, gambling, attention deficit hyperactivity disorder and other disruptive behaviours. It is in the light of this persistence wrong doing of our adolescents that this study therefore investigates the ways in which CBT is effective to reform and rehabilitated the adolescent's aggressiveness in senior secondary schools in Yobe State, Nigeria.

### **OBJECTIVES OF THE STUDY**

The objectives of the study are to:

1. Find out the effect of Cognitive Behaviour Therapy (CBT) on adolescents' aggressiveness among senior secondary school students in Yobe State, Nigeria
2. Determine whether the effect of CBT will differ according to gender of aggressive adolescents in senior secondary school of Yobe State
3. Determine whether the effect of CBT on adolescents' aggressiveness among Yobe State Senior Secondary School Students will vary according to parenting styles
4. Determine whether the effect of CBT on adolescents' aggressiveness among Yobe State Senior Secondary School Students will vary according to parental socio-economic status

### **RESEARCH HYPOTHESES**

The following null hypotheses were tested at 0.05 level of significance:

- H<sub>01</sub>:** There is no significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State.
- H<sub>02</sub>:** The effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly differ according to gender.
- H<sub>03</sub>:** The effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parenting styles.

**H<sub>04</sub>:** The effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parental socio-economic status.

## **METHODOLOGY**

This study adopted quasi-experimental research designs. Specifically, the study utilizes the cohort quasi-experimental design. This design is aimed at comparison of post-test scores of two or more cohorts (Kpolovie, 2010). Cohort design is use to investigate the effect of treatment conditions on a dependent variable by obtaining post-test scores from one of a cohort and comparing them with pot-test scores of a cohort control groups. The researchers are convinced that this present study effect of CBT on adolescent aggressiveness among senior secondary school students in Yobe State, Nigeria will be most appropriate with the use of cohort quasi-experimental research design.

The target population for this study comprised all aggressive adolescents' students in Government Senior Secondary Schools in Yobe State, Nigeria. Multi-stage sampling technique was used for the study. The first stage witnessed stratified sampling technique to divide the state in to three political zones (Zone A, B and C). The second stage witnessed selection of two (2) unisex schools and one (1) coeducational school. The third stage witnessed purposive selection of one hundred (100) adolescents from each selected school making the total population of three hundred (300) high aggressive adolescents which was identify through administration of conduct disorder scale. The instruments utilized in this research work were three and these include: Conduct Disorder Scale (CDS); Parenting Style Scale (PSS) and Socio-Economic Scale (SES).

### **CONDUCT DISORDER SCALE (CDS)**

Conduct disorder scale (CDS) was designed by James E. Gilliam in 2002. The CDS is preferred in this study because it is an efficient and effective instrument for evaluating students that are exhibiting severe behaviour problems and may have Aggression. Furthermore, it provides standard scores for use in identifying students with Aggression. The 40 items that are on the CDS depicts the specific diagnostic behaviours that are characteristic of persons with Aggression. The instrument has the reliability coefficient of .82.



## **PARENTING STYLE SCALE**

The researchers used a 5-like likert scale to score the adopted version of Abubakar, Fons, Van, Angela, Penny and Weny (2015) Parenting Style Scale. The scale is divided into three sections namely authoritative, authoritarian and permissive parenting styles which are in alignment with Baumrind (1971, 1991) and McKay (2006). Each section is made up of fifteen (15) items with a response scale from Never (1) to Always (5). However, in order the scale to suit the present study it was divided into (2) section authoritative and permissive. The instrument was given to four experts in the psychology department who ascertained its face and content validity. The instrument was further subjected to empirical validation. A pilot study was carried out at different secondary schools on adolescents with aggression record to validate the instrument. Test-retest reliability was carried out by administering the instrument to one hundred and fifty (150) adolescents comprising 71 males and 79 females. After an interval of four weeks, it was re-administered to the same set of adolescents. The scores of the two sets were correlated using the Pearson r. The correlation coefficient was found to be .78. The items on this scale are based on the Likert-like scale (i.e., Never (1); Almost never (2); Sometimes (3); Often (4) and Always (5).

