

**EFFECT OF POSITIVE REINFORCEMENT AND SOLUTION FOCUSED BRIEF  
COUNSELLING TECHNIQUES ON CIGARETTE SMOKING AMONG  
SECONDARY SCHOOL STUDENTS IN KATSINA METROPOLIS,  
KATSINA STATE, NIGERIA**

**BY**

**Zinatu SALEH**

**DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,  
FACULTY OF EDUCATION,  
AHMADU BELLO UNIVERSITY,  
ZARIA, NIGERIA**

**SEPTEMBER, 2021**

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**BY**

**Zinatu SALEH  
P15EDPC9008**

**A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,  
AHMADU BELLO UNIVERSITY, ZARIA,  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF  
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**DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING,  
FACULTY OF EDUCATION,  
AHMADU BELLO UNIVERSITY,  
ZARIA**

**SEPTEMBER, 2021**

## **DECLARATION**

I Zinatu SALEH declare that the work in this thesis entitled “EFFECT OF POSITIVE REINFORCEMENT AND SOLUTION FOCUSED BRIEF C OUNSELLING TECHNIQUES ON CIGARETTE SMOKING AMONG SECONDARY SCHOOL STUDENTS IN KATSINA METROPOLIS, KATSINA STATE ” has been performed by me in the Department of Educational Psychology and Counselling. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other institution.

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Zinatu Saleh  
N.C.E, B.Ed, M.Ed  
PhD/P15EDPC9008

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Date

## CERTIFICATION

This Thesis entitled: EFFECT OF POSITIVE REINFORCEMENT AND SOLUTION FOCUSED BRIEF COUNSELLING TECHNIQUES ON CIGARETTE SMOKING AMONG SECONDARY SCHOOL STUDENTS IN KATSINA METROPOLIS, KATSINA STATE, NIGERIA by Zinatu SALEH meets the regulation governing the award of the degree of Doctor of Philosophy of the Ahmadu Bello University and is approved for its contribution to knowledge and literary presentation.

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Professor D.A. Oliagba  
Chairperson Supervisory Committee

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Date

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Professor M.I. Abdullahi  
Member, Supervisory Committee

---

Date

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Professor S. Sambo  
Member, Supervisory Committee

---

Date

---

Professor M.I. Abdullahi  
Head of Department of Educational  
Psychology and Counselling

---

Date

---

Professor S.A. Abdullahi  
Dean Postgraduate School

---

Date

## **DEDICATION**

This thesis is dedicated to my husband Alhaji Halliru Lawal.

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## **LIST OF ABBREVIATIONS**

PRT	-	Positive Reinforcement Technique
SFBCT	-	Solution Focused Brief Counselling Technique
HONC	-	Hook on Nicotine Checklist



## **OPERATIONAL DEFINITION OF TERMS**

The following are the operational definitions of terms for the purpose of this study.

**Positive Reinforcement:** - Is a counselling technique that uses tangible rewards like verbal praise, clap of hands or material gifts for students to exhibit, maintain and increase frequency of reducing or stopping of cigarette smoking

**Solution Focused Brief Counseling:** – A direct to the point discussion on the needs to reduce or stop cigarette smoking among senior secondary school students in Katsina metropolis.

## ABSTRACT

This study investigated the effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among secondary school students in Katsina metropolis, Katsina state, Nigeria. The study was guided by six objectives. The first two were to find out whether positive reinforcement technique and solution focused brief counselling techniques were effective on cigarette smoking among senior secondary school students in Katsina metropolis. A quasi experimental design of pretest, posttest was employed for this study. The population of the study consisted one thousand and forty-nine (1,049) senior secondary school students identified as cigarette smokers drawn from the 12 secondary schools. Purposive sampling technique was used to select a sample size of forty (40) students (20 male and 20 female) with the habit of cigarette smoking as indicated by their scores on HONC. The instrument adopted for the study was cigarette smoking rating scale. While paired t-test, one way analysis of variance (ANOVA) and Analysis of Covariance (ANCOVA) statistical methods were used to test the six null hypotheses at alpha  $P \leq 0.05$  level of significance. The findings revealed that: positive reinforcement was effective in reducing cigarette smoking among secondary school students ( $p = 0.002$ ). Solution Focused brief counselling technique was effective in reducing cigarette smoking among secondary school students ( $p = 0.002$ ). In comparing the two techniques both were effective and have the same effect on reducing cigarette smoking. Differential effect did not exist between male and female students exposed to positive reinforcement counselling technique on cigarette smoking ( $p = 0.307$ ) and solution focused brief counselling technique. It is concluded that both technique were effective in treating students cigarette smoking habit. It was recommended that counsellors, school psychologists, school principals and teachers should be exposed to positive reinforcement and solution focused brief counselling techniques training in re-addressing cigarette smoking habit among secondary school students.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the Study**

