EFFECTIVENESS OF BEHAVIORAL AND RATIONAL EMOTIVE BEHAVIOR THERAPIES ON CONDUCT DISORDER AMONG JUVENILE DELINQUENTS IN SELECTED REHABILITATION SCHOOLS IN KENYA

by

Naomi James
13-0418

A dissertation submitted to the School of Human and Social Sciences

of

Daystar University
Nairobi, Kenya

In partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY
in Clinical Psychology

May 2016

EFFECTIVENESS OF BEHAVIORAL AND RATIONAL EMOTIVE BEHAVIOR THERAPIES ON CONDUCT DISORDER AMONG JUVENILE DELINQUENTS IN SELECTED REHABILITATION SCHOOLS IN KENYA

by

Naomi James
13-0418

In accordance with the Daystar University policies, this dissertation is presented in partial fulfillment for the requirements of Ph.D. in Clinical Psychology degree.

Signature	Date
_____	_____
Alice Munene, Psy.D., Supervisor	
_____	_____
Rebecca Oladipo, Ph.D., Supervisor	
_____	_____
Alice Munene, Psy.D., Coordinator, Ph.D. Clinical Psychology	
_____	_____
Kennedy Ongaro, Ph.D., Dean, School of Human and Social Sciences	

DECLARATION

EFFECTIVENESS OF BEHAVIORAL AND RATIONAL EMOTIVE BEHAVIOR THERAPIES ON CONDUCT DISORDER AMONG JUVENILE DELINQUENTS IN SELECTED REHABILITATION SCHOOLS IN KENYA

I declare that this dissertation is my original work and has not been submitted to any other institution of learning for academic credit

Signed: Date:

_____ _____

Naomi James
(13-0418)

ACKNOWLEDGEMENTS

I wish to register my appreciation to God for his provision of knowledge, good health and finances during my studies. Through his grace, I have been encouraged and strengthened during the tough times, all glory to his name.

I appreciate Dr. Alice Munene my supervisor for her tireless support, encouragement and insightful comments throughout this journey. I acknowledge Prof. Rebecca Oladipo and Dr. Lincoln Khasakhala for generously giving me the guidance and support I needed in my work. May the Lord richly bless you.

I wish to appreciate my husband, children, family and friends for being a source of encouragement. The support I received from them was tremendous especially when I felt overwhelmed, they stood by my side. May the blessings of the Lord be with you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS AND ACRONYMS

APA	American Psychiatric Association
CD	Conduct Disorder
DSM	Diagnostic and Statistical Manual of Mental Disorders.
KRS	Kabete Rehabilitation School
PSST	Problem-Solving Skills Training
REBT	Rational Emotive Behavior Therapy
SPSS	Statistical Package for Social Sciences
WRS	Wamumu Rehabilitation School

ABSTRACT

This study set to establish the effectiveness of behavior and rational emotive behavior therapies (REBT) in treating conduct disorder among juvenile delinquents. The objectives of the study were to establish the prevalence of conduct disorder among juvenile delinquents, determine the exposure of juveniles to distressful situations and determine the effectiveness of behavior and REBT therapies in treating conduct disorder. The study sample was drawn from Kabete and Wamumu rehabilitation schools in Nairobi and Kirinyaga counties respectively. A sample size of 94 respondents was drawn out of a population of 167 using purposive sampling procedure. This study used quasi-experimental design and quantitative data was collected in three time series. The Child Behavior Checklist Youth Self Report for ages 11-18 (2001) questionnaire was used to assess symptoms of conduct disorder. This questionnaire has proven validity and reliability of 0.82. Data was analyzed using Statistical Package for Social Studies (2011) and included bivariate, multivariate and multimodal analysis. The study established that the prevalence of conduct disorder was 36.5%, and respondents who presented with other psychological disorders were more likely to have conduct disorder: anxious depressed (OR=0.050, 95% CI: 0.110-0.255; p=<0.0001), internalizing anxiety (OR=0.067, CI: 0.024-0.187; p=<0.0001). Moreover, experiencing distressful events was significantly associated with the occurrence of conduct disorder. The study established a statistically significant reduction of conduct disorder symptoms from a mean of 19.96 at baseline to 8.26 at post-treatment two and this was significant at $p<0.001$, indicating the effectiveness of behavior and REBT therapies in treating conduct disorder. Based on the study findings, it is recommended that behavior and REBT therapies be integrated in the juveniles' rehabilitation program.

DEDICATION

I dedicate this work to my husband Mr. Augustine James and our children Neema and Imani for their continued support during this academic journey. I appreciate their prayers and encouragement.

CHAPTER ONE: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

The development of psychological disorders in children takes various pathways (Pardini & Frick, 2013). Some disorders like autism and attention deficit/hyperactivity disorder manifest in the early years of development while other disorders like depression and oppositional defiant disorder may manifest in the late years of childhood or adolescence (Furlong, McGilloway, Bywater, Hutching, Smith, & Donelly, 2012). There are many children who present with one or more kinds of disorders and the knowledge on prevalence is not exhaustive (Haugaard, 2008; Warner-Metzger, 2013). But such disorders usually affect their normal functioning either intellectually or socially while other disorders like autism derail the achievement of developmental milestones (Greger-Moser, 2008; Searight, Rottnek, & Abby, 2001. This chapter discusses the background to the study and the statement of the problem. Included in the chapter is the purpose, objectives, justification and significance of the study. Additionally, the chapter has discussed assumptions, scope and limitations of the study.

1.1.1 Conduct Disorder

Some of the common disorders children present with include anxiety, depression, oppositional defiant, attention deficit/hyperactivity and conduct disorder (Pardini & Frick, 2013). Conduct disorder is defined by the American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorder 5 (2013) as “a repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated” (p.469). The disorder is also described as a persistent pattern of antisocial behavior where the person offends others through aggressive

behaviors and other unacceptable acts in the society (The British Psychological Society and The Royal College of Psychiatrists, 2013).

Conduct disorder is one of the commonest disorders that affect children from early childhood and manifests mostly during school-going age and adolescence (Obsuth, Moretti, Holland, Braber, & Cross, 2006). It is most common with boys and sometimes presents with other disorders like attention deficit hyperactive disorder (Furlong et al, 2012; Greger-Moser, 2008). Other comorbid disorders include depression, opposition defiant disorder and substance abuse (Singh, Lancioni, Joy, Winton, Sabaawi, Wahler, & Singh, 2007). Children who have portrayed conduct behavioral problems, committed crimes and have been convicted are placed in rehabilitation centers for the purpose of correcting their behaviors.

Children with conduct disorder have difficulties with interpersonal relationships, emotional regulation and cognitive skills (Frick & Morris, 2004). Other difficulties such children portray include deficits in perceptions, interpretation of cues and processing of information (Frick, 2001; Kazdin, 2001). Additionally, children with conduct disorder often perceive their environment as hostile and hence respond with aggression to the people around them (Baker & Scarth, 2002; Ehrensaft, 2005). However, it is not every act of aggression or violation of rules that qualify a child for conduct disorder. Table 1.1 shows the diagnostic criteria for conduct disorder, according to APA (2013).

Table 1.1: Diagnostic Criteria for Conduct Disorder

Diagnostic Criteria for Conduct Disorder
Aggression to people and animals; bullying, fighting, using weapons, cruel to people and animals, stealing and forcing someone to sexual activity.
Destruction of property; fire setting and destroying people's property.
Deceitfulness or theft; breaking into houses, telling lies and stealing without confrontation.
Serious violation of rules; disobeying rules at home, running away from home and being truant.

Source: Adapted from American Psychiatric Association, DSM 5 (2013)

According to Table 1.1, a child meets the criteria for conduct disorder if at least three symptoms have been present for 12 months. This standardized criterion is vital in making the right diagnosis. In most cases, children will exhibit problem behaviors like telling lies and stealing at home. This may not necessarily be conduct disorder but as the children advance in years, they are likely to present with problems like increased aggression, abusive tendencies, drugs and substance abuse and antisocial personality disorder (Pardini & Frick, 2013; Valle, Kelley, & Seoanes, 2001; Vanyukov et al., 1992).

The childhood-onset of conduct disorder has poor prognosis and more often than not transitions to adulthood (Mueser et al., 2006). In the adult stage, the person is unable to adjust in work environment leading inevitably to unemployment and probably criminal activities (Baker & Scarth, 2002). Poor interpersonal functioning portrayed by people with conduct disorder could also lead to marital problems (Kumar, 2009). Although there is no definite cause of conduct disorder, a combination of multiple factors exposes children to the risk of developing the problem. In most cases, these children come from

families likely to be characterized by high stress, problematic parenting and dysfunctional family functioning (Frick & Morris, 2004; Haugaard, 2008; Obsuth et al., 2006).

Children growing up in hostile environment and high-crime neighborhoods may develop aggressive behaviors to protect themselves and cope with challenging situations (Mash & Wolfe, 2010; Ojo, 2012). Other factors that may expose children to the risk of developing conduct disorder include domestic violence, physical, emotional and sexual abuse, poverty and child negligence (Nolen-Hoeksema, 2004; Singh et al., 2007; Vanyukov, Moss, Plail, Blackson, Mezzich, & Tarter, 1992).

1.1.2 Treatment Approaches

Considering the effects of conduct disorder in childhood and adulthood, some researchers have done empirical reviews of effective treatment on conduct disorder (Frick, 2001; Kazdin, 1997; Kazdin, 2002). Treating conduct disorder involves strategies that focus on changing the thought patterns of children, their interpretation of events, perceptions, emotions and behavior. Learning alternative ways of solving problems, positive ways of relating with people and positive self-talk are some of the approaches used in treating conduct disorder (Kazdin, 2002; Nolen-Hoeksema, 2004). Studies have indicated that using various types of approaches in treating conduct disorder produces better results compared to the use of one approach due to the diversity of causal and protective factors of the disorder (Haugaard, 2008; Singh et al., 2007; Warner-Metzger & Riepe, 2013). Some of the treatment methods that have been used with children who have conduct disorder have applied approaches from the cognitive behavior theories or the psychoanalytic theory. Consequently, treatment approaches have been introduced that

basically target parents and others that train children alone on behavior modification, while others include both parents and children (Kazdin, 2002).

This study targeted juvenile delinquents with conduct disorder at Kabete and Wamumu rehabilitation schools. Both Kabete and Wamumu are rehabilitation schools that admit children with problem behaviors. Children with conduct disorder in these schools were identified after administering an assessment tool, Child Behavior Checklist Youth Self Report for Ages 11-18 (2001) questionnaire, to assess their behavior. The study sought to establish the effectiveness of Behavior and Rational Emotive Behavior Therapies (REBT) in the treatment of conduct disorder among juvenile delinquents in the two schools.

Treatment of conduct disorder is challenging due to the various developmental pathways and comorbidities that affect children (Frick & Morris, 2001; Pardini & Frick, 2013). In addition, children with conduct disorder present with emotional, cognitive and behavioral problems (Kumar, 2009; Singh et al., 2007). A combination of treatment has been found to be more effective in treating conduct disorder compared to the use of one approach (Kazdin, 2002; Lali, Malekpour, Molavi, Abedi, & Asgari, 2012). This study used a combination of behavior and REBT therapies. Behavior therapy focused on operant conditioning while REBT incorporated problem-solving skills training, relaxation techniques, role playing, cognitive homework and disputing irrational beliefs to establish the effectiveness of the intervention on conduct disorder.

Behavior therapy is an approach that focuses on observable, current behavior, and considers factors that influence it (Corey, 2009). According to behavior therapists, behavior is influenced by the environment and it can be changed through learning

(Haugaard, 2008; Humaida, 2012). Some of the aspects of behavior therapy include operant conditioning. Operant conditioning is a type of learning which emphasizes on behavior outcome being determined by reinforcement or punishment (Powell, Symbaluk, & Honey, 2009). It is used in training on behavior modification. Children with conduct disorder have problem behaviors, which require directive and active approaches to change them. Operant conditioning is used in eliminating undesired behavior and increasing occurrence of the desired behavior (Corey, 2009; Haugaard, 2008; Powell et al., 2009).

Rational Emotive Behavior therapy (REBT) has been proved to be effective in treating conduct disorder. Brestan and Eyberg (1998) conducted a study that evaluated the most effective psychosocial treatments of conduct disorder. The findings indicated that out of the 82 different treatments, rational emotive therapy and problem-solving skills training were among the first twenty in the list. Other studies have also shown that problem-solving skills training is one of the successful treatment approaches for conduct disorder (Baker & Scarth, 2002; Frick, 2001; Warner-Metzger, 2013). This study specifically used REBT and behavior therapies to help children work on their emotional, cognitive and behavioral problems.

1.2 Background to the Study

This study involved Kabete and Wamumu rehabilitation schools that admit boys who have committed criminal offenses. Kabete rehabilitation school (KRS) was built between 1910 and 1912 in the Lower Kabete area of Nairobi. The school was founded to cater for youths who had been imprisoned for failing to register themselves or to carry their identity cards (SoftKenya, 2012; Wapopa, n.d.). After the attainment of independence,

the approved schools were upgraded into a fully-fledged department under the repealed Children and Young Persons Act Cap 141. The department later came to be known as the Department of Children Services (Kenya Juvenile Justice Agencies, 2010).

Kabete rehabilitation school is one of the ten rehabilitation schools run by the Kenya Government under the Department of Children Services (KRS Orientation Handbook, n.d). The school currently admits male children under 18 years of age, with criminal and behavioral problems like stealing and truancy. The children are rehabilitated for a maximum of three years after which they are reintegrated into the general population (Kenya Juvenile Justice Agencies, 2010). The institution also caters for children who are homeless, and those who are abandoned or neglected by their caregivers. While at the institution, the children are expected to undertake a compulsory primary education curriculum in addition to technical training which includes masonry, baking, fashion and design.

Wamumu Rehabilitation School (WRS) was started as a youth detention camp in the 1950's in Nyeri. The camp held young men who had been suspected of having participated in the Mau Mau movement in one way or another. Youth in the camp received training in carpentry, mechanics, tailoring and formal education. Between 1955 and 1958, the camp had 1,800 young men, from 8 to 18 years (Ocobock, 2012). The detention camp was, however, changed to an approved school and later to a rehabilitation school. Today the rehabilitation school offers boarding facilities for boys (12-17 years) who have been in conflict with the law and have been sentenced to serve a jail term which takes a maximum of three years. Some of the criminal offences committed include robbery with violence, possession of illegal drugs or rape (Mugambi, 2012). The school

provides formal education, vocational training and behavioral programmes to address the social and spiritual needs of the children.

The two schools are boarding institutions that admit boys who have been convicted for committing crimes (Kenya Juvenile Justice Agencies, 2010). The institutions receive juveniles from Getathuru School which is a placement and distribution centre where children stay for about three months before they are transferred. According to a study done by Odera (2013), children in rehabilitation schools present with various psychological needs which are not addressed and sometimes the children have a tendency to escape from the schools. The report indicated that emphasis has been placed on academic performance to the neglect of the crucial role of behavior modification. Ngundo (2003; as cited in Ndirangu, 2010) further explained that due to the emotional problems that juvenile delinquents present with, it is difficult for them to consider education as one of their priorities.

Since most of the children convicted of crime present with mental health disorders (Okwara, 2010; Sisa-Kiptoo, 2014), it is important to give this matter the attention it deserves so that these juvenile children can be rehabilitated back to the society. As indicated by Ndirangu (2010), behavioral and psychological needs of children in rehabilitation schools have to be addressed if rehabilitation is to have any impact in their lives. If the treatment of mental disorders is not considered, it might be difficult for children to achieve behavior change. Research indicates that when conduct disorder is not treated, it is likely to develop into antisocial personality in adulthood, alcoholism and substance abuse (Scott, 2008; Vanyukov et al., 1992). Other children with conduct

disorder become criminals as they advance in years, drop out of school and end up unemployed (Omboto, Ondiek, Odera, & Ayugi, 2013; Scott, 2008).

Children placed in rehabilitation centers in Kenya fall under two categories, either seeking care and protection or serving jail term (Juvenile Justice Agencies, 2010). The children in the care and protection category do not have family support; in most cases their relatives cannot be traced or they have been neglected and probably living in the streets. The second category consists of offenders who have committed crime and have been sentenced. Some of the crimes children commit in Kenya include stealing, causing harm to people, running away from home, assault, found in possession of cannabis or breaking into people's premises (Maru, Kathuku & Ndetei, 2003). A study was conducted in Kamiti Youth Corrective Center (Kenya) in 2013, with a purpose to establish the factors influencing youth crime and youth delinquency (Omboto et al., 2013). This study sampled 55 inmates and some of the crimes they had committed included stealing, robbery, being found in possession of drugs or being in the streets.

Another study conducted by Odera in 2014 sampled children from Kabete, Getathuru and Dagoreti rehabilitation schools to find out the effectiveness of rehabilitation programmes on juvenile delinquency in Kenya (Odera, 2014). Out of the 89 sampled respondents, 94.4% were arrested for stealing, 77.8% for truancy, 45.8% for school dropout even after the introduction of free education in Kenya, and 45.8% for drug abuse. This is an indication that there is a wide range of diverse criminal activities committed by juvenile delinquents. Studies have also shown that the prevalence of conduct disorder varies from one population to another.

1.2.1 Prevalence of Conduct Disorder

Conduct disorder is a problem that affects the mental health of children causing serious effects on the individual child, the family and the society (Furlong et al., 2012). The disorder is not restricted to a specific race or culture but can affect any children globally as long as the causal factors are present. Statistics have shown that conduct disorder is increasing and the prevalence rate in terms of gender is higher with boys compared to girls (Brestan & Eyberg, 1998; Ehrensaft, 2005).

According to a report compiled for the British Columbia's Ministry of Children and Family Development in 2004, a large-scale community-based epidemiological survey indicated the prevalence of conduct disorder in the United States, Canada and British Columbia at 4.2% (Waddell, Wong, Hua, & Godderis, 2004). Looking specifically at British Columbia with about one million children, this translated to 42,000 children, which is a huge number of children population. In the United States, the prevalence of conduct disorder is estimated at 9% in the normal population (Mash & Wolfe, 2010). A study that sampled 3,199 respondents in the United States estimated the prevalence at 9.5% (Nock, Kazdin, Hiripi & Kessler, 2006). This means that conduct disorder is common in different countries.

The British Psychological Society and The Royal College of Psychiatrists (2013) clearly stipulated that there was an increase in conduct disorder among children and that the effects were being felt in the families, institutions and the entire society in the Western countries. In India, Sarkhel and colleagues conducted a study among school children both boys and girls on the prevalence of conduct disorder (Sarkhel, Sihna, Arora, & DeSarkar, 2006). The study sampled 240 children aged 10-15 years. The findings of this study

indicated that 36% of the children presented with mild conduct disorder while 64% had moderate. The prevalence of the disorder was found at 4.58% of those who participated and 73% had childhood onset while 27% had adolescent onset. The results of this study showed that most of the children had developed conduct disorder before the age of 10 years.

A survey was conducted to assess the prevalence of psychiatric disorders among juvenile delinquents detained in Cook County, Illinois in the United States of America (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). The study sampled 1829 boys and girls aged 10-18 years. The findings of this study indicated a 40% prevalence of conduct disorder. In another study, 25 surveys were reviewed to determine the prevalence of mental disorders among juveniles in various detention centers. This study involved 16, 750 adolescents, boys and girls, 10-19 years of age. The results of the survey reported a 52.8% prevalence of conduct disorder (Fazel, Doll, & Langstrom, 2008). Additionally, a review of 15 studies involving 3401 male adolescent detainees had 46.4% prevalence of conduct disorder (Colins, Vermeiren, Vreugdenhil, van den Brink, Doreleijers, & Broekaert, 2010).

In Khartoum, Sudan, a study was conducted among school children aged between 5 and 17 years. The study aimed at establishing the prevalence of conduct disorder among primary school pupils in Khartoum. A total of 384 pupils was sampled which included both boys and girls (Humaida, 2012). From this study, the prevalence of conduct disorder among primary school children was found to be low although statistical figures were not indicated. However, the conclusion of the findings was that the problem of conduct disorder exists among adolescents in the country. The research attributed the low

prevalence of the disorder to the strict Islamic values imparted during childhood through teaching in Koranic schools, and emphasized through further teachings in the society. Problem behaviors that are associated with conduct disorder are not allowed in the Islamic teaching. According to this study, there was no outstanding relationship between age and conduct disorder. However, the difference between male and female with conduct disorder was significant at a p value of 0.000. This indicated a higher number of males with conduct disorder and a higher prevalence of aggressive behavior among male.

A study conducted in Kenya by Maru and colleagues to assess psychological disorders among juveniles and adolescents in the Nairobi juvenile court sampled 90 of them from ages 8 to 18 years (Maru et al., 2003). The study found out that 44.4% of the juveniles and adolescents had psychological problems. Further analysis indicated that out of the 40 juveniles and adolescents with psychological problems, 45% of them presented with conduct disorder. In another study carried out by Okwara in Shimo La Tewa - Mombasa and Shikutsa - Kakamega rehabilitation centers, the findings indicated a prevalence of 59.7% of psychological disorders among the offenders (Okwara, 2013). Out of all the psychological disorders assessed, conduct disorder was the highest at 30.4%. There was no significant difference between age and conduct disorder, as well as education level and conduct disorder. The highest number of juveniles with conduct disorder in the study was from single parent or separated families.

A high prevalence of conduct disorder was also recorded in Kirigiti girls rehabilitation school where Sisa-Kiptoo conducted a study on problem behavior among adolescent girls aged between 12 and 17 years in the school. Out of the 33 sampled respondents, 60.8% presented with conduct disorder (Sisa-Kiptoo, 2014). These studies show that conduct

disorder is a problem that affects children from diverse background and races. Prevalence of the disorder is high among juvenile delinquents and a disparity exists between conduct disorder and gender.

1.2.2 Conduct Disorder and Gender

Research indicates that there is a difference in the rates of conduct disorder between boys and girls (Baker & Scarth, 2002; Humaida, 2012). A study carried out in India showed the ratio of boys to girls as 4.5:1 (Sarkhel et al., 2006), indicating the prevalence of conduct disorder is higher among boys than girls. Haugaard (2008) indicated that the number of boys diagnosed with conduct disorder was four times higher compared to girls. In north Sudan, a study was carried out among primary school children and adolescents to assess the prevalence of conduct disorder. The findings indicated a higher prevalence among boys compared to girls (Humaida, 2012). This was qualified by the significant statistical difference between boys and girls at p value of 0.000.

One of the factors that may be contributing to this difference is that generally the society is slightly strict with girls in terms of behavior expectations and a lot of pressure is put on them to comply with societal norms (Nolen-Hoeksema, 2004). Boys on the other hand are socialized to be tough and the society expects them to be aggressive (Baker& Scarth, 2002). Similarly, there are varied ways through which boys and girls portray behavioral problems. Boys tend to be overtly very aggressive and their behaviors are easily noticeable whereas girls use indirect methods of aggression like verbal humiliation, gossiping, discrimination and defamation (Nolen-Hoeksema, 2004; The British Psychological Society &The Royal College of Psychiatrists, 2013). It is therefore not clear if the prevalence is higher among boys or it is just that girls are socialized to behave

in less aggressive ways. As Haugaard (2008) noted, there is need for more research before a conclusion can be arrived at on the gender prevalence in conduct disorder.

In Kenya, there are ten rehabilitation centers and out of that number, eight are designated for boys while only two are for girls. This is a clear indication that the number of boys with problem behavior is higher than girls. Research shows that most of the juveniles with problem behavior also present with psychological problems of which, conduct disorder is among the highest (Maru et al., 2003; Okwara, 2013). Most of the programmes in the rehabilitation centers hardly address psychological problems therefore this study aimed at establishing the effectiveness of REBT and behavioral therapies in the treatment of with conduct disorder.

1.3 Statement of the Problem

Several causal factors lead children to develop conduct disorder across cultures and age groups. These factors may include issues affecting the child or the family, parenting style (harsh discipline), rebellious peers, the school and neighborhood environments, child abuse and exposure to other distressful situations (Dodge, 1993; Haugaard, 2008; Vanyukov et al., 1992). All these factors place children at the risk of developing conduct disorder.

Research indicates that juveniles who present with conduct disorder also have other psychological problems such as attention deficit hyperactivity, oppositional defiant disorder, depression and anxiety (Fazel et al., 2008; Maru et al., 2003; Okwara, 2010). Although rehabilitation centers provide safe shelter, formal education and vocational training, the juvenile delinquents do not receive treatment for conduct disorder. Despite

the tremendous effort placed on correcting behavior of the juvenile delinquents, the rehabilitation program overlooks treatment of conduct disorder. Upon completion of their jail term, the juveniles are released back to the society still manifesting with problem behaviors. Research has indicated that most of the former juveniles continue with criminal activities after completing their jail sentences (Ndirangu, 2010; Odera, 2014).

From the foregoing, it is clear that trying to modify children's behavior without treating conduct disorder does not seem to be effective. Treating conduct disorder enables children to gain interpersonal skills, problem solving skills, emotional regulation, reduce aggression, restructure their schemas and the outcome is behavior modification. This study therefore aimed at treating conduct disorder using REBT and behavior therapies in order to assist juvenile delinquents resolve their psychological problems as part of their rehabilitation.

1.4 Purpose of the Study

The purpose of this study was to establish the effectiveness of behavior and rational emotive behavior therapies as an intervention on conduct disorder among boys at Kabete and Wamumu rehabilitation schools.

1.5 Objectives of the Study

1.5.1 Broad Objective

The objective of this study was to establish the effectiveness of behavior and rational emotive behavior therapies in treating conduct disorder among juvenile delinquents in Kabete and Wamumu rehabilitation schools.

1.5.2 Specific Objectives

1. To establish the prevalence of conduct disorder among juvenile delinquents at Kabete and Wamumu rehabilitation schools.
2. To determine the exposure of juvenile delinquents to distressful situations.
3. To determine the effectiveness of behavior and REBT therapies in the treatment of conduct disorder among juvenile delinquents.

1.6 Research Questions

2. What was the prevalence of conduct disorder in Kabete and Wamumu rehabilitation schools?
3. What distressful situations had the juvenile delinquents experienced?
4. What was the effectiveness of behavior and REBT therapies in the treatment of conduct disorder among juvenile delinquents?

1.7 Justification of the Study

Children who develop conduct disorder are likely to suffer rejection and discrimination at the family level and in other settings like school, society due to poor interpersonal skills and unacceptable social behavior (Haugaard, 2008; Mash & Wolfe, 2010; Nolen-Hoeksema, 2004; Ojo, 2012). As the conduct disorder begins to advance in severity, some children rebel against authority, drop out of school, abuse drugs involved in other criminal activities (Holmes, Slaughter, & Kashani, 2001). Studies have shown a strong connection between crime and conduct disorder and that the rate of children committing criminal offenses has been on the increase. For instance in Kenya, Maru et al (2003) reported that the number of children appearing in the Nairobi Juvenile Court due to crime related cases had increased. Between 1991 and 1994, the number grew from 2328 to 2812 recording a 21% increase of cases presented in the juvenile court, which means the number of children committing crime was higher compared to earlier years. In 2006, the

number of children admitted in rehabilitation schools due to criminal cases was 1,164 and by 2007, the number increased to 2, 490 (SoftKenya, 2012). Even with this kind of information, studies are hardly done in rehabilitation schools in Kenya to treat conduct disorder among juvenile delinquents. Instead, research has focused on academic performance of the children, vocational training and the success of the rehabilitation program. The mental health issues of the children have not caught the attention of correctional facilities and other agencies.

It is possible for rehabilitation schools to minimize the number of indiscipline cases within the schools, reduce the number of children who go back to crime and produce children who are fully rehabilitated. This can be done by addressing the mental health issues of the children. Without offering psychotherapy to the children, the impact of the rehabilitation program will continue to take a downward trend since most of the children are likely to go back to crime after serving their sentences due to their untreated psychological problems.

Knowledge on the prevalence of psychological disorders and criminal activities committed by juvenile delinquents is relevant. However, there is a crucial need to conduct studies that can provide treatment to these children in order for behavior change to be achieved. This study therefore aimed at providing psychotherapy as an intervention using REBT and behavior therapies on conduct disorder among children at Kabete and Wamumu rehabilitation schools. The study helped the children resolve their internal conflicts and other psychological problems which led to behavior change. Behavior therapy incorporated operant conditioning using positive and negative reinforcement, punishment and extinction. REBT utilized behavioral, emotive and cognitive techniques

which included the 5 steps of Problem Solving Skills Training. This process contributed to promoting positive behavior change and modification among the juvenile delinquents.

1.8 Significance of the Study

Kenya has ten (10) rehabilitation schools for both boys and girls who have committed crimes and have been sentenced to serve jail terms. One of the major goals of rehabilitation schools is to change the behavior of juvenile delinquents from criminal activities to behaviors that are acceptable in the society. This study was significant to such schools in that it provided an additional strategy in the rehabilitation of the juvenile delinquents. Through this study, the juveniles received therapies aimed at changing problem behavior to socially acceptable behavior. Since Kabete rehabilitation school has already benefited from the intervention, it is hoped that the management shall incorporate treatment in their program to help children with conduct disorder address their emotional problems, learn social skills and achieve desired behavior change.

