EFFICACY OF TOKEN-ECONOMY AND TIME-OUT TECHNIQUES IN REDUCING AGGRESSIVE BEHAVIOUR AMONG STUDENTSOF FEDERAL UNITY SCHOOLS IN KANO AND KATSINA STATES, NIGERIA

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, NIGERIA
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JUNE, 2015

DECLARATION

I hereby declare that the work in the dissertation entitled “Efficacy of token Economy and Time-Out techniques in Reducing Aggressive Behaviour among Students of Federal Unity Schools in Kano and Katsina States-Nigeria” has been performed by me in the Department of Educational Psychology and Counselling,Ahmadu Bello University, Zaria under the supervision of Professor Musa Balarabe, Dr. Aisha I. Muhammad and Prof. E.F. Adeniyi.

I also declare that to the best of my knowledge, this work has never been presented wholly or partially for another degree or for publication at any university.

……. ……

Mansur Haruna Date

CERTIFICATION

This dissertation entitled "EFFICACY OF TOKEN-ECONOMY AND TIME-OUT TECHNIQUES IN REDUCING AGGRESSIVE BEHAVIOUR AMONG STUDENTS OF FEDERAL UNITY SCHOOLS IN KANO AND KATSINA STATES, NIGERIA" by Mansur Haruna meets the regulations governing the award of the degree of Doctor of Philosophy (Educational Psychology) of Ahmadu Bello University, Zaria and it is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This dissertation is dedicated to my parents: Haj. UmmaAbdulhamid and Late Alh.HarunaHaladu.

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ABSTRACT

This study investigated the efficacy of token-economy and time-out techniques in reducing aggressive behaviour among students of Federal Unity Schools in Kano and Katsina States-Nigeria. The study used non-equivalent pre-test, post-test control group of quasi experimental design. The population of the study was six hundred and seventy one (671). The study was conducted on a sample of sixty (60) selected students with aggressive tendencies from three Federal Unity schools in Kano and Katsina states (Federal Government College Daura Federal Government College Kano, and Federal Science Technical College, Dayi). The instrument used for data collection was Aggressive Behaviour Scales. The data generated were analyzed using mean, standard deviation and t-test. The hypotheses were tested at 0.05 level of significance. Based on the findings of the study, hypotheses one, two, three and five were rejected while hypothesis four was retained. The results of the study revealed that Token-economy and Time-out techniques are effective in reducing aggressive behaviour of the respondents in favour of the experimental groups (t-value = 23.985 and 23. 878, p = 0.000 and 0.000) respectively. Token-economy technique was also found to be more effective than Time-out technique in reducing students aggressive behaviour (t-value = 2.173, P = 0.036) in favour of the Token-economy technique. The result further showed that, there was no gender difference in the effectiveness of Token-economy technique in reducing aggressive behaviour of respondents; hence the technique had almost similar effect for both male and female students (t-value = 1.021, P=0.064). Gender difference was found in the effectiveness of Time-out technique in reducing aggressive behaviour of respondents. The difference is in favour of female students (t-value = 3.408, P = 0.003). Based on the research findings, it was recommended that teachers, School administrators, psychologists and counsellors should be exposed to Token-economy and Time-out techniques in re-addressing students with aggressive behaviour.

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OPERATIONAL DEFINITION OF TERMS

For the purpose of this study, the following terms have been defined as follows:

Aggression - It is a form of antisocial behaviour exhibited by secondary school students that is intended to injure someone physically or psychologically. Such behaviour include; bullying, pushing, hitting, shoving, kicking, slapping, among others.

Token-Economy - This involve points, tickets, clips, and anything that can be exchange for something desirable which student may like such as exercise books, calculators, biros, juice among others.

Time-Out - It is an act of removing a misbehaving student to a place that is less reinforcing such as sitting in the corner of a classroom watching other students attending a lesson or playing.

Federal Unity Schools - The Secondary Schools established by Federal Government in every State in Nigeria that admits students based on quota for the purpose of unity and harmony after the Nigerian civil war.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Secondary education in Nigeria is a form of education given to children between the ages of eleven and eighteen years plus. The Federal Republic of Nigeria revised (2004) section (5) described secondary education as education children receive after primary education and before the tertiary stage (FRN, 2004). The goals of secondary education shall be to prepare the individual for useful living within the society and higher education. To achieve the stated goals, it shall be of six years duration given in two stages of junior secondary school and senor secondary stages, each shall be of three years duration. It is quite obvious that secondary education occupies a very strategic position in any nation's educational system. In Nigeria, secondary education has been taken seriously from its earliest times not only as an acceptable qualification for good jobs but also as the gateway to a sound higher education both for academics and professional. It is pertinent to note that most of the students found in secondary school are adolescents aged between 11 and 20 years.

Adolescence is a transition between childhood and adulthood. It is the period in the developmental stage of a human being when an individual is faced with the problem of shedding of the relatively comfortable role of a child to that of a reasonable adult. Adolescence according to Chukwu (2003) is a transition stage, a difficult stage and a delicate stage that needs to be handled with caution by both the adolescent and all those who have influence over him/her, especially the parents. The adolescents are very eager and desirous to learn from the adults and siblings. They wish to control their own lives but finds life full of frustrating obstacles. They may be aggressive

or rebellious one day and co-operative and affectionate the next. Adolescents care about how they look and can go to the end of the world to initiate what is regarded as a fashion in vogue. Adolescents like to enjoy what adults regard as good life. They are ever ready to steal the parents' car key and drive out to show-case themselves. If they have no normal access to items of comfort they may attempt to get them through non-conventional ways such as robbery, killings, gangsterism and fighting. This situation most of the time leads to violence of various kinds (Nnamdi, 2009).

Aggressive behaviour whether physical or verbal is abnormal bahaviour that hurt another person either directly or indirectly. It is a universal social issue which an individual particularly adolescents commit against self or other people. It is a major problem that increases all over secondary schools in Nigeria causing individual and social damages which worry the parents, teachers, school administrators and community in general.Hostility and aggression are perhaps the most common forms of interaction between people in today's society. It is hardly a day passes without receiving media reports about destruction of lives and property in the country. In fact assault, random aggression, violent threats and other forms of antisocial behaviour are on the increase.

Secondary school students disrupt lessons in school and hurt, intimidate and frighten other students. They may be argumentative and verbally aggressive. According to O'Connor (2011) children with aggressive behaviour may have difficulty controlling their temper and are easily upset and annoyed by others. They are often defiant and may appear angry and resentful. It has also been observed that some students exhibit aggressive behaviours that are less extreme or problematic, but worrisome nonetheless. O'Connor (2011) suggested that these students may slap or poke other children or pinch them. Some throw small objects or bang and break things when

they are angry and upset. Others have temper tantrums and kick or scream. Some children are verbally aggressive. They call other children names, they threaten and tease other children or use emotional control to victimize and push other children around. They might ostracize them and spread rumours about others.

Most students are involved directly or indirectly in this situation of aggressiveness. This experience does not only affect the students but also education personnel, teachers, parents, school governing bodies and the community at large. Gasa (2005) suggest that aggressive behaviour frequently interrupts the smooth running of the school and leads to a school climate that is not conducive to learning and teaching. That is to say it places every body's life at risk and makes the culture of learning and teaching very difficult.

Unless intervention is given to help the aggressive students in the study areas, they are at risk of developing serious aggressive behaviour disorders. As their problems increase, their aggressive behaviours threaten the safety of other students. When the problems of aggressive behaviour students escalate to the high level, some students are expelled or suspended from school. Therefore, the protection of the other students and their teachers is the prime concern when this occurs. O'Conner (2011) observed that aggressive students need to learn how to control their behaviours and manage anger and conflict without resorting to aggression.

It is dangerous to ignore the negative effects of aggressive behaviour among secondary school students. Various preventive and controlling measures are being employed by parents, teachers and school administrators such as beating, depriving some basic necessities of life among others in order to facilitate behaviour change among aggressive students in secondary schools. It has been observed that, in spite of all these measures taken by the parents, teachers and school administrators to prevent the menace of aggressive behaviour, the problem is in persists among

students in Federal Unity schools in Kano and Katsina states like in other secondary schools in the country due to the fact that, the federal unity school students came from different clash of cultures and background.

It was against this background, the study sought to investigate on token-economy and time-out techniques to find out if they can be effective in reducing or preventing aggressive behaviour among Federal Unity Schools students in Kano and Katsina states. Token-economy is used as a positive reinforcer as a stimulus such as food, gifts, positive verbal praise, tickets, clips, stickers, note books and anything that can be change for something desirable which when presented to students in a given situation strengthen the desired behaviour and increase the likely hood of the occurrence of such behaviour. In time-out therapeutic technique, student with undesirable behaviour such as aggression receives no reward or attention by the therapist. It is one of the effective behaviour modification techniques that decreases antisocial behaviour such as aggression and increases desirable behaviour among students. The choice of these two techniques (token-economy and time-out) is to examine whether they will have an effect in helping Federal Unity School students of Kano and Katsina states with aggressive tendencies to reduce such problems and that will make them stay peacefully with both their teachers, colleagues and others outside school environment.

1.2 Statement of the Problem

It has been observed that, the incidence of aggression is rampant in Federal Unity schools like in other secondary schools in Nigeria. The security challenges being faced by the schools in general is usually associated with adolescents restiveness which can be attributed to aggressive behaviour of children which is a source of concern for parents, teachers and administrators.

Aggressive behaviour in schools under study include physical aggression such as hitting, biting, stabbing, shooting, rape, pushing, shoving, slapping and hair-pulling. Verbal aggression in the forms of threatening and intimidating others, engaging in malicious teasing, taunting and name-calling. Indirect aggression such as gossiping, spreading cruel rumours and encouraging others to reject someone are very common among secondary school students.

Youths in secondary schools are the future leaders that are expected to determine the direction of the country to achieve excellence. Therefore, an investment in human capital of young generation is crucial to prepare this group in order to withstand the current challenges of globalization. School going age is the critical stage of mental and physical development. It is sometime a negative stage of life, a period of storm and stress. When many students today have much free unsupervised time compared with previous students, there is tendency that they may be involved with unhealthy activities such as aggressive behaviour if they are not monitored.

In Secondary Schools, the problem of aggression is one of the serious problems that are faced by the parents, teachers, administrators and society in general. Aggression is one of the most prevalent and destructive behaviour that students face today, they may be at risk of being either the victim or the perpetrator of the act violence. Students disrupt classes on a daily basis and hardly a day passes without hearing the incidences about students beating or abusing their teachers and other fellow students on account of minor issues. Most students are involved in different groups with different names. They usually fight with each other, fight in the community, disobey and quarrel with their own parents. They frequently oppose the school rules and are in conflict with their teachers. The researcher observed that students who are aggressive in school present a substantial challenge for teachers. They bring about a climate of fear in the classroom, creating anxiety among other students and distracting them from their school work. It is therefore

to say that in a school situation, violence is a severe and complex social problem and probably the most frequent and visible.

The researcher observed that aggressive students often exhibit deficits in social information processing. That is they are likely to misinterpret social cues and miss assign hostile intent to others especially during times of stress. Some students are more likely than others to have some social skill deficits such as poor impulse control, low frustration tolerance, limited ability to generate alternative responses to stress and limited insight into the feelings of self and others.

Most students who manifest aggressiveness in schools come from dysfunctional family where relationships are strained; no parental care and affection. And where there is hatred, abuses, and disrespect for one another overtly display problem behaviour of aggression (Lauer,1986). Students from different clash of cultures are likely to witness incessant squabbles, physical confrontations, bullying, and violence and so on. The situation in which a student is raised can affect his or her aggressive behaviour. Social demands persistently exert influence on the aggressive student; the aggressive students do not necessarily make good decisions. Schools have an important role in aggressive behaviour prevention, because a large proportion of adolescents can be reached through schools, and aggression is a problem that affects schools directly which contributes to low academic achievement. Behaviour modification technique has a great role to play in reducing aggressive behaviour among students being a strategy that is purposely designed to help people with behaviour problems. However, there is lack of good implementation of these techniques in most of secondary schools which can assist students to reduce the problem of aggressive behaviour.

It was against this background, the study sought to investigate if token-economy and time-out techniques can reduce the level of aggressive behaviour among students of Federal Unity

Schools. In token-economy technique, tokens are being used as a stimulus like points, tickets, gifts, positive verbal praise and anything that can be exchange for something desirable which one may like when a desired response from student is produced. Token-economy when presented to student in a given situation strengthens the desired behaviour and decrease the likely hood of the occurrence of antisocial behaviour.

In Time-out technique, the therapists withdraw the privileges from students in the event of the occurrence of undesirable behaviour for increasing desirable behaviour without recourse to physical punishments. Despite all efforts being made by the parents, teachers, government functionaries and the general public by way of advising to curb or reduce the act of aggressive behaviour among students, the problem is on the increase. It is therefore, necessary to undertake an empirical investigation in order to gain more information and clarity on the aspects related to such aggressiveness. It was against this background, the researcher assumed that Token-economy and Time-out techniques to be an effective measures in reducing aggressive behaviour among students of Federal Unity Schools in Kano and Katsina States.

1.3 Objectives of the Study

This study intends to achieve the following objectives;

1. To find out the effectiveness of token-economy technique in reducing aggressive behaviour among the experimental and control group students.
2. To find out whether there is a difference between level of aggressive behaviour among students exposed to time-out technique and control group.
3. To find out the relative effectiveness of token-economy and time-out techniques in reducing aggressive behaviour among students of Federal Unity Schools.

4. To determine whether there is gender difference in level of aggressive behaviour of Federal Unity School students using token-economy technique.
5. To determine whether there is gender difference in level of aggressive behaviour of Federal Unity School students using time-out technique.

1.4 Research Questions

Based on the stated objectives, the following research questions are presented to guide the study:

1. What is the effect of token-economy technique on reducing aggressive behaviour between experimental and control group subjects?
2. What is the effect of time-out technique on reducing aggressive behaviour between experimental and control group subjects?
3. What is the effectiveness of token-economy and time-out in reducing aggressive behaviour among students of Federal Unity Schools?
4. Is there any difference in the level of aggressive behaviour between male and female students that were exposed to token-economy technique?
5. Is there any difference in the level of aggressive behaviour between male and female students when exposed to time-out technique?

1.5 Hypotheses

The research is assumed to be based on the following hypotheses:

H_O1 There is no significant difference in the mean aggressive behaviour of students exposed to token-economy technique compared with control group.

H_O2 There is no significant difference in the mean aggressive behaviour of students exposed to time-out technique compared with control group.

H_O3 There is no significant difference in effectiveness of token-economy and time-out techniques in reducing the mean aggressive behaviour among students of Federal Unity Schools.

H_O4 There is no significant gender difference in the mean aggressive behaviour of students exposed to token-economy technique.

H_O5 There is no significant gender difference in the mean aggressive behaviour of students exposed to time-out technique.

1.6 Basic Assumptions

This study will be based on the following assumptions:

1. It is assumed that token-economy and time-out techniques will assist in reducing aggressive behaviour among students of Federal Unity Schools.
2. It is assumed that one of the two techniques will be more effective than the other in reducing aggressive behaviour among students of Federal Unity Schools.
3. It is assumed that token-economy and time-out techniques can be applied on sex in order to reduce aggressive behaviour among students of Federal Unity Schools.

1.7 Significance of the Study

It is hoped that the findings of the study will make significant contribution to knowledge especially in the area of psychology by pointing out the importance of using token-economy and time-out techniques in reducing aggressive behaviour among students.

The study will also be useful to parents who are expected to lay good foundation of discipline and personality development for their children. The study will create awareness on what aggressive behaviours are and give parents insight on how to train their children properly. It is important for parents to facilitate children's involvement in supervised activities, given the association between lack of adult supervision and delinquent behaviour (particularly aggression).

To the teachers, the findings will be useful to gain insight into behaviour modification techniques and this would make it possible for them to assist students to regulate acceptable behaviour.

The findings would enable curriculum planners to understand the role of token-economy and time-out techniques in the development of good behaviour and include them in the curricula.

To school administrators, the findings will be used in minimizing aggressive behaviour among students especially through organizing programmes token-economy and time-out techniques can be taken as the tools for reducing aggressive behaviour. Support and willingness by all levels of government to commit to the necessary policy formation, implementation and financial investment is also vital. More effective disciplinary measures in maintaining discipline in secondary schools will lead to reduction if not eradication of lawless behaviour or rampages in secondary schools will keep the schools peaceful and conducive for teaching-learning processes.

The findings of the study will be of enormous benefit to psychologists and counsellors, because it will provide them with relevant information on effectiveness of token-economy and time-out techniques that can be utilized in reducing the undesirable behaviour among students.

The findings will also be vital to students. It will make them to have more knowledge about the Consequences of aggressive behaviour. This will enable them adjust to the good behaviour towards proper adjustment to school activities by having better interpersonal relationships with their teachers, school administrators and peers, and even leading to better academic performance.

In addition, the findings will enrich the available literature and this will be useful to the future researchers who might be interested in the subject matter to have reference materials for their research.

1.8 Scope and Delimitation of the Study

Secondary schools characterized by students' aggression are found throughout Nigeria. It is therefore not possible to investigate all of them. For this reason, the study covered the five (5) Federal Unity Schools in Kano and Katsina States.

The study was delimited to three Federal Unity Schools (Federal Governemt College, Daura, Federal Science Techinical College, Dayi and Federal Government College Kano). The study focused only on junior Secondary II students and how token-economy and time-out techniques can be used as stimulus for changing students aggressive attitude towards positive direction.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This research work is designed to investigate the efficacy of token-economy and time-out in reducing aggressive behaviour. This chapter is a review of related literature. It begins with a conceptual background, then presents some of the factors responsible for aggression and a theoretical framework on aggression is next discussed. Empirical studies relevant to behaviour management techniques, specifically token-economy and time-out therapeutic techniques are reviewed.

2.2 Conceptual Framework

2.2.1 The Concept of Aggression

The term aggression comes from the Latin 'aggression' meaning attack. The Latin was itself a joining of ad and gradi which means step at. The first known use dates back to 1611 in the sense of an unprovoked attack (Merriam-Webster, 2012). A psychological sense of hostile or destructive behaviour dates back to 1912 in an English translation of the writing of Sigmund Freud. Alfred Adler had theorized about an aggressive drive in 1908. Child raising experts began to refer to aggression rather than anger from the 1930s (Stearns, 2003).

There is no globally accepted definition of aggression. Some consensus seems to exist, however, that aggressive behaviour is meant either to injure another, to gain something for the aggressor, or to result in both injury and extraneous gains. It is unplanned and usually occurs during times of stress. It is viewed as a loss of self control or an impulse break-through. That is to say, aggressive behaviours refer to those behaviours, verbal, non-verbal or physical that injures

another person directly or indirectly and/or results in extraneous gains for the aggressor. Aggression is a psychological concept used to describe behaviour by an individual against himself or others with the sole aim of inflicting physical and psychological harm. It is a maladaptive behaviour exhibited by an individual in different ways from physical, to verbal and indirect ways. It can also be seen as an unprovoked attacked that causes hurt of a psychological, social or physical nature. Colman (2003) supported this idea by describing aggression as a behaviour whose primary or sole purpose or function is to injure another person or organism, whether physically or psychologically.

According to Nansel, et al (2001); centre for disease control and prevention (2000); US Department of Health and Human Services (2001) and Fox & Zawitz(2001) physical harm on another person include behaviours such as biting, pushing, hitting, shoving, slapping, stabbing, rape, shooting, kicking, hair-pulling among others. Verbal harm on another person include the employment of words to hurt someone as in the case of threatening and intimidating others and engaging in malicious teasing, taunting and name-calling. Indirect harm on other individuals include the manifestation of such behaviours as spreading cruel rumours, gossiping and encouraging others to reject or exclude someone.

Nwachukwu (1995) described aggression as the idea that one person commits an action that hurts another. Felson and Tedeschi (1993) define aggression as an act that injures or irritates another person. According to Baron and Richardson (1994) aggression is any form of behaviour directed toward the goal of harming or injuring another living being who is motivated to avoid such treatment. Berkowits (1993) sees aggression as any form of behaviour that is intended to injure someone physically or psychologically. Long and Brendtro (1993) also defined aggression

as a spontaneous, impulsive act of anger. It is an observable behaviour which can depreciate, threaten, or hurt a person or destroy an object. Loeber and Hay (1997) have also defined aggression as a category of behaviour that causes or threatens physical harm to others. This means that aggression is not a unitary term but encompasses a variety of behaviours, including verbal aggression, bullying, physical fighting, robbery, rape and homicide. Brain (1986) in Gasa (2005) explains aggression from four different views;

- The psychoanalytic view of human aggression: One of Freud's view of aggression was that it stormed from an innate, self-directed death wish that could be relieved by directing it towards others.
- Aggression viewed as an instinctive drive: Aggression is derived from an innate fighting instinct, which is common to all humans.
- The frustration aggression hypothesis: It stems primary from an externally elicited 'drive' to harm others, frustration elicits a persistent 'drive' toward aggression.
- Aggression as a learned social response: Bandura (1973) feels that instrumental conditioning and social modelling are strongly involved in the acquisition of responses of aggression.

Dollard and his collaborates (1939) in Mukherjee (2002) viewed aggression as a sequence of behaviour "the goal-response to which is the injury of the person towards whom it is directed". They believe that frustration eventually leads to aggression. According to them, when an individual is faced with a frustrating situation he/she react aggressively which makes aggression to be basically hostile in nature.

According to Long and Brendtro (1993) in Zirpoli (2008) aggression is a spontaneous, impulsive act of anger. It is an observable behaviour which can depreciate, threaten, or hurt a

person or destroy an object. It is unplanned and usually occurs during times of stress. It is viewed as a loss of self-control or an impulse break-through.

Berkowits (1993) described the goals of aggression as follows:

- Coercion: Attackers may hurt their victims primarily as an attempt to influence the other person's behaviour.
- Power dominance: Aggressive behaviour is often aimed at preserving or enhancing the attacker's power and dominance.
- Impression management: Many of the offenders were 'self-image promoters' who work hard at manufacturing the impression of themselves as formidable and fearless' whose fights designed to impress the victim and the audience.
- Evidence of the desire to hurt: Having been provoked earlier by the recipient of the injury, they want to hurt another individual. This means that they hurt another person because something provokes their previous experience of hurt.