## **SOCIO-ECONOMIC SCALE (SES)**

This Scale was used by Dada (2004) to measure the socio-economic status of individuals through their parents' profession, educational level, residence and type of equipment in the house. The scale comprises items as: items 1-4 focus on participants' bio-data, with items 5-12 focusing on the parents' occupation, educational level, residence and types of equipment in the house. The scale has a reliability coefficient of 0.73. The scoring pattern for the Scale is: Parents' occupation: 1–10 points; Educational Level: 1–14 points; Parents' Residence: 1–6 points; Type of House: 1–3 points and Equipment in the house: 1–27 points. The maximum point is sixty (60) which is further divided into three (2) parts: Lower socio-economic status (0–30 points) and High socio-economic status (31–60 points).

Before the commencement of counselling sessions, the researchers obtained an introductory letter from Yobe State Ministry of Education (YSME) to the principals of the selected schools for further necessary assis-

tance, after consulting the principals; the purpose of the programme was spelled out, and the strategies to be used and the samples size to be employed to get the aggressive students was discussed. Moreover, the data was collected in three different but interconnected phases, viz:

1. Pre-test and placement of subject into experimental and control group.
2. Treatment: (Administration of Cognitive Behaviour Therapy to the experimental group for the period of eight (8) counselling sessions and 1 hour per session and also administration of placebo treatment to the control group on Current Health Issues for the period of eight (8) sessions and 1 hour per session as well). Table 1 represent the treatment schedule as implemented.

Table 1: Treatment Schedule to be implemented

Grouping	Treatment Days	Time	No. of Sessions	No. of Client Involved
Experimental Group	Monday, Wednesday, and Saturday one day for each school	2:00pm-3:00pm (once in a week and 1 hour per session)	Eight Counselling sessions on CBT for aggressiveness	50 participants for each school (150) students for each school
Control Group	Monday, Wednesday, and Saturday one day for each school	4:00pm-5:00pm (once in a week and 1 hour per session)	Eight sessions on current health issues for control group	50 participants for each school (150) group for each school

3. Post-test (Re-administration of the instruments to the participants)

The study employed the use of inferential statistical of t-test to test hypotheses 1 and 2 while ANCOVA to test the hypotheses 3 and 4. The reason for selecting these tools was to determine the effect of cognitive behaviour therapy on aggressive behaviour of senior secondary school student adolescents and to determine the effect of the therapy on gender, parenting styles and parental socio-economic status.

## RESULT AND DISCUSSION

**Hypothesis 1:** There is no significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State.

Table 2: Result of t-test for independent sample between CBT and Control group of aggressive adolescent students

Group	N	$\bar{X}$	Std Dev	Std Error Mean	t	df	sig.(2-tailed)
Experimental	150	31.3529	6.11291	1.48260	-7.227	148	.000
Control	150	48.0588	9.43710	2.28883			

In order to test the null hypothesis that there is no significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State, t-test for independent sample was performed. From the table 2, there was significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State. This was based on the t-calculated value ( $t=-7.227$ ,  $p=.000$ ,  $p<.05$ ). Based on the obtained result a significant effect exists between experimental and control groups. Thus, the null hypothesis stating there is no significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State is hereby rejected.

**Hypothesis 2:** The effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly differ according to gender

Table 3: Result of t-test for independent sample between male and female aggressive adolescent students in Yobe state

Gender	N	$\bar{X}$	Std Dev	Std Error	df	t-cal	t-crit	Sig (p)
Male	75	30.9474	6.07795	1.39438	148	3.391	2.05	.002
Female	75	24.6364	1.02691	.30963				

Result in table 3 is the independent sample t-test which showed that, there is a significant difference between male and female aggressive adolescent students exposed to CBT. This is because the calculated p-value of .002 was found to be lower than the 0.05 alpha level of significance, while the t-calculated value of 3.391 was found to be higher than the t-critical value of 2.05 at df 148. The calculated mean value of 30.9474 and standard deviation value of 6.07795 for male students is higher than the calculated mean value of 24.6364 and

standard deviation value of 1.02691 for female students. This implies that female students adjusted better than the male students. Consequently, the null hypothesis which state that the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly differ according to gender is hereby rejected.