Findings from this study also assisted the researcher in making relevant recommendations to other rehabilitation schools to adopt psychological care and integrate it in their program for the full rehabilitation of the children. From this study, it is hoped that policy makers especially in the Childrens' Department have a reference treatment that can benefit children in rehabilitation schools.

In addition, this study has contributed relevant knowledge to the field of psychology especially in Africa since most of the studies done on treatment of conduct disorder have been conducted in the developed countries. Research in rehabilitation centers in Kenya has not addressed treatment of mental disorders. The findings of this study contributed

knowledge in psychology on the effective treatment therapy for conduct disorder in Kenya.

1.9 Assumptions of the Study

The treatment administered to the juvenile delinquents was effective to the level that it reduced conduct disorder and caused positive behavior change. This was observed through assessment at post-treatment and respondents reported reduced aggression, demonstration of problem solving skills, and good interpersonal relationships among others.

The respondents were committed to do cognitive and behavior assignments required during the treatment. The purpose of the assignments was to help the juveniles practice learnt behavior and different thought patterns aimed at behavior change. During the administration of this treatment, there were no major school programs that would interfere with the process.

As part of the requirements before carrying out a study, the researcher sought permission and was granted by the university authority and the Nairobi Hospital ethics review board. The researcher also got permission from the Children's Services Department and the National Council of Science, Technology& Innovation to carry out the study in both Kabete and Wamumu rehabilitation schools.

1.10 Scope of the Study

This study was assessing the effectiveness of rational emotive behavior and behavior therapies on conduct disorder among children in two selected rehabilitation schools in Kenya. The target population was two boys schools that is, Kabete and Wamumu

rehabilitation schools. Treatment was offered (REBT and behavior therapies) for six months while post-treatment tests were conducted in two intervals to assess the effectiveness of the intervention.

1.11 Limitations and Delimitations of the Study

Parents play a major role in training children acquire new skills, supporting them and monitoring behavior change. Children in this study did not live with their parents because they were in rehabilitation schools serving jail terms. This study would have benefited from participation of parents through generation of additional information on the behavior of their children. Since it was a challenge accessing parents in such a set-up, the school managers agreed to consent on behalf of the children due to the unavailability of parents.

The researcher was aware that some of the children in these rehabilitation schools may have had challenges in literacy because they had never attended school or due to long school absence. The researcher together with research assistants helped in clarifying the questions to such children without influencing their responses.

Children who have been in conflict with the law treat people with suspicion and sometimes it may be difficult to get the correct information from them. The researcher assured the respondents about confidentiality and their rights to voluntary participation in the study. The respondents cooperated well and the researcher worked toward building rapport with them.

1.12 Definitions of Significant Terms

Children: These are children under the age of eighteen years (UNICEF, 1989).

Juvenile delinquents: These are children who have committed criminal offenses (Mash & Wolfe, 2010). In this study, children and juvenile delinquents were used interchangeably.

Operant conditioning: A type of learning where responses in behavior are determined by consequences (Corey, 2009).

Conduct disorder: A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated (APA, 2013).

1.13 Summary

This chapter started with an introduction and a background to the study. The statement of the problem, the purpose, objectives, justification and significance of the study were also reviewed. It also included a review of assumptions, scope of the study, limitations and delimitations of the study, and definitions of significant terms. From this discussion, it was evident that children in rehabilitation schools present with mental health problems and among the most prevalent is conduct disorder. Furthermore, the discussion underscored the need to treat conduct disorder for effective rehabilitation of juvenile delinquents.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Children who present with conduct disorder have a pattern of behavior that violates the rights of other people and breaks norms in the society (Haugaard, 2008; Mash & Wolfe, 2010). Such children will often fail to meet the expected behavior and hence have difficulties relating with people (Mueser, Crocker, Brisman, Drake, Covell, & Essock, 2006; Pardini & Frick, 2013). This chapter discusses theoretical framework with emphasis on behavior and REBT therapies. Literature review in this chapter looks at some of the treatment models that have been used considering their effectiveness in the treatment of conduct disorder. Lastly, the chapter includes a conceptual framework used to demonstrate the interaction of specific variables.

2.2 Theoretical Framework

2.2.1 Behavioral Therapy

Behavior therapy is based on behavior theory which was started by J. B. Watson in 1950 (Hergenhahn, 2009). Watson was an American psychologist who lived between1878-1958. He worked at the University of Chicago teaching experimental psychology. He also studied testing procedures used with animals and observed behavior of rats in the university animal laboratory under the supervision of Henry Donald (Hergenhahn, 2009; Hewage, 2007). Watson deviated from the original perspective of psychoanalysts who emphasized on unconscious experiences (Corey, 2009). He argued that it was difficult to understand people's thoughts and feelings. According to Watson, studying introspection and consciousness had brought confusion and hindered the progress of psychology as a science.

Watson dismissed the idea of instincts and genetic factors (Hothersall, 2004). Although he supported the concept that a child may inherit physical characteristics from parents, Watson argued that behavior was not inherited. His goal was to introduce a different approach in psychology which would change from the previous focus on structure and functions of consciousness to behavior (Hergenhahn, 2009). Watson was interested in observing, predicting and controlling behavior. He therefore proposed the behavioral approach where psychologists could study behavior, through observation (Powell et al., 2009). His concept was opposed by his other supervisor James Angell (a psychologist), but this did not deter Watson. He continued to work on his concept, influenced by his supervisor Henry Donaldson and Russian physiologists although he did not involve them in its development.

One of the assumptions of behavior therapy according to Watson is that behavior is learnt (Corey, 2009; Hothersall, 2004). Watson worked with children at the Henry Phipps Psychiatric Clinic in Baltimore and discovered that little children did not demonstrate fear for anything until they learnt it (Hothersall, 2004). By interacting with the environment, children learnt through conditioning how to respond to a specific stimulus.

The main focus of behavior therapy is behavior change which addresses both covert (internalizing) and overt (externalizing) problems (Baker & Scarth, 2002; Corey, 2009). Behavior therapy addresses the current challenges of a client and works on the factors that maintain the problems (Greger-Moser, 2008). On the other hand, clients have to be actively involved in the process and be willing to monitor their behavior in and outside therapy (Corey, 2009).This is done through contingency management plan where a specific behavior is targeted, goals are set, and reinforcement and mild punishment are

used (Kazdin, 2001). Since behavioral approach aims at achieving change in behavior through learning and unlearning, it has therefore become one of the most effective therapies of treating conduct disorder. Some of the techniques applied include reinforcement, punishment, modeling, and observation.

Reinforcement technique was introduced by B. F. Skinner in his theory of operant conditioning (Corey, 2009; Mash & Wolfe, 2010). Operant conditioning involves learning new behavior on the basis of the consequences (Nolen-Hoeksema, 2004; Powell et al., 2009). Skinner emphasized on the influence of the environment and reinforcement. His behavioral approach of using operant conditioning stipulates that human behavior is influenced by consequences (Furlong et al., 2012). If behavior is rewarded, it increases in frequency of occurrence but if it is punished, it reduces (Baker & Scarth, 2002; Hewage, 2007).

Children learn behavior through what they see. If behavior is reinforced in other people, they learn it, but if they see other people being punished for it, they avoid it. For example, children may consider their peers as heroes because they belong to gangs that harass people and steal. Consequently, other children observe the behavior and learn it (Nolen-Hoeksema, 2004). The goal of operant conditioning is to increase the desired and terminate the undesirable behavior (Corey, 2009; Powell et al., 2009). Table 2.2 shows how different techniques are used in operant conditioning.

Table 2.2: Operant Conditioning Techniques

Technique	Description
Positive reinforcement	Rewarding positive behavior by use of praise, attention, recognition and token economy.
Negative reinforcement	Unpleasant consequences: Results that follow undesirable behavior are avoided.
Extinction	Withholding reinforcement. The kind of reinforcement (positive/negative) that maintains the behavior is withheld.
Punishment	Decrease target behavior through reprimand, withdrawing gifts and rewards.

Source: McGuire (2000)

In Table 2.2, positive behaviors in children like kindness, attentiveness in class and honesty are rewarded. On the other hand, to discourage undesirable behavior like aggression, the technique stipulates that such behavior is not rewarded and neither is it recognized. Moreover, undesirable behavior can be eliminated by withholding reinforcement and finally, punishment like reprimand and withdrawing rewards can be used to discourage unacceptable behaviors. These techniques are used at various intervals to assess the sustainability of learnt behavior.

Table 2.3 shows types of reinforcement and the expected outcome.

Table 2.3: Reinforcement Schedule

Type of reinforcement	Description	Outcome
Fixed-ratio schedule	Reinforcement after a particular number of responses.	Consistency in responding especially with new behavior.
Variable-ration schedule	Reinforcement is not fixed on number of responses.	High results due to the random reinforcement.
Variable-interval schedule	Reinforcement time is not specified.	Response can be maintained (the desired behavior change).
Fixed-interval schedule	Reinforcement time is specified.	Response is not consistent, high around the specified time.

Source: Adapted from Staddon & Ceruti (2003)

According to Table 2.3, behavior is likely to be learnt easily through a continuous reinforcement schedule. Reinforcement may be done after a number of specified responses or sometimes at random (Staddon & Ceruti, 2003). In both schedules, the learnt behavior is likely to be maintained. For instance reinforcement may be given after a child has participated in group activities three times. This is the fixed ratio schedule. Reinforcement may be done on the first or second response which means the schedule is not fixed. In the time specified schedule, behavior may be reinforced at midpoint or at the end of an activity. Reinforcement may also be done at any time in the schedule where it is not specified. All these schedules produce different results but the random schedule is effective in producing desired behavior (Hewage, 2007). This study used a combination of the four schedules in order to provide varieties for the children involved.

Operant conditioning can be used to effectively train people on socially-acceptable behavior (Furlong et al., 2012; Powell et al., 2009). This is based on the premise that

behavior can be learnt and unlearnt. Children with conduct disorder need to learn emotional regulation, interpersonal skills, assertiveness, self-acceptance and problem solving skills. Operant conditioning as an approach in behavior therapy is an appropriate approach to use since it motivates new behavior and it has also been effective in this study.

2.2.2 Effectiveness of Operant Conditioning

Treatment methods used with children who have behavior problems have been reviewed to check their effectiveness in treatment. Behavioral approaches like operant conditioning have been included in the reviews since a large number of studies done on children with conduct problems have used them. Weisz, Jensen-Doss, and Hawley (2005) reviewed 236 studies done between 1962 and 2002 to find out the evidence in treating conduct-related problems and other disorders among children. Out of this number, 71% used behavioral-based approaches where children learnt new behavior. This is an indication that behavioral approaches like operant conditioning are commonly used due to their effectiveness.

Operant conditioning has been used in behavior modification from the 1960's. Children who present with behavior problems have been put on programs that use operant conditioning techniques to change behavior. In the mid 1960's, Mills and Walter worked with a group of delinquent youth who had been arrested following criminal activities (Stumphauzer, 1986). The two researchers applied the techniques of operant conditioning like positive and negative reinforcement, punishment and extinction (Corey, 2009). To reinforce good behavior which would earn them employment, the youth received attention, praise, head nods, points and other token economy incentives (Hewage, 2007).

As the study continued, the youth entered into behavior contracts with their supervisors, a record of good behavior was kept and a list of earned points was displayed in an open place against their names for others to see. Each youth had a card where they recorded on a daily basis “things done well” and “things to improve on”. After six months, supervision meetings for the youth were reduced from once a week to once a month and recording changed from daily to weekly basis. After a year in the program, 85% of the youth were rated successful, 90% were not rearrested and 86% continued with school (Stumphauzer, 1986). The study proved that operant conditioning is effective in modifying youth behavior.

In a study conducted in the United States of America by Lochman, Burch, Curry, and Lampron in 1984, 76 boys aged between 9 to 12 years were placed in a program that utilized operant conditioning techniques. The program admitted boys who presented with disruptive behavior. The boys in the experiment group were trained on anger management using Lochman’s anger-coping intervention whereas the control group did not get any training. Appropriate behavior was reinforced through rewards where the boys would receive points, praise, attention or privileges. Inappropriate behavior was either ignored or translated to loss of points. At posttest, the experiment group recorded a decrease in disruptive behavior with an effect size of .55 compared to the control group (Gottfredson, n.d.) A follow-up was done after 15 years and a 5% point difference in criminal rate was recorded between the experiment and control group.

According to a review done by Weisz, Hawley, and Jensen-Doss (2004), Moracco and Kazandkian conducted a study in Beirut in which they used operant conditioning with 7 to 11-year-old children presenting with behavior problems. Positive reinforcement was

used, children earned points, praise and attention for good behavior while negative reinforcement was used by ignoring inappropriate behavior. In the same review, Jesness conducted a study with 15 to 17-year-old boys placed in a California Youth Authority due to behavior problems which included criminal activities. Boys who portrayed good behavior earned points which were displayed together with their names. Children treasure play time and games and this can be a source of positive reinforcement for them (Searight et al., 2001). In this study, boys earned dollars that were used to buy items for play to further reinforce positive change. Results of this study indicated positive effects in behavior change with minimal rate of repeated crime (Weisz et al., 2004).

A longitudinal study was conducted in Montreal by Reddy, Shyamala, Kusuma, and Santhakumari (2005) involving 250 boys with behavior problems. The study started when the boys were 6 years old. Operant conditioning approaches used included reinforcement contingencies, role play, coaching and modeling. The children were trained on social skills and anger control in the experiment group but the control group received no training. A follow-up assessment was done when the children were 10 years old. In the experiment group, there were minimal cases of delinquent behavior reported compared to the control group.

From the foregoing, it is clear that operant conditioning approaches have proved effective in treating behavior problems among children in normal settings like school and home as well as in rehabilitation centers (Reddy et al., 2005; Stumphauzer, 1986). Using positive reinforcement (token economy, points, praise, attention, privileges) helps to increase the chances of positive behavior recurring while negative reinforcement and punishment reduce the chances of negative behavior from recurring (Searight et al., 2001). Modeling

by facilitators or peers gives children an opportunity to observe expected behavior while role play helps them to practice learnt behavior and continuously shaping it to the expected level (Baker & Scarth, 2002; Powell et al., 2009; Searight et al., 2001). Using homework assignments where children practice new behavior also produces better results compared to treatment without homework (Weisz, Jensen-Doss, & Hawley, 2006).

2.2.3 Rational Emotive Behavior Therapy

Rational Emotive Behavior Therapy (REBT) was developed by Albert Ellis, an American psychologist in 1990's although initially he had introduced it as rational emotive therapy in 1955 (Corey, 2009). It is one of the therapies under cognitive behavior theory. REBT has been used to treat character disorders and train in self-management and social skills (Banks & Zionts, 2009). REBT incorporates the use of problem-solving skills training which enables children with conduct disorder to learn new ways of cognitive processing and behavior change (Froggat, 2005).

REBT incorporates both cognitive and behavioral approaches and it is used in treating clients who present with issues that affect their thinking and beliefs hence influencing behavior (Baker & Scarth, 2002; Banks, 2012). REBT assumes that reorganization of a person's cognition and self-statements leads to a corresponding reorganization of behavior (Banks & Zionts, 2009; Corey, 2009). The goal of this approach is to focus on changing cognitions in order to produce desired changes in affect and behavior.

Rational emotive behavior therapy "is based on the premise that we create irrational dogmas by ourselves" and the basic goal of this therapy is to "teach clients how to change their dysfunctional emotions and behavior into healthy ones" (Corey, 2009, p. 279).

Techniques used in REBT fall into three categories, namely cognitive, emotive and behavior. Some of them include role playing, disputing irrational beliefs, psycho-educational methods, doing cognitive and behavioral homework, shame attacking, modeling, reinforcement, and skills training (Corey, 2009; Kumar, 2009; Morris, 1993; Warner-Metzger & Riepe, 2013).

REBT allows a therapist to apply both cognitive and behavioral strategies, which in this case is relevant in treating conduct disorder. The approach is an active-directive and solution-oriented that helps children address their emotional, cognitive and behavioral challenges in their lives (Banks, 2012; Froggat, 2005; Kumar, 2009). Children develop irrational beliefs depending on the treatment they receive from parents and peers. For instance, a child may believe that his father beats him because he hates him. Disputing irrational beliefs helps children to learn different perspectives of analyzing situations before making a conclusion (Baker & Scarth, 2002).

Cognitive homework technique involves listing problems and matching them with beliefs (Corey, 2009; Froggat, 2005). For instance a child who was denied a chance to play a game by some friends may form self-defeating beliefs. The problem is peer rejection and his belief is that no one likes him. When children understand the problem and begin to dispute the negative self-statement, behavior is likely to change. This process also encourages monitoring of feelings and thoughts. Additionally, self-created feelings of shame are also addressed. A child may have done something in school that makes him feel incompetent or a failure. Shame attacking exercises encourage children to do the things they avoid in fear of others (Corey, 2009). Such acts of shame attacking may include answering questions in class or helping a teacher with luggage.

REBT also helps children learn how to analyze situations, think of alternative ways of responding, and monitor their feelings and thoughts (Froggat, 2005; Scott, 2008). REBT in addition helps in challenging of beliefs, using "self-talk" and problem-solving skills which they practice through role plays (Mash & Wolfe, 2010; Scott, 2008). As indicated by Baker and Scarth (2002), approaches which focus on behavior and cognition that is, behavior management, problem solving, modeling and cognitive restructuring are effective in treating conduct disorder.

In addition, REBT helps children to identify irrational beliefs and to learn to work on their maladaptive emotional responses like anger and guilt (David, Szentagotai, Kallay, & Macavei, 2005). REBT also gives children homework to practice new statements, thinking of difficult situations and looking for options while at the same time controlling their emotions (Kumar, 2009). Acquired skills empower the children to the level where they can express themselves and with reduced aggression, they are likely to relate better with the school community and by the time they complete their term in the rehabilitation center, they would have developed skills to help them fit in their families and society.

Rational emotive behavior therapy is relevant for use with children and adolescents considering their developmental stage. According to Erik Erikson theory, children between 12–18 years are in the same stage characterized by ego identity versus role confusion (Nolen-Hoeksema, 2004). Piaget's stages of cognitive development show that at this stage, adolescents are able to think and reorganize their operations in a systematic and abstract manner (Shaffer & Kipp, 2010). Another major cognitive development is the

ability to hypothesize issues, apply deductive reasoning and think of various options to situations (Mash & Wolfe, 2010).

2.2.4 Effectiveness of REBT on Conduct Disorder

Approaches that address the behavioral and cognitive functioning of problem behavior work well with adolescents. Shaffer and Kipp (2010) stated that programs that help children to control anger, empathize and understand actions from various perspectives are successful. Guerra and Slaby (1990) as cited in Shaffer and Kipp reported a study which was done where children learnt social skills and the findings indicated a great reduction in aggression and "improvements in their social problem-solving skills" (p. 577).

A study was conducted in Canada by Morris Barry in 1993 which involved adolescents between 10-19 years old. The study had identified 12 adolescents with conduct disorder and another 12 adolescents with attention deficit hyperactivity disorder. The adolescents were put into two groups according to the disorders. The two groups received a 12-week-program of therapy using REBT. Although this study did not give the effect size of the treatment, the findings indicated that at post-test, the group with conduct disorder registered tremendous positive change especially in anger management, problem solving and irrational thinking (Morris, 1993).

Another study done in India by Kumar (2009) sampled 200 children and adolescents with conduct disorder. The purpose of the study was to assess the effectiveness of REBT on treatment of adolescent students (boys and girls) with conduct disorder. The students were divided into two groups: control and treatment group each with 100 students. The treatment included techniques mostly used in REBT that is, disputing irrational beliefs, role play, cognitive homework and reinforcement (Banks, 2012; David et al., 2005).

Treatment was administered once a week for seven sessions and in groups of 10 participants. The findings indicated a significant difference in the levels of conduct disorder between the treatment and control group (Kumar, 2009). The study also showed a reduction of 1.12 comparing data at pre-test and post-test. From this study, it is evident that using REBT techniques is effective in treating conduct disorder.

REBT suggests Problem-Solving Skills Training (PSST) as one of the techniques applied in solving problems through thinking. Using PSST helps children to learn the connection between their thoughts, feelings and how emotional distress influences their behavior. For children to be able to demonstrate good behavior learnt through social skills training and other techniques, they must develop the ability to solve problems (Scott, 2008). Problem-solving skills model has been used with other REBT techniques like disputing irrational beliefs, emotional regulation, role play and training social skills. Children gain the ability to restructure thoughts by replacing negative self-statements with positive self-statements, and self-downing with unconditional self acceptance (Banks & Zionts, 2009; Froggat, 2005).

A combination of REBT and PSST approaches has been proven to be an effective intervention for behavior problems. Flanagan and his colleagues assessed the effectiveness of PSST compared to REBT combined with PSST in 1998. The study involved 44 students, 27 girls and 17 boys aged between 9 and 11 years (Banks & Zionts, 2009). Social Skills Rating System and Child Adolescent Survey of Irrationality were used as tools of assessment. The children covered a 12-week-program in which they were trained on social skills in the experiment group. At post-test, the experiment group recorded effect size of .32 in social skills, .52 in self-downing, and .61 in rebelliousness

subscales. The findings indicated that REBT and PSST were found to be effective in treating behavior problems of children.

One of the major assumptions of REBT is that people's emotions are dependent on their thoughts; the way they perceive and interpret events. During treatment, clients are helped to understand their thought processes, beliefs, feelings and their effects on behavior. The clients have to learn how to dispute irrational beliefs and develop a new way of handling issues in life. This is done through "thinking, judging, deciding, analyzing, and doing" (Corey, 2009, p. 275). Training clients on these processes requires a well structured model which is provided through PSST approach.

2.2.4.1 Problem-Solving Skills Training

Problem-solving skills training was developed by George Spivack, a clinical psychologist around 1965. Spivack was offering therapy to a boy who had behavioral problems. The boy left home one day to go shopping at 2 a.m. and Spivack rescued him. The boy was not aware of the dangers he was exposing himself to. When Spivack asked him questions regarding the event, he said he did not think about it. This led Spivack and his colleague Murray Levine to introduce a thinking skill for children. Later in 1968, Spivack joined efforts with Myrna Shure, a developmental psychologist, to find out whether children who presented with different behavior also thought differently (Shure & Spivack, 1999). The study compared African-American juveniles aged 9-12 years in a rehabilitation center with children in a regular school. Children who had been trained in thinking skills showed improvement in areas such as aggression level, ability to delay gratification, emotional reaction and ability to make friends and empathize (Shure & Spivack, 1999; Stan & Charisse, 2013). The impact of this training was measured again after one year, and was found to be effective.

Shure and Spivack conducted another study in which they trained 4-8 year old kindergarten children on how to solve problems, think of consequences and alternative solutions. The 35 children trained using PSST indicated great improvement in problem solving skills compared to the control group (Shure & Spivack, 1999). As the two psychologists continued developing the program, they used it with depressed people and children with conduct disorder. This training program was further developed by Robert D'Zurilla and Marvin Goldfried who used cognitive skills in problem solving (McGuire, 2000; Stan & Charisse, 2013). In support of the training program, Robert Ross and Elizabeth Fabiano conducted a study among offenders in prisons in Canada in 1980. The study compared persistent offenders with others who had low rates of repeated crime and non-offenders. The purpose of the study was to find out if the participants had cognitive skills and applied them in situations. The findings indicated that offenders who continued with problem behavior lacked problem solving skills. It was therefore concluded that training problem solving skills reduced the rate of re-offending among prisoners (McGuire, 2000).

2.2.4.2 Focus and Structure of Problem-Solving Skills Program

Problem-solving skills training (PSST) is a method which trains children on thought process, making choices, approaching situations and interpersonal skills (Mash & Wolfe, 2010). Initially, PSST was designed for children in lower primary school, but it has been extended to higher primary school level (Shure, 2000). Children with conduct disorder tend to have a narrow way of thinking about responses in situations. The way they perceive and process events determines their behavior response. Kazdin and Weisz (1998) indicated that children with conduct disorder lack interpersonal skills, have difficulties finding solutions to problems and have deficiencies in their cognitive

functioning (Ojo, 2012). According to D'Zurilla and Nezu (1999), PSST helps children develop the ability to cope with situations, overcome challenges and change their ways of reacting to problems. Moreover, PSST equips children with skills on how to think about complex situations and reduce reactive responses (Scott, 2008).

PSST is used to correct faulty thinking and how to interpret events. Mash and Wolfe, (2010) indicated that PSST assumes a "child's perceptions and appraisals of environmental events will trigger aggressive and antisocial responses" (p. 185). If faulty thinking and interpretation is corrected, it is likely to lead to desirable behavior in a child (McGuire, 2000; Ojo, 2012). Instead of responding with aggression, problem solving-skills training (PSST) can train them on how to think about alternatives. This model uses tokens, points (stars), reinforcement, feedback and praise (Mash & Wolfe, 2010).

PSST uses techniques such as modeling, practice, role-playing, behavior contracts, reinforcement, mild punishment and homework to practice learnt skills like solving problems, obeying rules, demonstrating kindness toward others. Homework helps children maintain the change in behavior. Others include cues, feedback and use of stories to demonstrate consequences of choices people make in life (Kazdin & Weisz, 1998). In addition, games are also used to train team work, demonstrate respect among competitors, and emotional regulation (D'Zurilla & Nezu, 1999). Children are asked to think of practical situations that happen in school, for instance, a boy hits another accidentally or picks up a pencil from another boy. When faced with a problem situation, PSST suggests application of specific procedures.

The use of PSST in this study benefited children with conduct disorder since it is a cognitive approach, which has been found to work effectively with adolescents (Ojo, 2012). PSST has also been used with tremendous positive results among offenders in prisons, therefore, it was relevant for this study (McGuire, 2000). Children were divided into groups of eight with a facilitator. The program comprised of eight sessions using different techniques like teaching, coaching, role play, modeling, games and stories. Concepts from REBT were integrated in the program to address aspects of perception, interpretation of events, beliefs and emotional regulation. Each session lasted for two hours and the facilitators were guided by a manual. Table 2.4 shows the steps used in the implementation of the program.

Table 2.4: PSST Five Steps.

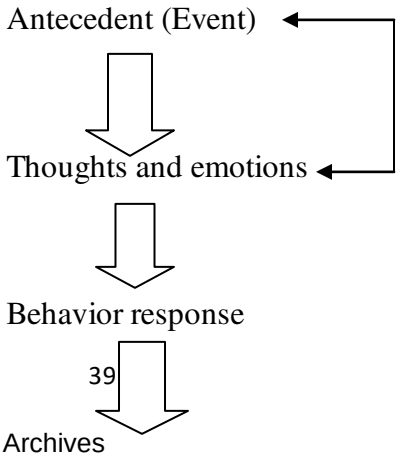
Step	Action
One	What point of action do I take?
Two	What alternatives do I have?
Three	Am thinking of the results of each choice.
Four	I have to make one choice now.
Five	What is my result?

Source: Mash & Wolfe (2010).

According to Table 2.4, children were asked to think of difficult situations they face either in school or at home. The next step was to think of several alternatives available for them. In step number three, children were asked to evaluate the results of each choice both positive and negative. This was followed by decision making which was informed by the evaluation in step three. Finally, children were required to think about the results of the action taken and the effects as well. This kind of training helped children to learn how to control impulsive responses and make wise decisions. PSST was used together

with the other techniques in REBT like restructuring and disputing irrational beliefs. A combination of both REBT and behavior therapies was found to be effective in treating conduct disorder.

REBT therapy focused on the cognitive and emotional aspects of conduct disorder by restructuring of thoughts, perceptions, training on relaxation and emotional regulation (Corey, 2009; Kumar, 2009). PSST provided a guideline on how to analyze situations, consider alternatives and make right choices in solving problems (Mash & Wolfe, 2010; Scott, 2008). The behavioral approach used operant conditioning which focused on punishment, extinction and reinforcement (Baker & Scarth, 2002; Powell et al., 2009). As illustrated in the figure 2.1, once an event happens, it is processed through thoughts. The thoughts influence emotions and behavior based on the beliefs a person holds, perceptions and interpretation, and the ability to solve problems. Depending on the reinforcement that the person receives, the chances of the behavior recurring are either increased or decreased (Baker & Scarth, 2002; Hewage, 2007; Nolen-Hoeksema, 2004; Powell et al., 2009).