Yahoo Contributor Network (2012) defined aggression as a physical or verbal behaviour intended to harm. Aggression is a behaviour that can be directed towards others internally and which is destructive (Blank, 2011). According to Wolman (1989) aggressive behaviour is the acts of behavioural responses of an organism that display the quantity of aggression while aggressiveness is the tendency to display hostility by performing act of aggression. Bruno (1992) sees aggressive behaviour as a behavioural trait characterized by hostile attack, usually upon someone or something else. It is a behaviour directed towards causing harm to others (Fraczek & Zumkley, 1992).

From the foregoing definitions of the concept of aggression, it can be inferred that human aggression, in its broadest sense, is behaviour or a disposition that is forceful, hostile or attacking. It is an intention to cause harm or an act intended to increase relative social dominance. It implies any physical, verbal, direct or indirect act or behaviour that is exhibited with the intention to harm self (aggressor's own self) as in the case of murder or suicide or others as in the case of pushing, hitting, slapping, kicking, stabbing, shoving, biting, rape, hair-pulling, shooting, threatening, intimidating, engaging in malicious teasing, taunting, name-calling, spreading rumours, gossiping, encouraging others to reject or exclude someone and so on. It is true to say that aggression is any form of behaviour exhibited with the intention to harm self or others which disrupt peace in the school environments and a challenge to the smooth conduct of school activities that affects student's academic performance.

2.2.2Classification of Aggressive Behaviour

Different classifications of aggression were given by different authors or psychologists. Bandura (1973) distinguishes instrumental and hostile aggression. He describes instrumental aggression as those actions aimed at securing extraneous rewards other than the victim's suffering. For example a student who steals a pair of tennis shoes out of another student's locker. Hostile aggression is an action that is used to produce injurious outcomes rather than to gain status, power, resources, or some other types of results.

Moeller (2001) described two major categories of aggression, physical aggression and verbal aggression.

- Physical aggression includes activities in which actual physical harm is intentionally done to a person, animal or object. For example hitting, kicking, stabbing, shooting, pushing and shoving, throwing objects, breaking windows, defacing property and setting fires.
- Verbal aggression involves the use of words to harm another person. Example of verbal aggression include behaviours such as making threats or writing threatening notes or letters, calling names, spreading gossip, and teasing.

Moeller (2001) further delineated three types of aggression, hostile aggression, instrumental aggression and reactive aggression. Hostile aggression has the primary goal of doing harm to the victim or of making the victim suffer. Instrumental aggression involves the use of force in order to obtain some non-aggressive goal, whereas reactive aggression refers to an angry aggressive act in response to some precipitating environmental event or behaviour. Instrumental aggression is sometimes called unprovoked aggression, while reactive aggression is sometimes referred to as provoked aggression.

Nwachukwu (1995) delineated four forms of aggression. These include physical attack, display of tantrums of temper, verbal attacks with threats, scolding and so on and indirect aggression, as when a child breaks something belonging to the person who has annoyed him/her.

Papalia, Olds and Felman (2002) has also described four categories of aggression, instrumental, hostile, overt and covert aggressions.

- Instrumental aggression according to Papalia (2002) is a kind of aggressive behaviour which is used as a means of achieving a goal which is very common in an early childhood

between 2 and 5 years of age. This kind of aggression is sometimes necessary for social development.

- Hostile aggression: It is a kind of aggressive behaviour intended to hurt another person.
- Overt Aggression: It is a form of aggression which is either instrumental or hostile. This kind of aggression can be physical or verbal and usually directed against its target openly. This is quite obvious during the political rallies where one party member destroys their opponents in order to win favour from the people and at the end to wins the election.
- Covert Aggression: This type of aggression consists of damaging or interfering with relationship, reputation or psychological wellbeing. It involve spreading rumour, withholding friendship, removing someone from a group and name-calling which is also common during politics when people's reputations are damaged and false rumours are spread. This kind of aggression is also found mostly among girls (Gleitman Fridlund and Reisberg 2004).

Kuppuswamy (2006) categorized aggression into two forms; sadistic and masochistic aggressions.

- Sadistic Aggression: It is also called externalized form of aggression. It is an aggression that is expressed on things, objects or people in the external world by doing some harm or damage to them. The individual that is afflicted is usually harmed and if it is an object, is damaged and in most cases destroyed.
- Masochistic Aggression: It is also referred to internalized form of aggression. This is where the individual does not express his anger on others. His/her aggression turns on his/herself.

Hunt (1993) categorized aggression into five forms:

- Over aroused Aggression: Students engage in behaviour that is characterized by high levels of activity that result in frequent accidents and aggressive incidents. Students who push and shove their peers often provoke or initiate an aggressive response from their peers. Unlike motivation for other types of aggressive behaviour students who demonstrate over aroused aggression rarely select their victims.
- Impulsive aggression: Students are generally quiet and passive in their demeanour but into a flurry of activity and violence that can be uncharacteristically destructive.
- Affective Aggression: Students demonstrate rageful aggression. Their behaviour is described as appearing to be chronically angry, resentful, and hostile.
- Predatory Aggression: Students seem to be seeking revenge. Individuals who demonstrate predatory aggression are described as persons who wait for a chance to get back at another person in a harmful manner.
- Instrumental Aggression: Students who engaged in instrumental aggression demonstrate behaviours that allow them to get their own way through intimidation of others.

Shaffer (1993) categorise aggression into two. Hostile aggression and instrumental aggression.

- Hostile Aggression: If a person's ultimate goal is to harm a victim, his or her behaviour qualifies as hostile aggression.
- Instrumental Aggression: This describes those situations in which one person harms another as a means to some other end.
-

The most common types of aggression observed in school settings are physical, verbal and psychological aggression. A study conducted by Popp (2003) showed the presence of physical

violence in schools (vandalism fights, blackmailing) and also presence of verbal aggression (calling names, nicknames and spreading rumours) that lead to social stigmatism and exclusion. The result of the study revealed that 50 to 60% of children showed verbal aggression, while physical aggression was reported only by 2% of children.

There are two broad categories of students' aggression in the secondary schools. These include proactive and reactive aggression. Proactive aggression is the type of aggressive behaviour, students engage to achieve some goals. Conversely, students who engage in reactive aggression are responding to perceived threats around them. For instance, students who are threatened by school authority for severe punishment may respond by violent demonstration. Students who have emotional disability or lack the cognitive ability of their peers are at risk for displaying reactive aggression particularly when they are frustrated by academic and social failures. Bandura (1986) suggested that aggression is a natural, almost automatic response to frustration circumstances. It is always a consequence of frustration. Aggressive behaviour exhibited among secondary school students therefore poses a serious challenge to the smooth running of school activities and also threatens lives and properties.

2.2.3 Identification of Aggressive Students

Szyndrowski (1999) viewed that children who witness violence often exhibit:

- Pattern of general aggressiveness.

- Pattern of over-compliance and fearfulness.
- Low self-esteem.
- Fear and distrust of close relationships.
- Conflict concerning taking sides with parents.
- Guilt at having escaped punishment and extreme fear for the future.
- Psychosomatic complains.
- Problems relating to authority.
- Behaviour problems often blamed on the victim.

Moeller (2001) described a clear picture of the early warning signs of potential future aggressive behaviour. These warning signs involve some type of aggression that warrants attention. They include:

- Social withdrawal.
- Extensive feeling of isolation and being alone.
- Excessive feelings of rejection.
- Being a victim of violence.
- Feelings of being picked on and persecuted.
- Low school interest and poor academic performance.
- Expression of violence in writings and drawings.
- Uncontrolled anger.
- Patterns of impulsive and chronic hitting, intimidating and bullying behaviour.
- History of discipline problems.
- Past history of violent and aggressive behaviour.
- Intolerance of differences and prejudial attitudes.

- Drug and alcohol use.
- Affiliation with gangs.

In contrast to early warning signs Moeller (2001) also discovered imminent warning signs where the students are very close to behaving in a way that is potentially dangerous to self and others. These include:

- Serious physical fighting with peer or family members
- Severe destruction of property.
- Severe rage for seemingly minor reasons.
- Detailed threats of lethal violence.
- Unauthorized possession of and/or use of firearms and other weapons.
- Self-injurious behaviour or threats of suicide.

2.2.4 Causes of Aggression

Aggressive behaviour is a major public health problem that is increasing all over the world, causing serious individual and social damages. It appears as if one life in the world is increasingly violent and out of control. In Nigeria, many people are being violently killed, properties are being destroyed for no cause. Aggressive behaviour exhibited among secondary school students in Nigeria poses a serious challenge to the smooth running of school activities and also threatens lives and properties. Different psychologists have given various factors leading to aggressive behaviour.

It appears that adolescents' aggression stems from different factors. Aggressive behaviour according to Gasa (2005) can be traced to adolescents' family backgrounds, community, school, peers, media, gender, age among others. The violent behaviour, so feared and worrisome,

results from the interaction between individual development and social contexts such as family, school and community. If the student is unstable due to the above factors, he/she may suddenly display deviant behaviour, tends to be emotionally disturbed and exhibits destructive tendencies.

2.2.5 Biological Causes of Aggression

Biological influences include genetic or inherited factors and various neurological factors that influence how the brain functions. Some theories attribute the tendency toward antisocial behaviour to innate biological factors. Evolutionary views revealed that aggression is biologically based. Lorenz (1965) and Tinbergen (1969) as cited by Santrock (2002) assert that certain stimuli release innate aggressive responses. The evolutionary theorists believe that early in human evolution, the survivors were probably aggressive individuals. For example, hunters and food gatherers did not only have to kill animals to eat but also had to compete for the best food territories if they were to survive. Freud (1917) as cited by Santrock (2002) also argued that aggression is biologically based. He believed that people have a self-destructive urge called the death instinct. The death instinct comes in conflict with our self-preserving life instinct; the death instinct is redirected toward others in the form of aggression.

Even though a human instinct for aggression had not been proved, genes are important in understanding that aggression is biological. The selective breeding of animals provides the evidence. Santrock (2002) viewed that after a number of a breeding among only aggressive animals and among only docile animals, vicious and timid strains of animals emerge. The vicious strains attack nearly anything in sight. The timid strains rarely fight even when attacked. Brennan, Mednick and Kandel (1991) assert that the genetic basis of aggression is more difficult to demonstrate with humans. However, in an investigation of 573 sets of adult twins, identical twins had more similar aggressive tendencies than did fraternal twins (Rushton and others, 1986 in

Santrock, 2002). Other twin studies in US have also been conducted to identify the extent to which genetic and environmental effects are involved in aggressive behaviour. Lyons, et al (1995) found that there were no genetic effects on antisocial traits during adolescence, but important genetic effects on antisocial traits during adulthood. They concluded that the similarity of antisocial behaviour during adolescence was mainly due to family environment, while the similarity during adulthood, when siblings have left the common family environment was due to genetic similarity.

Biological factor in antisocial behaviour is also based in twins. A study revealed by the New Encyclopaedia Britannica (2003, vol. 16 P. 803) showed that the rate of criminality was higher among these adopted children who had one biological parent who was criminal than those who had one adoptive parent who was criminal but whose biological parents were not. The highest rates of criminality were found among these children who had both biological parents and adoptive parents who were criminal.

Neurobiological Factors: Aggression can also be caused by neurobiological factors. Eibl-Ebesfeldt (1977) in Santrock (2002:676) viewed that rather than an instinct for aggression, what may have evolved is an aggressive capacity wired into the human neuromuscular system. Researchers point to the behaviour of children born deaf and blind, who still show aggressive patterns-foot stomping, teeth clenching and fist making. Even though they have had no opportunity to observe these behaviours. Studies by neuroscientists indicate how the brain is involved in the biological processes of aggression. King (1961) in Santrock (2002) asserts that, in 1966 Charles Whitman climbed to the top of the campus tower at the University of Texas at Austin. As he looked down on students walking to and from class, he pulled the trigger of a high-

powered rifle and killed fifteen people. Then he took his own life. An autopsy revealed a tumour in the limbic system of Whitman's brain, an area associated with emotion.

According to Liu (2004) the reason why brain dysfunction predisposes to aggression may be the result of the fact that the prefrontal region of the brain normally acts to control and regulate the emotional reactions generated by deeper limbic brain structure like the amydala. When the frontal region of the brain is poorly functioning, it will be less able to keep the aggressive impulses in check which results in an increased likelihood of impulsive aggressive acts.

Birth Complication Factors: Complication in birth also causes an aggressive behaviour. Birth complications are associated with increased aggressive behaviour in childhood (Piquero and Tibbetts, 1999). When birth complications are combined with other factors such as disadvantaged home environment, poor parenting and so on can result to aggressive behaviour. Liu (2004) opined that specific birth complications like anoxia, forceps delivery could cause an aggressive behaviour. Injury to the central nervous system affects the brain functions and thus it leads to aggressive behaviour.

Testosterone: This is another biological factor that causes aggressive behaviour. It can be associated with orbitofrontal cortex a brain area associated with impulse control and self-regulation systems that integrate emotion, motivation and cognition to guide context-appropriate behaviour. Patients with localized lesions to the orbitofrontal cortex engage in heightened reactive aggression. Archer (1991) believed that sex hormones appear to play a role in shaping aggressive behaviour. Thus aggressive violent offenders according to him have been found to have significantly higher levels of testosterone. Carlson (1998) observed that female criminals were found to be more likely to commit crimes around the menstrual phase of their cycle when

progesterone is low, while aggressiveness is low around the time of ovulation when oestrogen and progesterone levels are high.

Family Factors:

Another factor that contributes to aggressive behaviour among children and adolescents is the family. Very often family life is disrupted by an angry and difficult child. Much was said about the effect of the family upon the adolescents, but the impact of poor relationship is reciprocal. It is obvious that positive and negative interactions of the family influence children and adolescents learning aggression.

The parents or guardians who use frequent physical punishment to discourage antisocial behaviour of their children tend to raise aggressive children that lead to adolescent aggression. The child sees the parent as model and the punishment as an appropriate way of solving problems. Children want to succeed, they want to see themselves as worthy and adequate. With the support from adults, they will be able to see some purpose, meaning or value in persistence to a therapeutic interaction for changing behaviour. They tend to develop maladaptive motivational beliefs such as refusal to persist during a therapeutic interaction if they interpret their social environment as conveying negative information. Some parents practice aggressive acts against their children which sometimes take a form of unusually severe discipline or may be cross the line and become child abuse which can lead to aggressive behaviour.

In a research conducted by Maxwell and Maxwell (2003), Solomon and Serres (1999) viewed that familial antecedents such as parent and sibling relationships are extremely influenced to the development of aggression in adolescents.

Wentzel (1999) noted that when children experience supportive relationship with adults, they are likely to adopt and internalize the expectations and goals of adults. But if the relationships are harsh and critical, the motivation of children to achieve is badly affected. According to Paley, Conger and Havold (2000) children establish their first social relations with parental figures and the nature of these parent-child relationships and the context in which they are sustained may determine the social skills and social relations the child will develop with others later in life.

Casas and Colleagues (2006) have shown that, mother's and father's authoritarian and permissive parenting styles are positively correlated to aggressive behaviour in their children. Other studies from United States and Australia have found consistent correlations between infant temperament, parenting styles and later behaviour problems. Champbell, Shaw and Gillion (2000); Prior, Sanson, Smart and Oberklaid (2001); Baillargeon, Tremblay and Willms (2002) provides convincing evidence that physical aggression runs in families. Physical aggression of boys at two years of age was found by Keenan and Shaw (1997) to be predicted by a history of familial criminality.

Children who are aggressive according to Mishra (2007) are not born that way. Their education in the use of force may begin at home, where their parents may model aggressive behaviour as a way of solving problems. These children may learn from an early age that the way to get what they want is through force. They may be taught to respond to challenges with confrontation and to express themselves with their fists rather than with words. McWhirter Mcwitter, Mcwirtter and Mcwhirter (1998) assert that a dysfunctional family which is a marital disruption such as divorce, separation and unwedded or single parenthood. Although the family may seem intact, it might be characterized by spousal violence, child abuse and alcoholism.

Divorce and separation have been identified as causing stress for the whole family. Students who are part of this situation feel frustrated and often display behavioural problems. Gasa (2005) opined that parents who are going through a process of divorce and separation become frustrated and start to retaliate. They sometimes abuse their children physically or emotionally and sometimes resort to alcohol. Students who are exposed to this kind of home life are sometimes traumatized and start to show deviant behaviour and also resort to aggression.

Aggression and the Dysfunctional Family

The dysfunctional family can be traced to unconducive family relations and other adjustment issues, family stress, conflict and poor communication within its members. These are caused by several problems that the family is exposed to, such as divorce and separation, domestic violence, abusive parents, socio-economic status of the parents and so on.

Divorce is a major source of stress for the whole family, but adolescents are affected more because of their adolescent experiences (Lawson, Peterson and Lawson, 1983). According to Sandberg (1987) adolescents who are victims of divorce may suddenly display deviant or misbehaviour. Lauer (1986) stated that broken homes and homes in which parents frequently quarrel have been linked to stress in children and stress often results in physical and emotional illness. Aiken (1994) asserts that children have different reactions towards divorce. Many react with shock, anger or despair and show grief, loss or emptiness and restlessness. These children, especially adolescents are likely to have a lower self-esteem and self-image, have more inter-personal difficulties, are encompassed by guilt feelings and social embarrassment because of what happened to their family. Adolescents fare badly when they see their family splitting or falling apart and find that there is nothing they can do because things are beyond their control. They start to regress, withdraw and become aggressive or depressed (Conger, 1991). Heavens (2001)

delineated that parental separation and divorce will affect an ever-increasing number of children and adolescents. Children respond to divorce with anger, resentment, anxiety, depression, confusion and aggression.

A family with continual conflict and coldness can be very damaging to the children. Unhappy homes produce children with deviant behaviour, delinquency and maladjustment. Downs and Miller (1998) confirm that experiences of parental violence in childhood can cause immoral behaviour in adulthood. Robbins (2000) also confirms that angry exchanges between parents cause distress in the child. It is most distressing for the child who witnesses episodes of domestic violence, such as his/her father striking and injuring his/her mother. The child may want to retaliate, although he/she is powerless to do that. This might result in a child reacting with anger, anxiety and despair. This means that the child might be at risk of becoming aggressive himself.

Fraczek and Zumkley (1992) clearly stated that parents influence the child's behaviour intentionally or unintentionally, depending on how they behave. Aggressive children often have aggressive parents as a model for their behaviour. It is clear that living in a family where there is continual fight humiliates the children. They feel embarrassed in such a way that they hide their feelings by being aggressive towards their peers and community. They feel that everybody sees through their problems. And it is difficult to share their problems with peers and teachers because they think the whole world is hostile towards them. The parents who use frequent physical punishment to discourage antisocial behaviour of their children tend to raise aggressive children.

Aggression and Socio-Economic Status of Parents

There is an association between economic hardship of parents, children and adolescents behaviour problem such as aggression. There is extreme poverty among the Nigerians which makes it difficult for parents to cater for their responsibility of providing their children with basic needs. As a result the children may develop an aggressive behaviour.

Strauss (1977) described love to be the greatest need of a child. That every child has the right to be in love, carried with love during nine months of conception, warmly welcome into the world and allowed to experience love as he/she grows. With love he/she develops healthy emotional patterns of acceptance and security. Without these, he/she becomes withdrawn, insecure, hostile or neurotic. It is therefore to say that failure to experience love and affection is regarded as the most common factor for antisocial behaviours including aggression, rebelliousness and all kinds of discipline problems.

Ushasree (1990) delineated that in the disadvantaged families parents tend to be indecisive, disorganized, apathetic, rejecting and have low self-esteem. They do not believe that they can control their children's life as well as theirs. They are likely to give their children immediate gratification rather than to guide them toward a long-term gratification. According to Skinner, Elder and Conger (1992) experience of intense economic stress produces negative exchanges within the family. As negativity increases between the parents, short-tempered responses to children also increase. Moeller (2001) states that low socio-economic status is linked with a variety of behaviour problems. Poverty directly or indirectly affects parenting behaviour, which in turn affects youthful antisocial behaviour.

It is therefore clear that adolescents who are brought up in a low socio-economic status family may develop a variety of behavioural problems. The problems may be caused by growing

up in a socially and economically deprived family. As a result of continual financial squabbles in the family, the adolescents themselves become aggressive.

School Factors:

Social learning theories suggest that aggressive behaviour is earned and maintained through environmental experiences. Children and adolescents who are exposed to antisocial environment learn to participate in antisocial behaviour. Antisocial behaviour is not only related to family but also to school environment. A school is an institution where children of school-going age are taught. Students of different cultures attend to one school. They are placed in school with students and teachers who look, speak and behave differently than them. According to Irvine (1990) cultural misunderstanding may be expected among students. These misunderstanding may result in conflict, distrust and hostility. Kvaraceus, Gibson and Curtin (1967) opined that many people tend to react suspiciously, defensively, even aggressively towards individuals who differ in obvious physical characteristics. It is in the school setting where students learn new behaviours either positive or negative, depending on the school environment. The school expose children to new behaviours which were not acquired at home during the adolescent's childhood.

In school environment, the relationship among the teachers, school administrators and students does not seem to differ from that of the children and their parents at home. The hardships confronted by the parents are also experienced by the school teachers and other stakeholders in the education industry. School brings together large number of students from different backgrounds. These students were reared in a wide range of cultural environments with different models of development.

The consequences of the above stated circumstance that characterize our homes, schools environment and peers are now vividly experienced in our secondary schools in particular and the society in general. The greatest problem facing Nigerian secondary schools today is the issue of aggressive behaviour among students that brings about disruption in the normal and smooth running of school activities. Haggai (2003) noted that aggressive behaviour in schools intrudes not just on the rights of others but also impairs the normal functioning of school activities and other settings.

Teachers and school administrators play a dominant role in shaping the students behaviour positively or negatively. Every teacher is responsible for the welfare of students under his care. If the teacher looks on silently while student needs assistance, it led to destruction. Some teachers end up using harsh methods in trying to discipline the students who are showing antisocial behaviour such as excessive discipline which has a very harmful influence on students. It caused a stressful situation. Riak (2001) confirm that the stress causes negative feeling in a learner (student). These feelings in turn create certain thoughts leading to some kind of behaviour, particularly aggressive behaviour. Empirical research shows that offenders who are disciplined harshly are actually slightly more likely to commit further crimes (The New Encyclopaedia Britannica, 2003).