Cigarette smoking is one of the habits practiced by both youth and adult worldwide and is agreed to be harmful to the health of those who practice it. The health effects of cigarette smoking is so devastating that it could lead to deadly diseases like cancer of the lungs, tuberculosis, coughing, toothache and the like. Yet, the practice still persists and a lot more are going into it. Cigarette smoking is so addictive that the smokers find it difficult to stop, even if they tried hard to stop it.

Smoking cigarette whether in school or at home is not a desired behaviour. In school the smokers may not be regular in attendance and from there they become truant, leaving school to look for other substance and eventually become drop-out. Cigarette smoking has become one of the largest scourges of mankind it is regarded now as a dreadful enemy of public health since it is the cause of many premature deaths throughout the world.

Cigarette smoking in Katsina state is practiced by both male and female, girls easily falls victims of the act because their mothers send them to purchase cigarette sticks and from there most of them imitate and gradually it become a habit.

Engagement into cigarette smoking by youth leads to so many unwanted habits. It makes them restless and deprived them of the needed attention to study and engaged in other productive works. In the same vein it makes them addicted and dependent on it which will eventually leads to the use of other substances that have near effect.

Escandon and Galvez (2007) indicated that cigarette smoking causes lung cancer, cervix, oesophagus, kidney, larynx, mouth, pancreas and stomach cancers. It also triggers acute myeloid leukemia. General Surgeon Report (as cited by Escandon & Galvez

2007) shows that cigarette smoking is the cause of cardiovascular ailments, respiratory disorders such as chronic obstructive pulmonary disease, pneumonia and it affects reproduction.

WHO Report, as cited by Shittu (2011) stated that it has been estimated that about a third of the world's population, aged 15 years above, are smokers. In the same report it was reported that in the twentieth century, the tobacco epidemic was estimated to have killed about 100 million people worldwide. The report shows that smoking control is urgently needed to prevent the epidemic of tobacco related diseases and deaths. Unfortunately most African countries, including Nigeria did not respond appropriately to the growing epidemic because of the revenue generated from tobacco forgetting the enormous burden of cigarette-related diseases on health of the citizens.

Smoking is a practice in which a substance, most commonly tobacco, is burned and the smoke is tasted and inhaled. This is primarily practiced as a route of administration for recreational drug use, as combustion releases the active substance in drugs such as nicotine and makes them available for absorption through the lungs (Shuaib, 2011).

Many teenagers and younger children inaccurately believe that experimenting with smoking or even casual use will not lead to any serious dependency, the latest research shows that serious symptoms of addiction such as having strong urges to smoke, feeling anxious or irritable, or having unsuccessfully tried not to smoke can appear among youths within weeks or only days after occasional smoking first begins (Eke & Iscan, 2002). The average smokers try first cigarette at age 12 and may be a regular smoker by age 15 (Moszezynski, Fitzpatrick & Blair, 2001). Every day, more than 3,500 children try their first cigarette and about 1,000 other children under the age of 18 years become new regular

and daily smokers. Almost 90 percent of youths that smoke regularly report seriously strong cravings and more than 70 percent of adolescents smokers have already tried and failed to quit smoking (Difranza, 2002).

Apart of the addictive power of nicotine according to Caumo(2001) comes from its direct effect on the brain, in addition to the well understood chemical dependency, cigarette smokers also show evidence of a high rate of behavioural problems and suffer certain immediate effects such as increase stress, contrary to popular belief, smoking does not relieve stress. Studies have shown that on average smokers have higher levels of stress than non-smokers (Eke & Iscan, 2002).