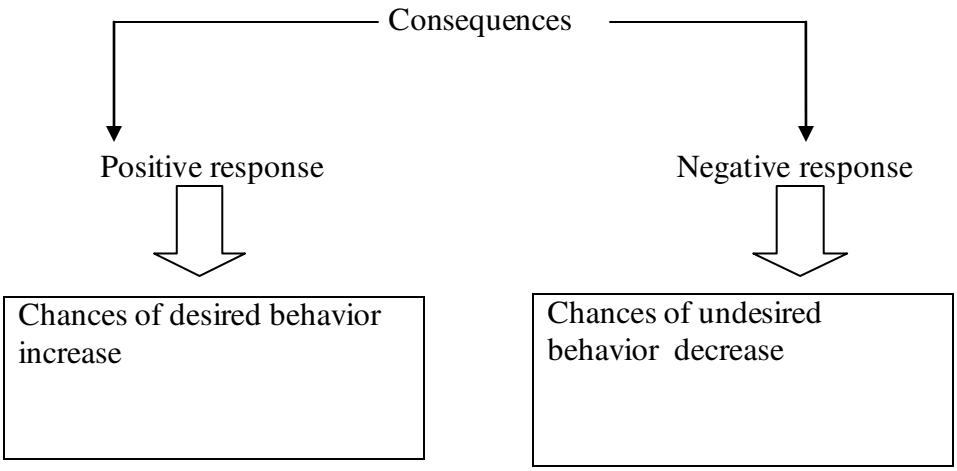


Figure 2.1: Behavior and REBT Approaches
Source: Researcher (2016)

2.3 General Literature Review

2.3.1 Types of Conduct Disorder

Conduct disorder is divided into two main categories determined by age of onset (Lali et al., 2012). The first one is the childhood-onset which occurs before the age of 10 years, and the second one is adolescent-onset, which occurs after 10 years (APA, 2013). With

the childhood-onset type, problems begin in pre-school, continuing into adolescence stage and later the behavior becomes severe and increases in rate (Frick& Morris, 2004). Children with this type of disorder have difficulties controlling impulses and maintaining emotional regulation (Frick, 2004; Pardini & Frick, 2013). Children who develop conduct disorder in early childhood have a temperament which is irritable, impulsive and rebellious (Haugaard, 2008). Some findings relate this behavior to neurological deficits in the brain or having been exposed to neurotoxins and drugs (Nolen-Hoeksema, 2004). However, this predisposition is highly influenced by parenting, environment and socioeconomic status.

Although some children with conduct disorder may show a reduction of the behavior as they develop in years, the childhood-onset type tends to increase in severity (Furlong et al., 2012; Singh et al., 2007). A child who started by hitting others moves to fighting, stealing items from home, shoplifting, disobeying authority, selling drugs, sexual assault and robbery with violence (Haugaard, 2008; Humaida, 2012; Scott, 2008). The aggressive behavior that a child manifests at home would extend to school and then to the society if measures are not taken early enough to change the behavior.

The adolescent-onset type begins at the adolescence stage and is commonly associated with peer pressure and rebellion against rules. Adolescent-onset is also associated with poor supervision from parents and keeping the company of delinquents (Pardini & Frick, 2013). The general behavior of adolescents is to rebel against authority in school and at home. According to Erikson's life-span stages, adolescents are in the identity versus identity confusion stage (Santrock, 2008). This stage is characterized by a need to know who they are and therefore, tend to seek for freedom. Although this is a general behavior

of adolescents, children with conduct disorder tend to exaggerate the need for autonomy and identity compared to other children (Frick, 2004).

Children with conduct disorder also exaggerate their sense of self-worth at the adolescence stage and become aggressive toward people who tend to underestimate their view of the self (Mash & Wolfe, 2010). However, since behavior is mostly influenced by peers in this stage, most children with adolescent-onset conduct disorder are likely to adjust into societal expectations as they transition to adulthood (Santrock, 2008).

2.3.2 Effects of Conduct Disorder

The effects of conduct disorder are not only experienced by children alone, but also the family and the entire society (Greger-Moser, 2008; Searight et al., 2001). Children with conduct disorder experience rejection from peers and families (Mash & Wolfe, 2010; Ojo, 2012). At the point where they join school, their behavior also affects their academic performance since children with conduct disorder have a slightly lower IQ compared to the general population (Frick, 2004; Holmes et al., 2001). If conduct disorder is not treated, it develops into antisocial personality disorder as the children transit into adulthood (Frick & Morris, 2004). Poor academic background makes it difficult for them to find employment, lack of social skills affects their interpersonal relationships and most of them tend to continue with criminal activities (Pardini & Frick, 2013).

At the family level, children with conduct disorder cause conflicts and disagreements among family members (Warner-Metzger & Riepe, 2013). The children's inability to relate well with people, impulsivity and aggressive behavior draws people away from them (Baker & Scarth, 2002). Such children have a problem with social cognition in that

they have a way of interpreting social behavior, which is different from the way other children do (Dodge, 1993). A simple act of chance or action toward them is interpreted as rejection, hostility or a challenge by the offender (Kazdin, 2002). They hardly take in conciliatory gestures, but instead, become aggressive toward the people who offend them (Banks & Zionts, 2009). They may also manifest inaccurate schemas with beliefs that people are hostile to them (Frick, 2004; Kazdin, 2002). Such schemas create biases in the way they perceive the world and memories of their interactions with people. Studies have shown that children with conduct disorder "have schemata that the world is a hostile place, and that most people are hostile toward them and the best strategy for dealing with this hostility is through aggression" (Haugaard, 2008, p. 192). As a result, such behaviors lead to rejection, discrimination and people avoid their interactions.

Other characteristics of conduct disorder like destruction of property, causing harm to other people, breaking into houses and using weapons (APA, 2013) affects the family and the neighborhood as well. At the point where children with conduct disorder are arrested and convicted for committing criminal offenses, the effects of their behavior are felt at the society level (Holmes et al., 2001; Mash & Wolfe, 2010). Governments have to take the responsibility of rehabilitating the children. Research has indicated that the cost of the rehabilitation programmes is high since most of them have to provide boarding facilities, training and personnel (Frick, 2004).

A study done in Canada showed the estimated cost of keeping juvenile delinquents in correctional centers to be $100,000 per year (Obsuth et al., 2006). Another study was conducted among children with conduct disorder from poor communities in the United States of America. In this study, the children were followed for a seven year period and

the cost of managing one child was $70000 (Foster & Jones, 2005). This is a very high cost for a government, especially given the fact that some of the juveniles go back to crime upon release. Despite the fact that families and institutions experience challenges in rehabilitating children, studies have indicated that the prevalence of conduct disorder is on the increase (Collishaw, Maughan, Goodman, & Pickles, 2004).

Children with conduct disorder are also likely to influence other children toward unacceptable behavior in the society. Once children observe aggressive behavior among their peers, they tend to act in the same way in order to gain acceptance or fit in a hostile environment. For instance a study done in the United States schools showed that 17% of students had been bullied. Out of the number that was bullied, 19% of them bullied other students. The same study also indicated that bullies had a higher likelihood of getting into other problematic behavior activities like smoking, drinking and recording poor performance in school (Shaffer & Kipp, 2010). This disruptive behavior therefore becomes costly at home, in schools and the entire society (Humaida, 2012; Waddell et al., 2004).

Considering all these effects of conduct disorder on the individual, family and society, it is important to emphasize the need to provide treatment especially targeting the childhood-onset. Childhood-onset usually develops before the age of 10 and transitions into the adolescence stage and adulthood unless it is treated. Although the society discriminates children with conduct disorder due to their unacceptable behaviors, knowledge on some factors attributed to the disorder is paramount.

2.3.3 Distressful Situations Attributed to Conduct Disorder

Conduct disorder is caused by multiple interacting factors including biological, social and psychological (Baker & Scarth, 2002). Some of these factors expose children to very distressful situations which affect them in their social, emotional and physical wellbeing, academic development and generally in their daily functioning (Mueser et al., 2006). A study that was conducted in Illinois (USA) among juveniles in a detention camp indicated that 93% had been exposed to a traumatic experience while 84% had experienced more than one event (AOC). Some of the major factors affecting children include the following:

Parent Related Factors

One of the key contributing factors to conduct disorder is parenting (Singh et al., 2007). Parents who have little interaction with their children expose them into the risks of developing conduct disorder (Mash & Wolfe, 2010). Children in such set ups lack mentorship since parents are not available. In other situations, parents offer poor supervision or model unacceptable moral behavior to their children (Obsuth et al., 2006; Waddell et al., 2004). A study was conducted among adolescents and their parents to find the relationship between parenting and conduct disorder. The parents were trained on effective parenting and at the end of the study, the experimental group recorded a 16% recidivism rate among the adolescents (Sells, Early, & Smith, 2011). This suggested that effective parenting is a protective factor in the occurrence of conduct disorder.

The parent factor is also important in determining the type of attachment a child develops. The uninvolved parent according to Bowlby's theory is detached from the child, is not warm neither attuned to the needs of the child (Bretherton, 1992; Carmody, Haskett, Loehman, & Roderick, 2015). This increases the chances of a child developing

callous-unemotional traits (Pardini & Frick, 2013) which includes severe reactive aggression, lack of empathy and guilt.

In some instances, if a parent did not develop secure attachment in childhood, he or she is not able to offer emotional support to children. Children feel neglected emotionally and they begin to seek the attention of the parent through aggression behavior (Obsuth et al., 2006). Consequently, the parent who is insecure may interpret aggression as rebellion which leads to conflict between the child and parent (Bretherton, 1992).

In the authoritarian type of parenting, parents give instructions without seeking dialogue with their children (Kazdin, 2002; Searight et al., 2001). Children are denied autonomy and once they make mistakes, they face corporal punishment and physical abuse. This kind of treatment can cause fear in children as well as confusion since authoritarian parents tend to issue conflicting instructions (Pardini & Frick, 2013). A study that involved 92 children who had been physically abused indicated a close association between abuse and parent-child relationship which resulted in externalizing disorders (Carmody et al., 2015).

Family Factor

Most children with conduct disorder come from dysfunctional families where they experience distressful situations like family conflicts and instability (Mash & Wolfe, 2010; Obsuth et al., 2006). In such families, there is a lot of stress with the parents and the children as well (Vunyokov et al., 1992). According to Nolen-Hoeksema (2004), children raised in homes where parents are aggressive toward each other are likely to learn the same kind of behaviors. Witnessing domestic violence exposes children to the

risk of developing conduct disorder (Ojo, 2012; Omboto et al., 2013). A study conducted in Israel sampled 120 children who had either witnessed or experienced domestic violence. The findings showed that most of the children had developed behavioral problems due to violence exposure and needed clinical intervention (Sternberg et al., 1993).

Haugaard (2008) explained that children with conduct disorder are likely to come from either single-parent families, large families or poor families. Okwara (2013) conducted a study among juvenile offenders in borstal institutions in Kenya. The results indicated that 39.3% came from single-parent families while 45.7% were from separated families. These findings showed that most of the children with conduct disorder came from dysfunctional families (Baker & Scarth, 2002).

In another research conducted among youth criminals at Kamiti youth correctional centre, 58% of the sampled group came from large families. On average, each youth had a minimum of six siblings (Omboto et al., 2013). In large families, it is difficult for parents to discipline each child and meet their unique needs. Parenting in large families also becomes a challenge especially if it is coupled with low income status (Baker & Scarth, 2002). The parents spend lots of time away from the children seeking to meet their basic needs (Searight et al., 2001).

Children with conduct disorder also increase the level of stress in families (Greger-Moser, 2008). Children receive minimal supervision from their parents and guidance also lacks in such families. In addition, parents tend to use punitive measures in correcting wrong behavior (Ojo, 2012). There is a significant association between hostile parenting and emotional instability in children. A study was conducted in North Carolina among 92

physically abused children and their parents. The results indicated an association between abuse and externalizing behaviors like conduct disorder (Carmody et al., 2015). It causes them to begin to experience rejection and the home environment as hostile. This kind of situation is a risk factor to the development of conduct disorder.

Moreover, children who come from families where the parent is widowed are likely to exhibit problem behaviors. A longitudinal study was conducted in London involving 411 males to assess the impact of disrupted families on adolescents. The findings of the study established that adolescents who had lost their parents were more likely to have conduct disorder compared to those from families where parents were alive (Juby & Furrington, 2001). Studies have found out that the death of a parent is a contributing factor to the development of mental problems among children and adolescents especially the death of a mother (Stikkelbroek, Bodden, Reitz, Vollebergh, & Baar, 2016). The risk increases in situations where other pre-existing factors are present before the loss. For instance, pre-existing mental health challenges, family dysfunction, strained relationship between the parent and the adolescent.

Another factor in the family which may expose a child to the risk of developing conduct disorder is the mental health of the parents (Searight et al., 2001; Warner-Metzger& Riepe, 2013). Some parents may suffer depression which interferes with normal functioning therefore affecting the way they parent their children (Mash & Wolfe, 2010). Other parents may have antisocial behavior which the children are likely to learn as the acceptable way of relating with people. Parents with antisocial personality disorder, alcoholism and substance abuse problems are contributing factors to conduct disorder in children (Mueser et al., 2006; Valle et al., 2001). In New York, a longitudinal study was

conducted involving 593 parents and their children. The study found that children whose parents had psychiatric disorders were at a higher risk of developing psychiatric disorders in adolescence stage (Johnson, Cohen, Kasen, Smailes, & Brook, 2001).

Child Abuse

Another distressful situation that children experience is child abuse. Children who are abused are more likely to develop conduct disorder (Holmes et al., 2001; Ojo, 2012). Child abuse is a state where a child is denied basic needs like food, shelter, safety and education in addition to other types of maltreatment (Baker & Scarth, 2002). Child maltreatment is described by Bjorklund and Blasi (2012) as the "intentional abuse or neglect of anyone younger that 18years of age that endangers their well-being" (p. 533). Exposing children to physical abuse or emotional negligence increases the chances of developing problem behavior (Ehrensaft, 2005; Rutter, 1994). An abused child manifests with fear and feelings of rejection and may end up getting attracted into a delinquent peer group that offer acceptance. A review of studies conducted in Iran indicated an association between rejection, aggression and conduct disorder. Boys who felt rejected developed aggression and associated themselves with delinquents (Salehi, Noah, Baba, & Jaafar, 2013).

Children are at the risk of experiencing physical, sexual or emotional abuse from families or caregivers due to their vulnerability. Some children are exposed to physical abuse where they can be hurt in the body through acts like corporal punishment, child labour, cuts, burns and lacerations (Bjorklund & Blasi, 2012). Others experience sexual abuse which involves maltreatment, assault and incest whereas other children go through

emotional maltreatment where their needs for care, love and connection are neglected (Baker & Scarth, 2002; Dodge, 1993; Spataro, Mullen, Burgess, Wells, & Moss, 2004). The perpetrators of child abuse are mostly parents and close relatives. Abused children tend to develop delinquent behaviors as a way of retaliation. Children who have been abandoned, rejected and abused by adults perceive the world as hostile (Ehrensaft, 2005). Moreover, child maltreatment whether it is physical or emotional exposes children to risks of manifesting with problem behavior. The behaviors can be internalizing like depression and anxiety or externalizing like conduct disorder (Bjorklund & Blasi, 2012).

Violent Environment

Living in violent environment where people are aggressive toward each other leads children to learn the same behavior in order to protect themselves (Obsuth et al., 2006). According to the social learning theory, children learn behavior through observation. Children emulate the behavior modeled to them as the acceptable way of relating and also through direct experiences in life (Bandura, 1971).

Although living in violent environment exposes children to the risk of developing conduct disorder, parents' religiosity can be a protective factor (Schreiber, 2010). A study was conducted among 1,703 adolescents who had been exposed to violent situations to find out the effect of the parent's religiosity on the adolescent's behavior. The study established a strong relationship between religiousness of the parent and reduction of conduct disorder (Pearce, Jones, Schwab-Stone, & Ruchkin, 2003). Furthermore, studies have shown that living in a hostile environment may not lead to conduct disorder. A study conducted among 440 children living in unstable environment did not establish any association with conduct disorder (Schonberg & Shaw, 2007).

Peer Pressure

Children with conduct disorder keep the company of other children with problem behavior like them (Murray & Farrington, 2010; Obsuth et al., 2006). The peer groups become training fields where children are oriented into severe acts of misconduct. Some of them are forced by their peers to engage in unacceptable behaviors of which failure to oblige leads to punishment. As a result, chances of such children developing into criminals and drug users are increased (Mash & Wolfe, 2010).

According to Omboto et al. (2013), juvenile delinquents detained in Kamiti youth correctional centre found in possession of cannabis sativa reported to have been introduced into drugs by their friends. Another study was done in Midwestern City among adolescents aged 9-15 years. The purpose of the study was to establish the direct and indirect effects of relationships on adolescent delinquency. Adolescents who had delinquent peers were more likely to develop problem behaviors compared to others who did not. The relationship was significant at $p<0.01$ showing that having delinquent friends was directly linked to delinquent acts (Ingram, Patching, Huebner, McCluskey, & Bynum, 2007).

Poverty

Parents who are facing economic challenges experience high stress levels due to their inability to provide for their children (Baker & Scarth, 2002; Lali et al., 2012). Children raised by poor parents or depressed single mothers who cannot provide consistent parenting stand a higher chance of developing conduct disorder (Haugaard, 2008; Singh et al., 2007). A study conducted at Kamiti youth correctional centre sampled 55 youth criminals aged 17 – 21 years old. The findings indicated that 70% of the youth came from poor families and 81.8% lived in various slums in Nairobi (Omboto et al., 2013). Some of

the youths explained that they had run away from home to meet their basic needs which led them into criminal activities.

These factors expose children to the risks of developing conduct disorder. As discussed in this literature, untreated conduct disorder transitions into adulthood where the adult develops antisocial personality disorder, alcoholism and substance abuse. Other behaviors portrayed in adulthood include criminal activities, poor interpersonal relationships and unemployment. Nevertheless, early intervention can prevent conduct disordered children from getting into problematic adulthood. This can be done by combining different approaches of therapies for effective intervention. As indicated in the following conceptual framework, a combination of REBT and behavior therapies was used as an intervention on conduct disorder.

2.4 Conceptual Framework

A conceptual framework explains the ideas inferred or derived in research and indicates the formulation of plans and important details (Kombo & Tromp, 2006). A conceptual framework shows how the independent, dependent and confounding variables interact with each other. It also indicates the influence each variable has on the other.

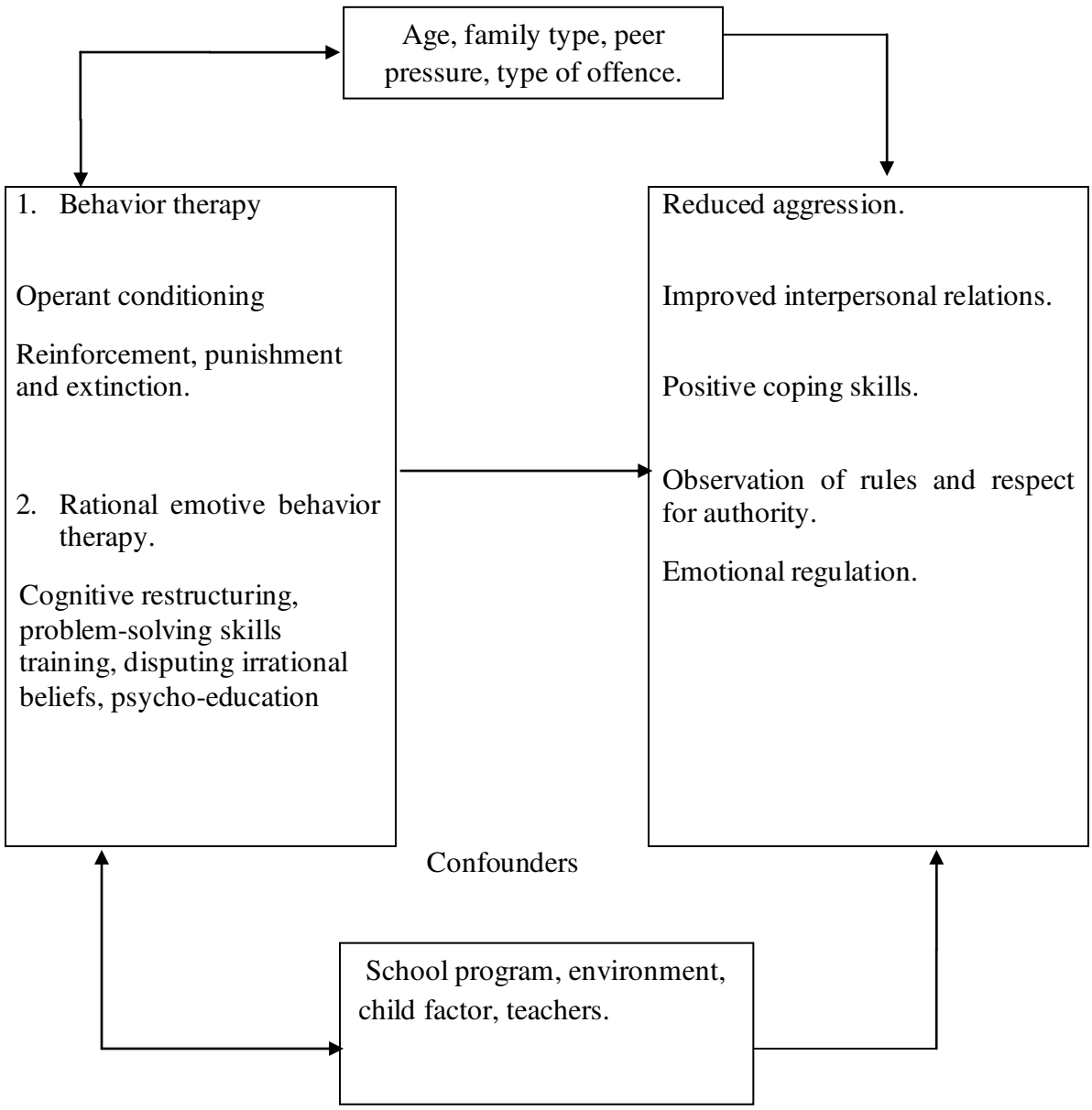


Figure 2.2: Conceptual Framework
Source: Researcher (2016)

2.5 Discussion

According to this conceptual framework, there was an interaction of variables which was aimed at producing results at the end of the study. In this case, there were the independent, confounding and the dependent variables. The independent variable is usually manipulated to determine the effect of that variable on another, and the dependent variable is the measure used to assess the influence of the independent variable (Mugenda & Mugenda, 2003; Shaughnessy, Zechmeister, & Zechmeister, 2006). Confounding variables are factors which can influence or affect the independent variable or influence the dependent variable. For instance, a new program introduced in the school may have a positive or negative influence on the treatment and lead to a change in the outcome. In addition, effect modifiers affect the direction or strength of the relationship between the independent and dependent variable. Age as an effect modifier meant that the younger children may have delayed in embracing change due to their cognitive level compared to the older adolescents therefore affecting the direction of the relationship.

This framework shows behavior and rational emotive behavior therapies as the independent variable (predictor) and reduction of problem behavior as the dependent variable (outcome).The independent variable had two subsets that is the exposed which is the experimental group and the controlled which did not receive treatment. In the experimental group, the intervention was manipulated to measure behavior change at post-treatment one (3 months) and post-treatment two (6 months). The behavior and rational emotive behavior therapies were administered on children who met the criteria for conduct disorder. A positive outcome in this study was indicated by reduced aggression, respect for authority, improved interpersonal skills, balanced emotional regulation and positive coping skills among the children.

2.6 Summary

This chapter reviewed conduct disorder in general and further explained the different types of onset that manifest in children. Behavior and REBT therapies were discussed showing specific approaches to treatment that is, operant conditioning and problem-solving skills training. Further discussion was done on the effects of conduct disorder and some of the distressful events that children with conduct disorder experience. The conceptual framework was used to demonstrate the interaction of various variables that led to the outcome of the study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is a description of all the methods applied in the process of carrying out the study. The chapter discusses quasi-experimental design which was used in this study to assess the effectiveness of behavior and Rational Emotive Behavior therapy (REBT) therapies on children with conduct disorder. The target population was juvenile delinquent boys in selected rehabilitation schools in Kenya and purposive sampling technique was used to get the sample size. Quantitative data was collected through questionnaires. The assessment tools included Child Behavior Checklist Youth-Self-Report for Ages 11-18 (2001) and a socio-demographic questionnaire further explained in this section. The chapter also discusses the methods of data analysis which include the application of statistical package of the social sciences. The last section contains a discussion on ethical considerations.

3.2 Research Design

A research design is an "arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure" (Kothari, 2004, p. 31). A design or a structure in research shows how various sections interact to meet the purpose of the study. Kombo and Tromp (2006) defined a research design as "an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance with the research purpose" (p. 70). The purpose of this study was to establish the effectiveness of therapy in treating conduct disorder among children by use of quasi-experimental design which is commonly applied in physical and biological sciences because it allows a greater degree of control and

manipulation of variables to establish cause and effect (Mugenda, 2008). Since the researcher was not able to exhaustively control for all variables, a quasi-experimental design was used. This study was quantitative because it collected data in form of numerical records using questionnaires.

A quasi-experimental design is an approach that uses both a treatment and a control group to determine any causal relationships between two or more variables in a study (Shaughnessy et al., 2006). By use of quasi-experimental design, the researcher arranged and followed a systematic change in conditions to determine the effects on a physical capacity, skill, or performance important to the targeted team (Kombo & Tromp, 2006). A psychological intervention in this case, behavioral and REBT therapies, were applied as a method of inducing changes in the children's behavior, thoughts and feelings in the context of a professional relationship.

Behavioral therapy utilized techniques of operant conditioning such as positive and negative reinforcement, extinction and punishment. In this study, good behavior was reinforced through attention, praise, points, privileges and token economy (Searight et al., 2001). Negative reinforcement and punishment reduced the chances of inappropriate behavior recurring. These techniques helped the children to learn and modify their behavior. Using REBT techniques, children learned the cognitive processes of interpreting events, evaluating their perceptions, emotional regulation and cognitive restructuring. Problem-solving skills training (PSST) provided guidelines on how to apply cognitive skills in solving problems using the five steps provided in the model.

This study used Kabete Rehabilitation School as the treatment group while Wamumu Rehabilitation School was the control group. The two schools were randomly selected out

of seven rehabilitation boys schools and randomly assigned the control and treatment groups. In terms of management and physical facilities, teachers and the programs, the two schools were similar. Moreover, before admission into the two schools, all the children were received from Getathuru school which is a reception centre. This design was considered appropriate for this study since it enabled the researcher to administer and assess the effectiveness of the treatment.

3.3 Target Population

The target population for this study was juvenile delinquents who had committed crimes, been convicted in a court of law and were currently serving jail terms in Kabete and Wamumu rehabilitation schools. The total population of children in the two schools by 2015 was167, Kabete had 76 (T. Onyango, personal communication, May 14, 2015) while Wamumu had 91 (A. Kinoti, personal communication, May 19, 2015).

The children included in this study were aged between 13 and 18 years old in classes four to eight. While the children served their sentences in these institutions, they also attended formal school where they learnt English, Mathematics, Kiswahili, CRE and Social Science. In addition, vocational training was offered in areas like masonry, carpentry, agriculture, baking and fashion and design.

Kabete and Wamumu rehabilitation schools admit boys only and offer boarding facilities where the juveniles stay until they complete their jail terms. Some of the crimes committed by the juvenile delinquents included stealing, robbery with violence, destruction of property or being found in possession of illegal drugs (Mugambi, 2012; Odera, 2014; Omboto et al., 2013). The two schools were chosen because this study was

examining conduct disorder and research has shown that this disorder is prevalent among boys especially those that portray problem behaviors.

Kabete rehabilitation school is located along Lower Kabete Road, Nairobi County, about 12Km Nairobi. Wamumu rehabilitation school is in Kirinyaga County, Wamumu location, along Nairobi-Makutano-Embu Road, about 95 Km from Nairobi. Due to the conducive climate around the schools, fertile red soil and reliable rainfall, farming is practiced in both centers. Some of the crops produced include vegetables, beans and maize. Dairy farming is also practiced in these rehabilitation schools and the children provide labor for those activities.

3.3.1 Inclusion and Exclusion Criteria

This study included children aged between 13 to 18 years from Kabete and Wamumu rehabilitation schools. This was an age-appropriate study. According to the psychoanalytic theory of Sigmund Freud, children between 12–18 years are in the same stage called the genital stage where puberty begins and the adolescent's sexuality is reawakened (Santrock, 2008). Jean Piaget's stages of cognitive development categorize children from 12 years and above in the formal operational stage (Corey, 2009; Shaffer & Kipp, 2010). In this stage, adolescents are aware of their thought processes, can think constructively and in an abstract manner and solve problems (Santrock, 2008).Therefore the children who were included in this study had almost the same presentations since they were in the same developmental stage. Moreover, the study included children who gave assent of participation and the school manager gave consent on behalf of the parents. Additionally, these children presented with symptoms of other disorders cormobid with

conduct disorder. However, this study did not find children with severe mental health challenges that would demand referrals for further specialized treatment.