Robbins (2000) reported that the more severe the physical discipline at pre-school age, the higher the average level of physical assault in late adolescence. The effects of early physical maltreatment of children can extend across a span of many years, influencing adolescent assaultive behaviour. Riak (2001) has also confirmed that the more serious the punishment, the more violent the bi-product. The frustration and excessive discipline leads to hostility which encourages the student to become violent in adulthood. The teachers' harsh discipline contribute to aggressive

behaviour as Kemper (1978) cited in Gasa (2005) supports this idea by stating that if emotions are charged through severe punishment some people resort to aggression.

School also brings together large number of students from different background reared in a wide range of cultural environments with different models of development. Zande (2005) reported that some students are aggressive probably because they have been unconsciously taught at home by their parents or siblings that intimidating and verbally abusing others are the best means of getting their own way and these sometimes work. Reinke and Herman (2002) observed that school environment being academically successful, perceiving peers in the classroom as friends or colleagues and having positive interactions with teachers have all recently been singled out as important for the adolescent's psychosocial adjustment. A negative school environment damages children and adolescents potential.

Peer Factors:

Peer group pressure is a compulsion to do or obtain the same things as others in one's peer group (Robinson, 1996). Peer group influence the members to engage in aggressive behaviour. Children learn appropriate and inappropriate social behaviour through their interaction with other children. Budhal (1998) revealed that during adolescence, children begin to form peer relationships in which there is equality, mutuality and reciprocity between members. He further reports that peer interaction plays a unique and essential role in developing sociability and attachment, socialization of sexuality and gender roles, moral development and developing empathy.

Heavens (2001) found that the peer group has a significant influence on the teenager's social development because it sets the cultural norms or rituals for acceptable behaviour.

Adolescents are likely to do the same as their closest friends and will emulate the behaviour through observation and imitation. It is possible that children and teenagers learn aggression from their peers: Peers may elicit aggression, or may serve as role models to other children who have a predisposition to act aggressively. McWhirter, McWitter, McWirter and McWirter (1998) confirmed that peer groups do not only provide positive settings but peer pressure can also lead to norms of risky behaviour and irresponsibility.

Most adolescents conform because they are afraid of being rejected by their peers. They become engaged in inappropriate behaviour so as to gain acceptance and approval of the group. These groups can be deviant groups consisting of antisocial youth gangs. But the adolescents join them so as to find acceptance and status by being valued by others of their own age and to find reassurance that the perceptions and attitudes they have are right. Berkowitz (1993) confirm this by saying, the conversation and actions adolescents experience with other members strengthen their attitudes and reinforce antisocial inclination. Kemper(1978) cited in Gasa (2005) also stated that peer interaction, acceptance or rejection is a central determinant of aggression. If adolescents are rejected by their peer groups, they may follow unfavourable routes so as to gain acceptance. Their behaviour may be changed and they might become argumentative, disruptive and aggressive in the school. Maffitt (1993) confirm that the glamour associated with groups of delinquent peers may contribute to late onset of aggression in adolescents with no prior history of serious problems.

Cairns and Cairns (1994); Tremblay Masse, Vitaro and Dobkin (1995) suggests that earlier-onset aggressive children are often friends of other oppositional, aggressive children. The influence of delinquent peers on later-onset (adolescence-limited) antisocial behaviour appears to be much stronger. Association with antisocial peers was related to the emergence of antisocial behaviour at adolescence among youths who had not previously exhibited behaviour problems

(Bartusch, Lynam, Moffitt and Silva, 1997). The glamour associated with groups of delinquent peers may contribute to the late onset of aggression in adolescents with no prior history of serious problems (Maffitt, 1993). It is therefore to say that by the onset of adolescence; most aggressive students have formed social networks with other deviant peers.

Community Factors:

Community is a group of organisms living in close proximity and having some type of social organization (Wolman, 1989). It can be referred to as a group of people who live in the same area or who have the same interest, religion, or nationality. Community is a group of people who live in the same area or who have the same interests, religion or nationality. The instability of a community can be traced to social violence, political violence, suicides and crimes such as kidnapping, rape, hostage, house breaking, senseless killing, gangsterism among others. Such community may place students in a stressful situation and compel them to be aggressive.

The community with instability could influence its members to engage in aggressive behaviour. It can be seen in all kinds of violence including political and social violence, social evils, suicides and crimes such as kidnapping, rape, senseless killings, gangsterism, hostage et cetera. Such community with instability may place students in a stressful situation and compel them to be aggressive. Kimaryo and Hitsum (1993) viewed that students may experience psychological problems in adjusting to normality and end up believing that violence is the way to address problems. Because of these incidents students have lost respect for authority and are subject to no restraint or discipline. Low neighbourhood attachment, community disorganization, availability of drugs and firearms, neighbourhood adults involved in crime, exposure to violence and racial prejudice in the neighbourhood, community laws and norms favourable toward violence all influence individual violence (Valois 2002). As Baron and Richardson (1994) put it, if

adolescents witness the aggression in the community, their behaviour and image of reality become altered. Because they frequently see violence, they are likely to expect violence and expect the world to be a hostile place. This is likely to make them feel easily threatened and therefore to respond in an aggressive way.

Baron and Richardson (1994) also continue to mention that witnessing violence often leads adolescents to acquire new ways of aggressing. They also become helpless and may experience sharp reductions in the strength of their restraints against engaging in same behaviour. They end up reasoning that if other people aggress with impunity, it is also wise for them to do or act likewise. This means the likelihood of aggressive actions increases. Some become desensitized in such a way that they become so inured to violence that they no longer see it as an inappropriate form of behaviour. This is likely to produce a gradual emotional desensitization to both aggression and signs of pain on their part.

Media Factors:

Many television programmes do not teach children and adolescents acceptable social skills; rather they learn impatience and destructive means of solving problems. Through the media, one learns of an adolescent who commits some horrifically violent act. Another adolescent, for no apparent reasons or critical incident, seemingly erupts and seriously injures or kills someone. An emerging literature by Finkelhor (1995) indicated that online bullying is a significant issue for a number of adolescents, with at least certain percentage of those who use the internet reporting being bullied online. Ybarra and Mitchell (2004) found that compared with non-bullied youth, youths who are victims of traditional bullies are significantly more likely to bully others online than in person, may be the internet provides socially marginalized children a safe outlet to express relation in a way that are not normally accessible to them. Anderson and

Carriage (2003) revealed that as many as eighty nine (89%) of video games contain some violent contents.

According to Mishra (2007) the amount of violence children are exposed to on television is simply astounding. By the age of fourteen, a child will have seen as many as 11,000 murders on television. These children and adolescents who see violence frequently on television may become less sensitive to the pain and suffering of others and may view aggression as an acceptable way of solving problems. Another aspect of criminality about which there is a reasonable measure of agreement according to the New Encyclopaedia Britannica (2003, Vol. 16 P.803) is that crime is predominantly an activity of the young. In both Britain and the United States, for example, the peak period for involvement in relatively minor property crime is adolescence from 15 to 21. For involvement in more serious crimes the peak age is likely to be rather higher, from the late teenage years through the 20s. Some criminality tends to decline steadily after the age of 30. It is therefore to say that by the onset of adolescence, most aggressive students have formed social networks with other deviant peers. Positive reinforcement (token-economy) for violent actions is a dominant characteristic of many violent video games. Other video games punish some forms of violence. It is reasonable to suspect that reinforcement (token-economy) to violent actions in a game could increase adolescent's aggression. On the other hand, punishing such as time-out for violent action could also make the players and their supporters to become frustrated and act violently.

Gender and Age:

Gender and age can also play a role in aggressive behaviour. It has been observed that boys were more often the victims of direct victimization, whereas girls were more often the victims of indirect victimization. Bjorqvist et al (1992) revealed that indirect or social aggression

is the primary means by which girls express aggressive tendencies, while boys are more likely to use physical or overt forms of aggression. Other studies have also shown gender differences in attitude to authority, with girls more likely to show positive attitude (Emler and Reicher, 1987). Social reputation has also been found to predict antisocial behaviour more strongly among girls (Carrol, Houghton, Hattie and Durkin, 2001).

It has also been observed that youths who engage in violence at the early age are more prone to remain violent in later adolescent and into early adult years. Research evidence indicated that about 67% of children who were rated within the clinical range of conduct disorder at two were still conduct disordered at five and six years old, and almost one third of aggressive five years olds were still aggressive at fourteen (Shaw, Gilliom and Giovanelli, 2000; Bar, Najman, O'callaghan, Williams and Anstey, 2001). Similarly, Campbell (1995) revealed that where problem aggressive behaviours are present in pre-school children, as many as 50% of these children maintain these behaviours into adolescence and a substantial number of these will engage in antisocial behaviour. At the age of ten years, antisocial behaviour and hyperactivity were strong indicators of violence at fourteen and sixteen years of age (Herrenkohl, 2007). Farrington (1995) viewed that half the boys who were violent at ten years of age continued to be violent at sixteen years contrasted with eight percent of the girls who remained violent. Talbott (1997) has also indicated that at the age of eleven, girls and boys report similar incidence rates of physical aggression.

Nwachukwu (1995) described the common causes of aggressive behaviour in young children as follows:

- Frustrations which predispose the child to attack a person or object that stands in his way.

- Displaced anger when the child cannot express anger directly toward the offending person or object.
- Parental rejection.
- The desire to win attention or to show superiority.
- Need for self-protection when feeling of insecurity develops.
- Jealousy.
- Identification with an aggressive adult.
- Physical punishment for misbehaviour arousing the desire to strike back.
- Permissive attitudes by significant adults towards aggression.
- Learning from adults both specific types of aggression and the general idea that acting aggressively pays and is acceptable.
- Emotional tensions generated by the environment.

2.2.6 Consequences of Aggression:

Aggressive behaviour has many serious consequences for both aggressors and people around them. The aggressors are often socially rejected and stigmatized. They are often the victims of retaliation from peers. The aggressors are also at risk of abuse from staff and family members. The aggressor may also lose opportunities for integration into community activities, integrated education and living settings. The informal management practices from family members as well as staff, who are reluctant to include them in activities with others, may also restrict aggressors' lives. Ferris and Grisso (1996) delineated that children who are aggressive at school are likely to be rejected by their peers.

When aggressive students fail to respond to simple interventions they may receive multiple interventions which are both restrictive and ineffective. Under the guise of behavioural intervention, aggressors may loss access to their personal possessions, work, money, community activities and access to their family and peers. Aggression is a major risk factor for failure of family and community placements and for admissions and multiple admissions to institutions and psychiatric facilities.

2.3 Token Economy Technique

2.3.1 Concept of Token Economy Technique

The token reinforcement system has been reviewed and analysed by different researchers in relation to general principles of behaviour. Hackenburg (2009) delineated that token system first appeared in human history in the transition from nomadic hunter-gather societies to agricultural societies, and expanded from simple barter economies to more complex economies. Its current use provides the basic economic framework for all monetary transactions involving some forms of token reinforcement. Therefore, the token economy has been employed as a behaviour management and a motivational tool or technique in education and rehabilitation settings. Token economy method according to Hackenburg (2009) was significantly practiced throughout the world in the 19^{th} century, and has since been manipulated and modified over the years and practiced in a variety of disciplines.

Token economy is a system of behaviour modification through positive reinforcement derived from the principles of operant conditioning. Example of token-economy involve points, clips, tickets, sweets and anything that can be exchange for something desirable which one may like. Martin and Pears(1978) described token-economy as a technique in which a group or

individual can earn tokens for a variety of desirable behaviours and can exchange tokens earned for back-up reinfocers. Child(1986) further viewed token economy as a behaviour modification technique that uses tangible reinforcers such as prices, money or gift as systematic application of a reinforcement schedule.

According to Rice (2012). Token economy is a form of behaviour modification which uses the principles of operant conditioning and based on B.F. Skinner's (1953) concept of behaviour shaping through selective positive reinforcement. It is designed to increase desirable behaviour and decrease undesirable behaviour with the use of tokens.

A token economy is a form of operant conditioning that is used in behaviour modification that involves rewarding desirable behaviours with tokens which can be exchanged for items or privileges and punishing undesirable behaviours by taking away tokens (Webster Medical Dictionary, 2002). Filcheck and McNeil (2004) described token economy as a program in which individuals earn tokens (example, poker chips, stickers) for exhibiting acceptable behaviours (example compliance), and can exchange these tokens for rewards (example, preferred activity).

According to Sandra and Friedrich (2009) described token economy within an educational setting as a system for providing positive reinforcement to a child or children by given them tokens for completing tasks or behaving in desired ways. Cosgrave (2009) also defined token economy as a system for providing positive reinforcement to a child or children by given them tokens for completing tasks or behaving in desired ways. A token economy is a system of behaviour modification through positive reinforcement derived from the principles of operant conditioning. Example of token involve points, chips, tickets, sweets, and anything that can be exchange for something desirable which one may like. Token economies are used in many environments from schools to individual households. They have been advocated for children with

ADD/ADHD, Autism spectrum disorders and children with developmental disorders (Reitman et al 2001).

Kerr and Nelson (2010) in Humphrey (2011) viewed token economy as an intervention used to reduce problem behaviours in children. It is a system of behaviour management in which tangible or token reinforcers are given as rewards and later exchanged for back-up reinforcers that have value in themselves. Token economy according to Humphery (2011) could include points plastic chips, metal washers, poker chips, play money and stickers used in numerous settings as long as attention can be focused on the child's behaviours.

Meyer (2002) opined that a token economy is a system where something, a token, represents a unit of value that can be exchanged for an item or service equal to the value of tokens exchanged. It is based on principles of operant conditioning and the work of B.F. Skinner and others. Skinner and others showed how to best use reinforcement by trying the different possibilities of reward structure. For example giving the same reward every time or varying it and giving the reward every time the behaviour is performed or randomly. Operant conditioning deals with voluntary behavioural change while classical conditioning deals mainly with physical response such as salivating at a food festival. Token economies are used as a method of strengthening behaviour or increasing its frequency, because the tokens are a way of "paying" children for completing tasks and the children can then use these tokens to buy desired activities or items (Miltenberger, 2008).

Token economy according to Elliott, Kratochwill, Cook and Travers (2000) is a form of classroom management in which students receive tokens for desirable behaviour. These tokens may then be exchanged for something pleasurable. According to Carr, Fraizer and Ronald (2005) token economy is treatment procedure based on the principles of operant conditioning.

Tarbox, Ghazzi and Wilson (2006) opined that token economy involves reinforcing a student for compliance with previously agreed upon behaviours. The student earns token, which can be anything from stickers, tickets, and marbles which he/she then collects until enough have been earned to trade in for reward. Some common rewards are stickers, free time, extra computer time, a no home work pass, an opportunity to line leader, and the ability to wear a hat during class. For students at a lower cognitive level, it is usually most effective in the beginning to reward each success with a token, and have the ability to trade in the tokens for a reward fairly quickly. As the student learns the system, typically the number of tokens required to earn a reward can be gradually increased.

Vaughn and Bos (2009) described token system as an economy in which a symbol (examples, points, chips or stars) is given if a designated behaviour is exhibited. They described the common forms of token economy to include plastic or metal circular chips, marks on a blackboard, points marked on a paper point card, stars, holes punched in a card, stickers, paper chips, beans in a jar, and happy faces. Vaughn and Bos (2009:5) had given thirty=-three ways of using token in a form of verbal praise or praise written on a cardboard: They include:

- Exactly right.
- Keep working on it, you're getting better.
- You outdid yourself today.
- Great.
- You figured that out fast.
- Good work.
- You really make my job fun.
- Fantastic.

- I knew you could do it.
- You are doing much better today.
- Way to go.
- Perfect.
- That's the way to do it.
- You are good.
- Congratulations.
- You got that down (call the child's name).
- Wow.
- That's right.
- That's much better.
- Wonderful.
- That's quite an improvement.
- That's great.
- One more time and you will have it.
- Tremendous.
- You did it that time.
- You've got your brain in gear today.
- Nothing can stop you now.
- Traffic.
- Now you have it.
- You make it look easy.
- Sensational.
- Good for you.

- You are learning fast.

Sandra and Friedrich (2009) cited Kazdin and Bootzin's (1972: 343) regarding a number of advantages in using tangible items for token. These include:

- The number of tokens can bear a simple quantitative relation to the amount of reinforcement.
- The tokens are portable and can be in the subject's possession even when he/she is in a situation far removed from that in which the tokens were earned.
- No maximum exists in the number of tokens a subject may possess.
- Tokens can be used directly to operate devices for the automatic delivery of reinforcers.
- Tokens are durable and can be continuously present during the delay.
- The physical characteristics of the tokens can be easily standardized among others.
- The tokens can be made fairly indestructible so that the experimenter can be assured that they are received only in the authorized manner.
- Tokens provide a visible record of improvement. This facilitates social reinforcement from staff members, as well as self-reinforcement.

The token economy programs work with normal children as well as adult. Most of the adults participate in some forms of token economy that rewards certain behaviours whether it is a credit card point, system or frequent flyer miles and also many incentive programs in existence. It is a system in which an individual earns token for target behaviours. Once an individual has collected a predetermined number of tokens he/she can trade them from an item or activity that he/she desires.

Sandra and Friedrich (2009) opined that the world economy where people go to work, do their job to earn money and then spend this money for things they want or need is pretty much identical to a classroom token economy. The money you earn from employment itself isn't really what you want, it is a means to an end. What you really want is what you buy with your money because getting money means you get desired items and activities (example, car, house, jewellery, food). For a classroom token economy, a child will go to school, complete academic tasks to earn tokens and then spend these tokens for back-up reinforcers (an activity, item or privilege that the child likes to enjoy). Again, the tokens aren't really what the child wants, just like money, the tokens are a means to an end, getting tokens means getting things the child wants (example, 5 minutes playing, a computer game, a break from work, chocolate, sweets et cetera).

2.3.2 Determinants Factors for successful Implementation of Token Economy

There are some factors that determine the success of token economy procedures in behaviour modification as explained in Mayer (2002) which include:

- First the system should have clear stated rules. It is important for the environment to be highly structured so students know what it is expected of them and the consequences of their actions.
- Also, while a token economy can be designed to punish undesirable behaviours, it is typically more successful when using rewards rather than punishments. Typically, student's disruptive behaviour increases with punishments rather than decrease. Finally, the teacher should always recognize appropriate behaviour in a timely manner. The faster the feedback, the more likely the behaviour will be reinforced because the student will understand the reason for being rewarded or punished.

Ingersoll (1988) opined that token economies require a considerable amount of time, organization and follow-through on the part of the adults involved. Because children's actions need to be closely monitored, token economies may be difficult to implement in the home. In a school setting, these programs are appropriate because daily routines are clearly established, adult supervision is consistent, and access to reinforcers, such as recess and free time, can be strictly controlled.

Carr, Fraizer and Roland (2005) identified five factors to be considered in planning token economy. They include:

- Identifying and defining target behaviours
- Selecting tokens
- Selecting backup reinforces
- Establishing the exchange system
- Programming for maintenance.

Miltenberger (2008) lists seven components that need to be defined when implementing a token economy. They include:

- The desirable target behaviours to be strengthened.
- The tokens to be used as conditioned reinforcers.
- The backup reinforcers to be exchanged for tokens.
- The reinforcement schedule for token delivery.
- How many tokens are needed to be exchanged for the backup reinforcers.
- A time and place for exchanging tokens for backup reinforcers.

- In some cases, a response cost component, in which the undesirable target behaviours to be eliminated are identified, together with the rate of token loss for each instance of these behaviours.

Voughn and Bos (2009) viewed the following factors to be considered before implementing token economy:

- Pinpoint behaviours to be changed. Determine the behaviours to be changed through the use of the token economy. It can be successful in influencing academic, social and classroom skills. Define them in specific, observable and measurable terms to facilitate consistency of implementation among staff. Behavioural pinpoints will also prevent confusion among students regarding the behaviours of which they can earn tokens.
- Select Tokens. Start by selecting what type of token you want to use. For example, objects such as money, beans, play money, marbles in a jar, pennies or plastic chips are excellent devices but use caution when working with younger or disabled students who may allow or lodge them in their nose or ears. In this case, happy face stickers, holes punched in a card or points in the board might serve these students.
- Select Reinforcers. When the token system is in place, students will periodically exchange their tokens for re-inforcers, so the reward must motivate students to do whatever is necessary to earn it. After considering about the person, his or her age, interests and what he or she likes and dislikes, identify a list of potential re-inforcers. Interview the person about the things that he/she likes and would be reinforcing to that person and be sure to keep a record of the target behaviour and the extent to which it is influenced by the token.

Neitzel (2009) identified the following steps to be considered for implementation of token economy:

- Identifying the target behaviour. Teachers should identify a target behaviour for students with behaviour problem that they would like to increase. And to define the target behaviour in observable and measurable terms. Describing the measurable and observable terms allows teachers to collect accurate and reliable baseline data, distribute tokens when the student uses the target behaviour correctly, and ensures that all staff members know what the target behaviour looks like so that tokens can be provided consistently across classes and activities. Furthermore, a clearly described target behaviour helps students understand exactly what behaviour is expected of them in certain settings and situations.
- Collecting Baseline data. Once the target behaviour is identified, teachers collect baseline data to determine how often the student with behaviour problem is currently using the target behaviour. Teachers should measure a student's use of the target behaviour before implementing a token economy program by collecting one of the following: A frequency data or duration data. Frequency data document how often a student engages in a particular behaviour by used of time sampling and event sampling. With time sampling, data on a particular behaviour are collected after a certain amount of time (example every 5 minutes). If a student is engaging in the behaviour at that time, then teachers record this on the data sheet.

  Event sampling is used to record every instance of the behaviour and typically focuses on how frequency behaviours such as hitting. Both sampling techniques are used to evaluate patterns of students' behaviour over a period of days or weeks. Duration data are used to record how long a student engages in a particular behaviour. For example, a teacher might collect data on how long a student with behaviour problem engaged in hitting or harming others.