In behavioural psychology, reinforcement is a consequence that will strengthen an organism's future behaviour whenever that behaviour is preceded by a specific antecedent stimulus. This strengthening effort may be measured as a higher frequency of behaviour (pulling a lever more frequency), longer duration (pulling a lever for longer period of time), greater magnitude (pulling a lever with greater force) or shorter latency (pulling a lever more quickly following the antecedent stimulus) (Johnson & Slach 2001). Although in most cases a reinforcing stimulus is a rewarding stimulus which is "valued" or "liked" by the individual (money received from a slot machine, the taste of the treat, the euphoria produced by an addictive drug). This is not a requirement. Indeed reinforcement does not even require an individual to consciously perceive an effect elicited by the stimulus (Winkelman, Berridge & Wilbarger, 2005). Furthermore, stimuli that are "rewarding" or "liked" are not always reinforcing: if a person drinks cold water from a freezer (response) and enjoy the coolness of the water (stimulus)but believes it is bad for his health, he may

not drink it again and thus it is not reinforcing in that condition. This shows that reinforcement occurs only when there is an observable strengthening in behaviour.

The popular works regarding reinforcement are the works of behavioral psychologists such as Thorndike, Watson and Skinner and their use of Animal experiments. Skinner in his theory in Shaffer (2005) proposed that both animals and humans will repeat acts that lead to favourable outcomes, Skinner's operant learning theory emphasizes that the direction in which we develop depends on external stimuli which could be a reinforcement or punishment. The human behaviour according to skinner can take many forms and can emerge or disappear depending on whether they have positive or negative consequences. A bad behaviour can be reinforced when the victims continue to give in or yield to it, another person who is punished will learn to suppress such habits or behaviour could include praise, a word of gratitude, a pat on the back or a medal, while fines, threats and confinements could serve as negative sanctions for bad behaviour.

Solution Focused Brief Technique (SFBT), often referred to as simply 'solution focused therapy' or 'brief therapy' is a type of talking therapy based upon social constructionist philosophy. It focuses on what clients want to achieve through therapy rather than or historical background of problem(s) that made them seek help (Guterman,2006). Solution Focused Brief Technique (SFBT) is used to treat entire range of clinical and psychological disorders, and in educational and business settings. Meta-analysis and systematic reviews of experimental and quasi-experimental studies indicate that SFBT is a promising intervention for the youth with externalizing behaviour problems and those with psychological and academic problems with significant effect measures. The research prefer this technique because it has been used by many researchers to find solution

to problems like parent-child conflict, domestic violence, delinquency, antisocial behaviour, child behaviour problems, schizophrenia, alcoholism, substance abuse, poor self concept and school counselling related issues (Pichot & Dolan, 2003; Stephen, 2014).

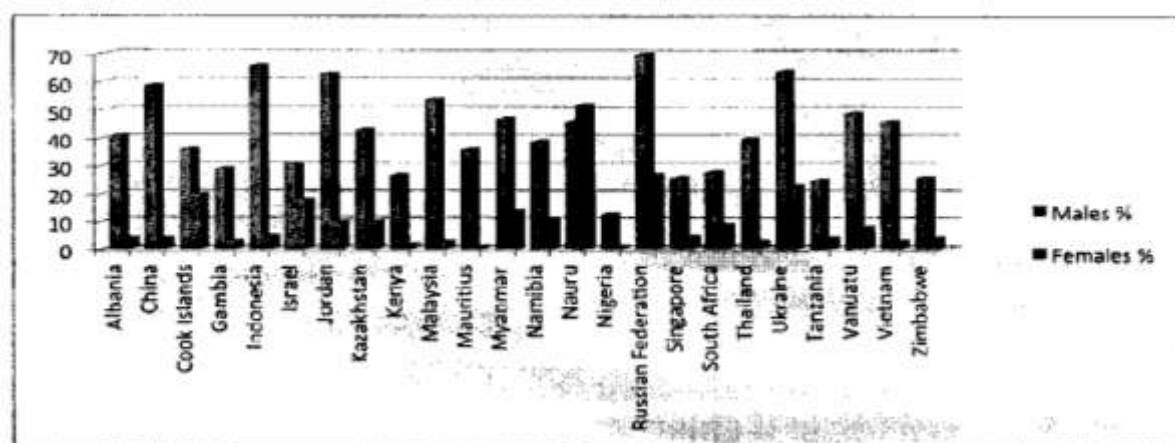
Ksir (2008) in his book 'drug, society and human behaviour traced the history of cigarettes where he indicated that the thin reeds filled with tobacco had been seen by the Spanish in Yucatan in 1518. In 1844 the French were using them, and the Crimean war circulated the cigarette habit throughout Europe. The first British cigarette factory was started in 1856 by a returning veteran of the Crimean war, and in the late 1850s an English tobacco merchant, Philip Moris, began producing handmade cigarettes. Also in the United States, cigarette were being produced during the same period, by the beginning of 19<sup>th</sup> century more than a billion cigarette a year were being sold.