3.4 Sample Size

In this quasi-experimental study, proportions of unmatched cases of conduct disorder in both experimental and control groups were compared at baseline and post assessments one and two using means of a standard t – test and Chi Square test. This also involved observations from the same children to assess the correlation between symptom reduction and facets of the treatment, and to check when actual effect on the intervention occurred. Using the sample size calculation procedure explained below, the total number of subjects was 86, given that one of the most current studies on prevalence of conduct disorder in rehabilitation school in Kenya was at 60% (Sisa-Kiptoo, 2014).

This method was borrowed from Chow, Shao & Wang (2003).

Sample Size Calculation

$$n = \frac{2\left(Z_{1-\alpha} + Z_{\beta} \right)^{2} P_{av}(1 - P_{av})}{(P_1 - P_2)^2}$$

P_1 = Prevalence of conduct disorder is 60%

P_2 = Estimated prevalence post intervention is 30%

P_{av} = Mean of P_1 and P_2 and is represented by 45% (0.45)

Z_{β}= The power 80% is used for the study (0.84)

Z = Z statistic representing 95% level of confidence (1.96)

d = desired level of precision set to 30% (0.3). Is represented by $P_1 - P_2$

$$n = \frac{2\,x\,(1.96+0.84)2x\;0.45\,(1-0.45)}{0.3^2}$$

$$n = 43$$

Using the above assumptions, the minimum sample size required was 43 children per school, giving a total of 86 in the two schools. Adding 10% attrition rate brought the number to 47 per arm, total 94.

3.5 Sampling Procedure

This study used purposive sampling to get the sample size. Kothari (2004) defined purposive sampling as a "deliberate selection of particular units of the universe for constituting a sample which represents the universe" (p. 15). Purposive sampling helped in selecting juvenile delinquents who had conduct disorder and facilitated in the in-depth study of conduct disorder. Purposive sampling was also relevant in quantitative studies as well as in situations where cases in the population were few (Kombo & Tromp, 2006). All the children willing to participate in the study were given questionnaires and after analyzing the data, the researcher was able to identify children who presented with symptoms of conduct disorder. Out of the 167, a 9 points cut-off criterion was used to select the 94 respondents. The study involved all the children in the experimental school to avoid discrimination and benefit those who presented with other disorders like opposition defiant disorder. A record of those who met the threshold of conduct disorder was kept in order to determine the effectiveness of the treatment.

Children from class four to eight both in Kabete and Wamumu rehabilitation schools were given questionnaires to fill. One questionnaire collected socio-demographic

information and the second one assessed conduct disorder. Studies done in rehabilitation schools in Kenya and children's court indicated that out of the psychological problems children presented with, conduct disorder was among the highest (Maru et al., 2003; Okwara, 2010).

3.6 Data Collection Instruments

This study used questionnaires as instruments of collecting data. The first questionnaire which was formulated by the researcher captured socio-demographic information and distressful events children had experienced in their lives. Social-demographic information included their age, class, length of time at the school, religion and family background. Questions on exposure to distressful situations gathered information on areas like child abuse, sexual assault, lack of food, medical services and having lived in the streets. In addition, the questionnaire collected details on children's exposure to domestic violence (witnessed), severe corporal punishment, witnessing death of significant people, or living in hostile neighborhood. The last section of the questionnaire focused on the child's emotional aspect, issues of negligence, rejection and verbal abuse.

Children were also given the Child Behavior Checklist Youth-Self-Report for Ages 11-18 (2001).Youth-Self Report (YSR) is one of Achenbach System of Empirically Based Assessments (ASEBA), which was developed in 2001 by Achenbach (Achenbach & Rescorla, 2001). The questionnaire has 112 questions rated on a likert scale from 0 to 2. A zero (0) indicates 'not true', a one (1) is 'somewhat or sometime true' and a two (2) is 'very true or often true'. This standardized tool has been adapted in Kenya and translated into Kiswahili.

Child Behavior Checklist Youth Self Report (11-18) is used to assess the following syndrome scales: anxious depressed, withdrawn depressed, somatic, social, thought and attention problem, rule-breaking and aggressive behavior. These scales are further categorized into externalizing or internalizing disorders; affective problems, anxiety, somatic problem, attention deficit hyperactive, oppositional defiant and conduct disorder (Bordin, Rocha, Cristianes, Achenbach, Rescorla, & Silvares, 2013). Conduct disorder has 13 items and the scores range from 0 to 26.

3.6.1 Validity

The Child Behavior Checklist Youth Self Report (11-18) has a strong criterion-related validity (Bordin et al., 2013). The validity of this tool has been tested by various researchers. In a study that involved 673 children and adolescents to test the psychometric properties of the questionnaire, the results indicated proved its validity since it was able to discriminate respondents with and without psychiatric disorders (Nakamura, Ebesutani, Bernstein, & Chorpita, 2009). Another study sampled 231 children between 7-14 years and the Youth Self Report questionnaire was administered (Ebesutani, Bernstein, Martinez, Chorpita, & Weisz, 2011). The results showed that children were able to give reliable reports and the tool identified respondents who had various disorders especially on externalizing scales like conduct disorder.

3.6.2 Reliability

The researcher used a standardized tool to assess conduct disorder among the respondents. The Child Behavior Checklist Youth Self Report (11-18) questionnaire is a standardized tool, which has been used to assess conduct disorder. YSR has a mean test-retest reliability of 0.82 for empirically-based syndromes and 0.79 for DSM-oriented

scales (Bordin et al., 2013). In 2009, Kumar used the Youth Self Report (11-18) in a research that aimed at assessing the impact of REBT on adolescents with conduct disorder in India (Kumar, 2009). The tool was able to identify 200 boys and girls with conduct disorder. In Kenya, the Child Behavior Checklist Youth Self Report (11-18) Kiswahili version was used by Sisa-Kiptoo in Kirigiti Girls Rehabilitation School (Sisa-Kiptoo, 2014). The study focused on problem behavior among girls in the school and 60.8% presented with conduct disorder among other psychological problems.

To ensure uniformity in the administration of the tool, research assistants with a minimum of a bachelor's degree in psychology were recruited and offered a two-day professional training on how to administer the instrument and provide intervention. During the training period, the research assistants were required to understand how to assist the children and provide the necessary guidance without influencing responses. According to the guidelines of administering Child Behavior Checklist Youth Self Report, there is a provision for facilitators to provide guidance to test takers (Bordin et al., 2013). The training also equipped research assistants with skills on how to facilitate group sessions.

3.7 Method of Data Collection

Data was collected from children at Kabete and Wamumu rehabilitation schools in three phases using questionnaires. Since this study was a quasi-experimental design with a treatment and control group, data was collected in phase one, baseline, at the beginning of the study before treatment. The second phase was done after three months (post assessment one) to assess any behavioral changes with the participants using the Child Behavior Checklist Youth Self Report (11-18) tool. The third assessment was conducted

after six months (post assessment two) using the Child Behavior Checklist Youth Self Report tool as well.

The researcher was granted permission from the following authorities: Daystar University School of Human and Social Sciences, Nairobi Hospital Ethics Review Board, National Council of Science, Technology & Innovation, Ministry of Labour, Social Security and Services-Children's Department, and the school managers. Upon getting permission, the researcher met with the class teachers to introduce the study and request for their assistance in allocating rooms and assembling the children when needed.

All the children were requested to assemble in the dining hall for a meeting with the researcher and research assistants. This was done with the help of the class teachers. The meeting focused on introducing the facilitators and explaining the purpose of the study to the children. This helped them to understand their role and their right of participation in order to give informed assent. The school managers gave consent on behalf of the parents. Children who voluntarily agreed to participate in the study were requested to go to their respective classes to receive copies of the questionnaires. The facilitators assisted the children in areas where they had difficulties in responding to the questions. The first questionnaire was the socio-demographic which was self-administered. Once this questionnaire was filled, the Child Behavior Checklist Youth Self-Report for ages 11-18 (2001) questionnaire was administered. The questionnaires were analyzed to identify children who presented with conduct disorder. After the analysis of baseline information, the data was treated with confidentiality and stored under key and lock by the researcher.

The next level was the intervention where the children were put in groups of between eight and ten. The groups were based on Kohleberg's levels of moral reasoning which categorizes adolescents in the post conventional level but in different stages. Stage one for the 11-13 years understand social contracts and are interested in interpersonal relations, 14-15 years have their conscience developed and the 16-17 year olds understand ethical issues, have personal principles and accept universal rules (McDevitt & Ormrod, 2010).

The children received a sixteen-week program of behavior and REBT therapies in the experimental group. To avoid discrimination and labeling of those who had conduct disorder, the researcher engaged all the children in the study. The control group also filled out questionnaires but did not receive treatment during the six- month period of this study.

At post-treatment one which was after three months, the same questionnaire, Child Behavior Checklist Youth Self Report for ages 11-18 (2001) was administered to the children to assess changes in delinquent behavior, attitude and thought patterns. Treatment continued for the next three months and another assessment was done after 6 months, using Child Behavior Checklist for ages 11-18 (2001). In research, the only way to determine if the results or findings of interventional study are reliable is by repeating the assessment. This helped the researcher to compare the behavior of the children at the beginning of the study (baseline), post-treatment one and post-treatment two at the end of the study. The purpose was to assess any changes on the targeted behavior (conduct disorder) which were caused by the introduction of the intervention.

The data collected from respondents was treated with confidentiality from the period of pilot study to the end of the research process. Questionnaires were stored under key and lock with the researcher being the only person who had access to the documents. Research assistants accessed the documents with permission from the researcher and use of the material was restricted to a specific private room with strict admission. Data was coded and entered in the computer, which was used by the researcher and assistant researchers. Access to the information required use of passwords which were kept by the researcher to ensure safety of the data.

3.8 Pretesting

In any research that uses tools to collect information from respondents, it is necessary to do pretesting. This study used a self-administered socio-demographic questionnaire and Child Behavior Checklist Youth Self Report for ages 11-18 (2001) assessment tool for children. Mugenda (2008) stipulated that one of the most key areas of any research is pre-testing the tools which will be used in a study. The assessment tools in this study were used with Getathuru Rehabilitation School to assess the response of participants. This school was purposively sampled because it had almost the same characteristics with Kabete and Wamumu rehabilitation school. Getathuru is a boarding rehabilitation school for boys which admits juvenile children from different parts of the country. Responses from this school were appropriate since the study was carried out with almost the same population.

The children were given the self-administered questionnaire to observe how they respond to the questions, any challenges they faced and reactions displayed in the process. The researcher also noted the time the children spent in responding to the questions. The

Child Behavior Checklist Youth-Self-Report for ages 11-18 (2001) questionnaire was also administered to assess how well the children understood the questions. The researcher was able to make necessary adjustments on the tools using the information collected before the study begun.

3.9 Data Analysis and Tools of Analysis

Collected data was analyzed with the help of the SPSS computer program using descriptive, bivariate, multivariate and multimodal analysis. Data was presented using statistical tables and graphs. In objective one, frequencies were used to analyze the prevalence of conduct disorder among juvenile delinquents. The prevalence was also determined across the different characteristics like school, age, class, religion, parents' marital status and offences committed. Pearson's chi-square test of independence analyzed statistical association observable in the conduct disorder results across demographic characteristics. This study also used logistic regression to determine the strength of association between socio-demographic characteristics and conduct disorder among respondents.

In analyzing objective two, frequencies were used to establish the occurrence of distressful situations among the juvenile delinquents. Pearson's chi-square test of independence was used to ascertain any observable statistical association in conduct disorder results and exposure to distressful situations. The p-value was set at $p<0.05$, 95% confidence interval. Logistic regression was used to determine the strength of association between conduct disorder and distressful events experienced by the juvenile delinquents.

In analyzing objective three, Pearson's chi-square test for independence was done to determine any significant differences between the two schools. In quasi- experimental design, the two schools should be comparable and in case of any significant differences, it should be controlled during analysis. During the six months period of study, data was collected and analyzed at baseline, post-treatment one (after 3 months) and post-treatment two (after six months). Further data analysis included Difference-in-Differences which is a measure used to establish the effect of treatment. This is done by comparing scores at post-treatment one and two using the general linear model and split analysis of variance for both the experimental and control groups.

The researcher tested statistical difference in the paired mean for both control and experimental groups to ascertain effect sizes. The differences were computed at baseline, post-treatment one and two by the use of sample paired t-test. Further analysis used the Cohen's *d* effect size to determine the effect of the treatment administered. This measure helps to establish the significant effect of treatment in order to determine the effectiveness. Using statistical measures to test significant differences in mean scores at baseline, post-treatment one and two, in addition to assessing the effect size of the treatment determines whether the treatment was effective or not.

Table 3.1 shows the intervals at which assessments were done. It also explained the source of data and how it was presented. The table also outlined the various statistical measures used to analyse data during the three intervals.

Table 3.1: Data Management Table

Assessment	Period	Source of Data	Presentation	Statistical Measure
Baseline	Time zero	Socio-demographic questionnaire. YSR questionnaire	Tables	Frequencies Percentages, mean, standard deviation. Pearson's chi-square test for independence. Logistic regression
Post-assessment one after REBT.	3 months	YSR questionnaire	Tables	Frequencies Percentages, mean, standard deviation. Pearson's chi-square test for independence. Logistic regression
Post-assessment two after behavior therapy.	6 months	YSR questionnaire	Graph Tables	Difference-in-difference, analysis of variance, sample paired T tests.

In conclusion, the different types of tools used in this study enabled the researcher to make interpretations from the findings which was necessary in making conclusions guided by the data. It was only from the findings that the researcher was able to assess the effectiveness of REBT and behavior therapies in rehabilitating juvenile delinquents.

3.10 Ethical Considerations

The researcher got permission from Daystar University School of Human and Social Sciences, the National Council for Science, Technology & Innovations, Nairobi Hospital Ethics Review Board, Ministry of Labour, Social Security and Service (the Department of Children's Services) and the school managers. In order to avoid discrimination, all the children in the two schools who were willing to participate were involved in the study. The researcher explained the nature and purpose of the study to the participants. Since this was an experimental study, the researcher explained the nature of the treatment to the respondents so that they could understand their expected role (Corey, 2009). This study

involved children between 13-18 years. Each willing participant was required to give informed assent after the researcher had given detailed information about the study. Children below 18 years do not give consent to participate in research, in this case, the school managers consented for them (Shaughnessy et al., 2006).

All information regarding the research was provided to the participants in simple language that they could understand to help them make informed assent. This included their freedom to participate voluntarily and withdraw without any penalties, the right of privacy and protection to ensure that the respondent does not suffer any serious risks as a result of participating in the study. The participants were also informed about their freedom to share personal information without being forced or coerced. Participation in group activities was voluntary and children were protected from embarrassing situations by ensuring that personal details were not shared and group activities were acceptable to the participants. This ensured that children were protected from social risks.

Confidentiality was observed throughout the entire process (Corey, 2009). Participants were given codes to use on their questionnaires instead of names. Since this study involved administration of assessment at three intervals, the researcher had to keep a master list of names matching codes. The researcher explained the purpose of that record and assured the participants that the information was accessed by the researcher only and stored under key and lock. Upon completion of the study, all data was analyzed using various statistical measures without identifying any individual participants. A summary of the findings was released to the entire school through the school managers. All personal details of the children were concealed including any results that could identify any group or class, instead, the results were generalized.

Looking at Kenya and generally in Africa, research is limited on effective methods of treating conduct disorder. Most of the studies focus on causes and prevalence of conduct disorder among children in rehabilitation centers. This study used a combination of therapies to determine their effectiveness in treating conduct disorder. The researcher made recommendations based on the findings that are relevant to policy makers and researchers in the field of psychology.

The researcher understood that some of the children in rehabilitation schools had experienced distressful events in their lives. During this study, memories of such events provoked some emotional discomfort among a few children. The researcher provided individual counseling to the affected children and assured them of continued support during the study.

Children involved in this study did not receive incentives to participate. Instead, the children benefited from the treatment that addressed their psychological problems and provided them with skills relevant for application in their daily life challenges. In addition, the treatment group received rewards like stationery during group activities to reinforce positive behavior as part of the treatment.

3.11 Summary

The chapter reviewed the methods of data collection, instruments and the various statistical methods of data analysis. Ethical guidelines were also reviewed in this chapter. Using the methods and instruments described in the chapter, the research aimed at producing conclusive results on the effectiveness of behavior and rational emotive behavior therapies in treating conduct disorder.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents data that was collected during the study period at baseline, post-treatment one and post-treatment two. The presentation is done in tables and graphs. The chapter also contains data analysis which was done according to the objectives of the study. In addition, the chapter has discussed the interpretation of the data, made conclusions and recommendations based on the findings.

This study was conducted in two institutions, Kabete rehabilitation school (KRS) and Wamumu rehabilitation school (WRS). The purpose of the study was to establish the effectiveness of therapy in treating conduct disorder using both REBT and behavior therapies. Participants were pupils from Kabete and Wamumu schools from class four to eight aged between 13 and 18 years. Quantitative data was collected using self administered questionnaires and some children who needed assistance in interpreting the questions were assisted. Before the data was analyzed, it was first cleaned, coded and entered in spread sheets. Analyses were performed using the SPSS software version 20 (2011).

4.2 Presentation, Analysis and Interpretation

Objective one sought to establish the prevalence of conduct disorder among juvenile delinquents at Kabete and Wamumu rehabilitation schools. Table 4.1 presents the results of the prevalence of conduct disorder in the two schools.

Table 4.1: The Prevalence of CD among Juvenile Delinquents at KRS and WRS.

	Prevalence of CD (n, %)	95% CI
Conduct Disorder	61/167 (36.5%)	29.2% to 43.8%
Study Arm		
Control	37/91 (40.7%)	30.61% to 50.79%
Experimental	24/76 (30.3%)	19.97% to 40.63%
Marital status of parent		
Married/Cohabiting	25/72 (34.7%)	23.7% to 45.7%
Separated/Divorced/Single	15/50 (30.0%)	17.3% to 42.7%
Widowed	18/35 (51.4%)	34.84% to 67.96%
N/A	3/10 (30.0%)	1.6% to 58.4%
Religion		
Christian	53/145 (36.6%)	28.76% to 44.44%
Muslim	7/20 (35.0%)	14.1% to 55.9%
Others	1/2 (50.0%)	-19.3% to 119.3%
Offence committed		
Stealing	32/92 (34.8%)	25.07% to 44.53%
Defilement and Rape	6/28 (21.4%)	6.21% to 36.59%
Breaking in and Stealing	3/13 (23.1%)	0.19% to 46.01%
Truancy (out of School, loiter)	16/25 (64.0%)	45.18% to 82.82%
Others	4/9 (44.4%)	-4.84% to 49.64%
Age		
<14 years	3/11 (27.3%)	0.97% to 53.63%
15years	13/47 (27.7%)	14.91% to 40.49%
16years	21/61 (34.4%)	22.48% to 46.32%
17years	21/40 (52.5%)	37.02% to 67.98%
Class		
Four	0/21 (0.0%)	n/a
Five	7/28 (25.0%)	8.96% to 41.04%
Six	16/37 (43.2%)	27.24% to 59.16%
Seven	19/41 (46.3%)	31.04% to 61.56%
Eight	19/40 (47.5%)	32.02% to 62.98%

According to Table 4.1, the prevalence of conduct disorder was 36.5% (95% CI: 29.2% to 43.8%). Further analysis depicted the prevalence disaggregated by key socio-demographic characteristics. This study found that the prevalence of conduct disorder was highest (51.4%) among juvenile delinquents who came from families where the parent was widowed, as opposed to other marital status. Respondents who came from families where the parents were married or cohabiting recorded a prevalence of 34.7% which was higher compared to the separated/divorced/single families at 30.0%. These findings suggested a high prevalence of conduct disorder in the study population and that

a majority of the respondents came from families where the parent was widowed. This indicated that the death of a parent had a negative impact in the lives of the children and exposed them to the risks of developing conduct disorder.

Considering the age of the respondents, 52.5% of them were 17 years old while 34.4% were 16 years old. Moreover, 27.7% were 15 years old and 27.3% were 14 years and below. This observation demonstrated that the prevalence of conduct disorder was higher among the older children. On offences committed, 64.0% of the respondents reported to have been truant (rebellious/out of school/loitering/in criminal gangs) while 34.8% had committed the offence of stealing. Respondents who committed the offence of breaking in and stealing formed 23.1% while the ones who committed defilement and rape had a prevalence of 21.4%. This suggested that the majority of the respondents with conduct disorder had dropped out of school.

The prevalence of conduct disorder in class eight was 47.5% while in class seven, it was at 46.3%. In class six, 43.2% of the respondents had conduct disorder while in class five the prevalence was at 25.0%. This showed that the prevalence of conduct disorder increased in the higher classes that is, seven and eight, compared to the lower classes. Moreover, class four respondents did not record conduct disorder. This situation may be explained by the fact that class four respondents were slightly younger and that conduct disorder is commonly manifested from 15 years of age.

Table 4.2 shows statistical associations between socio-demographic characteristics of the respondents and conduct disorder.

Table 4.2: Bivariate Analysis between Demographic Characteristics and CD.

	No CD	CD	Chi-square	p-value
Marital status of parent				
Married/Cohabiting	46/70 (65.7%)	24/70 (34.3%)		
Separated/Divorced/Single	36/52 (69.2%)	16/52 (30.8%)	2.245	0.1523
Widowed	17/35 (48.6%)	18/35 (51.4%)		
N/A	7/10 (70.0%)	3/10 (30.0%)		
Religion				
Christian	92/145 (63.4%)	53/145 (36.6%)		
Muslim	13/20 (65.0%)	7/20 (35.0%)	0.177	0.915
Others	1/ 2 (50.0%)	1/ 2 (50.0%)		
Class				
Four	21/21 (100.0%)	0/21 (0.0%)		
Five	21/28 (75.0%)	7/28 (25.0%)		
Six	21/37 (56.8%)	16/37 (43.2%)	18.190	0.001
Seven	22/41 (53.7%)	19/41 (46.3%)		
Eight	21/40 (52.5%)	19/40 (47.5%)		
Age				
<14 years	8/11 (72.7%)	3/11 (27.3%)		
15years	34/47 (72.3%)	13/47 (27.7)		
16years	40/61 (65.6%)	21/61 (34.4%)	6.522	0.089
17years	19/40 (47.5%)	21/40 (52.5%)		
Offence committed				
Stealing	60/92 (65.2%)	32/92 (34.8%)		
Defilement and Rape	22/28 (78.6%)	6/28 (21.4%)		
Breaking and Stealing	10/13 (76.9%)	3/13 (23.1%)	12.480	0.014
Truancy	9/25 (36.0%)	16/25 (64.0%)		
Others	5/9 (55.5%)	4/9 (44.4%)		

	No CD	CD	Chi-square	p-value
Father attending worship				
No	27/49 (55.1%)	22/49 (44.9%)	3.178	0.075
Yes	28/38 (73.7%)	10/38 (26.3%)		
Mother attending worship				
No	12/29 (41.1%)	17/29 (58.6%)	8.163	0.004
Yes	81/116 (69.8%)	35/116 (30.2%)		
Guardian attending worship				
No	3/5 (60.0%)	2/5 (40.0%)	0.036	0.849
Yes	25/45 (55.6%)	20/45 (44.4%)		
Student attending worship				
Never	10/15 (66.7%)	5/15 (33.3%)		
Sometimes	63/103 (61.2%)	40/103 (38.8%)	0.620	0.734
Always	33/49 (67.3%)	16/49 (32.7%)		
Employed (Self/Formal)				
No	42/67 (62.7%)	25/67 (37.3%)	0.030	0.863
Yes	64/100 (64.0%)	36/100 (36.0%)		
Earn Income				
No	59/97 (60.8%)	38/97 (39.2%)	0.700	0.403
Yes	47/70 (67.1%)	23/70 (32.9%)		

According to Table 4.2, class eight respondents reported the highest proportion of conduct disorder at 47.5% while class seven reported a prevalence of 46.3%. Class six had a prevalence of 43.2%. The increase in prevalence based on classes indicated a statistical association which was highly significant (p=0.001). This meant that the higher the class, the higher the proportion of juveniles with conduct disorder.

Additionally, 64.0% of the respondents were truant (rebellious/in gangs/loitering/out of school) while 34.8% committed the offence of stealing. Respondents who had committed the offence of breaking in and stealing formed 23.1% while 21.4% committed defilement and rape. This showed a statistically significant (p=0.014) association between the offence and occurrence of conduct disorder.

This study also found that 58.6% of juvenile delinquents reported their mothers did not attend a place of worship while 30.2% reported that their mothers did. The difference between juveniles whose mothers attended a place of worship and those who did not, indicated a highly significant difference (p=0.004). This signified that the prevalence of conduct disorder was highest among students whose mothers did not attend a place of worship. Additionally, there was no significant difference between respondents who attended a place of worship always, sometimes or never did. This implied that attending a place of worship or not for the respondent did not determine the occurrence of conduct disorder.

This study sought to find out associations between occurrence of conduct disorder and other socio-demographic characteristics. However, characteristics like parents' marital status, religion, father/guardian or the respondent attending a place of worship, earning consistent income, and employment status did not show any significant association with occurrence of conduct disorder among the study population.

Table 4.3 presents an analysis that sought to establish the association between other psychological disorders and the occurrence of conduct disorder.

Table 4.3: Bivariate Analysis between Psychological Disorders and CD.

	No CD	CD	Chi-square	p-value
Anxious Depressed				
No	104/148 (70.3%)	44/148 (29.7%)	25.923	<0.0001
Yes	2/19 (10.5%)	17/19 (89.5%)		
Withdrawn Depressed				
No	102/134 (76.1%)	32/134 (23.9%)	46.777	<0.0001
Yes	4/33 (12.1%)	29/33 (87.9%)		
Somatic Complains				
No	102/150 (68.0%)	48/150 (32.0%)	13.025	<0.0001
Yes	4/17 (23.5%)	13/17 (76.5%)		
Social Problems				
No	106/151 (70.2%)	45/151 (29.8%)	30.749	<0.0001
Yes	0/16 (0.0%)	16/16 (100.0%)		
Thought Problems				
No	105/154 (68.2%)	49/154 (31.8%)	18.919	<0.0001
Yes	1/13 (7.7%)	12/13 (92.3%)		
Attention Problems				
No	96/101 (95.0%)	5/101 (5.0%)	109.905	<0.0001
Yes	10/66 (15.2%)	56/66 (84.8%)		
Rules breaking				
No	104/132 (78.8%)	28/132 (21.2%)		
Yes	2/35 (5.7%)	33/35 (94.3%)	63.715	<0.0001
Aggressive behavior				
No	106/141 (75.2%)	35/141 (24.8%)	53.511	<0.0001
Yes	0/26 (0.0%)	26/26 (100.0%)		
Internalizing-Affective or Depression				
No	104/150 (69.3%)	46/150 (30.7%)	21.827	<0.0001
Yes	2/17 (11.8%)	15/17 (88.2%)		
Internalizing-Anxiety				
No	101/136 (74.3%)	35/136 (25.7%)	36.802	<0.0001
Yes	5/31 (16.1%)	26/31 (83.9%		
Internalizing-Somatic				
No	102/149 (68.5%)	47/149 (31.5%)	14.807	<0.0001
Yes	4/18 (22.2%)	14/18 (77.8%)		

	No CD	CD	Chi-square	p-value
Internalizing-Attention Deficit Hyperactivity Disorder				
No	105/143 (73.4%)	38/143 (26.6%)	42.520	<0.0001
Yes	1/24 (4.2%)	23/24 (95.8%)		
Externalizing-Sluggish cognitive processes				
No	99/128 (77.3%)	29/128 (22.7%)	45.484	<0.0001
Yes	7/39 (17.9%)	32/39 (82.1%)		
Externalizing-Obsessive Compulsive Problems				
No	102/141 (72.3%)	39/141 (27.7%)	30.715	<0.0001
Yes	4/26 (15.4%)	22/26 (84.6%)		
Externalizing-Posttraumatic Stress				
No	98/115 (85.2%)	17/115 (14.8%)	75.318	<0.0001
Yes	8/52 (15.4%)	44/52 (84.6%)		

In Table 4.3, respondents who had social problems reported 100% prevalence of conduct disorder compared to the others who did not have social problems (29.8%). The association was highly significant at p=<0.0001. This implied that all the respondents with social problems also presented with conduct disorder. In addition, respondents who had thought problems reported a prevalence of 92.3% compared to only 31.8% who did not present with the same. Moreover, respondents who reported rules breaking were 94.3% compared to 21.2% who did not, while 100% of respondents with conduct disorder reported aggressive behavior compared to 24.8% who did not. All the statistical associations were highly significant at p=<0.0001. This implied that majority of the respondents presented with symptoms of other comorbid disorders which were associated with the occurrence of conduct disorder.

Table 4.4 presents a multivariate analysis between key socio-demographic characteristics and conduct disorder among juvenile delinquents at KRS and WRS.

Table 4.4: Multivariate Analysis between Key Socio-Demographic and CD.