- Identifying reinforcers. Teachers identify reinforcers for students with anti-social problems. Reinforcers are anything that increases the likelihood that the target behaviour will be used in the future. This is important because learning will not take place unless reinforcers are motivating to the student with behaviour problem.
- Creating a reinforcer menu. Teachers should create a menu of possible reinforcers listed by name (if the student with antisocial behaviour can read) or by picture for an individual learner with behaviour problem. This task allows teachers to organize potential reinforcers in an orderly manner.
- Establishing a token economy program. Teachers should identify the medium of exchange. That is they determine what will serve as tokens for the program. Teachers should identify tokens that are attractive, easy to carry and easy to dispense. Usually anything that is visible and countable can be used as a token in this type of reinforcement program. Examples include poker chips, stickers, tally marks, pennies, marbles in a jar, pictures of the target behaviour on a Velcro board, and play money (Neitzel, 2009).
- Implementing a token economy program. Teachers should clearly describe to students with behaviour problem, the target behaviour, how the token economy program works and how many tokens are required before receiving an item from the reinforcer menu. They should also clearly describe the behaviour to students with antisocial behaviour in simple terms so that they know what is expected of them. Students also must be told when and where the token economy program will be in effect.
- Monitoring Learner Progress. Changes in behaviour are recorded daily on the same data collection sheets that were used during the baseline data collection phase. Progress monitoring data are used to measure a leaner's acquisition of the target behaviour as well as the effectiveness of the token economy program. Teacher should use monitoring data to

determine the student's mastery of the target behaviour. They should also use progress monitoring data to adjust the program when problems arise or if the target behaviour is not increasing.

According to Rice (2012) several elements are necessary in every token-economy such as:

- Tokens: Anything that is visible and countable can be used as a token. It should preferably be attractive, easy to carry and dispense, and difficult to counterfeit. Commonly used items include poker chips, stickers, point tallies, or play money. When an individual displays desirable behaviour he or she is immediately given a designated number of tokens. Tokens have no value of their own. They are collected and later exchanged for meaningful objects, privileges or activities. Individuals can also lose tokens (response cost) for displaying undesirable behaviour.
- A clear defined target behaviour. Individuals participating in a token economy need to know exactly what they must do in order to receive tokens. Desirable and undesirable behaviour is explained ahead of time in simple, specific terms. Where possible, the target behaviour should be expressed in positive terms. For example, "Remain quiet at meal times" rather than "Don't talk at meal times". The number of tokens awarded or lost for each particular behaviour is also specified.
- Primary reinforcers: Primary reinforcers are the meaningful objects, privileges, or activities that individuals receive in exchange for their tokens. Examples include food items, toys, extra free time or outings. The success of a token economy depends on the appeal of the primary reinforcers. Individuals will only be motivated to earn tokens if they anticipate the future reward represented by the tokens. A well designed token economy will use primary reinforcers chosen by individuals in treatment rather than by staff.

- A system for exchanging tokens: A time and place for purchasing primary reinforcers is necessary. The token value of each primary reinforcer is pre-determined based on monetary value, demand, or therapeutic value. For example, if the reinforcer is expensive or highly attractive, the token value should be higher. If possession of or participation in the reinforcer would aid in the individual's acquisition of skills, the token value should be lower. If the token value is set too low, individuals will be less motivated to earn tokens. Conversely, if the value is set too high, individuals may become easily discouraged. It is important that each individual can earn at least some tokens.
- A system for recording data: Before treatment begins, information (baseline data) is gathered about each individual's current behaviour. Changes in behaviour are then recorded on daily data sheets. This information is used to measure individual progress, as well as the effectiveness of the token economy. Information regarding the exchange of tokens also needs to be recorded.
- Consistent implementation of the token economy by staff: In order for a token economy to succeed, all involved staff members must reward the same behaviours, use the appropriate amount of tokens, avoid dispensing primary reinforcers for free, and prevent tokens from being counterfeited, stolen, or otherwise unjustly obtained. Staff responsibilities and the rules of the token economy should be described in a written manual. Staff members should also be evaluated periodically and given the opportunity to raise questions or concerns.

Humphrey (2011) also suggested the following steps to deliver a token economy system:

- Identify problem behaviour.
- Discuss with child their feelings regarding behaviours.
- Set structure/rules.

- Identify point/reward system.
- Discuss system with child.
- Monitor and model ideal behaviour(s).
- Keep structure.
- Reinforce desired behaviours.

2.3.3 Advantages of Token Economy

There are several reasons that make token economy more effective. Miltenberger (2001) highlights how the tokens can be provided immediately after the target behaviour occurs. A token economy is structured therefore there will be consistency with how positive reinforcement is delivered for target behaviours. Additionally, a child's future planning skills can be developed because different amounts of tokens need to be earned for different types of backup reinforcers and the tokens must be kept until enough has been earned. According to Kazdin and Bootzin (1972) in Sandra and Friedrich (2009) the use of tokens as a method of delivering reinforcement through the child exchanging them for back-up reinforcers has a number of advantages. These include, they:

- Bridge the delay between the target response and back-up reinforcement.
- Permit the reinforcement of a response at any time.
- May be used to maintain performance over extended periods of time when the back-up reinforcer cannot be parcelled out.
- Allow sequences of responses to be reinforced without interruption.
- Maintain their reinforcing properties because of their relative independence of deprivation states.
- Is less subject to satiation effects.

- Provide the same reinforcement for individuals who have different preferences in back-up reinforcers.
- May take on greater incentive value than a single primary reinforcer.

According to Carr, Fraizer and Roland (2005) the primary goal of the token economy is to increase and maintain appropriate behaviour. Children earn "token" (such as points) for appropriate behaviour and, at a later time, exchange the token for "backup" reinforcers (such as extended recess time). Token economy can be useful classroom management strategy. It involves certain rules for how students may gain and /or lose tokens, and the tokens may be redeemed for a reward, which should be reinforcing for the student (Alter, Wyrick, Brown and Lingo, 2008). Token economy according to Filcheck, McNell, Greco and Bernard (2004) allow teachers to reward students symbolically with tokens to represent the actual reinforcement, which the students will receive in the future, so that the rewards are not frequently disrupting instruction or interfering with other students' learning.

Rice (2012) opined that the primary goal of a token-economy is to increase desirable behaviour and decrease undesirable behaviour. Often token-economies are used in institutional settings (such as psychiatric hospitals or correctional facilities) to manage the behaviour of individuals who may be aggressive or unpredictable. However, the larger goal of token-economies according to Rice (2012) is to teach appropriate behaviour and social skills that can be used in one's natural environment. Special education (for children with developmental or learning disabilities, hyperactivity, attention deficit, or behavioural disorders), regular education, colleges, various types of group homes, military divisions, nursing homes, addiction treatment programmes, occupational settings, family homes (for marital or parenting difficulties), and hospitals may also use token-economies. Token-economies can be used individually or in groups. Token

economies have become a standard part of class management in education-sticker, charts among others.

According to Martin & Pear (1978) token economy permits the individual student to see his/her progress in tangible forms because if the program is well designed, the number of tokens an individual collects will correlate with the improvement in his/her behaviour. Additionally, tokens are teaching tools which can help to teach simple arithmetic and some of the behaviours involved in working for and dealing with money.

2.4 Time-Out Technique

2.4.1 Concept of Time-Out Technique

Time-out is one of the effective way of increasing desirable behaviour and decreasing undesirable behaviour without recourse to physical punishment. Child(1986) viewed time-out technique as a general isolation from all reinforcers inherent in the normal social environment. White and Bailey (1990) described time-out techniques as the act of removing a misbehaving child to a place that is less reinforcing such as sitting in the corner of a room watching other children play but not being allowed to join. Time-out is a procedure that involves removing an individual from the reinforcing environment to an austere environment to decrease the future provability of problematic behaviour (Donaldson and Vollmer, 2011).

According to Gordon (2000) time-out is used to control the occurrence of undesirable behaviour in pupils by the withdrawal of privileges in the event of the occurrence of undesirable behaviour. For example a student who disrupts classmates in the library, will probably do so

because he/she is reinforced by doing so. The loss of library privileges, or sitting alone for a period of time while others are together, may help to eliminate the behaviour.

Mishra (2007) delineated that time-out is a punishment that removes the child from something that is reinforcing (being with other students, participating in class). If the child does not find the classroom reinforcing, then time out may not be a punishment at all, if you use time-out, you should carefully monitor the change in the child's behaviour over time since you began using time-out. If the problem behaviour escalates, the child may be using time-out to get out of school work or your class environment. The intention of time-out according to Mishra (2007) is to remove the student from an environment that he or she would otherwise receive reinforcement. It is a setting or condition in which the student receives no attention, reinforcement or reward.

Day (2004) opined that time out is a specific procedure in which an individual is isolated from social contact or general access to reinforcing objects or activities for a period of time. It may include withholding a specific reinforcer. Day (2004) further viewed that the absence of human interaction and distraction also allows the child to calm down mentally and physiologically.

Cooper, Heron and Heward (2007) defined time-out as the withdrawal of the opportunity to earn positive reinforcement or the loss of access to positive reinforcers for a specified period of time, contingent on the occurrence of behaviour. Akinade (2012) define time-out as a behaviour modification technique that is used to check excess or disruptive behaviour among children. Time-out according to Akinade (2012) involves removing individuals who exhibit undesirable behaviour from places where they may receive or enjoy reinforcement for such behaviour for a brief period to where they cannot be reinforced. That is long enough to make them sober or better behaved. It varies from a few minutes to about 15 minutes. For example, if classroom activities

are such that children like to be in class being asked to go and stand at the back of the last row, facing the teacher/board is a form of time-out.

Time-out is therefore a form of behaviour modification technique in which students are denied to have an access to apportunities for reinforcement. It is used to control the occurrence of undesirable behaviour including aggression in students by withdrawal of privileges in the event of the occurrence of bad behaviour. According to White and Bailey (1990) time-out which are used in the home such as 'go to your room may be ineffective since the child's room may be a reinforcing environment. In support to White and Bailey's opinion, Vaughn and Bos (2009) believed that time-out is frequently used inappropriately. The underlying principle behind the successful use of time-out is that the environment the child is leaving must be reinforcing and the time-out environment must be without reinforcement.

2.4.2 Classification of Time-Out

1. Planned Ignoring. This form of time-out involves the systematic withdrawal of social reinforcers such as teacher's attention, physical contact or verbal interaction to student for a predetermined period of time upon the onset of mild levels of problem behaviour. The duration should be (10 – 60 seconds). During planned ignoring, the teacher does not interact with the student on time-out. Cooper, Heron and Heward (2007) stated that planned ignoring does not pose an imminent threat to personal or material safety. It is to integrate the procedure with the reinforcement of another students who is demonstrating the desired behaviour in such a manner that the student presenting undesired behaviour can see or hear the reinforcement occurring to the students for the demonstration of the desired behaviour. However, if planned ignoring is not properly implemented, some students misbehaviour may likely increase when the teacher attention is withdrawn.

2. Removal of Reinforcement. This is the removal of materials the student is interacting with. When the student is using the materials upon the occurrence of inappropriate behaviour, the teacher simply removes the materials that the student is using for a period of time (1 – 3 minutes). This is the recognized as the simplest form of time-out (Colarado Department of Education).

3. Contingent Observation. The student is removed from the current environment to another location in the room or setting. The student is removed from the reinforcing activity, but is allowed to sit and observes others engage in on-going reinforcement or instructional activities but may not participate in them for a brief period of time (30 – 60 second) (Cooper, Heron and Heward (2007). Erford (1999) stated that the teacher directs the students to a time-out area in the classroom where the student is able to listen to the discussion, but not allowed to participate for a period of time. When contingent observation is used, student may lean appropriate behaviour through imitation by observing classroom activities although instructional activities are interrupted.

4. Exclusion Time-Out. This is a removal of the student from the current reinforcing environment to another location within the same room were the student cannot participate observe on-going activities for a specified period of time of about 2 – 5 minutes. (Cooper, Heron and Heward, 2007). For example, the students sitting behind a partition or sitting in a corner for a maximum of 2 – 5 minutes.

5. Isolation Time – Out. Colarado Department of Education, Guidelines for the use of time-out viewed isolation time-out as the isolation child or youth from all probable reinforcers by being placed in a different room under the constant supervision of qualified staff. The duration should not exceed one minute per year of age of the student with a maximum of 12 minutes.

6. Seclusion Time–Out. It is a placement of a student alone in a locked room. The student is excluded from the reinforcing activity area and placed in a room specifically created for time–out (Mace and Heller, 1990). Example for seclusion time – out is the student in danger for hurting self or others are moved to a time-out room that is safe after disarming him or her under constant supervision by the staff.

7. Suspension and Expulsion. These interventions are usually carried out by school management and Governing board of the schools to correct the undesirable behaviours of the misbehaved students. It is recognized as extreme forms of time-out.

2.4.3 Guideline for Implementation of Time-Out

For time-out to be effective, following guidelines by Nelsen (2013) must be observed:

- A specific location should be defined for time-out
- A specific duration for time-out should be set
- A warning that time-out may come should be offered.
- The student should be consistently removed and placed in time – out when the behaviour reoccurs.
- A defined behaviour should lead to time – out.
- Clear contingencies should be defined for the child to be released from time-out.

Mishra (2007) outlined some procedure for implementation of time-out. Some of the procedures include:

- If a student is not responding to verbal redirection. Give one warning if desired, and then assign a base time out of 5 minutes.

- If the student refuses, warn that refusing will cause additional minutes to be added the 5.
- If the student still refuses, start adding minutes. You can decide to add an additional minute for every minute they delay.1 Additional minute per 30 seconds, and so on.
- If the student continues to refuse, tell them that if the number reaches ten (10), their parent/guardian will be called. If no-one is at home, call the office. Should the same problem occur daily, refer the student to the office directly. It is also an effective deterrent to deduct time spent in time out from activities that the child desires (recess, free time), deduct points that they may be accumulating for "store", reduce their behaviour level/privileges, et cetera. It is important to identify what the student values and provide penalties which are both appropriate to the behaviour, and effective.
- Never present a student with a consequence that you cannot or do not reinforce. It undermines your authority and your credibility.
- If the student accepts the time out and sits down in the proper place, make sure they understand the rules.

Mishra (2007) further viewed that if the student completes the time out, take a minute to speak with them about what happened, and how they will act differently to avoid the same problem. If it is clear that the student is still angry, in denial, and still demonstrating the same behaviour that prompted the time out in the first place, point this out to the student, and tell them you will check back with them in 5 minutes. Resume the procedure that you'd use for a regular time out.

Nelsen (2013) viewed that positive time out is designed to encourage children and to teach them self-control and self-discipline. It is respectful because children are involved in the process (by helping to create a space that will be encouraging) instead of object or victims of

the process. Positive time-out teaches children to understand that their brains don't function well when they are upset. They learn the value of taking time to out to calm down until their brains are functioning in a way that's advantageous to them rather than detrimental.

Nelsen (2013) outlined the following procedure for implementation of time-out:

- Identify reinforcers maintaining the undesired behaviour
- Conduct of functional assessment to identify the function of the target behaviour.
- Specify in advance the behaviours which will result in time-out.
- Use less intrusive behaviour reduction precedures first (i.e. differential reinforcement, verbal aversive, response cost).
- These less intrusive procedures should have been documented as ineffective before time-out is used.
- Develop a written statement of how time-out is to be implemented.
- Consider the following requirements for using seclusionary time-out:
  - The time-out room should be at least 6' x 6' or larger and base upon the age and size of the student.
  - The time-out room should be properly lighted and ventilated
  - The room should be free of objects with which the student could harm himself or herself.
  - The teacher should be able to see and hear the student in time-out at all times.
  - The room should never be locked.
  - At no time shall a student be placed in a locked area alone.
- Keep written records of each occasion when time-out is used. These include:
  - Student's name.
  - Date.

- Episode resulting in time-out.
- Time of entry into and release from time-out.
- The location of time-out.
- The student's behaviour in time-out.

- Always differentially reinforce desired student behaviour in time-in environment (classroom or instructional setting).
- Evaluate procedures if time-out duration exceeds 15 minutes.
- Evaluate the effectiveness of the procedures if time-out is not having the desired impact on student behaviour (collect and chart data on the frequency of the target behaviour).

Vaughn and Bos (2009) also enumerate the following procedures for successful time out:

- Students should be told in advance which behaviours will result in time-out.
- The amount of time students will be in time out should be specified a head of time.
- The amount of time students are in time-out should be brief (one to five minutes).
- Time-out must occur every time an undesirable behaviour occurs.
- Contingences should be set in advance for students who fail to comply with time-out rules.
- Time-out area should be constantly monitored.
- When time-out is over, student should return to the group.
- Positive behaviours that occur after time-out should be reinforced.
- Planned ignoring. This occurs when the teacher allows the student to remain in the setting; however all attention from the teachers and peers is removed for a designated period of time.

- Withdrawal of materials. All materials related to the behaviour are removed from a specified period of time. For example, if a student throws a ball at another student in an aggressive manner, he/she is not allowed to access to the ball for a specified period of time.
- Contingent observation. Students are removed from the setting but are able to observe. Example, on the play ground a student who exhibits inappropriate behaviour watches from the side-lines for a specified period of time.
- Seclusion time-out. The student is removed from the setting and place in isolation for a specified period of time.

Mishra (2007) pointed out the following as time out core rules:

- The student cannot bring anything to the cubicle except themselves (example, no toys, sunglasses, hats, books, pencils, and so on).
- Staff is in charge of timing the time-out.
- If the student disrupts the time out by standing, talking out, moving the chair to look at others, the time starts over.
- Staff will notify the student when time is up, and will notify them when they can return to their seat.
- When it's necessary to start time over, tell the student you've done this, and why (the rules, above). After a few reminders, there may not be any use in saying "Time has started over" and it may just make the student angrier. In this case, just make a mental note of the new time their time out is up.
- If the student starts wandering the room, begin adding additional minutes again, with a reminder about reaching ten (10) minutes.

Other staff in the room according to Mishra (2007) should be supportive and deferential to the person who set the time-out, regardless of who initiated it. When it comes to creating uniform discipline, teachers, instructional assistants, interns, volunteers, and counsellors should all have the ability to set limits and provide consequences, and have those decisions upheld by the team. If the students tries to engage or bargain with anyone, remind them that they have to do what they were asked to do by the person who gave them the time-out, and do not engage them further. Do not change the terms or modify the time-out in any way. It undermines the authority of the staff member who gave the time out, and harms team solidarity.

Wilhoit (2000) suggested the following rules for effective use of time-out:-

- **Parent or guardian permission**. Before using time-out especially seclusionary time-out as an intervention procedure, schools should obtained written permission from parents or guardian. The discussion in the permission of the time-out should consist the specific procedures that will be used, as well as the circumstances leading to the use of time-out and its effect on the student's behaviour.
- **Only use time-out as one component of an Extensive Array of Behaviour Interventions**. Time-out especially seclusionary time-out should not be used isolation as the only behaviour modification technique being applied.
- **Avoid power struggles with students**. Do not engage in forcing a student through physical means to take a time-out especially seclusionary time-out. Whenever the teacher engages in physical power struggles with a student, it becomes a no-win situation.
- **Avoid excessive use of Time-out**. Students should not be secluded in a time-out setting for more than 5 – 15 minutes.

- **Never lock a student in a closed setting**. Students should never be placed in a time-out setting secured with locks or in a fully enclosed area that could prevent teachers' observation and access to the student.
- **Maintain Through Written Records**. Detailed records of the use of time-out should be kept that include the student's name, date, time incident and outcome.
- **Assess When Time-out is not working**. Whenever the data indicated that time-out is not effective, functional behaviour assessment should be performed.

Cooper, Heron and Heward (2007) list three different methods of implementing exclusionary time-out and four non-exclusionary time out. Exclusionary time-out is in place when a student is removed from a reinforcing environment for a specified period of time. These incude:

- ✓ **Time-out room**: Time-out within a room created specifically for a time-out.
- ✓ **Partition time-out:** Time-out behind a partition
- ✓ **Hallway time-out**: Student stands outside the classroom.

Non-exclusionary time-out is in place when the student is allowed to remain within the reinforcing environment but is not permitted to engage in any reinforcing activities for a pre-specified period of time. These include:

- ✓ **Time-out Ribbon**: Each student wears a ribbon that can be taken off them to implement a time-out.
- ✓ **Planned ignoring**: A time-out where social attention is removed.
- ✓ **Contingent Observation**: The student has to sit and watch others engage in reinforcing activities.

- ✓ **Withdrawing a Specific Reinforcer**: Removing a positive reinforcer from a student for engaging in target behaviour.

Nelson (1997) maintained that the following are factors for effective use of time-out:

- A warning signal indicating that the time-out is about to happen if the student does not alter his or her behaviour.
- A nonverbal signal indicating the beginning and end of time-out may be used.
- A brief time-outs (e.g. 1 – 5 minutes) are more effective than a longer time-outs if the student has not been exposed to long time-out first.
- Duration of time-out longer than 15 minutes should not be employed.
- Requirements for release from time-out include:

- Completion of the specified duration of time-out.
- Appropriate behaviour during time-out.
- End of 15 minutes maximum duration of time-out (if time-out has not been effective at this point, implement other alternate intervention).

Prince (2013) outlines the following methods of implementing time-out technique:

- To remove student from environment were the behaviour occurred. Removing him or her from that area is a clear non-verbal signal that they will not get what they want while they are engaging in problem behaviour.
- Withholding attention while enforcing the time out procedure. This means interacting with the student as little as possible, which entails not speaking the student at all if possible or providing only minimal prompts ("sit down", "no").

- To remove the student from the area. Do not talk to the student during this time and provide the least amount of physical guidance necessary. Once the student behaves appropriately, he or she may return to the area were the behaviour occurred.
- Teaching the student appropriate ways of getting what he or she wants. If they are not taught a more appropriate way of getting it, then they will continue to engage in problem behaviour to get it, as they have no alternatives.

For time-out to be effective Essa (2000) suggested the following:

- Students should be separated from reinforcement.
- The time should be short.
- Confrontation should be avoided.
- Verbal interaction should be limited.
- A time-contingent release should be provided (e.g. sitting quietly required in earning release).

The contingencies should be explained and provided to student prior to entering time-out. The length of time period of time-out is also vital in determining the effectiveness of time-out. A 4 minutes time-out was found to be significantly better than a 10 second or 1 minute time-out among elementary school students. Essa (2000) further observed that teachers can do many things to minimize the need to use time out through the following:

- Ensuring that classroom activities are more reinforcing than time-out.
- Providing students with ample but not excessive opportunities to comply.
- Students with behaviour problem should be provide with additional consequences for not requiring time-out in a given time span.