**Hypothesis 3:** The effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parenting styles.

**Table 4:** Analysis of Covariance (ANCOVA) for the significant effect of CBT in mean scores of aggressive adolescent students exposed to CBT in Pretest and Posttest score

Dependent Variable: Post-Test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	397.536a	3	132.512	6.203	.003
Intercept	558.675	1	558.675	26.152	.000
Pretest	91.069	1	91.069	4.263	.049
Parenting Style	322.011	2	161.006	7.537	.003
Error	555.431	146	21.363		
Total	25549.000	150			
Corrected Total	952.967	149			

a. R Squared = .417 (Adjusted R Squared = .350)

Result on the table 4 showed the null hypothesis which state that the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parenting styles is rejected since the table showed an F-value of 7.537 and the p-value of .003 which is less than 0.05. This indicates that the null hypothesis is hereby rejected. Thus, the researchers upholds that there is significant effect of CBT on the mean score of aggressive adolescent students' according to parenting styles.

**Hypothesis 4:** The effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parental SES

**Table 5:** Analysis of Covariance (ANCOVA) for the significant effect of mean scores of students exposed to CBT in Pre-test and Post-test according to parental socio-economic status

Dependent Variable: Post-Test

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	403.511a	3	134.504	2.405	.002
Intercept	672.393	1	672.393	56.089	.000
Pretest	137.361	1	137.361	.181	.017
SES	327.986	2	163.993	2.604	.002
Error	549.456	146	21.133		
Total	25549.000	150			
Corrected Total	952.967	149			

a. R Squared = .423 (Adjusted R Squared = .357)

Result on the table 5 showed the null hypothesis which state that the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state does not significantly vary according to parental socio-economic status is rejected since the table showed an F-value of 2.604 and the p-value of .002 which is less than 0.05. This indicates that the null hypothesis is rejected. Thus, the researchers upholds that there is significant effect of CBT on mean scores of students exposed to CBT in pre-test and post-test according to parental socio-economic status.

## DISCUSSION

Research hypothesis one tested the significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State. The result of the data analysis reveals that there was significant effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe State. The finding is in consonance with the previous findings of Reinecke, Dattilow and Freeman (2003); Ojogbane and Amalia (2016); Olufunmilola (2013) that CBT has been effective and extended to children and secondary school students with good result. CBT begins with a careful behavioural analysis, examining the symptom and stimuli or thought associated with it. It then tailors' procedures to address problematic behaviour, cognitive and emo-

tional responses.

Research hypothesis two tested the whether the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly differ according to gender. The study revealed a significance difference between male and female senior secondary school student. The finding is in line with the previous study of Ojogbane and Amalia (2016) whose finding reveals that the used of CBT reduces examination misconduct of females more than male students in secondary schools. However, female students are more responsive to the CBT, this is so, because researches have suggested that males use more physical aggression than females while females use more verbal aggression than males. There are more recent findings that indicate that differences in male and female aggression appear at about two years of age, though the differences in aggression are more consistent in middle-aged children and adolescents. Many studies have found differences in the types of aggression employed by males and females, at least in children and adolescents. Females between the ages of 10 and 14, around puberty age, show a more extreme rate of relational aggression compared to boys. These findings however are true for Western societies, but are not true of all cultures. Similarly, it is observed that girls' show aggressive tactics which include gossip, ostracism, breaking confidences, and criticism of a victim clothing, appearance, or personality, whereas boys engage in aggression that involves a direct physical and/or verbal assault. Hay (2011) is of the opinion that the difference could be due to the fact that girls' frontal lobes develop earlier than boys which allow them to self-restrain. However, the study provides a direction for the present study which involved the boys' and girls' aggressive population in the CBT process.