	OR	95% CI		p-value
Marital status of parent				
Married/Cohabiting	Referent			
Separated/Divorced/Single	0.502	0.221	1.142	0.100
Widowed	0.405	0.165	0.993	0.048
Religion				
Christian	Referent			
Muslim	0.576	0.035	9.401	0.699
Others	0.538	0.029	9.985	0.678
Class				
Four	Referent			
Six	0.368	0.128	1.060	0.064
Seven	0.842	0.343	2.069	0.708
Eight	0.955	0.399	2.285	0.917
Age				
<14 years	Referent			
15years	0.339	0.078	1.468	0.148
16years	0.346	0.142	0.843	0.020
17years	0.475	0.210	1.073	0.073
Offence committed				
Stealing	Referent			
Defilement and Rape	0.300	0.119	0.755	0.011
Breaking in and Stealing	0.153	0.045	0.518	0.003
Truancy	0.450	0.096	2.115	0.312
Others	0.169	0.037	0.777	0.022
Father attending worship				
No	Referent			
Yes	2.281	0.913	5.699	0.077
Mother attending worship				
No	Referent			
Yes	3.279	1.417	7.584	0.006
Guardian attending worship				
No	Referent			
Yes	0.833	0.127	5.479	0.850
Student attending worship				
Never	Referent			
Sometimes	1.031	0.302	3.522	0.961
Always	1.310	0.640	2.681	0.461
Employed (Self/Formal)				
No	Referent			
Yes	1.058	0.557	2.010	0.863
Earn Income				
No	Referent			
Yes	1.316	0.691	2.506	0.403

Juvenile delinquents whose mothers were not attending a place of worship were three times more likely to have conduct disorder as compared to those who attended (OR= 3.279, 95% CI: 1.417 - 7.584; p=0.006). This showed that respondents whose mothers attended a place of worship were less likely to develop conduct disorder.

Further analysis indicated that juvenile delinquents who committed the offence of breaking in and stealing were less likely not to have conduct disorder as compared to those whose offence was stealing (OR=0.153, 95% CI: 0.045-0.518; p=0.003). This suggested that those respondents who reported to have committed the offence of breaking in and stealing were exposed to the risk of developing conduct disorder compared to those who committed the offence of stealing. In addition, respondents who reported to have committed the offence of defilement and rape were less likely to have no conduct disorder compared to those who committed the offence of stealing (OR=0.300, 95% CI: 0.119-0.755; p=0.011). This meant that respondents whose offence was defilement and rape were more exposed to the risk of developing conduct disorder compared to the ones whose offence was stealing.

Respondents who were 16 years old were less likely to have no conduct disorder compared to respondents who were 14 years old and below (OR=0.346, 95% CI: 0.142-0.843; p=0.020). This demonstrated that the respondents who were 14 years and below had reduced chances of developing conduct disorder compared to 16 year old respondents.

Moreover, respondents who came from widowed families were less likely to have no conduct disorder compared to those who came from families where the parents were married or cohabiting (OR=0.405, 95% CI: 0.165-0.993; p=0.048). This finding implied

that respondents from widowed families were more exposed to the risk of developing conduct disorder compared to the ones from married families.

Table 4.5 presents an analysis between psychological disorders and conduct disorder among juvenile delinquents in KRS and WRS.

Table 4.5: Multivariate Analysis between Psychological Disorders and CD

	OR	95% CI		p-value
Anxious Depressed				
No	Referent			
Yes	0.050	0.11	0.225	<0.0001
Withdrawn Depressed				
No	Referent			
Yes	0.043	0.014	0.132	<0.0001
Somatic Complains				
No	Referent			
Yes	0.145	0.045	0.467	0.001
Social Problems				
No	Referent			
Yes	0.000	0.000	-	0.998
Thought Problems				
No	Referent			
Yes	0.039	0.005	0.308	0.002
Attention Problems				
No	Referent			
Yes	0.009	0.003	0.029	<0.0001
Rules breaking				
No	Referent			
Yes	0.016	0.004	0.072	<0.0001
Aggressive behavior				
No	Referent			
Yes	0.000	0.000	-	0.998
Internalizing-Affective or Depression				
No	Referent			
Yes	0.059	0.013	0.268	<0.0001
Internalizing-Anxiety				
No	Referent			
Yes	0.067	0.024	0.187	<0.0001
Internalizing-Somatic				
No	Referent			
Yes	0.132	0.041	0.422	0.132

	OR	95% CI		p-value
Internalizing-Attention Hyperactivity Disorder				
No	Referent			
Yes	0.016	0.002	0.121	<0.0001
Externalizing-Sluggish cognitive processes				
No	Referent			
Yes	0.064	0.026	0.160	<0.0001
Externalizing-Obsessive Compulsive Problems				
No	Referent			
Yes	0.070	0.023	0.215	<0.0001
Externalizing-Posttraumatic Stress				
No	Referent			
Yes	0.032	0.013	0.079	<0.0001

In Table 4.5, respondents who reported to be anxious depressed were less likely to have no conduct disorder compared to the other respondents who did not present with anxious depressed (OR=0.050, 95% CI: 0.110-0.255; p=<0.0001). This suggested that respondents who were anxious depressed were more likely to have conduct disorder. Moreover, respondents who reported to have symptoms of withdrawn depressed were less likely not to have conduct disorder (OR=0.043, 95% CI: 0.014-0.132; p=<0.0001). This indicated that respondents who were withdrawn depressed were exposed to the risk of developing conduct disorder.

Respondents who had internalizing anxiety were less likely to have no conduct disorder compared to those who did not present with the same (OR=0.067, CI: 0.024-0.187; p=<0.0001). This indicated that having internalizing anxiety increased the chances of the occurrence of conduct disorder. Respondents who reported to have sluggish cognitive processes were less likely to have no conduct disorder compared to the ones who did not present with the same disorder (OR=0.064, CI: 0.026-0.160; p=<0.0001). It therefore

meant that those respondents who had sluggish cognitive processes were exposed to the risk of developing conduct disorder.

In objective two, the study sought to establish the exposure of juvenile delinquents to distressful situations. Table 4.6 shows the exposure of juvenile delinquents to distressful situations.

Table 4.6: Exposure of the Juvenile Delinquents to Distressful Situations

Question	No (N=167)	Yes (N=167)
Have you ever witnessed your parents/caregivers fight physically at home?	97 (58.1%)	70 (41.9%)
Have you seen your parents/caregivers fight with weapons at home?	123 (73.7%)	40 (26.3%)
Do your parents/caregivers quarrel and argue in your presence?	89 (53.3%)	78 (46.7%)
Do your parents/caregivers abuse alcohol?	70 (41.9%)	97 (58.1%)
Do your parents/caregivers abuse drugs like marijuana or others?	147 (88.0%)	20 (12.0%)
Have you been emotionally abused by your parents/caregivers?	77 (46.1%)	90 (53.9%)
Have you felt neglected by your parents/caregiver/s?	62 (37.1%)	105 (62.9%)
Do your parents/caregivers punish you with beatings?	76 (45.5%)	91 (54.5%)
Have you ever suffered physical injuries due to beatings from your parents/caregivers?	130 (77.8%)	37 (22.2%)
Have you been beaten with weapons by parents/caregivers?	136 (81.4%)	31 (18.6%)
Have you ever been physically injured by other people other than your parents?	139 (83.2%)	28 (16.8%)
Has anyone abused you sexually before joining this school?	138 (82.6%)	29 (17.4%)
Have you been sexually maltreated? (exploitation, coercion, harassment)	121 (72.5%)	46 (27.5%)
Do you find people in your neighborhood hostile to you?	52 (31.1%)	115 (68.9%)
Do you witness violence within your neighborhood?	47 (28.1%)	120 (71.9%)
Have you lived in the streets?	120 (71.9%)	47 (28.1%)
Have you been physically injured in the streets?	143 (85.6%)	24 (14.4%)
Have you lacked medical treatment because your caregiver could not afford it?	113 (67.7%)	54 (32.3%)
Witnessed the death of a close family member (not parent)?	113 (67.7%)	54 (32.3%)
Have you been given the responsibility of nursing a critically sick family member?	124 (74.3%)	43 (25.7%)
Have you been left with your siblings to provide for them?	133 (79.6%)	34 (20.4%)

According to Table 4.6, 71.9% of juvenile delinquents reported to have witnessed violence within their neighborhood while 68.9% found people in their neighborhood hostile to them. Juvenile delinquents who felt neglected by their parents/caregivers were 62.9% while 58.1% reported that their parents abused alcohol. Additionally, 54.5% of the respondents reported that their parents/caregivers punished them with beatings while 53.9% had been emotionally abused by their parents or caregivers. The high percentages recorded from these findings, were evident that the majority of the respondents had been exposed to distressful situations in their lives.

Table 4.7 shows the analysis between the distressful events experienced by the juvenile delinquents and the occurrence of conduct disorder.

Table 4.7: Bivariate Analysis between Distressful Situations and Prevalence of CD

Questions	No CD	CD	Chi-square	p-value
Have you ever witnessed your parents/caregivers fight physically at home?				
No	70 (72.2%)	27 (27.8%)	7.541	0.006
Yes	36 (51.4%)	34 (48.6%)		
Have you seen your parents/caregivers fight with weapons at home?				
No	89 (72.4%)	34 (27.6%)	15.895	<0.0001
Yes	17 (38.6%)	27 (61.4%)		
Do your parents/caregivers quarrel and argue in your presence?				
No	64 (71.9%)	25 (28.1%)	5.850	0.016
Yes	42 (53.8%)	36 (46.2%)		
Do your parents/caregivers abuse alcohol?				
No	55 (78.6%)	15 (21.4%)	11.850	0.001
Yes	51 (52.6%)	46 (47.4%)		
Do your caregivers abuse drugs like marijuana or others?				
No	89 (60.5%)	58 (39.5%)	4.541	0.046
Yes	17 (85.0%)	3 (15.0%)		
Have you been emotionally abused by your parents/caregivers?				
No	52 (67.5%)	25 (32.5%)	1.016	0.314
Yes	54 (60.0%)	36 (40.0%)		
Have you felt neglected by your parents/caregiver/s?				
No	47 (75.8%)	15 (24.2%)	6.470	0.011
Yes	59 (56.2%)	46 (43.8%)		
Do your parents/caregivers punish you with beatings?				
No	44 (57.9%)	32 (42.1%)	1.872	0.171
Yes	62 (68.1%)	29 (31.9%)		
Have you ever suffered physical injuries due to beatings from your parents/caregivers?				
No	78 (60.7%)	52 (40.3%)	3.748	0.098
Yes	28 (75.7%)	9 (24.3%)		
Have you been beaten with weapons?				
No	79 (58.1%)	57 (41.9%)	9.163	0.002
Yes	27 (87.1%)	4 (12.9%)		

Questions	No CD	CD	Chi-square	p-value
Have you ever been physically injured by other people other than your parents?				
No	86 (61.9%)	53 (38.1%)	0.918	0.338
Yes	20 (71.4%)	8 (28.6%)		
Has anyone abused you sexually before joining this school?				
No	80 (58.0%)	58 (42.0%)	10.376	0.001
Yes	26 (89.7%)	3 (10.3%)		
Have you been sexually maltreated? (exploitation, coercion, harassment)				
No	78 (64.5%)	43 (35.5%)	0.186	0.667
Yes	28 (60.9%)	18 (39.1%)		
Do you find people in your neighborhood hostile to you?				
No	31 (59.6%)	21 (40.4%)	0.485	0.486
Yes	75 (65.2%)	40 (34.8%)		
Do you witness violence within your neighborhood?				
No	33 (70.2%)	14 (29.8%)	1.281	0.258
Yes	73 (60.8%)	47 (39.2%)		
Have you lived in the streets?				
No	72 (60.0%)	48 (40.0%)	2.218	0.136
Yes	34 (72.3%)	13 (27.7%)		
Have you been physically injured in the streets?				
No	86 (60.1%)	57 (39.9%)	4.768	0.029
Yes	20 (83.3%)	4 (16.7%)		
Have you lacked food due to your parent/caregiver's inability to provide?				
No	62 (58.5%)	44 (41.5%)	3.107	0.078
Yes	44 (72.1%)	17 (27.9%)		
Have you lacked medical treatment because your parent/ caregiver could not afford it?				
No	65 (57.5%)	48 (42.5%)	5.338	0.021
Yes	41 (75.9%)	13 (24.1%)		
Have you witnessed the death of a close family member (not parent)?				
No	60 (53.1%)	53 (46.9%)	16.227	<0.0001
Yes	46 (85.2%)	8 (14.8%)		
Have you been given the responsibility of nursing a critically sick family member?				
No	71 (57.3%)	53 (42.7%)	8.023	0.005
Yes	35 (81.4%)	8 (18.6%)		
Have you been left with your siblings to provide for them?				
No	85 (63.9%)	48 (36.1%)	0.054	0.817
Yes	21 (61.8%)	13 (38.2%)		

Table 4.7 shows that 61.4% of respondents with conduct disorder reported to have seen their parents/caregivers fight with weapons at home compared to 27. 6% who did not experience the same event. This displayed a statistically significant association ($p<0.0001$) between the event and the possibility of developing conduct disorder.

Furthermore, respondents whose parents/caregivers abused alcohol had a higher occurrence of conduct disorder at 47.4%compared to 21.4% whose parents did not abuse alcohol. These differences were statistically significant ($p=0.001$). This demonstrated that majority of the respondents with conduct disorder had their parents/caregivers abusing alcohol. Further analysis indicated that 48.6% of respondents reported to have witnessed their parents/caregivers fight while 27.8% did not. The difference was statistically significant ($p=0.006$) showing that witnessing physical fights at home was associated with the occurrence of conduct disorder.

Additionally, this study established that 43.8% of the respondents reported to have felt neglected by their parents/caregivers while 24.2% did not. This was an indication that majority of the respondents who felt neglected also developed conduct disorder. Moreover, 10.3% of the respondents with conduct disorder had been sexually abused before joining the school while 42.0% were not abused. The difference was statistically significant ($p=0.001$) indicating that sexual abuse was not associated with the occurrence of conduct disorder since majority of the respondents had not been sexually abused.

Table 4.8 presents the analysis between the distressful events experienced by the respondents and the chances of developing conduct disorder. This analysis sought to portray any strong relationships between exposure to distressful events and occurrence of conduct disorder.

Table 4.8: Multivariate Analysis between Distressful Situations and Prevalence of CD

Questions	OR	95% CI		p-value
Have you ever witnessed your parents/caregivers fight physically at home?				
No	Referent			
Yes	0.408	0.214	0.779	0.007
Have you seen your parents/caregivers fight with weapons at home?				
No	Referent			
Yes	0.241	0.117	0.496	<0.0001
Do your parents quarrel and argue in your presence?				
No	Referent			
Yes	0.456	0.240	0.866	0.016
Do your parents/caregivers abuse alcohol?				
No	Referent			
Yes	0.302	0.151	0.607	0.001
Do your parents/caregivers abuse drugs like marijuana or others?				
No	Referent			
Yes	3.693	1.036	13.165	0.044
Have you been emotionally abused by your parents/caregivers?				
No	Referent			
Yes	0.721	0.382	1.363	0.314
Have you felt neglected by your parents/caregivers?				
No	Referent			
Yes	0.409	0.204	0.822	0.012
Do your parents/caregivers punish you with beatings?	Referent			
No	1.555	0.825	2.931	0.172
Yes				
Have you ever suffered physical injuries due to beatings from your parents/caregivers?				
No	Referent			
Yes	2.101	0.917	4.815	0.079
Have you been beaten with weapons?				
No	Referent			
Yes	4.870	1.615	14.689	14.689

Questions	OR	95% CI		p-value
Have you ever been physically injured by other people other than your parents?				
No	Referent			
Yes	1.541	0.634	3.746	0.340
Has anyone abused you sexually before joining this school?				
No	Referent			
Yes	6.283	1.815	21.756	0.004
Have you been sexually maltreated? (exploitation, coercion, harassment)				
No	Referent			
Yes	0.858	0.426	1.726	0.667
Do you find people in your neighborhood hostile to you?				
No	Referent			
Yes	1.270	0.647	2.492	0.487
Do you witness violence within your neighborhood?				
No	Referent			
Yes	0.659	0.319	1.360	0.259
Have you lived in the streets?				
No	Referent			
Yes	1.744	0.835	3.640	0.139
Have you been physically injured in the streets?				
No	Referent			
Yes	3.314	1.076	10.203	0.037
Have you lacked food due to your parents/caregiver's inability to provide?				
No	Referent			
Yes	1.837	0.930	3.626	0.080
Have you lacked medical treatment because your parents/caregiver could not afford it?				
No	Referent			
Yes	2.329	1.126	4.818	0.023
Have you witnessed the death of a close family member (not parent)?				
No	Referent			
Yes	5.079	2.200	11.727	<0.0001
Have you been given the responsibility of nursing a critically sick family member?				
No	Referent			
Yes	3.266	1.401	7.614	0.006
Have you been left with your siblings to provide for them?				
No	Referent			
Yes	0.912	0.419	1.984	0.817

Table 4.8 shows that respondents who saw their parents/caregivers fight with weapons at home were less likely to have no conduct disorder as opposed to those who did not (OR=0.241; 95% CI: 0.117-0.496, p<0.0001). Therefore, respondents who saw their parents/caregivers fight with weapons were at a higher risk of developing conduct disorder.

Juvenile delinquents who had ever witnessed their parents/caregivers fight physically at home were less likely to have no conduct disorder as compared to those who did not (OR=0.408;95% CI: 0.214-0.779;p=0.007). This indicated a relationship between witnessing parents/caregivers fight physically at home and the risks of developing conduct disorder.

Moreover, respondents whose parents/caregivers abused alcohol were less likely to have no conduct disorder as compared to those whose parents did not. (OR=0.302; 95% CI: 0.151-0.607, p=0.001). This signified that having parents/caregivers who abused alcohol increased the chances of conduct disorder occurrence among the juvenile delinquents.

This study found that respondents who felt neglected by their parents/caregivers were less likely to have no conduct disorder compared to those who did not (OR=0.409; 95% CI: 0.204-0.822, p=0.012). This meant that juvenile delinquents who felt neglected by their parents/caregivers were more exposed to the risk of developing conduct disorder. In addition, respondents who were sexually abused before joining the school were about 6 times more likely not to have conduct disorder as opposed to those who were not (OR=6.283; 95% CI: 1.815-21.756, p=0.004). This suggested that respondents who had been sexually abused did not have increased risks of manifesting with conduct disorder.

The third objective of this study sought to determine the efficacy of behavior and REBT therapies on conduct disorder among juvenile delinquents. Pearson's chi-square test for independence was used to test significant difference between the control and experimental group by key socio-economic-demographic characteristics namely religion, class and employment status of parent/caregiver (self/formal) among juvenile delinquents in Kabete and Wamumu rehabilitation schools.

Table 4.9 shows the differences between control and experimental in terms of class, employment, religion and type of facility.

Table 4.9: Differences between Control and Experimental Groups

Characteristics	Experimental (Kabete Rehabilitation School)	Control (Wamumu Rehabilitation School)	χ^2 statistics	p-value*
Number of respondents	47	47	-	-
Type of facility	Government Rehabilitation Schools	Government Rehabilitation Schools	-	-
Class				
4	0.0% (0/10)	100.0% (10/10)		
5	28.6% (4/14)	71.4% (10/14)		
6	62.5% (15/24)	37.5% (9/24)	16.262	0.003
7	60.0% (15/25)	40.0% (10/25)		
8	61.9% (13/21)	38.1% (8/21)		
Employment status (self/formal)				
No	44.4% (16/36)	55.6% (20/36)	0.720	0.396
Yes	53.4% (31/58)	46.6% (27/58)		
Religion				
Christian	51.2% (43/84)	48.8% (41/84)	0.448	0.503
Muslim	40.0% (4/10)	60.0% (6/10)		

*p-values generated using Pearson's χ^2 tests for independence

According to Table 4.9, there was a significant difference in the number of respondents per class between control and experimental groups (p=0.003). The experimental group had more respondents in the upper classes (6-8) compared to the control group.

Considering the employment status of juveniles' parents/caregivers, there was no significant difference between the control and the experimental groups. Similarly, this study did not establish any statistical difference between the control and experimental groups. The two groups were recruited from government boarding rehabilitation schools and the number of respondents was equal in both schools. The two groups were almost similar and therefore comparable.

Table 4.10 presents the mean conduct disorder scores at baseline, post-treatment one and post-treatment two. The experimental group (KRS) received REBT and behavior therapies while the control group (WRS) did not receive any treatment.

Table 4.10: Descriptive Analysis of CD Scores at Baseline and Post-Treatment.

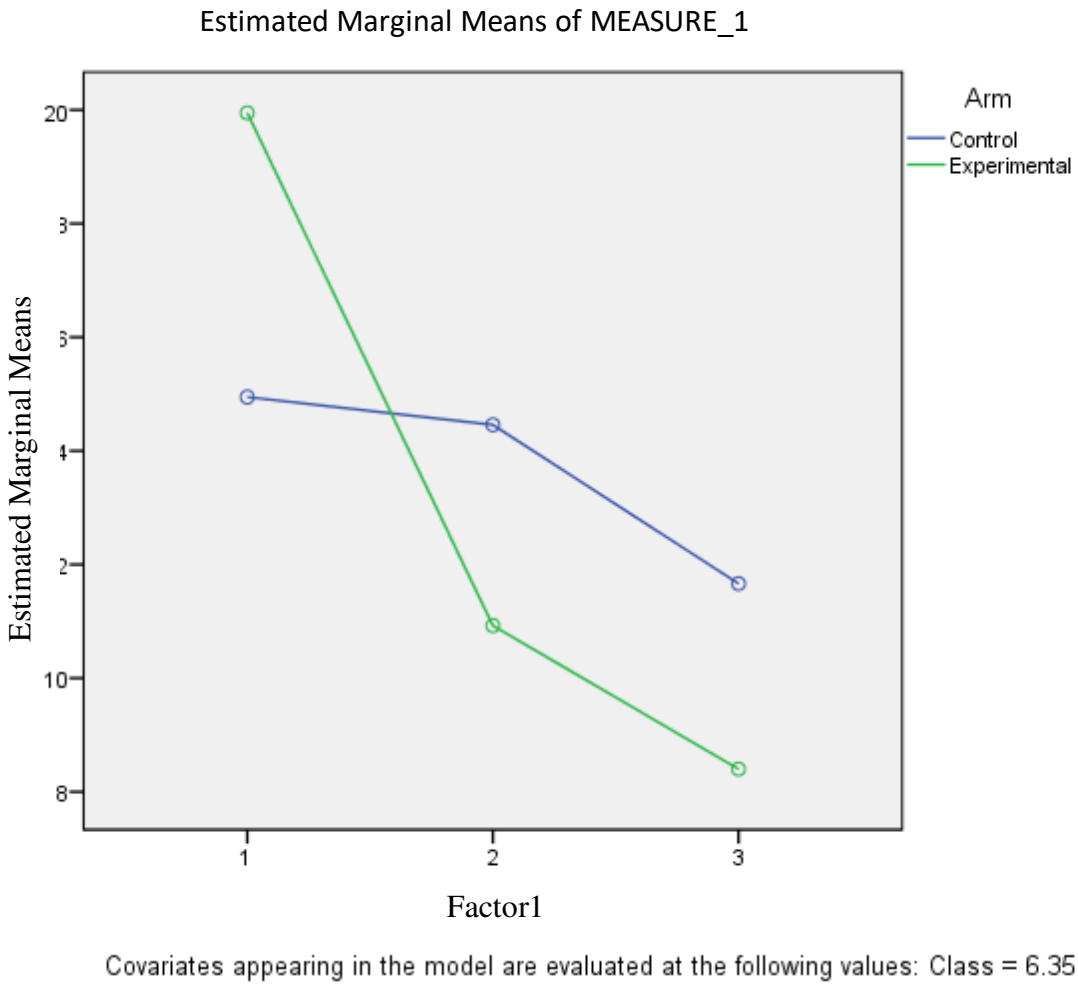
	Experimental	Control	Total*
Baseline scores	19.96 (5.069)	14.94 (3.953)	17.44 (95% CI: 16.510 – 18.383)
Post-treatment one scores	10.81 (2.983)	14.57 (4.292)	12.691 (95%CI: 11.933 – 13.450)
Post-treatment two scores	8.26 (2.625)	11.81 (4.332)	10.032 (95% CI: 9.299 – 10.765)

*Wilk's Lambda for Time*Arm interaction is significant at $p < 0.0001$

As shown in Table 4.10, the experimental group indicated a steady decline in the mean conduct disorder scores over the study period from the mean at baseline of 19.96 (SD: 5.069) to mean of 8.26 (SD: 2.625) at post-treatment two. The control group had a rather staggered decline from mean of 14.94 (SD: 3.953) at baseline to 11.81 (SD: 4.332) at post-treatment two. This implied that both groups recorded a reduction of conduct

disorder symptoms although the experimental group had greater reduction compared to the control group.

Figure 4.1 shows the trend in measurements between the control and experimental group at baseline, post-treatment one and two.



In Figure 4.1, the profile plot demonstrated the impact of the intervention on the mean conduct disorder scores over the two post-treatment periods across the control and experimental groups. The line graphs showed a much stepper decline in the conduct disorder scores in the experimental group as opposed to the control group after

controlling for class. The difference at post-treatment two between control and experimental group was wider as compared to baseline and post-treatment one. This depicted the behavior and REBT therapies having an impact at post-treatment one and post-treatment two among juvenile delinquents in Kabete Rehabilitation School.

Table 4.11 presents the marginal difference between baseline measurements in conduct disorder scores and post-treatment one and two in both control and experimental groups.

Table 4.11: Marginal Difference between Baseline and Post-Treatment Scores

Time (a)	Time (b)	Mean Difference (a-b)	Std. Error	p-value
Baseline	Post-treatment One	4.755	0.342	<0.0001
	Post-treatment Two	7.415	0.428	<0.0001

Based on estimated marginal means, there was a statistically significant difference between baseline and post-treatment one ($p<0.0001$), and between baseline and post-treatment two ($p<0.0001$) after controlling for the respondents' class. This demonstrated that there was a statistically significant difference between baseline and post-treatment one and baseline and post-treatment two as a result of the behavior and REBT therapies.

Table 4.12 shows estimate treatment effects by comparing the baseline and post-treatment differences using Difference-in-Difference. These were determined using ordinary least squares after controlling for class as a possible confounder.

Table 4.12: Difference-in-Differences Estimates of Behavior and REBT Therapies.

	**(1) Difference-in Differences Estimates (Arm*Post-treatment)
Baseline - Post-treatment One	-1.393 ($p < 0.0001$)
Baseline - Post-treatment Two	-1.204 ($p < 0.0001$)

**(1) Difference-in-Difference estimator is the interaction between treatment arms and post-treatment scores.
*(2) The difference-in differences estimates were reported as incidence rate ratios.

The difference-in-differences analysis was used to estimate the impact of behavior and REBT therapies in treating conduct disorder among juvenile delinquents in Kabete rehabilitation school as shown in Table 4.12. The difference-in-difference estimator equals the average change in outcomes in the experimental group after the average change in conduct disorder symptom reduction in the control group were subtracted. The analysis showed that the impact of the intervention resulted in a statistically significant reduction of the proportion of conduct disorder among the experimental group as compared to the control group at post-treatment one($p < 0.0001$) and post-treatment two ($p < 0.0001$) after controlling for class.

Table 4.13 shows the mean scores of conduct disorder in both the experimental and control group. The scores were analysed at baseline, post-treatment one at three months and post-treatment two at six months.

Table 4.13: Mean Scores at Baseline and Post-Treatment for Control and Experimental.

	Mean scores (SD)		
	Pre-treatment/baseline (n=47)	Treatment One/3 months (n=47)	Treatment Two/6 months (n=47)
Control	14.94 (3.953)	14.57 (4.292)	11.81 (4.332)
Experimental	19.96 (5.069)	10.81 (2.983)	8.26 (2.625)

The study revealed a steady decline in the mean scores for control and experimental at the repeated measures as it is displayed in Table 4.13. Control mean scores declined from 14.94 (SD $\pm$3.953) at baseline to 11.81 (SD $\pm$4.332) at post-treatment two. The experimental group mean scores declined from a baseline of 19.96 (SD $\pm$5.069) to a post-treatment two of 8.26 (SD $\pm$2.625). This revealed a significant drop in conduct disorder symptoms in mean scores between baseline and post-treatment one and post-treatment two in the experimental group as opposed to the control group.

Table 4.14 used sample paired T-test to determine the statistical significance in the paired mean difference scores between baseline and post-treatment one and post-treatment two.