2.4.4 Handling Potential Problems Associated with Time-Out

Mishra (2007) had provided helpful suggestions about how to handle

potential problems associated with time-out. These include:

- If the time-out requests are unsuccessful and the student is continuing to resist and disrupt class time, call the office. Once again NEVER present a student with a consequence that you cannot or do not reinforce.
- If the student's behaviour turns destructive, evacuate the room and notify the office from the nearest phone or emergency call button what is happening. Request that the principal call security.
- If a student initiates physical violence toward a peer they should be placed in an isolated seat for the rest of the day. Write a referral, consult the office, and proceed with their plan (calling security, suspension, immediate or after school detention by police and so on).

Vaughn and Bos (2009) suggested the following about how to handle potential problems associated with time-out:

- Add time to a student's time out for refusing to go to time-out or displaying others inappropriate behaviours such as screaming, yelling and kicking.
- Students should be required to clean up any mess made during time-out before they return from time-out.
- Be sure to have a backup consequence if a student refuses to go to time-out and the amount of time added reaches 30 minutes (usually considered the maximum amount).
- Do not argue with individuals when they either try to talk you out of time-out or indicate that you have no right to put them in time-out, ignore their comments.

- If the inappropriate behaviour involves two students and it is not possible to determine the source of the problem, do not argue; put both students in time-out.
- If the student displays the behaviour in a place where it is not possible to use time-out, indicate that time-out will be provided when you return to the classroom.
- Be sure to chart the effects of time-out so that you can determine whether it is working.

2.4.5 Advantages of Time-Out

Nelson (2013) highlights the following effectiveness of time-out:

- It can help children learn many important life skills, such as the importance of taking time to calm down until they can think more clearly and act more thoughtfully. When human beings are upset, they function from their reptilian brain (the brain stem) where the only options are fight or flight.
- Time out allows children (and adults) space to calm down until they are again functioning from their rational brain (the cortex), so they can problem-solve and learn.
- It encourages children to form positive beliefs about themselves, their world, and their behaviour. In this state of mind, they can learn their mistakes and /or problem solve on how to make amends for any hurt or damage their behaviour might have caused.
- When the method of time-out has really worked with children they feel empowered and motivated to improve from inner desire and locus of control (as opposed to control from others), and they develop skills that will help them solve problems and improve behaviour.

2.5 Federal Unity Schools

2.5.1 The Concept of Federal Unity Schools

The Federal Unity Schools came into existence after the civil war in 1970.

Olamide (undated) viewed that the Federal Government of Nigeria decided to establish Unity Schools in all states of the Federation as a model to foster much needed understanding, patriotism and national unity among the disputing tribes through education. The Federal Government Colleges were rightly considered to be the fastest and best means of promoting understanding, tolerance and respect for one another's culture; and children in their seminal years were given the opportunity to live together, and that was considered to be the better place to create national unity. Presently, there are one hundred and four (104) Federal Unity Schools nation wide.

2.5.2 Objectives of Federal Unity Schools

According to Federal Government Colleges (2013) the main objectives of the Federal Unity Schools include:

a. Promotion of National Unity and integration by bringing together children from all the states in the country to study under the same roof in one environment.
b. Elimination of the ethnicity or tribalism by fostering a sprit of oneness and patriotism among the students.
c. Development of every student's capabilities by providing diversified curriculum that would sharpen his/her natural potentials.
d. Encouragement of academic excellence in an era of science and technology.
e. Inculcation of moral discipline to students.

2.5.3 Admission Policy

Federal Government Colleges in the country adopted the Federal character admission policy. This policy is adopted to foster national unity. Candidates seeking admission into the colleges are

expected to write the national common entrance examination conducted by the National Examination Council. According to the Federal Government Colleges (2013) final selection after writing the entrance examination, final selection of the candidates in based on national merit, state quota and environment quota.

2.6 Theoretical Framework:

Aggression is not a phenomenon. It was laid by different theorists many years ago. As old as this phenomenon people and current researchers are still learning new things by building on the foundation of these theories. Psychologists predicted that there is a root cause in all aggression that a person demonstrates and these theories might help us find and understand that root. Mackintosh (1990) opines that an attempt to describe aggression is diverse and often influenced by the professional discipline of the person given the explanation.

Positive reinforcement (token-economy) and punishment (time-out) could influence aggressive behaviour among children and adolescents. For example, according to Dollard (1939) and Berkowitz(1963) individuals who are frustrated, annoyed or threatened will behave aggressively since aggression is a natural, almost automatic response to frustrating circumstances. In short, frustration facilitates the performance of aggressive behaviour.

Each scientific discipline has its own way of analysis and develops its own set of theories and methods to explain phenomena. Felson &Tedeschi (1993) delineated that psychologists focus on internal tensions and frustrations, learned associations, emotions and perceptions in developing their theories. Sociologists tend to focus on social, demographic and cultural factors to explain aggressive behaviour. Biologists are more apt to focus on evolutionary principles, genetic codes, biochemical factors, or central nervous system activity

as explanations of aggression. Therefore, this study concentrated on social learning theory, behavioural theory, frustration aggression theory and anomie theory with the aim of revealing the past in order to understand and predict the future. Below is the review of the theories developed by various professionals.

2.6.1 Social Learning Theory

This theory was developed by Albert Bandura (1973; 1983). Bandura developed a cognitively oriented social learning theory of aggression that does not depend on internal drives. He believed that anticipated positive consequences are a major cause of aggression. Bandura (1977) opined that social learning theories can be broadly understood as a social behavioural approach that emphasizes the reciprocal interaction between cognitive, behavioural and environmental determinants of human behaviour. According to social learning theories Bandura (1983); Mischel & Shoda (1995) believed that people acquire aggressive responses the same way they acquire other complex forms of social behaviour, either by direct experience or by observing others. This means that people develop many complex behaviour including aggression by watching their parents and significant others in their communities and school environment.

. According to Bandura (1991) human beings adopt, learn and maintain behaviour patterns that have worked in the past even if they worked occasionally. This means that children develop many complex behaviour including aggression by watching their parents and significant others in their communities and school environment. According to him, when a child's initiative behaviour is reinforced by praise and encouragement from significant models, the probability that the behaviour will occur in the future is increased.

Social learning theory explains the acquisition of aggressive behaviours, via observational learning processes, and provides a useful set of concepts for understanding and describing the beliefs and expectations that guide social behaviour. Anderson and Bushman (2002) opine that social learning theory especially key concepts regarding the development and change of expectations and how one construes the social world is particularly useful in understanding the acquisition of aggressive behaviours and in explaining instrumental aggression.

Baron and Richardson (1994) also give a clear explanation by saying that an individual may acquire a wide variety of aggressive responses when rewarded for such behaviour providing reinforcement for an act of aggression increases the probability. The reward and punishments that regulate aggressive behaviour are labelled by Baron and Richardson (1994), three kinds as follows:

- One kind comes from sources external to the individual and includes tangible reward and punishments, social praise or rejection, and or the reduction of an increase in aversive treatment from others.
- Aggression may be regulated by vicarious experiences. For example, observing the rewarding or punishing consequences of aggression or others.
- Reward and punishment can be self-administered.

Felson and Tedeschi (1993) viewed that people sometimes learn aggressive behaviour through trial-and-error processes but the fact remains that most complex skills are learned vicariously. People learn by observing others, i.e. models, who use different skills to obtain goals in a variety of situations. As Felson and Tedeschi (1993) cited from Bandura (1983) there are four processes by which modelling can instigate aggressive behaviour.

- A direct function of modelling serves to inform the observer about the casual means-ends relations in the situation.
- An inhibitory function of a model teaches observers that they avoid punitive outcomes associated with aggressive conduct.
- Observation of others who engage in aggressive behaviour causes emotional arousal in the observers, which may increase the likelihood of imitative aggression or may heighten the intensity of aggressive responses.
- Observation of a model may have stimulus enhancing effects by directing the observer's attention to the kinds of implements or tools being used.

Baron and Richardson (1994) opined that social learning theory treats aggression as a social behaviour, involving activities that entail intricate skills that require extensive learning. As Bandura (1986) stated that in order to engage in aggressive action, individuals must learn how to use a weapon, they must learn the movements that make physical contact painful for the victim, or they must understand what words or actions will be considered hurtful to their targets. No individual human is born with such knowledge, but have to learn how to behave aggressively through interaction with others.

Govender & Killian (2001) delineated that the continued exposure to acts of violence is likely to induce a process of learning and imitation, culminating in the acceptance of violent conduct as a dominant and normal mode of conflict resolution. Felson and Tedeschi (1993) cited Bandura (1997) who revealed that learning by observation involves the following interrelated processes:

- The individual must notice or pay attention to the cues, behaviour and outcomes of the modelled event.

- These cognitive processes are transformed into imitative response patterns that are new for the individual.
- Given the appropriate inducements or incentives, the learned behaviour pattern will be performed.

Donnerstein and Linz (1995) believed that social learning theory has indicated that witnessing the actions of others, in particular people that are close to us can affect our participation in both conforming and non-conforming behaviours. According to Akers and Sellers (2004) imitation is the notion that individuals engage in behaviour that they have previously witnessed others doing. The extent to which behaviours are imitated is determined in large part by the "characteristics of the models, the behaviour observed, and the observed consequences of the behaviour".

Even though Bandura (1973) believes that observational learning is the most influential, he also had the notion that human beings also acquire some forms of aggression through direct experience. People do not only acquire aggressive responses by observing the behaviour of the people but there are a number of different contributing factors (such as biological, internal drives, etc). These factors operate to ensure that these responses are regulated, maintained, strengthened or controlled.

Social learning theory provides a logical theoretical link between exposure to community violence and the later development of aggressive behaviour. Collings and Magojo (2003) opined that exposure to community violence teaches aggressive behaviour and encourages the acceptance of aggression as a norm. The fact that Nigerian adolescents are exposed to high levels of violence, both at school and in the general community. Ramphele

(2002) suggests that the desensitizing effects of such exposure are likely to be of significance in the development of aggressive behaviour.

2.6.2 Behavioural Theory

Like the social learning theory, behaviouristic theory also emphasizes the learning of aggression within a social context. Behaviouristic theorists argue that aggression can be learned, maintained and unlearned through the processes of classical and operant conditioning. This means that aggression tends to be learned through classical conditioning and strengthened and maintained through operant conditioning. According to classical conditioning if a stimulus for an aggressive response repeatedly occurs at the same time and in the same place as some initially neutral environmental stimulus, that aggressive response will eventually begin to occur in the presence of the initially neutral stimulus.

Thorndike (1800s) a behaviourist conducted his experiment with a hungry cat in which he placed it inside a puzzle box which could be opined by pulling a lever from inside. Outside the box and in full view of the cat, a food reward in the form of a fish on a dish was placed. It was observed that the hungry cat in its attempted to obtain release was manifesting many elements of unsuccessful behaviour by clawing, dashing about and biting before the lever was accidently opened and it comes out of the puzzle box and had its food reward.

In another experiment by Dollard and his Collaborates(1939) in Mukherjee (2002) rats were made hungry and they ran towards the food box where instead of food a small doll was kept. It was found that the rats showed aggressive acts towards the doll by gnawing at it. In Pavlov's terms, the environmental stimulus becomes the conditioned stimulus for the conditioned response of aggression. In operant conditioning, aggressive responses are

reinforced thereby strengthened and maintained. Moeller (2001) viewed that the aggressive response might produce some positive pay-off, in this case the aggression is strengthened through positive reinforcement. It is therefore, confirmed that aggression can be learn through both positive and negative reinforcement.

Behavioural theory views all behaviour criminal and otherwise as learned and thus manipulable by the use of reinforcement and punishment (The New Encyclopaedia Britannica, 2003, vol. 16 P. 804). Cavell (2000) delineated that some adolescents' involvement in aggressive behaviour is rewarded by their peer group. Deviant adolescents interacting with deviant friends have been found to reinforce each other's talk of rule-breaking behaviour. Peer rejection has been labelled as a punishment one gets if he/she is not abiding to the rules. For the sake of peer acceptance, adolescents may be involved in aggressive episodes to prove their loyalty to the group.

The theory argues that aggression can be learned, maintained, and unlearned through the processes of classical and operant conditioning. Moeller (2001) confirmed that children can learn aggression through both positive and negative reinforcement.

2.6.3 Frustration-Aggression Theory

Frustration Aggression theory was developed by Clark Hull (1984) in Felson and Tedleschi (1993). Hull (1984) believed that frustration produces aggressive energy, which activates aggressive behaviour. Under the influence of Hull's work, Felson and Tedeschi (1993) describe factors associated with the strength of the instigating to aggressive behaviour:

- The amount of frustration is directly affected by the strength of the response that is frustrated.

- The degree of interference with a response is directly related to instigation to aggression.
- The number of frustrated responses experienced by the individual.

Felson and Tedeschi (1993) opined that if a person is frustrated, aggressive energy is created and that energy activates dominant aggressive responses. These aggressive responses are considered self-reinforcing because they reduce the negative 'drive state' produced by frustration. If a person is frustrated, this self-reinforcement increases the likelihood of aggressive behaviour.

The frustration experienced by an individual adolescent instigates aggressive behaviour. It is therefore to conclude that frustration is one of the aversive stimuli that may cause aggression.

2.6.4 Anomie Theory

Merton (1957) a prominent American sociologist who came with the anomie theory of deviant behaviour is concerned with three things:

a. The cause of widespread breakdown of norms in the society.
b. The modes, conformist and deviant with which the members of the different strata in the society adapt to the anomie situation.
c. The variation in the rates at which they choose different mode of adaptation.

According to Merton, widespread breakdown in norms in the society occurs when the value of that society extol the pursuit of goal, but provide the opportunity of access to the legitimate means of attainment of that goal to only some members and denied it to others. Therefore, members of the society who accept the goals were provided with the means of its attainment will find it easy to conform to the norms and became discipline and law abiding

people. While those who find to attainment of the goals difficult tend to be deviated from the norms of the society.

2.7 Review of Empirical Studies

Various approaches to the control or reduction of aggressive and violent behaviour exist, but vary according to the individual therapist's theoretical inclination and persuasion. Research had been carried out using both token-economy and time-out techniques attesting to their efficacy in modifying disruptive and undesirable behaviour among individuals.

In a related study, which utilized token-economy and time-out as effective methods to decrease the frequency of inappropriate behaviour, one of such research work was by Child (1986) were he reported a research work carried out in a Washington reforms school using both token-economy and time-out techniques in shaping the behaviour of criminal offenders. The study involved forty young criminals including murderers, rapists and other serious offenders. The subjects were submitted to a schedule involving their living conditions. Leisure activities, foods and living quarters were used for improving their behaviour and learning a trade. At worst, the offender could sit around doing little of interest, live on a boring frugal diet and sleep in a dormitory.

At the displays of good behaviour and learning using teaching machines, reward were awarded such as better food, private quarters, colour television and free day out. After the treatment from the reform institution, many had learned useful skills from the programmed learning texts.

Bostow and Bailey (1969) carried out a research on modification of severe disruptive and aggressive behaviour using brief timeout and reinforcement procedures. Brief

timeout for disruptive behaviours and reinforcement for appropriate behaviours were used with two retarded patients in state hospital ward setting. The procedures reduced loud vocal behaviour in one patient and aggressive behaviour in another to near-zero levels when the procedures were removed and were again greatly reduced when timeout and reinforcement were reapplied. The results were significant because the behaviour problems were severe and long-standing and the procedures were instituted without greatly disturbing normal ward routine.

Another study was carried out by Bolarin and Badejo (1998) using self-control therapy and token-economy therapy to eliminate stealing behaviour among juvenile delinquents in Lagos approved schools. At the end of treatment, the study revealed that the two techniques (self-control therapy and token-economy therapy) were effective by reducing stealing behaviour among twenty male and twenty female delinquent youth that were used for the study.

Wille (2002) investigated on the use of multicomponent intervention including token-economy in reducing disruptive classroom behaviours. The result of study affirmed that token-economy have been one of the most effective ways to improve effective classroom behaviours.

Reinke and Herman (2002) has also observed that school environment being academically successful, perceiving peers in the classroom as friends or colleagues, and having positive interactions with teachers have all recently been singled out as important for the adolescent's psychosocial adjustment. Students sharing these characteristics are likely to perceive the school as a useful learning context the purpose of which is to help them construct a successful future as workers and citizens. Such students will not normally exhibit behavioural problems and will express positive attitudes towards teachers and the school. A negative school environment in contrast, damages children and adolescents potential.

Luby (2007) conducted a study on an examination of the use of token-economy in reducing behaviours in an adolescent with autism spectrum disorder. The interpretation of the results indicated instability in the variability of the frequency of all targeted behaviours, as the token-economy did not serve as an effective method in modifying the behaviours of the participant.

In another study carried out by Brosnan and Healy (2011) on a review of behavioural interventions for the treatment of aggression in individuals with developmental disabilities. A comprehensive number of interventions have been evaluated for the treatment of aggressive behaviour exhibited by individuals with developmental disabilities. These treatments have included antecedent manipulations and changes in instructional context, reinforcement-based strategies, and behaviour reduction strategies the review of study suggests that the treatments implemented have effectively decreased or eliminated aggression in individuals aged 3-18 years.

Desmond and Laule (2012) investigated the use of positive reinforcement training in the management of species for reproduction. The study revealed that positive social interaction and reproductive behaviour can be increased and aggressive behaviour reduced through employment of a specialized training regime called "cooperative feeding". The study also suggests that this technique should be given serious consideration when developing comprehensive programs for the management of species for reproduction.

Clark, Rowbury, Baer and Baer (1973) in Fire-stone (1976) delineated that time-out has been particularly successful in decreasing the frequency of aggressive behaviour. Pendergrass (1972) retrieved on 31st May, 2013 and accessed at edteched. vottawa.ca/Psy 3171/Personal up/ADHD/53, conducted an investigation with retarded children. The study revealed that

time-out not only suppressed high rate misbehaviour, but concomitantly caused a decrease in desirable behaviour such as speaking and touching.

Firestone (1992) conducted a research on the effects and side effects of time-out on aggressive Nursery School Child. Systematic observations of target and non-target behaviour were undertaken. The results indicated that as the aggressive behaviour was eliminated, the child showed increases in some desirable behaviour. The finding also suggests that time-out may sometimes lead to decreases in undesirable behaviour at the cost of certain pro-social activities. The study supports the notion that occasionally, when a behaviour that is disturbing to the environment is eliminated, other deviant behaviours also drop out and pro-social behaviours increase.

Kandel (1992) investigated on physical punishment and the development of aggressive and violent behaviour: A review. The findings of the study suggested that, severe or frequent parental use of physical punishment was associated with an increase in the child's aggression. The study also revealed that family factors such as identification with parents, high parental warmth, or use of reasonable discussion may eliminate any noxious effects which occur as a result of the use of physical punishment.

In another study conducted by Gee and Potwarka (2007) on the impact of introducing legal punishment on the frequency of aggressive behaviour in professional Ice Hockey: Using the Todd Bertuzzi incident as an ecological case study. The findings revealed that a slight, but statistically insignificant, reduction in the frequency of aggressive behaviour was witnessed. However, when individual acts of aggression were assessed independently, fighting and misconduct infractions significantly decreased following the incident. Therefore, legal punishment may be useful in curbing the most extreme forms of aggression.

Muhammad, Chong and AbdMunaf (2012) investigated on substance abuse and aggressive behaviour among adolescents. The respondents were 200 adolescents from three juvenile Henry Gurney Schools in Malaysia. The study revealed that the majority of adolescents indicated an aggressive behaviour. 54.5% of students in secondary schools did not hesitate to use force only to defend themselves, 56% of the students had shown anger by way of subdivision and damage to the goods, while 59% were characterized of aggressive behaviour where they did not think twice to beat someone if the person challenge them.

Akinlabi and Olatunji (2010) conducted a research on the influence of sex on inclination to crime among secondary school students in Ekiti State. The population for their study involved all the public secondary school students in the State. The result of study revealed that there is no significant difference between male and female students inclination to crime.

In another study conducted by Lopez, Perez, Ochoa and Ruiz (2008) on adolescent aggression: Effects of gender and family and school environments. The study examined the influence of family and classroom environments on the development of particular individual characteristics, including level of empathy, attitude to institutional authority and perceived social reputation, and the role of these characteristics may in turn play in school aggression. Participants were 1319 adolescents aged 11-16 (47% male) drawn from state secondary schools in Valencia, Spain. The findings of the study suggested that a positive family environment seems to be a stronger protective factor for girls in the development of problems of behaviour at school, whereas for boys this is the case for a positive classroom environment. This model accounted for 40% of the variance in aggression at school for boys and 35% for girls.

Wilson, Lipsey and Derzon (2003) investigated the effects of school based intervention programs on aggressive behaviour: A meta-Analysis. Changes in aggressive behaviour between pretest and posttest were analysed for developmental patterns and characteristics associated with differential effects. The result indicated that control groups showed little change in aggressive behaviour, but there were significant reductions among intervention groups.

Another study was conducted by Duane, Thomas, Karen, Bierman and the conduct problems prevention Research Group (2006) on the impact of classroom aggression on the development of aggressive behaviour problems in children. The study followed a longitudinal sample of 4,907 children and examined demographic factors associated with exposure to high-aggression classrooms, including school context factors (school size, student property levels, and rural versus urban location) and child ethnicity (African American, European American). The developmental impact of different temporal patterns of exposure (example, primacy, recency, chronicity) to high-aggression classrooms was evaluated on child aggression. The study revealed that African American children attending large, urban schools that served socio-economically disadvantaged students were more likely than other students to be exposed to high-aggressive classroom contexts. Hierarchical regressions demonstrated cumulative effects for temporal exposure, whereby children with multiple years of exposure showed higher levels of aggressive behaviour after 3 years than children with primacy, less recent, and less chronic exposure, controlling for initial levels of aggression

Vander Woerd, Cox, and McDiarmid, (2006) conducted a study on preliminary look at aggressive and violent behaviour in aboriginal adolescent girls. The study reviews the data from the Raven's children report, which is based on data from the McCrery centre society's

Adolescent Health Survey (AHS) II. In 1998, the AHSII was administered to over 26,000 youth attending school in the province of British Columbia, of whom 1707 participants (45 percent male, 55 percent female) identified themselves as aboriginal. The finding revealed that the majority of aboriginal girls rated their health as good or excellent. Aboriginal girls who experienced harassment or abuse demonstrated significantly higher levels of emotional distress.