Ksir (2008) also indicated that at the start of the 20<sup>th</sup> century, there were preference for cigarette with an aromatic components that is, Turkish tobacco camels, a new cigarette in 1913. The camel brand contained just a hint of Turkish tobacco, it eliminated most of the imported tobacco and made its price very low and with a big advertising campaign: The camels are coming: Tomorrow there'll be more CAMELS in town than in all of Asia and Africa combined". By 1918 camels had 40 percent of the market and stayed in front until after World War II.

By 1937 King size cigarette appeared in the form of Pall Mall and it become the top seller, then filter cigarettes appeared in 1954 which rapidly took over the market and continued to be number one and over 90 percent of the type of cigarette use all over the world.

Nigeria is one of the three largest tobacco markets in Africa, others being Egypt and South Africa. Tobacco sales in Nigeria have continued for long with profits of the Nigerian tobacco companies increasing year on year. Although there are no records of consumers in Nigeria, WHO report has estimated that Nigeria has a population of almost 13 million smokers, and 18bn cigarettes are sold each year at a value of about \$931m (N185 billion). Nigeria has a relatively low smoking prevalence rate (Figure 1) compared to other countries across the globe.

**Figure 1:** Nigeria has one of the lowest smoking prevalence rates in the world



**Source:** Tobacco Atlas (Third Edition 2012)

From the explanations so far, it is clear that cigarette smoking may be one of the serious health, social and economic problems that contribute immensely to the academic failure and on set of so many health issues of senior secondary school students, in this regard positive reinforcement technique and solution focused brief counselling technique were applied and tested to see their effect on the menace of cigarette smoking among youth.

## 1.2 Statement of the Problem

Despite the hazard associated with cigarette smoking there is always a high increase in the habit among adolescents and youths in Nigeria. In Katsina State cigarette smoking is



very common in most secondary schools especially the day students in public secondary schools where they sneak out of schools to different joints to smoke. The prevalence of this problem among senior secondary school students within Katsina city is alarming, this problem cuts across all gender and ethnic groups.

It has been observed by the researcher that majority of the students are seen to avoid attending classes, they are seen roaming about the streets and other joints during school hours. They cannot stay and focus in the regular class activities. This is so because of the urge to smoke cigarette. For this to be remedied it has to be linked up to some counselling interventions and other disciplinary measures.

Female students are also involved in this habit of cigarette smoking, this happens mostly from home where they imitate their mothers who smoke or send them to purchase. Smoking cigarette by female children is so disastrous and the effect can lead to them being drop out of school, indulging into other drug abuse and this can be a serious stigma for them in the society. It can stop or prevent them from accomplishing their dream of getting married and becoming mothers. It can lead to serious health complications later in life.

Cigarette smoking effects are seen in the health aspects of the smokers in Nigeria according to Global Adult Tobacco Survey (2012) 5.6% (4.7 million) Nigeria adults aged 15 years or older currently used tobacco products. 10.0% (4.2 million) of men and 1.1% (0.5 million) of women. Overall 3.9% (3.1million) of adults (7.3% of men and 0.4% of women) currently smoked tobacco and 3.7% (3.1 million of adults (7.2% of men and 0.3% of women) currently smoked cigarettes. Overall 2.9% of adults (2.4 million) were daily smokers 5.6% men, 0.3% of women) while 0.9% (0.8 million) were occasional smokers (1.8% of men and 0.1% of women). Daily smokers smoked an average of 8 cigarettes per

day; 7 cigarettes per day in urban areas and 9 cigarettes per day in rural areas. More than 60% of 20 to 34 year old males who had ever smoked on a daily basis started smoking daily before the age of 20 years. More than half of all currently daily tobacco users (55.3%) had their first tobacco use of the day within 30 minutes of waking up. Smokeless tobacco products were used by 1.9% of adults (1.6 million) (2.9% of men and 0.9% of women).

Other effects of cigarette smoking; especially to adolescents according to Difranza (2002) includes, Bronchus Pasm – “airway irritability” or the abnormal tightening of the airways of the lungs, increase phlegm production in which the lungs produces mucus to trap the chemical and toxic substances. Persistent cough, decrease physical performance, atherosclerosis; a process in which fat and cholesterol form “plaques” and stick to the walls of an artery. Thrombosis: a process that results in the formation of a clot inside blood vessels, smoking, even light smoking causes the body’s blood vessels to constrict (vasoconstriction), to assist the young smoker and adolescent out of this trouble, effective counselling techniques such as positive reinforcement and solution focused brief counselling techniques were employed.