Table 4.14: Mean Outcome Difference Scores from Baseline to Post-Treatment at 3 Month and 6 Month Follow-Up for Control and Experimental Groups

	Mean difference scores (SD)				
	Baseline	Treatment One (n=47)	p-value	Treatment Two (n=47)	p-value
Control		0.362 (2.981)	p=0.410	3.128 (3.362)	p<0.0001
Experimental		9.149 (3.617)	p<0.0001	11.702 (4.736)	p<0.0001

As shown in Table 4.14, the study revealed mean difference scores between baseline and post-treatment one of 0.362 (SD $\pm$2.981) in the control group and this was not statistically significant (p=0.410). At post-treatment two the mean difference scores was 3.128 (SD $\pm$3.362) and this was statistically significant (p<0.0001). This indicated that psycho-education had an impact at post-treatment two among juvenile delinquents in Wamumu rehabilitation school. With respect to experimental group, the study showed statistically significant difference in mean difference scores at both post-treatment one and post-treatment two (p<0.0001).

Table 4.15 was generated using Cohen's *d* method of calculating effect size for both experimental and control group at baseline and post-treatment after three and six months.

Table 4.15: Effect Sizes from Baseline to Post-Treatment at 3 and 6 Month Follow-Up.

	Pre/3-month post-treatment (n=47)		Pre/6-month post-treatment (n=47)	
	Effect sizes	95% CI	Effect sizes	95% CI
Control	0.091	-0.735 – 0.916	0.763	0.066 – 1.592
Experimental	2.224	1.392 – 3.056	2.930	2.123 – 3.737

Table 4.15 shows statistically significant effect sizes for both control and experimental group at post-treatment one and post-treatment two. With regard to the control group, the Cohen's *d* effect size value for post-treatment one (d=0.091) was small while at post-treatment two (d=0.763) was a medium effect size. For experimental group, very large effect sizes were noted at post-treatment one and post-treatment two. Cohen's *d* effect size value for post-treatment one (d=2.224) and post-treatment two (d=2.930) suggested a very large practical significance for the experimental group. Therefore, this was an indication that behavior and REBT therapies had an impact at post-treatment one and post-treatment two among juvenile delinquents in the experimental group.

4.3 Key Findings

1. This study established that the prevalence of conduct disorder was 36.5% among the juvenile delinquents in both Kabete and Wamumu rehabilitation schools. This percentage is considered high compared to the prevalence of the disorder in the normal population which is estimated at 9%**.** The majority of the respondents (51.4%) came from families where the parents were widowed. In terms of offence committed, the majority of the juveniles had committed truancy that is being rebellious, running away from home, loitering, being out of school or in criminal gangs. This study also found that conduct disorder was more prevalent among older juveniles (>16years) compared to the younger ones and that the prevalence also increased in the higher academic classes. Generally, conduct disorder manifests at the adolescence stage.

2. Another key finding in this study was that there was an association between the type of crime committed and the prevalence of conduct disorder. In addition,

conduct disorder prevalence increased in the upper classes. This study also found an association between prevalence of conduct disorder and the juveniles' mother attending a place of worship. The prevalence was high among juveniles whose mothers did not attend a place of worship. This meant that religion was a significant factor in molding the behavior of a child. There was also an association between comorbid disorders like social problems, thought problems, and conduct disorder. Prevalence of conduct disorder was high among juvenile delinquents who presented with comorbid disorders. In most cases, children with conduct disorder usually manifest with other psychological disorders.

3. This study found a statistical significance between parents' marital status and the occurrence of conduct disorder. Juveniles who came from families where the parent was widowed had increased chances of developing conduct disorder. Respondents who had committed truancy and those who were 16 years old and above were exposed to the risk of developing conduct disorder. This study also established that respondents who reported other disorders like anxious depressed, withdrawn depressed and sluggish cognitive process had high chances of presenting with conduct disorder compared to others who did not.

4. The majority of the respondents had experienced distressful events in their lives. High prevalence of conduct disorder was reported among juveniles who had their parents/caregivers abuse alcohol, felt neglected and witnessed violence at home. Furthermore, this study established that sexual abuse did not have an association with conduct disorder. The prevalence of conduct disorder among juveniles who had been sexually abused was lower compared to the ones who had not. This was

contrary to other studies because more often than not, sexually abused children are likely to develop problem behaviors.

5. This study found that juvenile delinquents who had witnessed violence in their homes were more likely to develop conduct disorder compared to the ones who did not. Moreover, juvenile delinquents who felt neglected and the ones whose parents abused alcohol had increased chances of developing conduct disorder. This implied that the home environment was a key determining factor in a child's behavior.

6. Behavior and REBT therapies were effective in treating conduct disorder among juvenile delinquents in the experimental group. These therapies used operant conditioning, emotional regulation training, cognitive restructuring and problem solving skills training. These techniques addressed the key aspects of a child's functioning that is cognition, emotions and behavior leading to the reduction of conduct disorder symptoms. In the control group, this study established some slight behavior change among the respondents. This may have been caused by the brief interactions with the questionnaire which specifically addressed problem behaviors.

4.4 Summary

This chapter presented data that had been analyzed according to the objectives of the study. The chapter also included data interpretation and discussions on the interaction of various variables. The key findings of the study were outlined based on the outcome of the data analysis. This study found that conduct disorder was prevalent among juvenile

delinquents and the prevalence was higher among the older respondents. The existence of comorbid disorders and some socio-demographic characteristics like widowed parent, truancy were predictive factors for respondents to develop conduct disorder. Moreover, juveniles who had experienced distressful events reported high prevalence of conduct disorder. This study established that a combination of behavior and REBT therapies was effective in treating conduct disorder among juvenile delinquents.

CHAPTER FIVE: DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discussed the key findings that were obtained in the study. The key findings were derived from data analysis and interpretation which was guided by the objectives of the study. In addition, the chapter also included conclusions of the study and recommendations that were informed by the outcome of the study. Moreover, the chapter outlined some areas for further research. The main objective of this study was to assess the effectiveness of behavior and REBT therapies in treating conduct disorder among juvenile delinquents.

5.2 Discussions of Key Findings

The first objective of this study sought to establish the prevalence of conduct disorder among juvenile delinquents in rehabilitation schools. According to this study, 36.5% of the juvenile delinquents had conduct disorder. This percentage was high compared to the general population whose prevalence of conduct disorder is estimated at 9% (Mash & Wolfe, 2010; Nock et al., 2006). However, the high prevalence of conduct disorder in this study was in agreement with other studies done globally in juvenile institutions (Colins et al., 2010; Fazel et al., 2008; Teplin et al., 2002). In Kenya, studies have also shown almost a similar prevalence of conduct disorder (Maru et al., 2003; Okwara, 2013). This occurrence is supported by literature which stipulates that conduct disorder is highly prevalent among boys (Haugaard, 2008; Humaida, 2012; Sarkhel et al., 2006).

This study established that 51.4% of the respondents came from families where the parent was widowed. Compared to other families, this category had the highest prevalence. This

finding was consistent with other studies (Juby & Furrington, 2001). The death of a parent especially the mother has adverse effects and is strongly associated with delinquency among adolescents (Stikkelbroek et al., 2015).

This study found that 52.5% of respondents with conduct disorder were 17 years old. The prevalence of conduct disorder increased among the older children. This finding was supported by studies which indicated that conduct disorder was commonly diagnosed at the adolescence age and the prevalence continues to increase with age (Lahey & Waldman, 1999; Murray & Farrington, 2010). Generally, adolescents seek for freedom and autonomy as they negotiate the identity versus identity confusion stage (Santrock, 2008). Coupled with other factors like ineffective discipline, lack of communication with parents and negative peer pressure, the risks of manifesting with behavior problems increase (Sells et al., 2011).

According to the findings of this study, 66.7% of juvenile delinquents were truant. This finding is comparable to other studies that have shown that a close association with delinquents influences an adolescent into delinquent activities as well (Ingram et al., 2007; Omboto et al., 2013). When children drop out of school, they join rebellious groups and miss out on parental care and guidance. Delinquents are usually rejected by peers due to their behavior and as a result, they alienate themselves and get attracted to other delinquents who accept them (Lahey & Waldman, 1999; Mash & Wolfe, 2010; Maru et al., 2003; Pardini & Frick, 2013; Scott, 2008). In such groups, adolescents get into more serious criminal activities like stealing, robbery, assault and breaking into premises (Furrington & Murray, 2010).

This study found no significant difference in prevalence among juvenile delinquents based on religion. Among Christians, there was a prevalence of 36.6% while among the Muslims, it was at 35.0%. This was contrary to a study which indicated a difference in prevalence that it was low among Muslim children due to strict religious teaching (Humaida, 2012). However, this finding suggested that adolescents were exposed to similar risk factors of developing conduct disorder regardless of their religion. The implication here was that factors that expose children to the risks of developing conduct disorder like domestic violence, neglect by parent/caregiver or drug abuse can impact on any child.

Respondents who had their mothers not attending a place of worship like a church or mosque had a higher prevalence of conduct disorder at 58.6% compared to only 30.2% whose mothers did. The difference was statistically significant p=0.006. In addition, respondents whose mothers did not attend a place of worship were three times more likely to develop conduct disorder. This finding was comparable to other studies which indicated a decrease in conduct disorder among adolescents where the parent had a religious affiliation (Pearce et al., 2003). This finding suggested that parenting that is based on religious values can protect children from delinquent activities (Schreiber, 2010).

The findings of this study found no association between parent's employment whether self or formal, parent/guardian earning consistent income and conduct disorder. On the contrary, other studies show a strong association between low income and occurrence of problem behavior (Lahey & Waldman, 1999; Omboto, 2013). This study did not however focus on assessing the social economic status of respondents. Nevertheless, lack of

employment and inconsistent income had no direct link with conduct disorder. Other contributing factors like family conflicts and alcohol and drug use among parents/caregivers may have overshadowed the income factor.

Respondents who had conduct disorder also presented with symptoms of other psychological disorders. Respondents with anxious depressed formed 89.5%, while withdrawn depressed was at 87.9%, attention deficit hyperactive disorder was at 95.8% and aggressive behavior at 100.0%. These results are in agreement with studies conducted in Kenya among juvenile delinquents which indicated a high prevalence of psychological comorbidity. The prevalence of comorbid disorders among juvenile delinquents in a Nairobi juvenile court was 44.4% (Maru et al., 2003). Another study done by Okwara (2012) also found major depressive and post traumatic stress disorders among juveniles with conduct disorder. Studies conducted across cultures have indicated high prevalence of comorbidity among juvenile detainees (Colins et al., 2010; Holmes et al., 2001; Scott, 2008; Searight et al., 2001; Teplin et al., 2002; Wolff & Ollendick, 2006).

The second objective sought to establish the exposure of juvenile delinquents to distressful situations. This study found a strong connection between exposure to traumatic events and the risk of developing problem behavior. Exposure to chronic traumatic experiences affects children's functioning which include both behavioral and cognitive in addition to difficulties with emotional regulation (AOC, 2014; Mueser et al., 2006; Wolff & Ollendick, 2006). Complex trauma, maltreatment and child abuse are risk factors to the occurrence of conduct disorder in adolescents. This finding is supported by

a study conducted in Illinois – United States of America which showed that majority of juvenile delinquents in detention had been exposed to traumatic events (AOC, 2014).

According to the findings of this study, the majority of the respondents had been exposed to distressful events in their lives. A high prevalence was recorded among juvenile delinquents who had witnessed violence within their neighborhood and those who found their neighborhood hostile to them. In addition, there was a high prevalence of adolescents who had been neglected by their parents/caregivers, punished with beatings, emotionally abused and having parents/caregivers abuse alcohol. Moreover, some of the adolescents had witnessed parents/caregivers fight physically or quarrel in their presence.

Witnessing domestic violence was significantly associated with occurrence of conduct disorder. There was also a statistically significant difference between adolescents who saw their parents fight with weapons compared to the ones who did not experience the same. The difference was highly significant at $p=<0.0006$. This study also found a significant association between occurrence of conduct disorder and adolescents witnessing their parents argue in their presence ($p=0.016$). These findings were comparable to other studies conducted in other countries on the association between witnessing domestic violence and the increased risk of conduct disorder (Sternberg et al., 1993; Widom & Maxfield, 2001). Moreover, studies have found a high prevalence of internalizing and externalizing behaviors among adolescents who have witnessed intimate partner violence (McFarlane et al., 2003).

Exposure to domestic violence is a risk factor to the development of conduct disorder (Holmes et al., 2001; Mash & Wolfe, 2010; Ojo, 2012; Omboto et al., 2013).

Adolescents learn to be aggressive and hostile to other people in order to cope with difficult situations (Obsuth et al., 2006; Searight et al., 2001).This confirms the social learning theory that behavior is learnt through observation, modeling and direct experiences (Bandura, 1971).

There was a significant difference between adolescents who felt neglected by their parents or caregivers and those who did not feel neglected. This study also found that adolescents who felt neglected had greater odds of developing conduct disorder compared to the ones who did not feel neglected. These results were similar to other research, which reported high chances of developing conduct disorder among children and adolescents who had been neglected (Widom & Maxfield, 2001). Neglecting the needs of a child is a predisposing factor to the development of conduct disorder (Holmes et al., 2001).

A parent who neglects children is not able to offer positive parenting. Studies have found that positive parenting can be a protective factor against the development of problem behavior in adolescents (Kim, Haskett, Longo, & Nice, 2012). Positive parenting offers proper guidance to children, consistent instructions, effective discipline and allows emotional bond to develop between the parent and child in addition to effective communication (Frick, 2001; Ingram et al., 2007).

There was no significant difference between respondents who had been punished with beating by their parents and those who were not. Moreover, there was no association between punishment through beatings and occurrence of conduct disorder. This finding was contrary to other studies which indicated that children who experience corporal

punishment and harsh discipline from their parents and caregivers are likely to develop conduct disorder (Murray & Farrington, 2010). Familial factors like the mental health status of the parent, loss of a parent, negligence and domestic violence may have had great negative impact on the children compared to punitive punishment.

Contrary to other studies, there was no strong association between sexual abuse and the occurrence of conduct disorder. Although some respondents who had been sexually abused developed conduct disorder, the higher percentage did not. Child Family Community Australia, (2013), refers to three different studies that have shown no link between sexual abuse and conduct disorder. In some situations, the survivors of child abuse receive a lot of family support, and positive parenting which becomes a protective-stabilizing factor (Kim et al., 2012). On the other hand, some children may suppress the effect until adulthood (Child Family Community Australia, 2013).

This study found that respondents whose parents/caregivers abused alcohol and other drugs like marijuana had a high prevalence of conduct disorder. Compared to the respondents whose parents/caregivers did not abuse alcohol or other drugs, there were significant differences. Respondents whose parents/caregivers abused alcohol or other drugs had greater odds of developing conduct disorder. The results of this study were comparable to other studies which indicate a strong association between parents and children with psychiatric disorders (Johnson et al., 2001). A parent who is abusing alcohol or other drugs is not able to respond to the needs of the child or adequately offer supervision (Ingram et al., 2007). In such situations, attachment between the child and parent is affected since there is rejection and emotional disconnect as described by Bowlby's attachment theory (Bretherton, 1992).Therefore in this study, the findings

showed that the mental status of the parent or caregiver is a determining factor in shaping the behavior of a child.

Respondents who found people hostile and witnessed violence within their neighborhood recorded high percentages (68.9% and 71. 9% respectively). However, this study did not find any association between conduct disorder and experiences in the neighborhood. This finding is in agreement with other studies that have indicated no association between conduct disorder and neighborhood experiences (Schonberg & Shaw, 2007). From these findings, violence and hostility within the neighborhood is not a strong factor in the development of conduct disorder. A safe home environment without violence, rejection and alcohol abuse can protect the child from delinquent behaviors despite being in a hostile neighborhood.

The third objective sought to determine the effectiveness of REBT and behavior therapies in treating conduct disorder among juvenile delinquents.

Conduct disorder is a persistent behavior problem which is highly prevalent among adolescents. Compared to the general population, juvenile delinquents record a higher prevalence of conduct disorder (Colins et al., 2010; Okwara, 2013). Effects of conduct disorder on children and adolescents-rejection, strained relationships, poor academic performance, crime, later develop to antisocial disorder if left untreated. Studies have indicated high prevalence of conduct disorder in correctional facilities (Fazel et al., 2008). Further research has shown the effectiveness of specific interventions in treating the disorder. This study however used a combination of behavior and rational emotive behavior therapies as an intervention in the treatment of conduct disorder.

The experimental and control group were government institutions for boys only. The institutions also offered formal education and vocational training to the juvenile delinquents. Moreover, both institutions provided boarding facilities to the juveniles. A Pearson's chi-square test indicated that there was no significant difference in religion between the two institutions. Further analysis also showed that there was no significant difference in employment status of respondents' parents/caregivers in the two groups. Therefore both the control and experimental were two comparable groups. There was however a significant difference in class but this was controlled during analysis.

As far as treatment was concerned, the experimental group received both behavior and rational emotive behavior therapies for a period of six months. This study indicated a highly significant difference ($p<0.0001$) based on marginal mean between baseline, post-treatment one and post-treatment two. The result was generated after controlling for class.

The experimental group recorded a huge symptom reduction between baseline and post-treatment compared to the control group. At baseline, the experimental group had a mean of 19.96 (SD: 5.069) and at post-treatment one, the mean reduced to 10.81 (SD: 2.983). In the first three months of the treatment, rational emotive behavior therapy was administered. Therapy aimed at addressing cognitive, emotive and behavioral issues using the problem solving skills training (Baker & Scarth, 2002; Banks, 2012; Corey, 2009; Froggat, 2005; Warner-Metzger & Riepe, 2013). The decline in scores between baseline and post-treatment one was an indication that rational emotive behavior therapy using problem solving skills training was effective in treating conduct disorder. This study was comparable to other studies which demonstrated the use of REBT as an

effective intervention (Banks & Zionts, 2009; Kumar, 2009; McGuire, 2000; Morris, 1993).

In addition, the experimental group indicated a decline in the mean conduct disorder scores from 10.81 (SD: 2.983) to 8.26 (SD: 2.625) during post-treatment two. At this period, behavior therapy using operant conditioning as a model was administered. This included reinforcement, extinction and punishment, focusing on behavior change, unlearning destructive behavior and learning socially acceptable behavior (Furlong et al., 2012; Greger-Moser, 2008; Hewage, 2007; Powell et al., 2012). The change in the mean scores in post-treatment two demonstrated that behavior therapy was effective in treating conduct disorder. These results compared to other studies that indicated a significant reduction of behavior problem symptoms by using behavior therapy (Reddy et al., 2005; Weisz et al., 2004).

In the control group, there was a decline in symptom reduction between baseline, post-treatment one and two without treatment. At baseline, the control group had a mean score of 14.94 (SD: 3.953) and after three months, the mean score dropped to 14.57 (SD: 4.292). After six months, the control group further declined the mean score from 14.57 (SD: 4.292) to 11.81 (SD: 4.332). The group interacted with the questionnaire three times and probably the respondents started reflecting on their behavior as they were scoring for themselves. The insight may have been received as part of psycho-education since it is ranked among the most effective programs that lead to behavior change among juveniles (Gemignani, 1994).

Further analysis using the difference-in-difference indicated a highly statistical significant reduction of symptoms ($p<0.0001$) in the experimental group compared to the control group (Table 10). This was recorded both at post-treatment one (-1.393) and post-treatment two (-1.204). The difference-in-difference negative scores indicated that, compared to the control group, there was a significant symptom reduction in the experimental group. Although the control group recorded some decline, these results showed that comparing the two groups, the experimental group had registered tremendous change.

Moreover, the experimental group indicated statistically significant differences in post-treatment one and two. This meant that the rational emotive behavior therapy administered in the first three months was effective in treating conduct disorder. Moreover, behavior therapy administered in the last three months was effective as well. This finding was comparable to other studies which have indicated that using a combination of therapies was effective in treating conduct disorder (Kazdin, 2002; Lali et al., 2012; Singh et al., 2007; Warner-Metzger & Riepe, 2013).

This study established significant effect sizes at post-treatment one and post-treatment two ($d=2.224$, $d=2.930$ respectively) in the experimental group. Using both REBT and behavior therapies in this study caused a decline in conduct disorder symptoms. Children with conduct disorder present with cognitive deficiencies, poor perception, aggression, emotional dysregulations in addition to poor social skills. REBT addressed irrational thoughts, beliefs and perceptions, emotional regulation and problem solving skills. Behavior therapy focused on learning and unlearning behavior through reinforcement. The effect sizes realized during the two treatment phases were as a result of therapy. This

study therefore concluded that REBT and behavior therapies were effective in treating conduct disorder among juvenile delinquents in the two rehabilitation schools.

5.3 Conclusions

According to the findings of this study, there was a high prevalence of conduct disorder among the juvenile delinquents. The prevalence increased among the older respondents especially at the adolescence stage. Further, this study established that the loss of a parent was one of the key contributing factors to the occurrence of conduct disorder among the respondents.

Furthermore, this study found out that among the respondents, having a mother attend a place of worship was a protective factor against the development of conduct disorder. On the other hand, familial factors greatly exposed children to the risks of manifesting with conduct disorder: witnessing parents fight, fighting with weapons, quarreling and arguing, and child negligence. Again, this study established that living in a hostile environment may not necessarily be a predictor unless other contributing factors are involved. Moreover, punitive punishment by parents did not have an association with the occurrence of conduct disorder.

One of the key contributing factors to the development of conduct disorder among juvenile delinquents was the mental status of the parent/caregiver. This study found that respondents whose parents/caregivers abused alcohol and other drugs like marijuana were at a greater risk of developing conduct disorder compared to others whose parents/caregivers did not.

The use of behavior and REBT therapies as an intervention for conduct disorder was effective. The treatment recorded high effect sizes at post-treatment one and two. The decline in symptoms at post-treatment one was greater compared to treatment two. Post-treatment one addressed self-perception, irrational beliefs and offered problem solving skills training while post-treatment two administered behavior therapy (operant conditioning). Combining both REBT and behavior therapies proved to be effective in treating conduct disorder among juvenile delinquents.

This study found key factors that predict the development of conduct disorder among juvenile delinquents. The death of a parent, truancy (rebellion, running away from home/ out of school/loitering), having a mother who does not attend a place of worship and a parent/caregiver who abuses alcohol and other drugs are high risk factors of developing conduct disorder. This study also established a strong association between cormobidity and occurrence of conduct disorder. Moreover, children who witness their parents/caregivers fight were more likely to develop conduct disorder. Findings in this study indicated that a functional home environment, intact family, mother attending a place of worship and being accepted are protective factors against development of conduct disorder. Finally, this study found out that a combination of behavior and REBT therapies is effective in treating conduct disorder.

5.4 Recommendations

The Ministry of Labour, Social Security and Services through the Children's Department needs to employ qualified mental health personnel who can assess the mental status of children before admission into rehabilitation centers.

The Ministry of Labour, Social Security and Services through the Children's Department needs to revamp the counseling department in rehabilitation schools by employing psychologists who can provide psychological treatment in the correction centers as part of rehabilitation. The majority of children in rehabilitation centers present with psychological disorders which require intervention.

Religious sectors need to introduce training programs on effective training. This study found that effective parenting can protect children from developing conduct disorder. Such programs will create insight on effective parenting and enhance healthy relationships between parents and their children.

This study established that familial factors had a strong relationship with occurrence of conduct disorder among juvenile delinquents. It therefore recommends an introduction of a program in all the rehabilitation schools in Kenya where parents can learn how to create a healthy home environment for their children. This can also go a long way in preparing parents to receive their children once they complete their jail terms.

5.5 Areas for Further Research

The areas recommended for future research include the following:

A study that will seek to establish the influence of conduct disorder comorbidity on treatment. The majority of the children in rehabilitation centers present with other psychological disorders in addition to conduct disorder. Such a study would probably determine the difference in outcome where comordity is a factor.

A study that will determine the association between living in streets, sexual abuse and conduct disorder. This is necessitated by the finding in this study that respondents who had been sexually abused before joining the school and the ones who had lived in the streets had very low prevalence of conduct disorder.

A study that will use a different model of intervention on the same population. It would be beneficial especially in Kenya to identify other treatment approaches.

A follow up study to establish the sustainability of the impact of treatment among juvenile delinquents. Understanding how long the treatment can have positive impact on the children would inform researchers on how to make adjustments in treatment models.

REFERENCES

Achenbach, T. M., & Rescorla, L. A. (2001). *Manual for the ASEBA school-age forms and profiles*. Burlington: V. T. University of Vermont, Research Center for Children, Youth & Families. www.nctsn.org/content/youth-self-report-11-18.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC, American Psychiatric Publishing.

Baker, L. L., & Scarth, K. (2002). *Cognitive behavioral approaches to treating children and adolescents with conduct disorder*. Ontario: Children's Mental Health.

Bandura, A. (1971). *Social learning theory*. USA: General Learning Corporation.

Banks, T. (2012). Rational emotive behavior therapy with diverse student populations: meeting the mental health needs of all students. *Multicultural Learning and Teaching, 7*(2), 1-18.

Banks, T., & Zionts, P. (2009). Rational emotive behavior therapy used with children and adolescents in educational settings: A review of literature. *Journal of Rational Emotive Cognitive Behavior Therapy, 27*, 51-65.

Bjorklund, D. F., & Blasi, C. H. (2012). *Child and adolescent development: An integrated approach*. Australia: Wadsworth Cengage Learning.

Bordin, I. A., Rocha, M. M., Cristianes, P., Telxeira, M., Achenbach, T., Rescorla, L. (2013). Child behavior checklist (CBCL), youth-self-report (YSR) and teacher's report form (TRF): An overview of the development of the original and Brazilian versions. *Cad. Saude Publica, Rio de Janeiro, 29*(1), 13-28.

Brestan, E. V., & Eyberg, S. M. (1998). Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies and 5,272 kids. *Journal of Clinical Child Psychology, 27*(2), 180-189.

Bretherton, I. (1992). The origins of attachment theory: John Bowlby and Mary Ainsworth. *Developmental Psychology*, *28*, 759-775.

Child Family Community Australia, (2013). *The long-term effects of child sexual abuse*. AIFS: Australia.

Chow, S. C., Shao, J., & Wang, H. (2003). *Sample size calculations in clinical research*. New York: Marcel Dekker.

Colins, O., Vermeiren, R., Vreugdenhil, C., van den Brink, W., Doreleijers, T. & Broekaert, E. (2010). Psychiatric disorders in detained male adolescents: A systematic literature review. *Canadian Journal of Psychiatry, 55*(4), 255-263.

Collishaw, S., Maughan, B., Goodman, R., & Pickles, A. (2004). Time trends in adolescent mental health. *Journal of Child Psychology and Psychiatry, 45*(8), 1350-1362.

Corey, G. (2009). *Theory and practice of counseling and psychotherapy* (8th ed.). Canada: Thomson Brooks/Cole.

David, D., Szentagotai, A., Kallay, E., & Macavei, B. (2005). Rational-emotive behavior therapy: Fundamental and applied research. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 23*(3), 175-221.

Dodge, K. A. (1993). Social-cognitive mechanisms in the development of conduct disorder and depression. *Annual Review Psychology*, *44*, 559-584.

D'Zurilla, T. J., & Nezu, A. M. (1999). *Problem solving therapy: A social competence approach to clinical intervention* (2nd ed.). New York: Springer.

Ebesutani, C., Bernstein, A., Martinez, J., Chorpita, B., & Weisz, J. (2011). The youth self report: Applicability and validity across younger and older youths. *Journal of Clinical Child & Adolescent Psychology. 40*(2), 338-346.

Ehrensaft, M. K. (2005). Interpersonal relationships and differences in the development of conduct problems. *Clinical Child and Family Psychology Review*, *8*(1), 39-63.

Fazel, S., Doll, H., & Langstrom, N. (2008). Mental disorders among adolescents in Juvenile detention and correctional facilities: A systematic review and metaregression analysis of 25 surveys. *Journal of American Academy Child Adolescent Psychiatry, 47*(9), 1010-1019.

Foster, E. M., & Jones, D. E. (2005). The high costs of aggression: Public expenditure resulting from conduct disorder. *American Journal of Public Health*, *95*(10), 1767-1772.

Frick, P. J. (2001). Effective interventions for children and adolescents with conduct disorder. *Canadian Journal of Psychiatry*, *46*, 597-608.

Frick, P. J. (2004). Developmental pathways to conduct disorder: Implications for serving youth who show severe aggression and antisocial behavior. *Psychology in the Schools*, *41*(8), 823-834.

Frick, P. J., & Morris, A. S. (2004). Temperament and developmental pathways to conduct problems. *Journal of Clinical Child and Adolescent Psychology, 33*(1), 54-68.

Furlong, M., McGilloway, S., Bywater, T., Hutching, J., Smith, S. M., & Donnelly, M. (2012). Behavioral and cognitive behavioral group-based parenting programmes for early-onset conduct problems in children aged 3 to 12 years (Review). *Evidence-Based Child Health: A Cochrane Review Journal, 2*, 318-692.

Gemignani, R. (1994). *Juvenile correctional education: A time for change. Office of Juvenile Justice and Delinquency Prevention*. U.S. Department of Justice: Juvenile Justice Bulletin.