Rortvedt and Miltenberger (1994) investigated on the use of exclusionary time-out in decreasing non-compliance in two 4-years girls. The girls often fail to comply with their mothers request; in response, their mothers repeated requests, threatened, scolded or pleaded. With them to do what had been asked. The researchers instructed the mother to praise their daughters when they did comply with a request and to use time-out when the daughters refused. When the mother made a request and the daughters did not comply within 20 seconds, the mother took the daughter to another room and made her to sit on a chair for 1 minute. After telling the daughter why she had to sit on the chair, the mother did not interact with her during the period of time out. If the daughter engaged in a behaviour problem during the time-out period, the time-out period was quiet for at least 10 seconds. The result indicated that rising time-out greatly reduced their noncompliant behaviour.

In another study conducted by Reitman and Drabman (1999) who investigated on how an on-going data based monitoring of time-out use by parents on an 8-years-old boy. The boy is often noncompliance in the home. The time-out was selected as the technique used to change the behaviour. The parents were instructed in implementing and recording each instance of time-out on a simple data form. During the treatment sessions these data were reviewed and used to direct the course of treatment. The benefits recorded from the time-out include

enabling rapid refinements. The result shows that parents can be trained to use time-out to improve their children's behaviour.

Mcquire (2008) investigated on a review of effective interventions for reducing aggression and violence. The study revealed that there is sufficient evidence that personal violence among female youth can be reduced by the use of time-out and other psychosocial interventions.

Adefunke (2010) investigated on the type and prevalence of peer victimization among secondary school students in Osun State, Nigeria: Implication for counselling. The result of the study indicated that, peer victimization was a recurring problem among secondary school students. Most students in secondary schools indicating 72.3% are confronted with problems of physical victimization. 67.3% of the students were injured one or more times, while 63% indicated to have been pinched. The study also indicated that 70.4% of students have experienced being swore, 75.2% experienced being called names, while 61.2% indicated to have experienced being shouted. Considering the gender and the rate of victimization, the study observed that only 39.4% and 40.1% of male and female students respectively have not been hurt or experienced pain as a result of what other students did to them. On the other hand, the rate of victimization across student's age, the study revealed that 39.1% and 37.8% of students within the age bracket of 9-12 and 13-14 years respectively have not been hurt or experienced pain from their fellow students.

Kozina (2007) investigated the measurement of students' aggressive behaviour in school settings. The study presents the development of psychometrically valid instrument for measuring student's aggression in school. A newly developed instrument to identify correlates of student aggression according to different student and school factors were used. The

students factors included in the analysis are gender, age, educational aspirations, and activities in spare time and attitudes toward school. The results indicated that there are important connections of aggression and the use of spare time, attitudes toward school and educational aspiration.

Tiano, Fortson, McNeil and Humphreys (2005) examined the efficacy of three techniques used in a Head Star classroom, which included, techniques used by the teacher currently response cost and the token-economy. The researchers determined if less inappropriate behaviours are exhibited when the response cost and token-economy were implemented, than when the teacher utilized the method in the baseline. The study revealed that a decrease in inappropriate behaviour occurred throughout the study for each child, and it did not return to baseline levels during the withdrawal conditions. Additionally, the study conducted by Koegel, Koegel and Dunlap (1996) also determined that utilizing strategies that included the token-economy decreased participants' disruptive behaviour (example, aggression, self stimulation, and self-injurious behaviour) occurred as a result of the method/strategies.

Kilmas and Mclaughlin (2007) investigated on a female kindergarten student with a developmental disability who had difficulty completing assignments in the classroom. The students were engage in behaviours such as hitting or kicking, running around the classroom, and not participating in classroom discussions or activities. And ABC single-subject design was used in the study. The student was given instructions as to how to complete a task and then the duration for how long it took her to complete the task was recorded. The number of assignments the student completed during the 30minute period and the number of inappropriate behaviours during that period was also recorded. The student received a token for each assignment completed.

During the ‘B’ portion of the design the student was able to choose a preferred activity after receiving three tokens, and during the ‘C’ portion she was able to choose an activity after five tokens. The amount of time it took to complete an assignment during the baseline condition was 10.0 minutes, during the three token portions it was 4 minutes, and during the 5 token portions it was 4.57 minutes. the amount of inappropriate behaviours during the baseline period was an average of 3.33 per 30 minutes, zero inappropriate behaviour were exhibited during the three token system, and one inappropriate behaviour was done during the five token system.

It appears that the three token systems was the most effective, although the five token systems was still a significant improvement over the baseline conditions. The study indicates that both academic task completion and inappropriate behaviours can be influenced in a positive way by a token economy.

Higgins, Williams and Mclaughlin (2001) also implemented token economies to decrease 3 inappropriate behaviours in an elementary school setting. The intervention targeted “out of seat” talking out” and “poor posture”. Tokens (check marks) paired with verbal praise were awarded each minutes if the child engaged in the appropriate behaviour and did not display the inappropriate behaviour. For each minute, there was a potential to earn up to three check marks, one for the absence of each behaviour. The total number of check marks was divided by 2 at the end of each session and the resulting quotient indicated the number of minutes the students was permitted access their rewards. Access to rewards (which, surprisingly, included math worksheets, computer time reading instruction, leisure reading and playing academic games) was awarded the next day. Each of the three inappropriate behaviours decreased

immediately following implementation of the token economy. Behaviours recorded remained the same or slightly below these new levels of inappropriate behaviour.

In a study conducted by Tarbox, Ghezzi, and Wilson (2006), the effects of token economies on another young child with autism were investigated. A token reinforcement program was design to increase attending (eye-contact for 3 second) to a tutor in a day treatment centre. During student behaviour training, the child received tokens and verbal praise for each occurrence of attending behaviour, following vocal prompts. The student aimed to earn 10 tokens to exchange for a reinforcer of a 90 second break from the activity. During the subsequent condition, 5 tokens were added to the initial 10 tokens needed. After two consecutive sessions were considered mastered (80% attending), the tokens needed increased by 5 with additional 90 seconds of break time earned. This continued until completion of 50 tokens were earned. The next condition was introduced, where only verbal praised was rewarded. No break time was earned throughout this condition. Finally, a condition began where the student was instructed to "wait" before earning their break time. The time to wait was increased by 5 seconds after every set of 10 trials. The student waited for up to 190 seconds. Results indicate an increase in attending to the tutor during the token economy and the following condition (where the number of tokens needed increased). However, during conditions where the student did not receive a break, and when their reward was delayed, there was a decline in the appropriate behaviour of attending.

Cangi and Daly (2013) investigated the effect of token economies on the occurrence of appropriate and inappropriate behaviours by children with autism in a social skills setting. In both social and academic setting are expected to demonstrate social skills including maintaining personal space and comply with instructions. Children with autism display

difficulties with these skills, accompanied by myriad of inappropriate and increasing appropriate behaviours, including hitting and pinching.

Research indicates token economies are effective interventions for decreasing inappropriate and increasing inappropriate behaviours. Two children (ages 10 and 7, with autism) participated in a social skills group consisting of typical children, children with autism, and student volunteers. Throughout 14 hours sessions, WCU student volunteers implemented token economies contingent on demonstrating 'quit hands' (maintaining hands in current activity). Frequency data was collected on hitting and pinching behaviours. Duration data was collected on 'quiet hands'. For Doug, the token economy was a differential reinforcement of incompatible behaviours: 'quiet hands' token + no consequence were delivered for hitting (social function). Upon achieving 10 tokens, Doug received one minute of playtime. As a secondary reinforcer, Greg received a short break from the group to walk to the water fountain. Outcomes indicate an increase in the duration of 'quiet hands' and a reduction in the frequency of hitting and pinching upon implementation of the token economy.

In a study conducted by Donaldson and Vollmer (2011) on an evaluation and comparison of time-out procedures with and without release contingencies, they compared a fixed duration time-out procedure with 4 young children using a reversal and multi-element design. Results demonstrated that both time-out procedures were effective at reducing problem behaviour.

A study conducted by Horton (2010) on the diverse adolescent relational aggression measure: Development and validation. The population of the study consisted of 191 students from 9^{th} – 12^{th} grade (predominantly African American) from schools located in the Southern city. The measure consisted of 20-items developed from relational aggression research. The

findings suggest that the Alternative School Group had higher scores on the Diverse Adolescent Relational Aggression scale than the High School Group.

Whittington and Moran (1990) conducted a study on peace begins with me. The researchers viewed time-out as an efficient means of providing space and time for the young child to mull over wrong doings, refresh feelings of guilt and ponder socially desirable responses in similar circumstances. By using a published prevention curriculum for use with kindergarten through 6-grade children, the curriculum offers keys to attitude and behaviour changes related to self-esteem and self control. The results confirm that time-out if properly implemented especially exclusionary time-out, students' antisocial behaviours can be thoroughly treated.

In another study conducted by Luiselli, Myles and Littman-Quinn (1983) on an analysis of reinforcement and time-out treatment package to control severe aggressive and distractive behaviours in multi-handicapped, rubella child. The researchers used reinforcement and time-out procedures to treat severe aggressive and distractive behaviour of a 15-year-old multi-impaired rubella child. Using a multiple baseline design across two target behaviours and two treatment settings, the reinforcement procedure was applied first in isolation and then in combination with time-out. Results indicated that with reinforment, target responses persisted at high rates but were rapidly eliminated when time-out was introduced and remained absent at a 4-months follow-up.

2.8 Summary

The chapter has explained various views on aggression of some scholars and researchers. The literature reviewed that there are different forms of aggression caused by many factors

including biological, family, community, school, peers, media, gender and age. The theoretical framework was also examined. The use of token-economy and time-out as a therapeutic technique was examined. The chapter also provide the various techniques several researchers have applied in reducing aggressive behaviour of individuals. This study focuses attention on Federal Unity School Students who also live in the age of storm and stress. The age when the most dangerous aggression takes place. The study investigated and examine the efficacy of token-economy and time-out techniques in the schools that are socially different (i.e Federal Unity Schools in Kano and Katsina States) to see whether these techniques are still relevant in reducing aggressive behaviour among students.

CHAPTER THREE

METHODOLOGY

3.1 Introduction:

The chapter presents the research design, the population of the study, sample size and the sampling procedure. The chapter includes description of the research instruments and how they will be administered, scored and pilot tested. A breakdown of the treatment sessions with

the treatment groups for both the token-economy and time-out techniques was also discussed. The chapter also presents the procedure for data analysis to be employed.

3.2 The Research Design:

The research design that was adopted for this study is quasi-experimental design involving pre-test, post-test and control group design. The quasi-experimental design that was used is the interpretable Non-Equivalent group design. Thus, the researcher found the design suitable for the two techniques (token-economy and time-out) in management of aggressive behaviour among students. To begin the treatment, the subjects were randomly selected according to their respective sampled schools. Olayiwola (2010) observed that quasi-experimental design is interpretable because it has a pre-test. The researcher therefore, used interpretable non-equivalent group design because it is suitable analysis for this study as it takes cognizance of the inherent pre-testing and biased sampling. The design is diagrammed as:

The pre-test and post-test research design is represented below:

Table 3.1: Pre-test Post-test Quasi-Experimental Format Design

Group	**Pre-Test**	**Treatment**	**Post-Test**
R_1	O_1	X_1	O_2
R_2	O_3	X_2	O_4
R_3	O_5		O_6

Sourse: Kolo (2001)

Key:

R_1 = Experimental group (Token-Economy)

R_2 = Experimental group (Time – Out)

R_3 = Control group that will be pretested and post tested without receiving any treatment.

O_1 = Pre-treatment test (Token-Economy)

X = Treatment

O_2 = Post-treatment test (Token – Economy)

O_3 = Pre-treatment test (Time-out)

X = Treatment

O_4 = Post-treatment test (Time-Out)

0_5 = Pre-treatment test (Control group)

0_6 = Post-treatment test (Control group)

The researcher therefore had three groups. Two experimental groups and one control group. Federal Governemt College, Daura and Federal Governemt College, Kano were made to become the experimental groups who were subjected to token-economy and time-out techniques respectively. While the control group was made up of the Federal Science Technical College, Dayi students who did not receive any treatment.

3.3 Population of the Study

The population for this study consist all Junior Secondary Two (JSS 2) students from three Federal Unity Schools in Kano and Katsina States. The total population was made up

of six hundred and seventy one (671) students as can be seen in the table 3.2 below. The reason for selection of these students is because they are intermediate junior class in the schools who are expected to have settled down in the school. They were also less busy, since they were not preparing for any external examination. Similarly, they were deemed to represent students from all backgrounds and different environmental upbringing who have been directly and indirectly involved in aggressive behaviours. The population comprises male and female students out of the total target number 496 are male and 175 are female students

Table 3.2: Research Population by schools:

S/No.	Names of Schools	Number of Students		Total
		Boys	Girls	
1.	Federal Government College Daura	187	66	253
2.	Federal Government College Kano	178	65	243
3.	Federal Science Technical College Dayi	131	44	175
	Total:	496	175	671

Source: Class Attendance Registers.

3.4 Sample Size and Sampling Technique:

The sample for this study was randomly drawn from three Federal Unity Schools (Daura, Kano and Dayi) out of five Federal Unity Schools in Kano and Katsina States. The samples were identified and assigned to the different groups. Sixty (60) identified aggressive students who were purposively sampled were used for this study. It was suggested by Okobiah (1991) that the number for treatment group counselling can range from 15 to 20 and Ohlsen and Gazda (1986) maintained that better results are achieved in smaller group and there was effective concentration and understanding of the treatment procedures by the clients.

Table 3.3: Samples Drawn from Schools

S/No.	Names of Schools	Sample size		Total
		Boys	Girls	
2.	Federal Government College Daura	10	10	20
2.	Federal Government College Kano	10	10	20
4.	Federal Science Technical College Dayi	10	10	20
	Total:	30	30	60

In this study, the researcher had a total of sixty (60) students as shown in the above Table 3.3 . Each school was allotted a group of twenty students. Ten male and ten female students each. Two out of the three groups are experimental while one of them is control.

- Twenty students for token-economy technique (Federal Government College, Daura).
- Twenty students for time-out technique (Federal Government College, Kano).
- Twenty students for the control group (Federal Science Technical College, Dayi).

3.5 Conceptual Model:

The conceptual model is concerned with the specification of research variables and their inter-relationships. This study is quasi-experimental. Therefore, the variables include: Two independent variables (token-economy and time-out techniques) and a dependent variable (the level of aggressive behaviour) and the extraneous variables. In quasi-experimental study, the independent variables are manipulated and their effects on the dependent variables are observed by the researcher. According to Olayiwola (2007) the independent variable is the manipulated variable and the effect of that manipulation is observed or measured on one or more dependent variable by the researcher.

The extraneous or intervening variables are those variables that may have an effect on the dependent variable that could prevent the researcher from attributing the observed changes in the dependent variables on the independent variables. It therefore necessary to control the intervening variables to ensure that the observed changes are attributed to the effect of the independent variables on the dependent variables.

In this research work, the independent variables are token economy and time out techniques, where the dependent variable is the level of aggressive behaviour of the students that is hoped to be reduced after treatment. The extraneous or intervening variables in the study include the interaction between the experimental group and the control group, absenteeism of the study

subjects from treatment, the involvement with aggressive peers at home, lack of interest by the teachers and students and , selection bias of the students.

3.6 Control of Extraneous Variables

It is important for the researcher to take some precautionary control measures so as to minimize the effects of the intervening variables on the control variable. The researcher therefore will adopt the following control measures in order to attribute the changes to be observed in the control variable to manipulation of the independent variables.

- **Interaction of study subject**: This is where the treatment subjects interact with one another thereby influencing their behaviour and performance. To control this, three Federal Unity Schools have been selected for this study. Students with aggressive behaviour in Federal Government College Daura were exposed to token economy technique, while those in Federal Government College Kano were exposed to the time out technique. The aggressive students of the Federal Science Technical College Dayi were made up the control group. These Federal Unity Schools are located at different areas within Kano and Katsina States.
- **Absenteeism from treatment**: This refers to the students' refusal to turn up for treatment sessions regularly. To control this, the researcher served the group members with drinks and snacks during and after the treatment sessions in order to motivate them. The treatment session was full of practical activities and involved each member in the treatment discussions.
- **Lack of interest by the teachers and students**: To control this problem, the researcher briefed the teachers that the study is about aggressive behaviour.

On the part of the students, the researcher created a conducive atmosphere in which all the aggressive students under study participated actively. Other forms of teaching methods (such as role-play, story-telling) were also employed by the researcher.

- **Selection Bias**: To control the bias, every possible effort was made by the researcher to give each subject ample chance for participation in the treatment groups by adopting a purposive sampling technique. For any student to be a subject for the study, he/she needed to have a summed interpersonal score of aggression 60% and above.
- **Instrumentation**: This can be refers to changes in the measuring instrument or scores that may produce changes in the scores obtained. The instrument that will be constructed in a way that the extremes are reserved so that the socially desirable alternative occurs on both size extremes of the items.
- **Personality of the researcher**: To control this, the researcher had objectivity and clearly explained to the subjects to react to the treatment sessions according to their wishes and interests. In other words, the subjects were free and decide on attending the sessions without feeling shame or being afraid of the researcher, as there is no compulsion in psychological counselling.

Winegardener (undated: 3) stressed that the researcher must conform to the following ethics:

- Good communication skills.
- Able to listen effectively.
- An atmosphere of trust.
- Establish a rapport with the participants.

- Sensitivity not only to one's own personal biases, but also to all the verbal and non-verbal data, the overt and hidden agenda, and all the cues and nuances of the people and settings.

3.7 Instrumentation:

Two instruments were used to identify and assess the subjects for this study with a view to determining the effects of the treatment techniques (token economy and time out) in the study. The aggression scale of teachers' identification of students with aggressive behaviour adopted from Huesmann, Eron, Guerra and Crawshaw (1994) was used to identify the subjects. The instrument consists of 22 questions about whether a nominated student by the form teacher displays a specific aggressive behaviour. In the twenty two (22) items, ten (10) items were adopted while twelve (12) of them were deleted. Refer to appendix A.

The Aggressive Behaviour Scale: adopted from Orpinas and Frankowski (2001) was used to assess the subjects before and after treatment. The instrument was designed to measure self-report aggressive behaviour among students. Consequently, the items were reformulated from past tense to present continuous tense. The instrument was made up of Likert type 6 scale ranging from 0, 1, 2, 3, 4, 5, and 6 or more times a student manifested an aggressive act during the last 7 days.

3.8 Scoring of the Instrument:

The aggression scale of teachers' identification of students questionnaire were scored to provide percentage ratings of the number of times the student has been scaled for any given behaviour by his or her form teacher out of the total number of times the student could have been scaled. When scoring for each item, 1 = No is assign to the left box, 2 = Undecided to the middle box and 3 = Yes to the last right box to obtain the raw score for the item. Students who score the range from 60% and above were used for the study.

The aggressive behaviour scale was designed in such a way that the respondents could tick the opinion that appropriately described their responses on the right side of the scale about their behaviours during the past seven (7) days. Responses to each item range from 0 times through 6 or more times. All the items were scored by summing responses and dividing by the total number of items. A higher number indicates a higher level of aggression.

A score of 60% and above indicates the presence and high level of student's aggressive tendency in specific provocative situation. On the other hand, a minimum number below 60% indicates the least level of student's aggressive tendency in specific provocative of anger arousing circumstances.

3.9 Validity and Reliability of the Instrument:

The researcher used both face and content validity. For face validity, the researcher presents the drafted questionnaire to both supervisors and other professional lecturers in the Department of Educational Psychology and Counselling Ahmadu Bello University, Zaria, for their vetting and advice with a view to establishing its content validity.

For reliability of the instrument, the pilot testing was conducted to sixty (60) students from Federal Government Girls College, Minjibir, Kano State which was not used for the study. The aggression scale of Teachers identification of students with aggressive behaviour questionnaire and Aggressive behavioiur Scales have 10 and 11 items respectively. The researcher gave out the aggression scale of teachers' identification of students with aggressive behavioiur questionnaire to form teachers to fill for identifying the aggressive students. The aggressive behaviour scale was given to the subjects identified with aggressive behaviour to fill. The instruments were retested after two weeks with the same students in order to establish reliability of the test instrument.

Descriptive statistic was used to find the mean and standard deviation which were used to report the pilot test. The reliability coefficient of the instrument using Cronbach alpa method was found to be 0.646 and 0.720 in the first and second administration of instrument respectively. This means that the internal consistency of the data for research on efficacy of token-economy and time-out techniques in reducing aggressive behaviour among students was reliable. This was a confirmation of test of reliability by Spiegel (1992), Stevens (1986) and Olayiwola (2010). According to them an instrument is considered reliable if it lies between 0 and 1, and that the closer the calculated reliability co-efficient is to 1, the more reliable is the instrument. This therefore, confirms the reliability of the data collection instrument used as fit for the main work.

3.01 Identification of Subjects

The aggression scale of teachers' identification of student with aggressive behaviour questionnaire was used to identify the subjects for this study. The questionnaire was given to the form teachers to scale the students who often get angry in the classroom. The aggressive behaviour scale was given to students that were identified by the form teachers to scale themselves. Refer to appendix 'A' and '**B'** for details.

3.02 Procedure for Data Collection

Prior to the administration of the questionnaire, the researcher held a discussion with the college administrators in order to obtain permission. The researcher, after gaining access to the respondents, established a good rapport through identifying himself as a researcher and explained the reason for coming to them and solicit them to feel free to offer genuine and honest feedback.

To minimize the interaction among the treatment group members, the researcher divided the groups into three, according to their schools located at different areas of Kano and Katsina

states. All the treatment groups were treated independently. They include token economy group at Federal Government College, Daura who were exposed to eight (8) weeks of token economy treatment sessions. The other experimental group i.e. the time out technique group at the Federal Government College, Kano who had eight (8) weeks of time out treatment sessions. While the control group students were at Federal Science Technical College, Dayi.