Research hypothesis three tested the whether the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parenting styles. However, the study found out that there is significance difference between students from authoritative parenting style and students from permissive parenting style. The finding is in total agreement with the previous study of Patterson, Reid and Dishion (1992); Mmari, Blum and TeufelShone (2010) that ineffective parenting behaviours such as poor supervision, rejection, harsh and inconsistent discipline and poor parenting techniques place adolescents at risk for developing aggression. Similarly, research reveals that adolescents are at risk of engaging in delinquent

behaviours when they are exposed to ineffective parenting techniques, parental rejection (Barnow, Lucht, & Freyberger, 2005); harsh and inconsistent discipline and poor family relationships (Conger & Simons, 1997; Edwards, Dodge, Latendresse, Lansford, Bates, & Pettit, 2010).

Research hypothesis four tested whether the effect of CBT on adolescents' aggressiveness among senior secondary school students in Yobe state do not significantly vary according to parental SES. From the analysis of data obtained it was found that there is significance difference between students from low socio-economic status and those from high socio-economic status with respect to the effect of CBT on their aggressive behaviour. The finding agrees with the previous study of Aneshensel and Sucoff (1996) whose finding reveals that youths in low socioeconomic status (LSES) neighborhoods perceive greater ambient hazards such as crime, violence, drug use, and graffiti than those in high SES neighborhoods. Also, Demarest, Reisner, Anderson, Humphrey, Farquhar and Stein (1993) and Dada (2004) are of the view that a family's socio-economic status is based on family income, parental education level, parental occupation, and social status in the community (such as contacts within the community, group associations, and the community's perception of the family). Hausman and Hammen (1993); American Academy of Pediatrics (1995) and Carr-Hill, Rice and Roland (1996) observed that social disadvantage, homelessness, low socio-economic status, poverty, overcrowding and social isolation are broader factors that predispose adolescents to aggression. It seems that the longer the child has been living in poverty within the first four years of his or her life, the more prevalent externalizing behaviour problems become (Duncan, Brooks-Gunn & Klebanov, 1994). According to Graham (2004) children from large families and those living in homes where divorce or separation has occurred are at greater risk of aggression. Children with aggressive behaviours are more likely to come from troubled neighborhood.

## **CONCLUSION**

This study investigated the effects of cognitive behaviour therapy on adolescents' aggressiveness in secondary schools in Yobe State. It has been observed that CBT has effect in the treatment of aggression. The adolescents are peculiar individuals, as they stand midway between childhood and adulthood; hence they are not liable when involved in aggression. It is therefore the responsibility of the parents, schools and government at

all levels (local, state and federal) to play their expected roles to promote good conduct in adolescents. This is more so when we remember that they are the future of the society. The study revealed that parenting styles of parents are not usually the same. It was also discovered that the three styles can influence aggression. Hence, parents should be vigilant and observant in their rearing methods and the results. Likewise, the study revealed that not only low socio-economic status of parents predicts adolescent aggression, as participants from the medium and high socio-economic status also exhibited aggression.

## RECOMMENDATIONS

From the conclusion drawn, the following recommendations were proffered based on the findings:

1. Counsellors, psychologists, social workers at the secondary schools and other helping professionals should use CBT since it was found effective in the treatment of aggression in adolescents.
2. Counselling psychologists and social workers at the secondary schools should endeavor to attend conferences, workshops and be acquainted with current and relevant literatures on CBT and more research should be intensified in order to proffer solution to the challenges that are faced by the adolescents' male students in secondary schools
3. School counsellors should give parents orientation on the implication of parenting styles to enable them understands the challenges that adolescents face. This will equip them with appropriate and realistic parenting styles to proffer solutions in attending to affected adolescent. This would enable them to detect any indication of aggression early enough.
4. Parents should pay greater attention to their children's behaviours. The act of watching home videos and films of movies should be censored. This would caution their comportment.

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