Gottfredson, D. C. (n.d). *School-based crime prevention*. www.ncjrs.gov/works/chap5.htm.

Greger-Moser, M. (2008). Child problem, executive functions, and treatment: The role of executive functions in treatment of children with conduct disorder. *The Undergraduate Journal of Psychology*, *21*, 1-15.

Haugaard, J. (2008). *Child psychopathology*. Boston: McGraw Hill Higher Education.

Hergenhahn, B. R. (2009). *An introduction to the history of psychology* (6thed.). Australia: WADSWORTH CENGAGE Learning.

Hewage, C. C. (2007). Behavior therapy for medical practice. *Galle Medical Journal, 12*(1), 45-48.

Holmes, S. E., Slaughter, J. R., & Kashani, J. (2001). Risk factors in childhood that lead to the development of conduct disorder and antisocial personality disorder. *Child Psychiatry and Human Development*, *31*(3), 183-193.

Hothersall, D. (2004). *History of psychology* (4thed.). Boston: McGraw Hill.

Humaida, I. A. (2012). Research on the prevalence of conduct disorders among primary school pupils in Khartoum-Sudan. *I.A. I. H/Health*, *4*(3), 125-132. doi.org/10.4236/health.2012.43020.

Ingram, J. , Patching, J., Huebner, B., McCluskey, J. D., & Bynum, T. S. (2007). Parents, friends and serious delinquency: An examination of direct and indirect effects among at-risk early adolescents. *Criminal Justice Review, 32*(4), 380-400.

Johnson, J. G., Cohen, P., Kasen, S., Smailes, E., & Brook, J. (2001). Association of maladaptive parental behavior with psychiatric disorder among parents and their offspring. *Arch Gen Psychiatry, 58*(5), 453-460.

Kazdin, A. E. (1997). Practitioner review: Psychosocial treatments for conduct disorder in children. *Journal of Child Psychology, Psychiatry, 38*(2), 161-178.

Kazdin, A. E. (2002). Psychosocial treatments for conduct disorder in children and adolescents. In P. E. Nathan & J. M. Gorman (Eds.), *A guide to treatments that work* 2nd ed., pp. 1-46. New York: Oxford University Press.

Kazdin, A. E., & Weisz, J. R. (1998). Identifying and developing empirically supported child and adolescent treatments. *Journal of Consulting and Clinical Psychology, 66*(1), 19-36.

Kenyan Juvenile Justice Agencies. (2010).The Juvenile Justice Procedure Handbook: Legal provisions in the domestic and international laws related to juvenile justice. *Legal Provisions in the Domestic and International Laws Related to Juvenile Justice,* 1-69.

Kim, J., Haskett, M. E., Longo, G. S., & Nice, R. (2012). Longitudinal study of self-regulation, positive parenting, and adjustment problems among physically abused children. *Child Abuse Negl, 36*(2), 95-107.

Kombo, D. S., & Tromp, D. L. (2006). *Proposal and thesis writing: An introduction.* Nairobi: Paulines Publications Africa.

Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Delhi: New Age International (P) Limited Publishers.

Kumar, G. V. (2009). Impact of rational-emotive behavior therapy on adolescents with conduct disorder. *Journal of the Indian Academy of Applied Psychology, 35*, 103-111.

Lali, M., Malekpour, M., Molavi, H., Abedi, A., & Asgari, K. (2012). The effects of parent management training, problem-solving skills training and the eclectic training on conduct disorder in Iranian elementary school students. *International Journal of Psychological Studies*, *4*(2), 154-61.

Maru, H. M., Kathuku, D. M., & Ndetei, D. M. (2003). Psychiatric morbidity among children and young persons appearing in the Nairobi juvenile court, Kenya. *East African Medical Journal, 80*(6), 226-232.

Mash, E. J., & Wolfe, D. A. (2010). *Abnormal child psychology* (4thed.). Australia: Wadsworth Cengage Learning.

McDevitt, T. M., & Ormrod, J. E. (2010). *Kohlberg's three levels and six stages of moral reasoning*. Pearson Ally Bacon: Prentice Hall.

McFarlane, J. M., Groff, J. Y., O'Brien, J. A., & Watson, K. (2003). Behaviors of children who are exposed and not exposed to intimate partner violence: An analysis of 330 black, white and hispanic children. *Pediatrics, 112*(3Pt1), 202-207.

McGuire, J. (2000). *Cognitive behavioral approaches: An introduction to theory and research.* United Kingdom: University of Liverpool.

Morris, G. B. (1993). A rational-emotive treatment program with conduct disorder and attention deficit hyperactivity disorder adolescents. *Journal of Rational-Emotive and Cognitive Behavior Therapy, 11(*3), 123-134.

Mueser, K. M., Crocker, A. G., Brisman, L. B., Drake, R. E., Covell, N. H., & Essock, S. M. (2006). Conduct disorder and antisocial personality disorder in persons with severe psychiatric and substance use disorders. *Schizophrenia Bulletin, 32*(4), 626-636.

Mugambi, J. N. (2012). *Celebrating the African child*. Retrieved from http://wangechijan.blogspot.com/2012/06/celebrating-africa-child.html

Mugenda, A. G. (2008). *Social science research: Theory & principles*. Nairobi: ACTS Press.

Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative & qualitative approaches*. Nairobi: ACTS PRESS.

Murray, J., & Farrington, D. P. (2010). Risk factors for conduct disorder and delinquency: Key findings from longitudinal studies. *Canadian Journal of Psychiatry*, *55*(10), 633-642.

Ndirangu, J. M. (2010). *Educational outcomes of reintegrated child offenders in Othaya rehabilitation school, Nyeri County, Kenya* (Unpublished master's thesis), Kenyatta University, Nairobi.

Nakamura, B. J., Ebesutani, C., Bernstein, A., & Chorpita, B. (2009). A Psychometric analysis of the child behavior checklist DSM-oriented scales. *J Psychopathol Behav Assess*, *31*, 178-189.

Nock, M., Kazdin, A., Hiripi, E., & Kessler, R. (2006). Prevalence, subtypes, and correlates of DSM-IV conduct disorder in the national comorbidity survey replication. *Psychol Med, 36*(5), 699-710.

Nolen-Hoeksema, S. (2004). *Abnormal psychology* (3rd ed.*)*. Boston: McGraw Hill.

Obsuth, I., Moretti, M. M., Holland, R., Braber, K.,& Cross, S. (2006). Conduct disorder: New directions in promoting effective parenting and strengthening parent-adolescent relationships. *Journal of Canadian Academy, Child Adolescence Psychiatry*, *15*(1), 6-15.

Ocobock, P. (2012). *Generation Mau Mau: Constructing rites of passage in late colonial Kenya*. Retrieved from http://www.academia.edu/4865235/Generation_Mau_Mau_Constructing_Rites_of_Passage_in_Late_Colonial_Kenya

Odera, O. T. (2014). *Effectiveness of rehabilitation programmes on juvenile delinquents in Kenya: A survey of rehabilitation schools in Nairobi County* (Unpublished master's thesis). University of Nairobi, Nairobi.

Okwara, L. V. (2010). *Prevalence of psychiatric morbidity among juvenile offenders committed to Borstal institutions in Kenya* (Unpublished master's thesis). University of Nairobi, Nairobi.

Omboto, J. O., Ondiek, G. O., Odera, O., & Ayugi, M. E. (2013). Factors influencing youth crime and juvenile delinquency. *International Journal of Research in Social Sciences*, *1*(2), 18-21.

Pardini, D., & Frick, P. J. (2013). Multiple developmental pathways to conduct disorder: Current conceptualizations and clinical implications. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 22*(1), 20-25.

Pearce, M. J., Jones, S. M., Schwab-Stone, M. E., & Ruchkin, V. (2003). The protective effects of religiousness and parent involvement on the development of conduct problems among youth exposed to violence. *Child Development, 74*(6), 1682-1696.

Powell, R. A., Symbaluk, D. G., & Honey, P. L. (2009). *Introduction to learning and behavior* (3rd ed.). Australia: Wadsworth Cengage Learning.

Reddy, G. L., Shyamala, V., Kusuma, A., & Santhakumari, P. (2005). *Antisocial behavior in students: Detection and management*. New Delhi: Discovery Publishing House.

Rutter, M. (1994). Family discord and conduct disorder: Cause, consequence, or correlate? *Journal of Family Discord*, *8*(2), 170-186.

Santrock, J. W. (2008). *A topical approach to life-span development* (4thed.). New York: McGraw-Hill Higher Education.

Sarkhel, S., Sinha, V. K., Arora, M., & DeSarkar, P. (2006). Prevalence of conduct disorder in school children in Kanke. *Indian Journal of Psychiatry*, *48*(3), 159-164.

Schonberg, M. A., & Shaw, D. S. (2007). Do the predictors of child conduct problems vary by high-and low-levels of socioeconomic and neighborhood risk? *Clinical Child and Family Psychology, 10*(2), 101-136.

Schreiber, J. (2010). *The role of religion in foster care*. Raleigh-Durbam, NC: North American Association of Christians in Social Work.

Scott, S. (2008). An update on interventions for conduct disorder. *Advances in Psychiatric Treatment, 14*, 61-70.

Searight, H. R., Rottnek, F., & Abby, S. L. (2001). Conduct disorder: Diagnosis and treatment in primary care. *American Family Physician, 63*(8), 1579-1589.

Sells, S. P., Early, K. W., & Smith, T. E. (2011). Reducing adolescents oppositional and Conduct disorders: An experimental design using the parenting with love and limits model. *Professional Issues in Criminal Justice, 6*(3/4), 9-30.

Shaffer, D. R., & Kipp, K. (2010). *Developmental psychology: Childhood and adolescence*. Mexico: Wadsworth Cengage Learning.

Shaughnessy, J. J., Zechmeister, E. B., & Zechmeister, J. S. (2006). *Research methods in psychology* (7thed.). New York: McGraw Hill Higher Education.

Shure, M. B. (2000). *Thinking child. I can problem solve.* Retrieved from http://www.thinkingpreteen.com/icps.htm#schools

Shure, M., & Spivack, G. (1999). Preventing violence. *Juvenile Justice Bulletin*. Retrieved from http://www.ojjdp.gov/jjbulletin/9904_1/raise.html

Singh, N. N., Lancioni, G. E., Joy, S. D., Winton, A. S., Sabaawi, M., Wahler, R. G., & Singh, J. (2007). Adolescents with conduct disorder can be mindful of their aggressive behavior. *Journal of Emotional and Behavioral Disorders, 15*(1), 56-63.

Sisa-Kiptoo, P. N. (2014). *Profile problem behavior among adolescent girls committed at Kirigiti Rehabilitation Center, Kiambu county* (Unpublished master's thesis). Daystar University, Nairobi.

SoftKenya (2012). *Children's correction and rehabilitation centers in Kenya. Education in Kenya*. Retrieved from www.efarereport.unesco.org.

Spataro, J., Mullen, P. E., Burgess, D. M., Wells, D. L., & Moss, S. A. (2004). Impact of sexual abuse on mental health. *The British Journal of Psychiatry, 184*(5), 416-421.

Staddon, J. R., & Ceruti, D. T. (2003).Operant conditioning. *Annual Review of Psychology*, *54*, 115-144.

Stan, D., & Charisse, L. N. (2013). Youth voice project. *Student Insights into Bullying and Peer Mistreatment,* 1-4.

Sternberg, K., Lamb, M. E., Greenbaum, G., Ceccheti, D., Dawud, S., Cortes, R. M. (1993). Effects of domestic violence on children's behavior problems and depression. *Developmental Psychology*, *29*(1), 44-52.

Stikkelbroek, Y., Bodden, D. M., Reitz, E., Volleberg, W. M., & Baar, A. L. (2016). Mental health of adolescents before and after the death of a parent or sibling. *Eur Child Adolesc Psychiatry, 25*, 49-59.

Stumphauzer, J. S. (1986). *Helping delinquents change: A treatment manual of social learning approaches*. New York: The Haworth Press.

The British Psychological Society & The Royal College of Psychiatrists. (2013). *Antisocial behavior and conduct disorders in children and young people: Recognition, intervention and management*. Great Britain: Stanley L. Hunt Printer Ltd.

Tolan, P. H., Gorman-Smith, D., & Henry, D. B. (2003). The ecology of urban males youth violence. *Developmental Psychology, 39*(2), 274-291.

Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Arch Gen Psychiatry*, *59* (12), 1133-1143.

UNICEF. (1989). *The UN Convention on the Rights of the Child*. London: United Nations.

Valle, P., Kelley, S., & Seoanes, J. E. (2001). The "oppositional defiant" and "conduct disordered" child. *Behavioral Development Bulletin, 1*, 36-41.

Vanyukov, M. M., Moss, H. B., Plail, J. A., Blackson, T., Mezzid, A. C., & Tarter, R. E. (1992). Antisocial symptoms in preadolescent boys and in their parents: Associations with cortisol. *Psychiatry Research*, *46*, 9-17.

Waddell, C., Wong, W., Hua, J., & Godderis, R. (2004). Preventing and treating conduct disorder in children and youth. *Children's Mental Health Policy Research Program, University of British Columbia, Columbia, 1*(3), 1-30.

Wapopa, P. K. (n.d). *Orientation handbook for children.* Nairobi*:* Kabete Rehabilitation School.

Warner-Metzger, C., & Riepe, S. M. (2013). Disruptive behavior disorders in children and adolescents. *EchappellTDMHSASResearch Team,* 132-160.

Weisz, J. R., Jensen-Doss, A., & Hawley, K. M. (2004). Empirically-tested psychotherapies for youth internalizing and externalizing problems and disorders. *Child and Adolescent Psychiatric Clinics of North America, 13,* 729-815.

Weisz, J. R., Jensen-Doss, A., & Hawley, K. M. (2005). Youth psychotherapy outcome research: A review and critique of the evidence base. *Youth Psychotherapy Research, 56,* 337-363.

Weisz, J. R., Jensen-Doss, A., & Hawley, K. M. (2006). Evidence-based youth psychotherapies versus usual clinical care: A metal-analysis of direct comparisons. *American Psychologist, 61*(7), 671-689.

Widom, C. S., & Maxfield, M. G. (2001). *An update on the "Cycle of Violence"*. US: National Institute of Justice.

Wolff, J. C., & Ollendick, T. H. (2006). The comorbidity of conduct problems and depression in childhood and adolescence. *Clinical Child Family Psychology, 9*(3/4), 201-220.

APPENDICES

Appendix A: Socio-Demographic Questionnaire

This questionnaire requires you to give your own personal details. Please fill the correct information to the best of your knowledge in the spaces provided. Do not write your name on the paper.

Code Number_____ _____

Date

Section A
(Demographics)

1. Date of birth:___ ___ / ___ ___ / ___ ___ ___ ___

Month Day Year

2. Age: _____

3. Class _____

5. How long have you been living in this rehabilitation school?

_____months

_____ years.

6.What offence/s did you commit?_____

_____

7. Indicate if your both parents are alive (tick √).

_____Yes

_____No

8. If no, who of the two is dead? (tick √).

_____father

_____mother

9. State the marital status of your parent/s (tick √).

Married_____

Separated_____

Divorced_____

Widowed_____

Cohabiting_____

Single (never married)_____father_____mother_____.

Other specify_____

10. How many siblings do you have? _____

11. What is your birth position in the family?_____

12. Do your parents live together?

_____Yes

_____No

13. Whom have you been living with before joining rehabilitation school? (tick√ all that apply).

_____both parents

_____one parent

_____siblings

_____grandparents

_____other relatives

_____caregiver

14. Are your parents/caregiver employed (self or formal)? (tick√).

_____Yes

_____No

15. Do your parents/caregivers consistently earn an income? (tick√).

_____Yes

_____No

16. What material forms the walls of your house? (tick√).

Stones_____ Bricks_____ Iron sheets_____

Plywood_____ Cartons_____ Sticks_____

Mud_____ Other specify_____

17. What material forms the roof of your house? (tick√).

Tiles_____ Iron sheets_____ Grass thatched_____ Cartons_____

Plastic sheet_____ Wood_____ Other specify_____

Section B

Please indicate if you have experienced any of the following events (tick √).

No.	Question	Yes	No
18.	Have you ever witnessed your parents/caregivers fight physically at home?		
19.	Have you seen your parents/caregivers fight with weapons at home?		
20.	Do your parents/caregivers quarrel and argue in your presence?		
21.	Do your parents/caregivers abuse alcohol?		
22.	Do your parents/caregivers abuse drugs like marijuana or others?		
23.	Have you been emotionally abused by your parents/caregivers?		
24.	Have you felt neglected by your parents/caregiver/s?		
25.	Do your parents/caregivers punish you with beatings?		
26.	Have you ever suffered physical injuries due to beatings from your parents/caregivers?		
27.	Have you been beaten with weapons by your parents/caregiver?		

28.	Have you ever been physically injured by other people other than your parents?		
29.	Has anyone abused you sexually before joining this school?		
30.	Have you been sexually maltreated? (exploitation, coercion, harassment)		
31.	Do you find people in your neighbourhood hostile to you?		
32.	Do you witness violence within your neighbourhood?		
33.	Have you lived in the streets?		
34.	Have you been physically injured in the streets?		
35.	Have you lacked food due to your parents/caregiver's inability to provide?		
36.	Have you lacked medical treatment because your parents/caregiver could not afford it?		
37.	Have you witnessed the death of a close family member (not parent)?		
38.	Have you been given the responsibility of nursing a critically sick family member?		
39.	Have you been left with your siblings to provide for them?		

40. Please indicate your religion.

a) Christian_____ b) Muslim_____

c) Hindu_____ d) Other specify_____

41. Do your parents/caregiver attend a place of worship?

a) Father_____ b) Mother_____ c) Guardian_____

42. Were you attending a place of worship before joining this school?

a) Never_____ b) Sometimes_____ c) Always _____

Appendix B: Youth Self Report for Ages 11 -18

<table>
<tr><td colspan="2">Code_____</td><td colspan="2"></td></tr>
<tr><td>Your Gender (Jinsia)
Boy_____
Girl_____</td><td>Your Age(Umri)
_____</td><td>Your Ethnic Group or Race
Kabila lako_____
_____</td><td></td></tr>
<tr><td>Today's date (Tarehe ya leo)
_____</td><td colspan="2">Your Birthdate.(Tarehe ya kuzaliwa)
_____</td><td rowspan="2">Please fill out this form to reflect your views, even if other people might not agree. Feel free to print additional comments beside each item and in the space provided on pages 2 and 4. Be sure to answer all items.

Tafadhali jaza fomu hii iweze kuonyesha maoni yako , hata kama watu wengine hawakubaliani na maoni yako. Kuwa huru kuongezea maelezo zaidi katika nafasi zilizoachwa tupu katika kurasa za 2 na 4. Hakikisha kuwa umejibu maswali yote.</td></tr>
<tr><td>Class in school.
kiwango au darasa shuleni .
_____

Not attending school.
Huhudhurii shule_____</td><td colspan="2">If you are working,please state your type of work:

Kama unafanya kazi tafadhali taja kazi yenyewe</td></tr>
</table>

Please print. Be sure to answer all items. Tafadhali chapisha.Hakikisha umejibu maswali yote.

Below is a list of items that describes kids. For each item that describes you now or within the past 6 months, please circle the 2 if the item is very true or often true of you. Circle the 1 if is somewhat or sometimes true of you. If the item is not true of you, circle the 0. Chini ni orodha ya vitu vinavyo elezea watoto kwa kila kitu kinachokuelezea wewe sasa au katika miezi sita iliyopita, tafadhali viringa 2 kama kitu ni kweli kabisa au mara kwa mara kweli kuhusiana na wewe. Viringa katika nambari 1 Kama jambo hilo ni kweli kwa kiwango fulani. Kama jambo hilo si kweli kukuhusu, viringa kwa nambari 0.

0 Not true	1 somewhat or sometime true	2 very true or often true
Siyo ukweli	Ukweli kwa kiwango fulani	Ukweli kabisa au ukweli kila mara

0 1 2	1. I act too young for my age ***Vitendo vyangu viko chini ya umri wangu***	**0 1 2**	15. I am pretty honest ***Huwa ni mwaminifu***
0 1 2	2.I drink alcohol without my parents' approval [describe]_____ ***Hunywa pombe bila idhini ya wazazi wangu*** **[eleza]_____**	**0 1 2**	16. I am mean to others ***Huwa mchoyo***
		0 1 2	17. I daydream a lot
0 1 2	3. I argue a lot ***Hubishana sana***		***Hupotea katika mawazo wakati wa mchana***
0 1 2	4.I fail to finish things I start ***Hushindwa kumaliza kazi yangu ninapoanza***	**0 1 2**	18. I deliberately try to hurt or kill myself ***Hujaribu kujidhuru/kujiumiza au kujiua***
0 1 2	5.There is very little that I enjoy ***Kuna vitu/mambo vichache /machache yanayonifurahisha***	**0 1 2**	19. I try to get a lot of attention **Huhitaji kushughulikiwa sana**
		0 1 2	20.I destroy my own things ***Huharibu vitu vyangu.***
0 1 2	6.I like animals ***Ninapenda wanyama***	**0 1 2**	21.I destroy things belonging to others. ***Huharibu vitu vya watu***
0 1 2	7.I brag ***Ninaringa***	**0 1 2**	22. I disobey my parents. **Si mtiifu kwa wazazi.**
		0 1 2	23.I disobey at school **Si mtiifu shuleni**
0 1 2	8.I have trouble concentrating or paying attention ***Siwezi kukaa nikatulia na kuwa makini kwa muda mrefu***	**0 1 2**	24.I don't eat as well as I should **Sili vizuri kama ninavyotakikana**
		0 1 2	25.I don't get along with other kids **Sisikizani na watoto wengine.**
0 1 2	9.I can't get my mind off certain thoughts [describe] ***Siwezi kuwacha kuwaza juu ya mambo*** **fulani [eleza]** **_____**	**0 1 2**	26.I don't feel guilty after doing something I shouldn't. ***Huwa sina majuto baada ya kufanya makosa [sioni haya ninapofanya makosa]***
		0 1 2	27.I am jealous of others ***Ninawaonea wivu watu wengine***
0 1 2	10.I have trouble sitting still ***Siwezi kutulia***	**0 1 2**	28. I break rules at home, school, or elsewhere. ***Sifuati sheria /kanuni za nyumbani/ shuleni au kwokwote.***
0 1 2	11.I am too dependent on adults ***Hutegemea watu wazima sana***		
0 1 2	12.I feel lonely ***Huhisi upweke***	**0 1 2**	29.I am afraid of certain animals ,situations, or places, other than school [describe]: ***Ninaogopa wanyama wengine, hali au mahali pengine ambapo si shule (eleza)*** **_____**
0 1 2	13.I feel confused or in a fog ***Huwa nimechanganyikiwa***		
0 1 2	14.I cry a lot ***Hulia sana***	**0 1 2**	30. I am afraid of going to school. ***Ninaogopa kwenda shule.***

0	**1**	**2**	31. I am afraid I might think or do something bad. ***Ninahofia kuwa ninaweza kufikiria au kufanya kitu kibaya.***	**0**	**1**	**2**	46. Parts of my body twitch or make nervous movement [describe] ***Sehemu za mwili wangu huwa zinatetemeka kwa hofu.*** ***Eleza_____***
0	**1**	**2**	32. I feel that I have to be perfect. ***Ninahisi kuwa nahitajika kuwa mwema***.				
0	**1**	**2**	33.I feel that no one loves me ***Ninahisi kuwa hakuna mtu ananipenda***	**0**	**1**	**2**	47. I have nightmares ***Huwa ninaota ndoto za kuogofya /jinamizi***
0	**1**	**2**	34.I feel that others are out to get me ***Ninahisi/ninaona kuwa watu wananitafuta***	**0**	**1**	**2**	48.I am not liked by other kids ***Sipendwi na watoto wengine***
0	**1**	**2**	35.I feel worthless or inferior ***Ninahisi au kujiona kama asiyefaa au duni au mdhaifu kwa wengine.***	**0**	**1**	**2**	49. I can do certain things better than most kids. ***Ninaweza kufanya vitu vingine vizuri kuliko watoto wengi.***
0	**1**	**2**	36.I accidentally get hurt a lot ***Wakati mwingine bila kutaka/kupenda ninapata ajali ya kujiumiza.***	**0**	**1**	**2**	50. I am too fearful or anxious ***Nina wasiwasi na huogopa sana***
0	**1**	**2**	37.I get in many fights ***Hujipata katika vita vingi.***	**0**	**1**	**2**	51. I feel dizzy or lightheaded ***Hujihisi mwepesi kichwani na kusikia kizunguzungu.***
0	**1**	**2**	38. I get teased a lot ***Hutaniwa sana.***	**0**	**1**	**2**	52. I feel too guilty ***Huwa ninajuta sana***
0	**1**	**2**	39. I hang around with kids who get in trouble. **Hushiriki na watoto wanaopatikana shida.**	**0**	**1**	**2**	53. I eat too much ***Hula sana.***
0	**1**	**2**	40. I hear sounds or voices that other people think aren't there [describe]: **Husikia sauti au makelele yasiyokuwepo[eleza]** _____	**0**	**1**	**2**	54. I feel overtired without good reason **Hujihisi mchovu bila sababu**.
0	**1**	**2**	41. I act without stopping to think ***Hutenda bila kufikiria***	**0**	**1**	**2**	55. I am overweight ***Mimi ni mzito zaidi***
0	**1**	**2**	42. I would rather be alone than with others ***Hupenda kuwa pekee yangu kuliko kukaa au kuwa na wengine***	**0**	**1**	**2**	56. Physical problems without known medical cause: **Nina matatizo ya kimwili bila sababu inayojulikana kiafya:**
0	**1**	**2**	43. I lie or cheat ***Hudanganya***				
0	**1**	**2**	44. I bite my fingernails ***Hujiuma kucha zangu***	**0**	**1**	**2**	a) Aches or pains [not stomach or headaches] ***Huumwa [lakini sio kuumwa tumbo au kuumwa kichwa***
0	**1**	**2**	45. I am nervous or tense ***Huwa nina wasiwasi na hofu***				

0	**1**	**2**	b) Headaches ***Huumwa kichwa***				
			c) Nausea ,feel sick	**0**	**1**	**2**	65. I refuse to talk. ***Hukataa kuzungumza*.**
0	**1**	**2**	***Hujihisi mgonjwa au kusikia kichefuchefu***				
				0	**1**	**2**	66. I repeat certain acts over and over (describe). ***Hurudia vitendo fulani mara kwa mara.***
0	**1**	**2**	d) Problems with eyes (not if corrected by glasses) (describe) ***Matatizo ya macho (lakini si yaliyotibiwa kwa kuvaa miwani)*** ***(eleza_____***				***Eleza:_____***
				0	**1**	**2**	67. I run away from home. ***Hutoroka nyumbani.***
0	**1**	**2**	e) Rashes or other skin problems. ***Nina vipele au nina matatizo mengine ya ngozi*.**	**0**	**1**	**2**	68. I scream a lot. ***Hupiga mayowe sana*.**
0	**1**	**2**	f) Stomachaches. ***Huumwa na tumbo***.	**0**	**1**	**2**	69. I am secretive or keep things to myself. ***Msiri*.**
0	**1**	**2**	g) Vomiting, throwing up. ***Hutapika.***				
0	**1**	**2**	h) Other (describe). ***Mengine (eleza):*** _____	**0**	**1**	**2**	70. I see things that other people think aren't there (describe). ***Huona vitu visivyokuwepo.*** ***(Eleza):_____***
0	**1**	**2**	57. I physically attack people. ***Huwashambulia watu kwa kutumia nguvu.***				
				0	**1**	**2**	*71. I am self-conscious or easily embarrassed.* ***Hujifahamu sana au huaibika kwa urahisi.***
0	**1**	**2**	58. I pick my skin or other parts of my body. (describe). ***Hujivuta ngozi au sehemu zingine za mwili.*** ***Eleza:_____***	**0**	**1**	**2**	*72. I set fires.* ***Huwasha moto.***
0	**1**	**2**	59. I can be pretty friendly. ***Ninaweza kuonyesha urafiki.***	**0**	**1**	**2**	*73. I can work well with my hands.* ***Ninaweza kufanya kazi kwa mikono yangu***.
0	**1**	**2**	60. I like to try new things. ***Hupenda kujaribu vitu vipya.***	**0**	**1**	**2**	*74. I show off or clown.* ***Mwenye maringo***.
				0	**1**	**2**	75. I am too shy or timid ***Mwenye haya***
0	**1**	**2**	61. My school work is poor. ***Kazi yangu ya shule ni mbovu***.				
				0	**1**	**2**	76. I sleep more than most kids during day and /or night ***Hulala sana zaidi kuliko watoto wengi mchana au usiku***
0	**1**	**2**	62. I am poorly coordinated or clumsy. ***Nina mpango mbaya sina umakini katika mambo***.				
0	**1**	**2**	63. I would rather be with older kids than kids my own age. ***Hupenda kuwa na watoto wa umri mkubwa kwangu kuliko wale wa rika langu*.**	**0**	**1**	**2**	77. I sleep less than most kids ***Silali sana kama watoto wengi.***
				0	**1**	**2**	78. I am inattentive or easily distracted ***Huwa situlii darasani na ni mwepesi wa kutaabishwa na mambo haraka au kwa urahisi***
0	**1**	**2**	64. I would rather be with younger kids than kids my own age. **Hupenda kuwa na watoto wa umri mdogo kwangu kuliko wale wa rika langu**.	**0**	**1**	**2**	79. I have a speech problem (describe) ***Nina matatizo ya matamshi (eleza).*** _____