3.03 Experimental Phase

3.03.1 Pre-Treatment Session (Pre-test Session):

This session is aimed at familiarization between the researcher and the students before the actual treatment phase. It served as the introductory meeting between the researcher and the students to be studied. The researcher used this opportunity to create rapport with the aggressive students and to identify why students exhibit aggressive behaviours and the circumstances leading to aggressive behaviour among students. The responses of study subjects were also recorded by the researcher to ensure that no detail was omitted.

3.03.2 Treatment Sessions:

This study aimed at two treatment groups. The token economy group were students in Federal Government College, Daura and the time out treatment group are students in Federal Government College, Kano. The control group students were at Federal Science Technical College, Dayi who were not exposed to any treatment.

Token Economy Treatment Procedure

1st Session (1st Week)

The following are some of the activities that took place during the first week period of the treatment session:

i. Introduction: the researcher introduced himself to the subjects in a polite and simple manner. The researcher also asked the students to introduce themselves too, by names, class, age, likes and dislikes at home and in school one after the other.

ii. The researcher explained that the purpose of forming the group was to help them to understand that their behaviour usually hinder achievement of academic goals.

iii. The researcher continues to get the interest of the students through establishing good rapport with them. He also assured them of strict confidentiality concerning what ever was discussed.

iv. The researcher introduced the treatment program by explaining what token economy is all about. The mode and the procedure of token-economy technique were also explained.

v. Time of meeting; A suitable time of meeting was discussed with the students and agreed upon which will be applicable to all the sessions.

vi. The pre-test was administered to the students to ascertain their readiness for the programme. Students were guided to fill the questionnaire given to them. (writing materials were given to them as reinforcement).

vii. The researcher appreciated the subjects for attending the session, and also reminds and them of the time, and venue of the next meeting. They were also encouraged to give more cooperation.

A total of 40 minutes was used for this session.

Second Session (2nd Session)

i. A review of the previous session was made.

ii. The group members were told about the classroom rule to comply with before benefitting from the tokens. They include the following: -

- Do not threating or intimidate others.
- Enter the classroom quietly without running or pushing.
- Respect yourself and others.
- No talk outs in the class.
- Do not hit any one
- No dragging of feet.
- No dragging of chairs and desks.
- No throwing of object or papers.
- No fidgeting on seat.
- Be in your assigned seat and ready to work when the bell ring
- Listen and stay seated when someone is speaking.
- Treat anyone and their property respectfully.
- Raise your hand if you want to communicate and wait for permission to speak.
- Have your writing materials ready when needed.
- No sleeping in class.
- No humming of songs or beating of desk.
- Be courteous.
- Be a responsible person.

iii. The researcher delivered a lecture on the topic: causes of aggressive behaviour.

a. Frustration

b. Peer –group influence

c. School factors

d. Family factors

e. Media factors

Question for Group Discussion

a. Mention other reasons why students become aggressive

b. Why do you think it is good for students to behave well?

iv. While the session is going on, the green card was dropped complying subjects. The green cards were traded with exercise books and biros by the end of the session.

v. The researcher closed the session by thanking the students for attending the session and solicits for further cooperation.

vi. The records of the award of tokens for the day were recorded against individuals who received tokens.

A total period of 40 minutes was allocated for this session to enable good interaction between the researcher and the students.

Third Session (3rd Session)

i. The researcher led the students to review the last session on reminding them of classroom rules.

ii. A lecture was given to the students, on the topic: The disadvantages of aggressive behaviour.

a. An aggressor will not make any progress in life.

b. The academic performance of aggressive student will continue to be poor.

c. Aggressive students will be suspended or withdrawn from school .i.e. they will drop out of school.

d. They will be rejected by other people.

Question for Discussion

a. What other disadvantages can you think of?

b. What advice would you give to a friend who is aggressive?

iii. As the discussion was going on, the observation and award of tokens was made at five minutes interval. This means that any complying group member was given a token traded after the session depending on the number of tokens received.

iv. The tokens received were traded for something tangible. As a member with four-five tokens had traded such with calculators while those with less than four tokens traded such with calculators while those with less than four tokens had traded such for sixty leaves exercise books.

The session takes 40 minutes.

Fourth session (4th Week)

i. Previous session's activity were reviewed by asking the following questions:

a. What are the causes of aggressive behaviour?

b. Mention some disadvantages of aggressive behaviour.

ii. The researcher told students a story about three students.

- One of the students was well behaved, while the other two students were aggressors.

- The two aggressive students joined the bad gangs on streets, throwing things, destroying school property and the frequently oppose the school rule and regulations.
- They were also threatening, intimidating, abusing or beating other students on account of minor issues.
- They found themselves in different types of problems ranging from poor academic performance, school dropout, being punished by school authority, unemployment and diminished earning potential in their adulthood.
- The well behaved student was seen as successful, respectful, full of dignity and increased brighter future.

- To conclude the session the following questions for discussion were made:

a. What lessons have you learnt from this story?
b. If the two aggressive students were your brothers, how would you help them?
c. List five things that led to aggressive behaviour.

iii. While the session is going on, observation and award of tokens continued.

iv. By the end of the session, students with four – five tokens had traded such for sixty leaves exercise book and biro while those with less than four tokens had traded such for forty leaves exercise books and biros.

The session also took 40 minutes.

Fifth session (5th week)

i. The subjects were warmly welcomed by the researcher who appreciate them for their support and scarifies during the programme.

ii. The researcher lead the students to review the last session especially the short story and its lessons.

iii. Discussion was carried out on aggressive behaviour and its causes. Students were asked to express their views on the causes and implications of aggressive behaviour.

iv. The observation time and the award of tokens continued at five minutes intervals. By the end of the session, they were traded for exercise books, biros, and juice.

v. The students were given a home work to write on the factors and implications of aggressive behaviour.

Closing remark: The researcher thanked the students for their cooperation.

A total of 40 minutes was used for this session.

Sixth Session (6th Week)

i. The students were welcomed by the researcher as usual.

ii. The home work given to the students during the previous session was collected by the researcher, and every subject was asked to read his/her work before the class to provoke a debate on it.

iii. While discussion is going on, the observation and award of tokens continued at 10 minutes intervals which were traded for calculators, juice and biscuits.

iv. The researcher thanked the students for attending the session and encourage them to attend the next session.

The time was 40 minutes for this session.

Seventh Session (7th Week)

i. The researcher welcomed the students for coming to the session.

ii. The observation and award of tokens continued while the discussion is going on at every 10 minutes intervals.

iii. The researcher delivered a lecture on the topic: How students can achieve their goals in life.

a. Attend school regularly

b. Work hard in your academics

c. Keep off from bad company

d. Be obedient to the school rules and regulations.

e. Be obedient to your parents and others in the community.

f. Be friendly with others.

- Questions for discussion were made:

1. What happens to students who fail to obey the rules and regulations of the schools?
2. How can you keep away from a bad company?
3. Can aggressive students achieve their goals in life?

iv. By the end of the session three tokens were traded for sixty leave exercise books and biros while two or one token was traded for a forty leave exercise book due to the change in time of observation.

v. The researcher thanked the students for their usual cooperation.

A total of 40 minutes was used for this session.

Eighth Session (8th Week)

i. As usual, the researcher welcomed the students and appreciated them for their support and sacrificies during the programme.

ii. The observation time during this session was a 10 minutes interval.

iii. The researcher reviewed the previous sessions by asking the following questions:

1. Mention some of the classroom rules.
2. Mention some causes of aggressive behaviour.
3. What are some disadvantages of aggressive behaviour?
4. What should a student do to achieve his/her goals in life?

iv. The researcher asked the group members what they achieved during the sessions.

v. Observations were recorded against individuals with no award of tokens. This is because, this is the last contact session and to find out whether there is reduction in their aggressive behaviour or not.

vi. **Closing remark:**

- The researcher appreciates and expressed his profound gratitude to the students for their commitment throughout the sessions.
- To plead with the students to shun all habit, that might lead them to aggressive behaviour?
- To encourage them to attend school regularly, pay close attention to their studies and abide by the rules and regulations of the school.
- Those students with the highest number of tokens for their good behaviour were rewarded specially.
- Finally, the researcher thanked the students, share tokens and dismissed them.

vii. The researcher gathered all records during the treatment sessions as important data for analysis.

Total 40 minutes was used for this session.

Ninth Week

- The researcher returns back to the school to post-test the group members to find out how the treatment session has affected their aggressive behaviour.

Time Out-Treatment Procedure

1st session (1st week)

i. Establishing the relationship. The group members were welcomed by the researcher who introduced himself to them. The subjects were also asked to introduce themselves.

ii. The students were allowed free time to talk on some antisocial behaviours that they think were hindrances to achieving educational goals.

iii. The researcher explained the purpose for the formation of the group which is helping to know that aggressive behaviour usually hinder smooth teaching and learning processes.

iv. The concept of time-out treatment technique was explained. The procedure involves in time out was also explained to the subjects.

v. The pre-test was administered to ascertain the student's readiness for the programme through the aid of the school counsellors.

A duration of 40 minutes was used for this session.

2nd session (2nd week)

i. At this point a review of last session was done.

ii. The subjects were told about the classroom rules to be obeyed in the course of training, written on cardboards and placed on the chalkboard at every contact period. They are as follows,

- Do not threating or intimidate others.
- Enter the classroom quietly without running or pushing.
- No talk outs in the class.
- Do not hit any one
- No dragging of feet.
- No dragging of chairs and desks.
- No throwing of objects or papers.
- No fidgeting on seat...
- Be in your assigned seat and ready to work when the bell ring
- Listen and stay seated when someone is speaking.
- Treat anyone and their property respectfully.
- Raise your hand if you want to communicate and wait for permission to speak.
- Have your writing materials ready when needed.
- No sleeping in class.
- No humming of songs or beating of desk.

iii. The concept of time-out technique was explained to the group members as well as the mood of the operation. That is any student who exhibit any form of aggressive behaviour would be given a red card. And the number of red card would determine the time to be spent on time-out.

The time-out pattern adopted was the delayed time-out. This means that while in the classroom during the treatment session no matter the number of times, the student exhibits an aggressive act, he or she would keep receiving the red cards. By the end of the session the student would spend some minutes in time-out while others were allowed to go out. The student will stay in the class and is not allowed access to by other students under the researchers' supervision.

iv. The subjects were informed that any member who fails to comply with the rules would be given a red card. If a subject receives between four-to-five red cards will spend 5 minutes on time-out. While those received between one – to-three red cards will spend 2 minutes on time-out.

v. The subjects were allowed to ask questions concerning the discussion made.

The session lasted for 40 minutes.

3rd session (3rd Week)

i. A review of the previous session was made reminding the group on classroom rules.

ii. The researcher delivered a lecture on the concept and causes of aggressive behaviour.

iii. As the lecture commences, the observation time was made at every five minutes interval. This means that any member who exhibits an aggressive act was recorded and given a red card which by the end of the session observed time-out depending on the number of red cards received.

iv. Questions for discussion were done;

a. Mention other reasons why students become aggressive

b. Why do you think it is good for students to behave well?

v. The researcher closed the session and the aggressors observed time-out (2 – 5 minutes).

The session lasted for 40 minutes.

4th session (4th Week)

i. The researcher reviewed the last session and reminded the group members on the class rules.

ii. The researcher commenced the treatment by writing and discussing on the topic for the day on the chalkboard; the disadvantages of aggressive behaviour.

iii. The Questions for discussion were made such as;

a. What other disadvantages can you think of?

b. What advice would you give to a friend who is aggressive?

iv. The researcher continued observing and recording those subjects who exhibited an aggressive act at every five minutes interval.

v. The researcher closed the session and students with red cards observed time-out (2 – 5 minutes).

The session lasted for 40 minutes.

5th session (5th Week)

i. A review of the previous session was made by asking the following question:

- Mention some disadvantages of aggressive behaviour

ii. The researcher told a story about three students.

- One of the students is well behaved while the other one two students are aggressors
- The two aggressive students joined the bad gangs, throwing things, destroying school property and frequently oppose the school rules and regulations. They were also threatening and intimidating other students.
- They found themselves in different forms of problems ranging from poor academic performance, school drop out, being punished by school authority, unemployment and diminished earning potential in their adulthood.
- The well behaved student was seen as successful, respectful, full of dignity and increased brighter future.

iii. Questions for discussion were as follows:

a. What lessons have you learnt from this story?

b. If the two aggressive students were your brothers, how would you help them?

c. List five things that led to aggressive behaviour.

iv. The observation, recording and award of red cards continued, those students with red cards observed 2 – 5 minutes time-out by the end of the session to ensure that there is reduction in the exhibition of aggressive behaviours.

The session lasted for 40 minutes.

6th session (6th Week)

i. A review of last session about the story of three students and the lessons deduced from the story was made.

ii. The observation and recording at this session was at ten minutes interval.

iii. When the discussion is going on, the observation and award of red cards continued.

iv. Students were given home work to write on the causes and implications of aggressive behaviour to present during the next session.

v. By the end of the session, 2 – 5 minutes time-out was observed by those students with red card.

A total duration of 40 minutes was used for this session.

7th session (7th week)

i. The home work given during the previous session was collected and asked individual student to read his or her work before the class for the debate on it.

ii. The observation, recording and award of red cards continued when discussion is going on.

iii. Those with the red cards went on 2 – 5 minutes time-out by the end of the session.

The session last for 40 minutes.

8th session (8th week)

i. The observation and recording during this session was at 10 minutes interval.

ii. A general review of the previous sessions was done.

iii. The researcher asked group members how they felt about coming to this treatment techniques.

iv. Students were asked to keep in touch with the researcher if they have any problem.

v. Observation and award of red cards were recorded against those who manifested an aggressive act during the session but there was no time-out.

vi. The reasons why time-out was not been observed are;

a. This is the end of the contact sessions.

b. To find out whether there is reduction in aggressive behaviour or not.

vii. The researcher appreciated the group members for their cooperation during the sessions.

The session lasted for 40 minutes.

9th Week

- The post – test (test - retest) was administered to find out how the treatment sessions has affect the aggressive behaviour of the subjects.
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3.03.3 Post-Treatment (Post-Test) Session

The Aggression measurement scale was used to re-assess the aggressive students that were used for the study, involving both the treatment and the control group subjects for analysis.

3.04 Procedure for Statistical Analysis

The type of data and the nature of hyphotheses to be tested in the study determine the type of statistics to be employed by the researcher (Bichi, 2004). The data collected was analysed by using the statistical package for social sciences (SPSS) version 15, which was done by expert in the field of computer analyst. Descriptive statistics was used for answering the research questions and for data presentation. While the hyphotheses were tested using t-test. The t-test statistical technique was used where there was comparison between two variables. Bichi (2004) opined that when samples are assigned to two conditions, test appropriate to independent samples must be used example, t-test for independent samples. All the hyphotheses were tested at 0.05 level of significance which formed the basis for acceptance or rejection of hyphotheses.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This study is aimed primarily at assessing the effects of token economy and Timeout on managing the aggressive behaviour of students. A total of 60 respondents were used as sample for the study. The Statistical package IBM version 20 was used for the analysis. The first section analysis is the presentation of bio data using frequencies and percentages distribution by sex, and treatment groups. The second section presents the research questions using comparative mean descriptive statistics. The research hypotheses were tested using the Independent t - test statistics and decision taken. Independent t- test statistics at 0.05 alpha level of significance was used to test the five null hypotheses. The summary of major findings were also presented at the end of the chapter,

4.2 Demographic Data ofn Subjects

Below is the demographic characteristics of subjects.

Table 4.2.1.: Distribution of subjects by gender

Gender	No of Subjects (N)	Percentage (%)
Male	30	50
Female	30	50
Total	60	100

A total of 60 respondents were used for this study. A total of 30 representing 50% were males and the rest 30 representing 50% are females. This indicates that both male and female aggressive students have equal number of presentation.

Table 4.2.2: Distribution of subjects by treatment groups

Groups	No. of Subjects (N)	Percentage(%)
Control Group	20	33.3
Token Economy	20	33.3
Time Out	20	33.3
Total	60	100

Three treatment groups were considered. The first group consist of 20 or 33.3% respondents in control group that were not exposed to any treatment, while the second group consist of 20 or 33.3% that were exposed to the experimental treatment of Token Economy and the rest 20 or 33.3% of the respondents were exposed to the second experimental treatment of Time out strategy.

4.3 Research questions:

Research question one: What is the effect of token-economy technique on reducing aggressive behaviour between experimental and those respondents in Control group subjects?

To solve this Question, the mean Aggressive behaviour Aggressive behaviour of respondents exposed to Token Economy experimental group were compared with that of respondents in Control group using the 2 independent t-test analyses.

Table 4.3.1: **Mean score of student's aggressive behaviour after administration of token-economy compared with the control group.**

Variables	N	$\overline{X}$	SD	SEM
control group	20	46.3500	3.14182	.70253

Token Economy (TE)	20	24.8000	2.50473	.56008

Outcome of the descriptive statistics above showed that there is difference between mean Aggressive behaviour of respondents exposed to Token Economy experimental and those respondents in Control group. Their calculated mean aggressive behaviour were 46.3500 and 24.8000 by respondents in control group and those in Token economy experimental group respectively, making a mean difference of 21.5500,

Research Question Two: What is the effect of time-out technique on reducing aggressive behaviour between experimental and Control group subjects?

To answer this question the mean Aggressive behaviour of respondents exposed to Time Out experimental group were compared with that of respondents in Control group.

Table 4.3.2 Mean score of student's aggressive behaviour after administration of time-out compare with the Control group.

Variables	N	$\overline{X}$	SD	SEM
control group	20	46.3500	3.14182	.70253
Time out (TO)	20	26.4500	2.29358	.51286

Outcome of the descriptive mean statistics showed that there is difference between mean Aggressive behaviour of respondents exposed to Time Out experimental and those respondents in Control group. Their calculated mean aggressive behaviour were 46.3500 and 26.4500 by respondents in control group and those in Time Out experimental group respectively, making a mean difference of 19.9000,

Research question Three: What is the effectiveness of token-economy and time-out techniques in reducing Aggressive behaviour among students of Federal Unity Schools?

To solve this Question, the mean Aggressive behaviour of respondents exposed to Time Out experimental group were compared with those respondents exposed to Token economy experimental group.

Table 4.3.3: **Mean score of student's aggressive behaviour after administration of token-economy and time-out techniques.**

Variables	N	$\overline{X}$	SD	SEM
Token Economy (TE)	20	24.8000	2.50473	.56008
Time out (TO)	20	26.4500	2.29358	.51286

Results of the above descriptive statistics showed that there is difference between mean Aggressive behaviour of respondents exposed to Time Out experimental and those respondents exposed to Token economy experimental group. Their calculated mean aggressive behaviour were 24.8000 and 26.4500 by respondents exposed to exposed to Token economy experimental group and those exposed to Time Out experimental group respectively, making a mean difference of 1.6500,

Research question Four: Is there any difference in the level of aggressive behaviour between male and female students exposed to Token Economy technique?

To solve this question, the mean Aggressive behaviour of male was compared with female respondents exposed to Token Economy experiment.

Table 4.3.4: **Mean score of student's aggressive behaviour between genders after administration of token-economy technique**.

Variable	N	$\overline{X}$	SD	SEM
MALE	10	25.8500	2.23669	.70730
FEMALE	10	24.7500	2.40659	.76103

Results of the above descriptive statistics showed that there is no difference between male and female respondents in their mean Aggressive behaviour Aggressive behaviour when exposed to Token Economy experiment Their calculated mean aggressive behaviour were 25.8500 and 24.7500 by male and female respondents in token economy respectively.

Research question Five: Is there a difference in the level of aggressive behaviour between male and female students when exposed to Time out technique?

To answer this question, the mean Aggressive behaviour of male was compared with female respondents exposed to Time out technique.

Table 4.3.5: Mean score of student's aggressive behaviour between gender after administration of time-out technique.

Variable	N	$\overline{X}$	SD	SEM
MALE	10	27.8500	1.79583	.56789
FEMALE	10	25.0500	1.87750	.59372

Results of the above descriptive statistics showed that significant difference exist between male and female respondents in their mean Aggressive behaviour when exposed to Time out experiment. Their calculated mean aggressive behaviour were 27.8500 and 25.0500 by male and female respondents in Time out respectively.

4.4 Testing of Research Hypotheses.

Hypothesis one: There is no significant difference in the mean Aggressive behaviour of students exposed to Token Economy technique compared with Control group.

To solve this hypothesis, the mean Aggressive behaviour of respondents exposed to Token Economy experimental group were compared with that of respondents in Control group using the 2 independent t test analysis**.**

Table 4.4.1 Result of t-test analysis on the effect of token-economy technique on the mean aggressive behaviour of experimental and control groups.

Treatment group	N	Mean	std.dev	std.err	Df	t-Calculated value	Sig (p)
control group	20	46.3500	3.14182	.70253			
Token Economy (TE)	20	24.8000	2.50473	.56008	**38**	23.985	0.000

Significant difference at P <0.05 (Calculated p < 0.05)

Results of the above independent t-test statistics showed that there is significant difference between mean Aggressive behaviour of respondents exposed to Token Economy (experimental 1) and those respondents in Control group. Reason being the fact that the calculated p-value of 0.000 is lower than the 0.05 level of significance while the calculated t-value of 23.985 is higher than the 1.96 t - critical value. Their calculated mean aggressive behaviour were 46.3500 and 24.8000 by respondents in control group and those in Token economy experimental group respectively, making a mean difference of 21.5500, implying that the token economy therapy has significantly reduced their aggressive behaviour. Therefore, the null hypothesis which states that there is no significant difference in the mean Aggressive behaviour of students exposed to Token Economy technique compared with Control group, is hereby rejected.

Hypothesis Two: There is no significant **difference** in the mean Aggressive behaviour of students exposed to Time Out technique compared with Control group.

To solve this hypothesis, the mean Aggressive behaviour of respondents exposed to Time Out experimental group were compared with that of respondents in Control group using the 2 independent t test analysis**.**

Table 4.4.2: T-test analysis on the effect of Time-out technique on the mean aggressive behaviour between treatment and control groups after treatment.

Variable	N	$\overline{X}$	SD	SEM	Df	t - cal	Sig (p)
control group	20	46.3500	3.14182	.70253			
Time out (TO)	20	26.4500	2.29358	.51286	**38**	22.878	0.000

Significant difference at p <0.05 (Calculated p < 0.05)

Results of the above independent t-test statistics showed that there is significant difference between mean Aggressive behaviour of respondents exposed to Time Out (experimental2) and those respondents in Control group. Reason being the fact that the calculated p value of 0.000 is lower than the 0.05 level of significance while the calculated t value of 22.878 is higher than the 1.96 critical t value at df 38. Their calculated mean aggressive behaviour were 46.3500 and 26.4500 by respondents in control group and those in Time Out experimental group respectively, making a mean difference of 19.9000, implying that the Time Out therapy has significantly reduced their aggressive behaviour Therefore, the null hypothesis which state that there is no significant difference in the mean Aggressive behaviour of students exposed to Time Out technique compared with Control group, hereby rejected.

Hypothesis Three: The null hypothesis states that there is no significant difference in effectiveness of Token economy and Time Out techniques in reducing the mean aggressive behaviour among students of Federal Unity Schools.

To solve this hypothesis, the mean Aggressive behaviour of respondents exposed to Time Out experimental and those respondents exposed to Token economy experimental group using the 2 independent t test analysis.

Table 4.4.3: **T-test analysis on the level of student's aggressive behaviour following administration of token-economy and time-out techniques**.

Variable	N	$\overline{X}$	SD	SEM	Df	t- cal	Sig(p)
Token Economy (TE)	20	24.8000	2.50473	.56008			
Time out (TO)	20	26.4500	2.29358	.51286	**38**	2.173	0.036

Significant difference at p <0.05 (Calculated p < 0.05)

Results of the above independent t-test statistics showed that there is significant difference between mean Aggressive behaviour of respondents exposed to Time Out experimental and those respondents exposed to Token economy experimental group.

Reason being the fact that the calculated p value of 0.036 is lower than the 0.05 level of significance while the calculated t value of 2.173 is higher than the 1.96 critical t value at df 38. Their calculated mean aggressive behaviour were 24.8000 and 26.4500 by respondents exposed to exposed to Token economy experimental group and those exposed to Time Out experimental group respectively, making a mean difference of 1.6500, implying that the token economy group have reduced mean aggressive behaviour compared to those exposed to time out. Therefore, the null hypothesis which states that there is no significant difference in effectiveness of token economy and Time Out techniques in reducing the mean aggressive behaviour among students is hereby rejected.

Hypothesis Four: There is no significant gender difference in the mean aggressive behaviour of students exposed to Token Economy technique.

To solve this hypothesis, the mean Aggressive behaviour of male and female respondents exposed to Token Economy experimental using the 2 independent t test analysis.

Table 4.4.4: T-test analysis on the level of reducing aggressive behaviour between male and female students after administration of token-economy technique.

Variable	N	$\overline{X}$	SD	SEM	Df	t- cal	Sig (p)
MALE	10	25.8500	2.23669	.70730			
					18	1.021	
FEMALE	10	24.7500	2.40659	.76103			0.064

No significant difference at p > 0.05 (Calculated p > 0.05)

Results of the above independent t-test statistics showed that there is no significant difference between male and female respondents in their mean Aggressive behaviour when exposed to Token Economy experiment. Reason being the fact that the calculated p value of 0.064 is higher than the 0.05 level of significance while the calculated t-value of 1.021 is lower than the 1.96 critical t-values at df 18. Their calculated mean aggressive behaviour was 25.8500 and 24.7500 by male and female respondents in token economy respectively, implying that the token economy therapy is good for both male and female alike. Therefore, the null hypothesis which states that there is no significant gender difference in the mean aggressive behaviour of students exposed to Token Economy experiment is hereby accepted and retained.

Hypothesis Five: There is no significant gender difference in the mean aggressive behaviour of students exposed to Time out technique.

To solve this hypothesis, the mean Aggressive behaviour of male and female respondents exposed to Time out experimental using the 2 independent t test analysis.

Table 4.4.5: T-test analysis on the level of reducing aggressive behaviour between male and female students after administration of Time-out technique.

Variable	N	$\overline{X}$	SD	SEM	Df	t-cal	Sig (p)

MALE	10	27.8500	1.79583	.56789			
					18	3.408	
FEMALE	10	25.0500	1.87750	.59372			0.003

Significant difference at p < 0.05 (Calculated p < 0.05)

Results of the above independent t-test statistics showed that significant difference exist between male and female respondents in their mean Aggressive behaviour when exposed to Time out experiment. Reason being the fact that the calculated p value of 0.003 is lower than the 0.05 level of significance while the calculated t value of 3.408 is higher than the 1.96 critical t value at df 18. Their calculated mean aggressive behaviour were 27.8500 and 25.0500 by male and female respondents in Time out respectively, implying that female had reduced mean aggressive behaviour than their male counterparts when both are exposed to the Time out. Therefore, the null hypothesis which states that there is no significant gender difference in the mean aggressive behaviour of students exposed to Time out technique is hereby rejected.

4.2 Summary of major findings of the study.

The findings of this study reveal that:

1. Students who were exposed to Token-economy treatment were able to reduced their aggressive behaviour compared to the control group with (t = 23.985, p = 0.000) in favour of the treatment group. Hence the null hypothesis that state there is no significant difference in the mean Aggressive behaviour of students exposed to Token Economy technique compared with Control group is hereby rejected.

2. Students exposed to time- out treatment had a reduced aggressive behaviour compared to their counterparts in control group with (t =22.878, p = 0.000). Hence the null hypothesis which states that there is no significant **difference** in the mean Aggressive behaviour of students exposed to Time Out technique compared with control group was also rejected in favour of the treatment group.

3. Token-economy technique was found to be more effective in reducing aggressive behaviour than Time-out technique with (t = 2.173, p = 0.0036) in favour of those in token economy group. Hence the null

hypothesis which states there is no significant difference in effectiveness of Token economy and Time Out techniques in reducing the mean aggressive behaviour among students of Federal Unity Schools is thereby rejected.

4. Token-economy technique was found to be effective in reducing aggressive behaviour among male and female students with ($t = 1.021$, $p = 0.064$). Hence the null hypothesis that state **t**here is no significant gender difference in the mean aggressive behaviour of students exposed to Token Economy technique is thereby accepted and retained.

5. Female students had significantly reduced aggressive behaviour than male students after administration of Time-out technique with ($t = 3.408$, $p = 0.003$) in favour of the Female students, Hence the null hypothesis which state that there is no significant gender difference in the mean aggressive behaviour of students exposed to Time out technique was rejected.

4.6 Discussion of Results

The result from the findings of this study reveals that students exposed to token-economy techniques were able to reduce their aggressive behaviour as compared to the comterpart in control groups. This means that aggressive behaviour has been manage to the lowest minimum through the use of token-economy technique. Therefore the assumption made in chapter one of this study was confirming the efficacy of token-economy technique in management of reducing aggressive behaviour among students.

The findings of this research work therefore, agrees with the study of Bolarin and Badejo (1998) who reported the use of token-economy in eliminating stealing behaviour among juvenile delinquents in Lagos Approved Schools. The results revealed that token-economy were effective in reducing behaviour problem among students. Again Wille (2002) investigated on the use of

token-economy techniques in reducing disruptive classroom behaviours. The results confirmed token economy is one of the most effective ways to improve effective behaviours. Similarly, Tiano, Fortson, McNeil and Humphreys (2005) examine the efficacy of token-economy in decreasing inappropriate behaviour. Their study revealed that a decrease in inappropriate behaviour occurred throughout the study for each child.

Similarly, Cangi and Dally (2013) also investigated the effect of token-economy on the occurrence of appropriate and inappropriate behaviours by children without autism in a social skills setting. Outcomes of the results indicate an increase in reduction inappropriate behaviour. This finding is contrary to Lube (2007) who made use of token-economy in reducing behaviours in an adolescent with autism spectrum disorder. The results indicate that token economy did not serve as an effective method in modifying the behaviour of the participants. The differences between the two researchers may be due to the difference in approach during the treatment sessions.

Findings of this study also reveal that student exposed to time out technique had reduced aggressive behaviour than their counterpart in control groups. This confirmed the efficacy of time-out technique in reducing aggressive behaviour among students. This finding agrees with the research conducted by Wille (2002) who affirmed that time out is one of the most effective ways to improve effective classroom behaviours. Similarly Firestone (1992) conducted a study on the effects and side effects of time-out on aggressive Nursery School Child. The results indicated that time-out lead to decreases in undesirable behaviour.

Conversely, Clark, Rowbury, Bear and Baer (1973) in Firestone (1976) delineated that time-out has been particularly successful in decreasing the frequency of aggressive behaviour. Pendergrass (1972) also revealed that time-out not only suppressed high rate misbehaviour, but

concomitantly caused a decrease in desirable behaviour. In a study conducted by Doneldson and Vollmer (2011) on an evaluation of time out procedures in reducing problem behaviour. Results indicated that time-out procedures were effective at reducing problem behaviour. Again Reitman and Drabman (1999) investigated on the use of time-out by parent on an 8-year-old boy. The results confirmed that time-out could be used to improve children's' behaviour Whittington and Moran (1990) also confirmed that, time-out if properly implemented, students' antisocial behaviours can be thoroughly treated.

Furthermore, findings reveal that, Token-economy techniques, was fund to be effective in reducing aggressive behaviour than time-out techniques. Hence the null hypothesis is thereby rejected. This finding does not agree with the study of Bostow and Bailey (1969) who indicated that the two procedure were significantly reduced the behaviour problems. Similarly, the finding does not also agree with the study of Fire-stone (1976) that delineated that time-out has been particularly successful in decreasing the frequency of aggressive behaviour. This finding does not also agree with the study conducted by Lubey (2007) on an examination of the use of token-economy in reducing behaviours in an adolescent with autism spectrum disorder. The result indicated that token-economy did not serve as an effective method in modifying the behaviours of the participant.

However, this finding agrees with the study of Koegel, Koegel and Dunlap (1996) who indicated that the use of token-economy decreased participant's disruptive behaviour. Similarly, Luiselli, Myles and Littman-Quinn (1983) examine the use of reinforcement and time-out treatment on controlling severe aggressive and distractive behaviours. The results indicated that the combination of reinforcement and time-out techniques rapidly eliminated the severe aggressive and distractive behaviours in children.

Findings of this study also reveal that token-economy techniques were found to be effective in reducing aggressive behaviour among male and female students. Hence the null hypothesis was retained and accepted. This imply that the token-economy technique is good for both male and female students alike, this is because it has almost the same effect on managing and reducing aggression of both sex.

These findings agree with the study of Balarin and Badejo (1998) who indicated that token-economy technique was effective by reducing behaviour problems among male and female delinquent youth that were used for their study. Similarly, the findings of this study agree with the study of Fortson, McNeil and Humphreys (2005) who reported there was a decrease in inappropriate behaviour occurred throughout the study for each child when using the token-economy technique. This finding is also supported by Kilmas and Mclauhlin (2007) who were of the opinion that inappropriate behaviours can be influence in a positive way by a token-economy to both male and female adolescents. Cangi and Daly (2013) also supported this finding by indicating that token economy technique could be manage in children with behaviour problems.

Finally, the findings of this study reveal that female students had significantly reduced aggressive behaviour as compared to their male counterpart after treatment using time-out techniques. Hence the null hypothesis is thereby rejected. This implies that time-out was found to be more effective in reducing female aggressive behaviour as compare to their male counterpart as a result of treatment.

These findings collaborate with the earlier findings of Mcquire (2008) who maintained that violence among female youth can be reduced by time-out. Similarly, Rortvedt and Miltenberger (1994) agreed with these findings as they revealed that, using time-out greatly

reduced noncompliant behaviour by girls when they carried out a research on the use of exclusionary time-out in decreasing non compliance in two 4-year-old girls.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presented the summary, conclusion, recommendations and suggestions for further study on the effects of Token Economy and Time out techniques in managing the aggressive behavPiour among students

5.2 Summary

This study was structured into five chapters in order to effectively carry out this research. Chapter one presented the background and purpose of the study, the statement of problem, significance of the study especially to teachers, students, psychologists and counsellors including the various Educational planners. Five research objectives as well as five research questions, including their corresponding five hypotheses formulated for the study, scope and limitations. Chapter two presented the literature reviews that are related to this study under the concept of aggression, Token Economy and time out techniques. Theoretical frame work and literature related to the topic in reducing the aggressive behaviour of students were reviewed.

In chapter three the research methodology used and adopted were discussed. The quasi - experimental pre-test, post-test control group design was used. The population of this study was 671 students. The sampling technique adopted was random sampling technique and a total of 60 students were sampled for the study divided into three groups. The reliability test was also carried out in this chapter to determine the reliability of the instrument used for this study. The instrument used for data collection was Aggressive Behaviour Scales.

In chapter four, the analysis, presentation and discussion of the results was carried out. The data were analysed using mean, standard deviation and t-test. The IBM version 20 statistical package was used to carry out the entire data analysis. The findings reveal that:

1. Students who were exposed to Token-economy treatment were able to reduce their aggressive behaviour compared to the control group in favour of the treatment group.

2. Students exposed to time- out treatment had a reduced aggressive behaviour compared to their counterparts in control group.

3. Token-economy technique was found to be more effective in reducing aggressive behaviour than Time-out technique in favour of those in token economy group.

4. Token-economy technique was found to be effective in reducing aggressive behaviour among male and female students.

5. Female students had significantly reduced aggressive behaviour than male students after administration of Time-out technique in favour of the Female students.

5. 3 Conclusion

From the research conducted and discussion made so far, the following conclusions are made based on the finding of this research. The findings of this study revealed that students who were exposed to token-economy and time-out techniques were able to reduce their aggressive behaviour compared to their counterparts in the control group in favour of the treatment groups. Implying that both token-economy and time-out techniques are effective in the management of aggressive behaviour among students. However, the study revealed that token-economy technique is more effective in reducing aggressive behaviour among students than time-out technique. Similarly, the result indicated that time-out technique could be best used in the management of female aggressive behaviour.

In conclusion, teachers, school adminitrators, psychologists and counsellors should be able to help aggressive students considerably by using token-economy and time-out techniques which is easy to implement and well matched to their basic role as a helpful instructor to the aggressive students.

5.4 Recommendations.

Based on the findings of this study, the following recommendations are here suggested:

1. Teachers, School administrators, psychologists and Counsellors should be exposed and train on the use of Token-economy and Time-out techniques in reducing aggressive behaviour problems among students.
2. Both Token-economy and Time-out techniques should be inculcated into the School curriculum in managing students aggressive behaviour problems.
3. Seminars, Workshops and in-house training on how to use Token-economy and Time-out techniques in managing aggressive behaviour among students should be emphasize.
4. Time-out techniques should be use in addressing aggressive behaviour in respective of gender

5.5 Suggestions for further studies.

The study is by no means exhaustive, further studies can be carried out in the following areas related to the study:

1. Effect of social praise strategy on reducing the aggressive behaviour of adolescents in tertiary schools in Katsina and Kano states.
2. Effect of token-economy and time-out techniques in reducing aggressive behaviour between rural and urban students of Federal Unity Schools in Kano and Katsina States.
3. Effects of token-economy and time-out techniques in managing other behavioural problems such as truancy, school phobia, bullying among others should be emphasize.

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APPENDIX "A"

AGGRESSION SCALE OF TEACHERS' IDENTIFICATION OF STUDENT WITH AGGRESSIVE BEHAVIOUR QUESTIONNAIRE Adopted from Huesmann, Eron, Guerra and Crawshaw (1994).

You are pleased required to respond to the following by ticking the appropriate opinions that best represent your opinion. All the information provided shall be treated strictly confidential.

Section "A" Biodata:

Name:……..

School:…….

Class:……...Sex:……

…….

Section "B"

S/N		NO	UNDECIDED	YES
1.	Frequently oppose the school rules and regulations.			
2	Often says "you must give me that!"			
3	Is a child who pushes or shoves other students.			
4	Gives dirty looks or sticks out his or her tongue at other students.			
5	Makes up stories and lies to get other students in trouble.			
6	Disrupt classes on a daily bases			
7	Starts a fight over nothing.			
8	Is always getting into trouble.			
9	Often in conflict ways with other students			
10	Takes other student's things by force.			

The deleted items include:

11 - Likes to share with others.

12 - Gets along well with others

13 - Helps other kids.

14 - Does nice things to help other people.

15 - Is someone I would like to sit next in class.

16 - Is a child I would like to have for my best friend.

17 - Is a child I really don't like.

18 - Is someone I wish were not in my class at all.

19 - Gets picked on by other kids.

20 - Gets hit and pushed by other kids.

21 - Gets out of his or her seat a lot.

22 - Wiggles or moves around in his or her seat a lot.

APPENDIX "B"

AGGRESSIVE BEHAVIOUR SCALE: Adopted from Orpinas and Frankowski (2001)

You are please required to respond to the following by filling the information in section 'A' and ticking the appropriate options in the right side of the questions that best represent your opinions

of what you actually did **duringthe last 7 days.** All the information provided shall be treated strictly confidential.

Section "A" Biodata:

School:……

Class:……

Sex:……..

Section "B"

S/N	During the last 7 days	0 Times	1 Time	2 Times	3 Times	4 Times	5 Times	6 or more Times
1	I tease students to make them angry							
2	I get angry very easily with someone.							
3	I fight back when someone hits me.							
4	I say things about other students to make other students laugh.							
5	I encourage other students to fight.							
6	I push or shove other students.							
7	I am usually angry most of the day.							
8	I get into a physical fight when I get angry.							
9	I slap or kick other people							
10	I called other students bad names.							
11	I threaten to hurt or hit other people.							

APPENDIX C

Reliability Coefficient Students Aggression Scale (Internal Consistency

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	60	100.0
	Excluded[a]	0	.0

Total	60	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.646	.722	11

Item Statistics

	Mean	Std. Deviation	N
i tease students to make them angry	3.5000	1.43208	60
i get angry very easily with someone	5.3667	1.11942	60
i fight back when someone hits me	5.4667	1.12697	60
i say things about other students to make other students laugh	4.3167	2.01260	60
i encourage other students to fight	2.9500	1.54509	60
i push or shove other students	3.4167	1.46475	60
i am usually angry most of the day	5.3000	1.30579	60
i get into a physical fight when i get angry	3.6667	1.72388	60
i slap or kick other people	4.2333	1.11030	60
i called other students bad names	4.0667	1.92984	60
I threaten to hurt or hit other people	3.5667	1.41860	60

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	4.168	2.950	5.467	2.517	1.853	.755	11

APPENDIX D

Reliability Coefficient Students Aggression Scale (Test-retest)
Scale: ALL VARIABLES

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.720	.726	11

Item Statistics

	Mean	Std. Deviation	N
i tease students to make them angry	3.8333	1.27780	60
i get angry very easily with someone	4.8167	1.68233	60
i fight back when someone hits me	4.1333	1.39572	60
i say things about other students to make other students laugh	4.3167	1.51257	60
i encourage other students to fight	2.2167	.95831	60
i push or shove other students	3.9000	1.88392	60
i am usually angry most of the day	3.9833	2.00416	60
i get into a physical fight when i get angry	4.5167	1.24181	60
i slap or kick other people	3.5500	1.26792	60
i called other students bad names	1.8833	1.36657	60
I threaten to hurt or hit other people	4.4667	1.46677	60

Summary Item Statistics

	Me sec onan	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.783	1.883	4.817	2.933	2.558	.865	11

APPENDIX E

DATA ANALYSIS

T-Test

Group Statistics

	Groups	N	Mean	Std. Deviation	Std. Error Mean
mean_Agreesive_behaviur	control group	20	46.3500	3.14182	.70253
	Token Economy (TE)	20	24.8000	2.50473	.56008

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
mean_Agreesive_behaviur	Equal variances assumed	.142	.709	23.985	38	.000	21.55000	.89846	19.73116	23.36884
	Equal variances not assumed			23.985	36.203	.000	21.55000	.89846	19.72819	23.37181

```
T-TEST GROUPS=group(1 3)
  /MISSING=ANALYSIS
  /VARIABLES=mean_Agreesive_behaviur
  /CRITERIA=CI(.95).
```

Group Statistics

	Groups	N	Mean	Std. Deviation	Std. Error Mean
mean_Agreesive_behaviur	control group	20	46.3500	3.14182	.70253
	Time out (TO)	20	26.4500	2.29358	.51286

T-Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Inte of the Difference	
									Lower	Uppe
mean_Agreesive_behaviur	Equal variances assumed	.320	.575	22.878	38	.000	19.90000	.86982	18.13915	21.66
	Equal variances not assumed			22.878	34.772	.000	19.90000	.86982	18.13377	21.66

```
T-TEST GROUPS=group(2 3)
  /MISSING=ANALYSIS
  /VARIABLES=mean_Agreesive_behaviur
  /CRITERIA=CI(.95).
```

T-Test

Group Statistics

	Groups	N	Mean	Std. Deviation	Std. Error Mean
mean_Agreesive_behaviur	Token Economy (TE)	20	24.8000	2.50473	.56008
	Time out (TO)	20	26.4500	2.29358	.51286

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
mean_Agreesive_behaviur	Equal variances assumed	.050	.824	-2.173	38	.036	-1.65000	.75941	-3.18735	-.11265
	Equal variances not assumed			-2.173	37.709	.036	-1.65000	.75941	-3.18774	-.11226

T-Test token economy

Group Statistics

	SEX	N	Mean	Std. Deviation	Std. Error Mean
mean_Agreesive_behaviur	MALE	10	25.8500	2.23669	.70730
	FEMALE	10	24.7500	2.40659	.76103

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
mean_Agreesive_behaviur	Equal variances assumed	.319	.579	1.021	18	064	2.10000	1.03896	-.08278	4.28278
	Equal variances not assumed			2.021	17.904	.058	2.10000	1.03896	-.08362	4.28362

T-Test time out

Group Statistics

	SEX	N	Mean	Std. Deviation	Std. Error Mean
mean_Agreesive_behaviur	MALE	10	27.8500	1.79583	.56789
	FEMALE	10	25.0500	1.87750	.59372

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
mean_Agreesive_behaviur	Equal variances assumed	.000	.985	3.408	18	.003	2.80000	.82158	1.07392	4.52608
	Equal variances not assumed			3.408	17.965	.003	2.80000	.82158	1.07367	4.52633

APPENDIX F

Time-Out Record Sheet

Date	Student name	Observed Behaviour	Time-out Type	Time in	Time out	By Whom	Outcome

Source: Nelson, M. (1997).