0	**1**	**2**	80. I stand up for my rights ***Huwa ninatetea haki zangu***	**0**	**1**	**2**	100. I have trouble sleeping (describe). **Nina taabu/shida ya kulala au kupata usingizi (eleza).**
0	**1**	**2**	81. I steal at home ***Huiba nyumbani***				**_____**
0	**1**	**2**	82. I steal from places other than home ***Huiba mahali popote isipokuwa nyumbani*** .	**0**	**1**	**2**	101. I cut classes or skip school. **Hutoroka shule**.
0	**1**	**2**	83. I store up too many things I don't need(describe) **Huweka na kuhifadhi vitu vingi nisivyohitaji.** **Eleza:_____**	**0**	**1**	**2**	102.I don't have much energy **Sina nguvu nyingi ,ninatenda au kufanya mambo polepole**
				0	**1**	**2**	103.I am unhappy , sad or depressed **Sina furaha ,nina huzuni ,au nina hangaika**
0	**1**	**2**	84. I do things that other people think are strange. (describe)._____				
			Huwa ninafanya mambo yasiso ya kawaida. **Eleza_____**	**0**	**1**	**2**	104.I am louder than other kids **Nina sauti kubwa kuliko watoto wengine**
0	**1**	**2**	85. I have thoughts that other people would think are strange. (describe). **Nina mawazo yasiyo ya kawaida.** **Eleza;_____**	**0**	**1**	**2**	105.I use drugs for nonmedical purpose (don't include alcohol or tobacco)(describe) **Ninatumia madawa ya kulevya kwa sababu zisizo za tiba (bila kileo au tambaku)(eleza):**
0	**1**	**2**	86. I am stubborn. **Mimi ni mkaidi/mjeuri.**				**_____** 106. I like to be fair to others
0	**1**	**2**	87. My moods or feelings change suddenly. **Hali yangu/hisia zangu hubadilika kighafla.**	**0**	**1**	**2**	***Hupenda kutenda haki kwa wote***
0	**1**	**2**	88. I enjoy being with people. **Ninafurahia kuwa na watu.**	**0**	**1**	**2**	107. I enjoy a good joke ***Hupenda mzaha***
0	**1**	**2**	89. I am suspicious. **Nina tabia ya kushuku sana.**	**0**	**1**	**2**	108. I like to take life easy ***Hupenda kuchukulia maisha kiurahisi***
0	**1**	**2**	90. I swear or use dirty language. **Huapa au kutumia lugha ya matusi.**	**0**	**1**	**2**	109.I try to help other people when I can. ***Hujaribu kuwasaidia watu wakati ninaweza.***
0	**1**	**2**	91. I think about killing myself. **Hufikiria kuhusu kujiua.**				110. I wish I were of the opposite sex
0	**1**	**2**	92. I like to make others laugh. **Ninapenda kuwachekesha watu.**	**0**	**1**	**2**	***Ningependa kuwa wa jinsia tofauti na nilivyo.***
0	**1**	**2**	93. I talk too much. **Huongea sana.**				111. I keep from getting involved with
0	**1**	**2**	94. I tease others a lot. **Hudhihaki watu sana.**	**0**	**1**	**2**	others ***Sipendi kushirikiana na watu wengine***
0	**1**	**2**	95. I have a hot temper. **Hupandwa na hasira haraka.**				112. I worry a lot
0	**1**	**2**	96. I think about sex too much.	**0**	**1**	**2**	***Huhangaika au husumbuka sana kimawazo***
0	**1**	**2**	**Hufikiria kuhusu mapenzi na ngono sana.**				
0	**1**	**2**	97. I threaten to hurt people. **Hutisha kuwaumiza watu.**				Please write down anything else that describes your feelings, behavior, or interests:
0	**1**	**2**	98. I like to help others. **Hupenda kuwasaidia watu**.				Tafadhali andika kitu kingine ambacho kinaweza kuelezea hisia, tabia au uraibu wako.
			99. I smoke, chew, or sniff tobacco. **Ninavuta, kutafuna au kunusa tumbaku**.				

Appendix C: Treatment Manual

Treatment Manual

Using REBT and Behavioral Therapies

Children in groups of 8-10, each session takes 2 hours. Number of sessions 16.

Session	Content	Activity	Skills	Expected Outcome
1	Introduction of participants and facilitators. Introduction of the program. Building rapport. Laying ground rules. Group activity TOPIC: Common problems faced by children.	Presentation by facilitator. Group activity- a fun exercise (names and adjectives), group's names. Open discussion.	Personal identity. Building rapport.	Normalize challenges faced by children. Build rapport and create a relaxed atmosphere. Develop group identity.
2	TOPIC: Introduction of problem-solving skills training (PSST). Case using step 1 of PSST-events that happen to children created by themselves or others. Group activity-exercise on instant reactions to provocation. Cognitive homework.	Presentation by facilitator. Use of stories. In groups of 4, children to create cases. Record events of provocation.	Role play. Self-statements. Perception and interpretation of events-beliefs.	Understanding of the PSST steps and their benefits. Application of step one in children's lives. Develop ability to change irrational beliefs.

3	Review and introduction of discussion. TOPIC: PSST step 2- alternatives available in difficult situations. Group activity-exercises-how to delay reactions. Cognitive homework	Presentation by facilitator. A case study, children to discuss. Record difficult situations and responses.	Role play. Finding alternatives. Use of self-statements.	Ability to think of alternatives in solving problems. Reduced impulsivity, enhanced self control and changed irrational beliefs.
4	TOPIC: PSST step 3- considering the positive and negative effects of each choice. Group discussion on application. Case presentation. Group activity.	Presentation by facilitator. Share personal experiences. Children to play supervised ball game.	Evaluating effects in decision making. Shame attacking.	Insights on the effects of choices on the person and others. Increased ability to solve problems in a rational manner.
5	Review and introduction of discussion. TOPIC: PSST step 4- making the final choice. Case presentation Group activity.	Children responding to questions. Presentation by facilitator. Children discuss how to make final choice in the case presentation. Play table game supervised by facilitator.	Making choices. Modeling Shame attacking.	Ability to assert themselves and defend their choices. Ability to make choices and develop positive coping skills.

6	Review and introduction of discussion. TOPIC: PSST step 5- implementation, considering the results of the action taken. Group activity.	Children responding to questions. Presentation on taking action and results of the same. Drawing faces- expressions that may follow results of an action.	Modeling and use of self-statements. Evaluating actions.	Improved emotional regulation. Ability to do an evaluation of personal actions. Appreciation of various outcomes after an action.
7	Review and introduction of discussion. Application of the 5 steps in case studies. TOPIC: Presentation on maintenance of change. Group activity. Cognitive homework.	Personal experiences. Supervised ball game. Record one incident where they apply the 5 steps practically. Practice reading self statements daily.	Role play. Modeling. Positive self-statements on cards.	Skills on the application of the 5 steps. Assertiveness and reduced aggression. Increased sense of being in control of their behavior.

8	TOPIC: -self – esteem: self acceptance, self worth. How self-esteem influence behavior. Group activity: Who am I? Use of I statements. Cognitive assignment.	Presentation of the topic. Personal description of the self. In groups of 4, write positive attributes of each child and share in the group. Play a game to identify themselves. Write things that make them love themselves	Positive self attributes. Play. Self confidence.	Increased self acceptance and self awareness. Appreciation of other children's positive attributes. Appreciation of their own personal description. Enhanced team spirit and individual participation. Self acceptance.
Mid-test	Assessment at Time Series 2			
9	TOPIC: Operant conditioning Conflict management-introduction, discussion on conflicts. How children resolve conflicts among themselves. Group activity-children pair and each demonstrate their disagreement in the group.	Presentation by facilitator-conflict among children and ways of managing it. Observation of the group activity.	Role play. Praise and reward.	Gain insight on conflicts and how to manage them. Individual participation in the activity.

10	TOPIC: how to resist negative peer pressure. Group activity-in groups of four, children enact how to resist peer pressure. Behavioral assignment.	Presentation by facilitator. . Record instances where the children resist peer pressure.	Use of stories Reinforcement-use token economy.	Skills on how to resist peer pressure, enhanced self confidence and assertiveness.
11	TOPIC: Relating with authority. Causes of conflict between children and authority. How children can relate well with authority. Personal experiences-children to share good and bad experiences with authority at home or in school. Group activity: choose a leader and play a table game.	Presentation by facilitator. . Negative reinforcement. Play table game.	Use of stories. Modeling. Play. Negative reinforcement.	Improved relationship with authority. Enhanced positive view of authority. Increased team spirit and observation of rules.
12.	TOPIC: Interpersonal relationship: acts of kindness, care, respect, personal etiquette. Group activity-play ball	Presentation and use of a case. Discussion.	Shaping Extinction.	Skills on how to relate with people.

	game. Behavioral assignment.	Record acts of kindness, respect, etiquette.	Use coaching Role play.	Children practising learnt behavior.
13.	TOPIC: Good communication skills- clarity, listening, eye contact, cues and voice tone. Group activity: children to demonstrate poor communication in groups. Fun activity to practice good communication skills. Behavioral assignment.	Topic presentation. Children tell stories in the group. Exercise on sharing secrets in groups. Practice with a friend and keep a record of the skill applied.	Role play. Punishment (loss of rewards/opportunities).	Enhanced communication skills, self expression and confidence. Improved team spirit. Communication skills enhanced.
14.	TOPIC: Emotional regulation- anger/aggression/responses during anxious moments and relaxation. Group activity: competition in the group.	Presentation of topic by facilitator. Ball game where the highest scorer is rewarded.	Relaxation technique. Use role play.	Ability to regulate emotions. Reduced aggression and better coping skills in stressful situations.

	Demonstration of various emotional responses. Homework	Record incidents and emotional responses.	Reinforcement- Use of praise and token economy.	Enhanced awareness of emotions.
15	TOPIC: Mindful of others. Unacceptable practices in school: bullying, theft, deception. Group activity-in pairs. Play time.	Topic presentation. Group discussion. Role play the experiences of the victim. Each person to write one act they would appreciate from another. Group participation earns play time.	Role play Appreciating others.	Ability to identify with others, a sense of being mindful about others. Appreciation of good acts.
16	TOPIC: Setting personal goals. Considering strengths, areas of growth, available opportunities. Obstacles that hinder achievement of personal goals-lack of confidence,	Presentation of topic by facilitator. Children to share personal experiences. Reinforcement- Exchange earned points for small gifts.	Modeling and role play. Reinforcement.	High level of self awareness and understanding of individual potential. Increased motivation to focus on goals in life.

	strong will, peer pressure, substance abuse, misconduct. Summary and closing of session.			
Posttest	Assessment at time series 3	After 6 months.		

Case study using PSST model

Baraka is a 15 year old boy. He is the first born child in a family of 8 children. His parents work as casual labourers in a tea plantation near their home. Some of Baraka's siblings have dropped out of school because the parents could not afford to buy several items needed in the school. In addition, many are the days the family would go without food so they would opt to go work in the farm in order to get enough money to buy food. Although Baraka's highest level of education was class 6, he kept on encouraging his two younger siblings to work hard in school. He believed that since the rest of his siblings were no longer in school, his parents could manage to support the two through their education so that in the future, they could get good jobs and change the poor state of the family.

Baraka worked hard to ensure his siblings were in school. It was not easy, some days his wages were delayed and his parents on the other hand were not assured of being hired every day. Baraka started becoming hostile toward people in the village because he thought they were laughing at him and his family due to their poor status. Sometimes Baraka would report to work late or disobey the supervisor which translated into reduction of his wage.

One day, Baraka was hit by a child who was riding a bicycle besides the road. He instantly got furious, saying the boy hit him because he was poor and didn't like him. The boy ran to his home and Baraka ran after him. The boy's parents wanted to know why Baraka was running after their son. He could not listen to them. The father to the boy tried to restrain him without success. Baraka insulted the parents, threatened to pull the boy out of the house where he was hiding. When the boy's father prevented him, Baraka said he was a strong man and no one in the entire village would resist him. The boy's mother pleaded with him to be calm so that they could talk but Baraka got more agitated. As he tried to force himself into the house, the boy's mother started screaming and that noise attracted the attention of neighbors. Within a short while, a crowd of furious neighbors gathered armed with crude weapons to rescue one of their own. It was only after Baraka had received several beatings that the crowd listened to the boy's parents to spare his life.

Steps

1. *The scenario presented. Common problems that children are likely to face.*
2. *Think of alternatives to solving the problem.*
3. *Evaluate the results of each available choice.*
4. *Finally make a decision on what to do.*
5. *Implement the action and think of the results.*

Appendix D: Explanation of Assent for Pupils (Experimental)

Kabete Rehabilitation School

My name is Naomi James, a student at Daystar University studying clinical psychology. I am doing a study entitled "Effectiveness of behavior and rational emotive behavior therapies on conduct disorder among children in selected rehabilitation schools in Kenya". I am working under the supervision of Dr. Alice Munene, dean School of Human and Social Sciences, and Prof. Rebecca Oladipo, director Research and Publications, Daystar University.

The purpose of this study is to assess psychological problems among children in the school and offer treatment to those who will present with conduct disorder. I wish to invite you to voluntarily participate in this study and in case you wish to withdraw at any time, you will not be penalized. The study will take 6 months which will cover 16 sessions and each session will take a maximum of 2 hours. Children will be divided into groups of 8-10 participants where they will be involved in various activities. Children who participate in the study will be able to address their problems and learn useful skills that will benefit them. In case you experience any emotional discomfort as a result of participating in the study, I will provide individual counseling as you will require.

I promise to observe your right to privacy, respect and protection. You will not be forced or coerced to share any information in the group against your will. During this study, I will give you questionnaires to fill at three intervals. I will allocate you a code number that you will use on your questionnaire instead of your name. However, I will need to keep a master list that will contain your name and code number for comparing your progress throughout the study. I will treat that list with confidentiality and store it under key and lock. This will apply to all the information you will share during sessions and the data that will be collected. Findings of the study will be shared with the school through the school manager but will not reflect your individual results.

In case you have any questions concerning this study, please contact me through this number, 0733898070 or my supervisor Dr. Munene at Daystar University. If you agree to participate in this study, please sign below.

I _____ after receiving information about

this study and understanding it hereby agree to voluntarily participate.

Date_____

Appendix E: Explanation of Assent for Pupils (Control)

Wamumu Rehabilitation School

My name is Naomi James, a student at Daystar University studying clinical psychology. I am doing a study entitled "Effectiveness of behavior and rational emotive behavior therapies on treatment of conduct disorder among children in selected rehabilitation schools in Kenya". I am working under the supervision of Dr. Alice Munene, dean School of Human and Social Sciences, and Prof. Rebecca Oladipo, director Research and Publications, Daystar University.

The purpose of this study is to assess psychological problems among children in the school, in particular conduct disorder. Your school has been chosen as a control group. I wish to invite you to voluntarily participate in this study and in case you wish to withdraw at any time, you will not be penalized.

I promise to observe your right to privacy, respect and protection. You will not be forced or coerced to share any information against your will. During this study, I will give you questionnaires to fill at three intervals. I will allocate you a code number that you will use on your questionnaire instead of your name. However, I will need to keep a master list that will contain your name and code number for comparing your progress throughout the study. I will treat that list with confidentiality and store it under key and lock. This will apply to all the information you will share during discussions and the data that will be collected. Findings of the study will be shared with the school through the school manager but will not reflect your individual results.

In case you have any questions concerning this study, please contact me through this number, 0733898070 or my supervisor Dr. Munene at Daystar University. If you agree to participate in this study, please sign below.

I _____ after receiving information about this study and understanding it hereby agree to voluntarily participate.

Date_____

Appendix F: Informed Consent for School Manager (Control).

Wamumu Rehabilitation School

My name is Naomi James, a student at Daystar University studying clinical psychology. I am doing a study entitled "Effectiveness of behavior and rational emotive behavior therapies on treatment of conduct disorder among children in selected rehabilitation schools in Kenya". I am working under the supervision of Dr. Alice Munene, dean, School of Human and Social Sciences, and Prof. Rebecca Oladipo, director of Research and Publications, Daystar University.

The purpose of this study is to assess psychological problems among children in the school, in particular conduct disorder. Your school has been chosen as a control group. The children will be requested to fill out questionnaires that will assist in identifying psychological problems. The study will take 6 months and questionnaires will be filled in three time series.

Participation of children will be voluntary and in case any of them would wish to withdraw at any time, they will not lose any benefits or be penalized. All the information gathered from participants will be treated with confidentiality and will be used for the purpose of this study. Children will not be required to indicate their name in the questionnaires, instead, each one will be given a code number. In case any of them experiences emotional discomfort as a result of participating in the study, I will provide the psychological support required.

Parents of the children participating in this study are required to give consent but since they are not available, I am requesting you to consent on their behalf.

In case you have any questions concerning this study, please contact me through this number, 0733898070 or my supervisor Dr. Alice Munene at Daystar University. If you agree to give consent in this study, please sign below.

Declaration

I_____

the manager _____ rehabilitation school after

receiving information about this study and understanding it hereby give consent to allow

pupils to participate.

Date_____ Sign_____

Appendix G: Informed Consent for School Manager (Experimental)

Kabete Rehabilitation School

My name is Naomi James, a student at Daystar University studying clinical psychology. I am doing a study entitled "Effectiveness of behavior and rational emotive behavior therapies on treatment of conduct disorder among children in selected rehabilitation schools in Kenya". I am working under the supervision of Dr. Alice Munene, dean, School of Human and Social Sciences, and Prof. Rebecca Oladipo, director of Research and Publications, Daystar University.

The purpose of this study is to assess psychological problems among children in the school and offer treatment to those who will present with conduct disorder. The children will be requested to fill out questionnaires that will assist in identifying psychological problems. The study will take 6 months which will cover 16 sessions and each session will take a maximum of 2 hours. Children shall be put in groups of 8-10 participants.

Participation of children will be voluntary and in case any of them would wish to withdraw at any time, they will not lose any benefits or be penalized. All the information gathered from participants will be treated with confidentiality and will be used for the purpose of this study. Children will not be required to indicate their name in the questionnaires, instead, each one will be given a code number. Children who participate in the study will be able to address their problems and learn useful skills that will benefit them in handling life challenges. In case any of them experience emotional discomfort as a result of participating in the study, I will provide individual counseling as will be required.

Parents of the children participating in this study are required to give consent but since they are not available, I am requesting you to consent on their behalf.

In case you have any questions concerning this study, please contact me through this number, 0733898070 or my supervisor Dr. Alice Munene at Daystar University. If you agree to give consent in this study, please sign below.

Declaration

I_____

the manager _____ rehabilitation school after

receiving information about this study and understanding it hereby give consent to allow

pupils to participate.

Date_____ Sign_____

Appendix H: Children's Department Approval

MINISTRY OF LABOUR, SOCIAL SECURITY AND SERVICES
DEPARTMENT OF CHILDREN'S SERVICES

Tel: +254 (0) 2729800 /2727980-4
Fax: +254 (0) 2726222/2734417
Email: institution2014@yahoo.com
When replying, please quote

Social Security House, Bishops Road
P.O. Box 46205 - 00100
Nairobi
KENYA

Ref: CS/6/12/Vol.VI (15). **DATE: 30/06/2015.**

THE MANAGER,
KABETE REHABILIATATION SCHOOL,
WAMUMU REHABILIATATION SCHOOL,

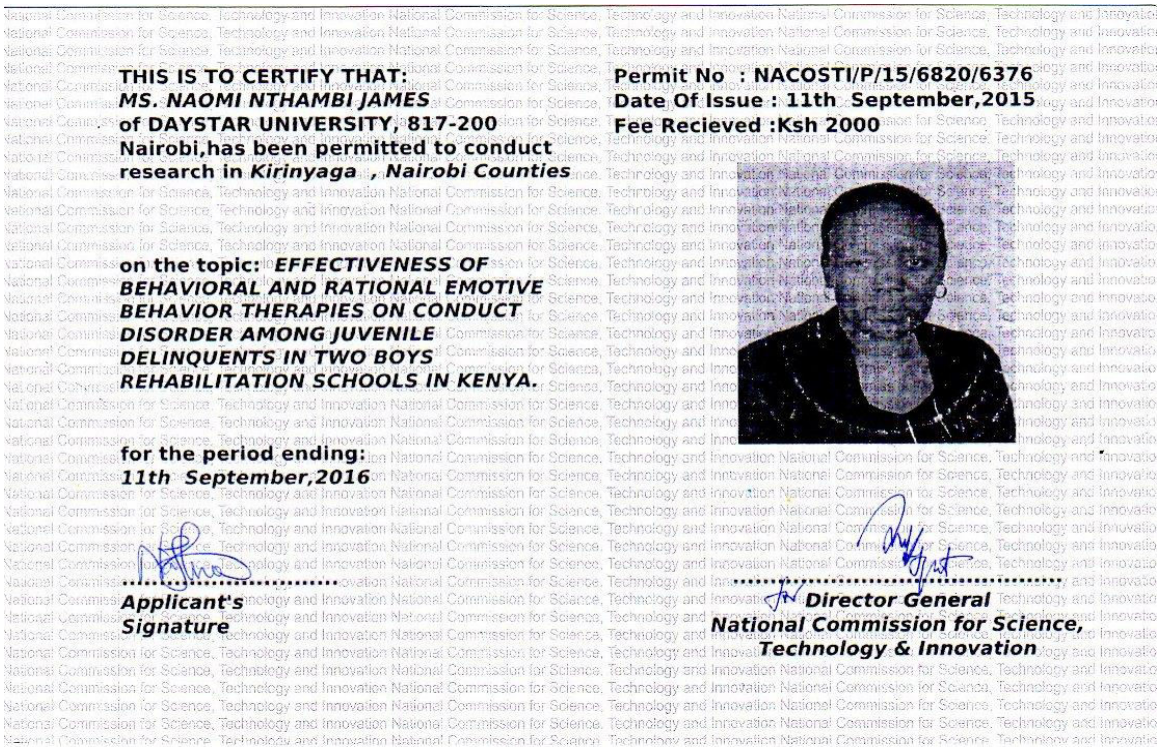
RE: FIELD RESEARCH.

The bearer of this letter **Naomi James** is a student at Dyster University pursuing a PHD in Clinical psychology. Her topic for research is **"Effectiveness of behavioral and rational emotive behavior therapies on conduct disorder among Juvenile delinquents…"** She has selected your institutions to conduct her research for a period of six (6) months beginning on **6th July, 2015**.

This is therefore to inform you that authority to conduct research in your institutions has been granted. Give her the necessary assistance required. She is expected to abide by the regulations and rules governing the Department of children services.

Rev. Samuel Kirui.
For: Director Children Services.

Appendix I: Nacosti Approval

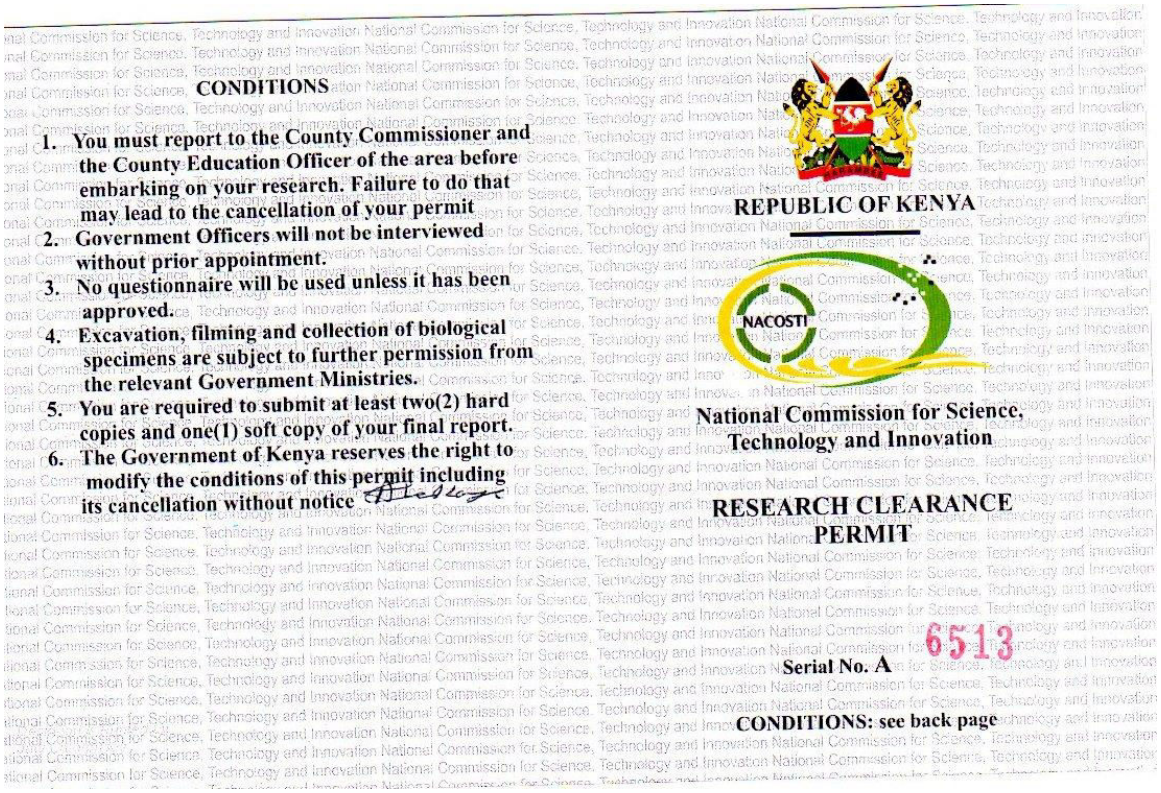


THIS IS TO CERTIFY THAT:
MS. NAOMI NTHAMBI JAMES
of DAYSTAR UNIVERSITY, 817-200
Nairobi,has been permitted to conduct
research in *Kirinyaga , Nairobi Counties*

on the topic: *EFFECTIVENESS OF BEHAVIORAL AND RATIONAL EMOTIVE BEHAVIOR THERAPIES ON CONDUCT DISORDER AMONG JUVENILE DELINQUENTS IN TWO BOYS REHABILITATION SCHOOLS IN KENYA.*

for the period ending:
11th September,2016

Permit No : NACOSTI/P/15/6820/6376
Date Of Issue : 11th September,2015
Fee Recieved :Ksh 2000



CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 6513

CONDITIONS: see back page

Appendix J: Nairobi Hospital Approval

THE NAIROBI HOSPITAL

Our Ref. TNH/ADMIN/ERC/14/05/15

14th May 2015

Naomi James
Daystar University
P. O. Box 817 - 00200
NAIROBI

Dear Ms. Naomi,

RE: EFFECTIVENESS OF BEHAVIOURAL AND RATIONAL EMOTIVE BEHAVIOUR

Reference is made to your letter dated 24th April 2015 requesting for ethical approval of the above Proposal by The Nairobi Hospital Bioethics &Research Committee.

We are pleased to inform you that ethical review has been done and approval granted. In line with the research projects Policy, you will be required to submit a copy of the final research findings to the Committee for records.

You will also be required to seek for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI).

Yours sincerely,

Dr. M. M. O. Okonji, FRCPsych
CHAIRMAN – BIOETHICS & RESEARCH COMMITTEE

ISO 9001: 2008 Certified Healthcare with a difference !
P.O. Box 30026-00100 Nairobi - Kenya • Tel: 254 - 020 - 2845000 • Fax: 254 - 020 - 2728003
E-mail: hosp@nbihosp.org • website: www.nairobihospital.org

Appendix K: Vita

VITA

NAME:

Naomi James

EDUCATION:

Daystar University Clinical Psychology	Ph. D.		(Cand.)
Daystar University Counseling Psychology	M. A.		2005
Kenyatta University	B. Ed.		1991

INTERNSHIP:

Springs of Hope Counseling and Consultancy. Nairobi, Kenya.	2015	-	2016

PRACTICA:

Springs of Hope Counseling and Consultancy. Nairobi, Kenya.	2014	-	2014
Kenyatta National Hospital. Youth Centre.	2013	-	2014
Kenyatta National Hospital.	2013	-	2013

EMPLOYMENT:

Oasis Africa Counseling and Training Centre	2007	-	present
Teachers' Service Commission	1992	-	2007