The nature of this problem is so disastrous considering the effects of cigarette smoking to human health, it therefore requires counselling intervention which prompted the researcher to address the problem through the effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis.

### **1.3 Objectives of the Study**

The objectives of the study are to determine:-

1. The effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis.
2. The effect of solution focused brief counselling on cigarette smoking among senior secondary school students in Katsina metropolis.
3. The gender effect on the efficacy of positive reinforcement technique in reducing cigarette smoking among secondary school students in Katsina metropolis.
4. The gender effect on the efficacy of solution focused brief counselling technique in reducing cigarette smoking among secondary school students in Katsina metropolis.
5. The effects of positive reinforcement and solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis.
6. The effects of positive reinforcement and solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

#### **1.4 Research Questions**

The following questions were answered.

1. What is the effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis?
2. What is the effect of solution-focused brief counselling on cigarette smoking among senior secondary school students in Katsina metropolis?
3. How does gender affect the efficacy of positive reinforcement technique in reducing cigarette smoking among secondary school students in Katsina metropolis?

4. How does gender affect the efficacy of solution focused brief counselling technique in reducing cigarette smoking among secondary school students in Katsina metropolis?
5. What are the effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis?
6. What are the effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis?

## **1.5 Hypotheses**

The following null hypotheses were tested.

1. There is no significant effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis.
2. There is no significant effect of solution focused brief counselling on cigarette smoking among senior secondary school students in Katsina metropolis.
3. Gender has no significant effect on the efficacy of positive reinforcement technique in reducing cigarette smoking among secondary school students in Katsina metropolis.
4. Gender has no significant effect on the efficacy of solution focused brief counselling technique in reducing cigarette smoking among secondary school students in Katsina metropolis.

5. There are no significant effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis.
6. There are no significant effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

## **1.6 Basic Assumptions**

The following basic assumptions are made for the study:

1. That the positive reinforcement technique will have positive effect on cigarette smoking among senior secondary school students in Katsina metropolis.
2. That the solution focused brief counselling will have positive effect on cigarette smoking among senior secondary school students in Katsina metropolis.
3. That the positive reinforcement and solution focused brief counselling techniques will have positive effect on cigarette smoking among male and female secondary school students in Katsina metropolis.

## **1.7 Significance of the Study**

The study will determine the effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among secondary school students in Katsina metropolis. It is hoped that the study will benefit the youth, all secondary school stakeholders, the counsellors and the community at large.

The study would therefore provide remedies for youth cigarette smokers in Katsina metropolis to try, practice and use it so that they may be free from smoking and may live a

healthy life in school and outside school. This would be achieved through the provisions of positive reinforcement and solution focused brief counselling techniques assumptions, conditions and applications.

The findings of the study would benefit secondary schools staff i.e. teachers and principals as they would have full attention of their students and it would close doors to other unwanted behaviours like truancy, stealing, and later drug abuse.

The results of this study would provide empirical data for counselors that positive reinforcement and solution focused brief counselling techniques can be used in reducing the menace of cigarette smoking.

The findings of this research will be significant to school counsellors and psychologists. It will be of great importance towards improving their level of awareness about the relationship between cigarette smoking and poor performance among senior secondary schools students. It will also increase their awareness of the effectiveness of positive reinforcement and solution focused brief counselling technique in reducing the habit of cigarette smoking among students.

It is hoped that the findings of this study will also help parents, teachers and school authorities in understanding negative impact of cigarette smoking among secondary school students, it will also provide information to parents and school authorities on what cigarette smoking can lead to and thus the possibility of putting in more measures in looking after their children and allowing them to seek for counselling interventions that will assist them to develop quitting skills in order to stay free and healthy to achieve their maximum potentials in school and outside school.

The findings of this work will also help all the stakeholders of senior secondary school education in Katsina state such as Ministry of Education, Katsina State Science and Technology Board and others to understand the effects of cigarette smoking and how it contribute to poor performance among student.

The findings of this research will help the students to understand the negative effect of cigarette smoking to their health and effectiveness of positive reinforcement and solution focused brief counselling techniques in helping them to quit smoking.

The study will help the community in exposing the dangers of cigarette smoking not only to the youth but to the larger population. It will also provide them with the knowledge of positive reinforcement and solution focused brief counselling techniques as counselling interventions that are effective in helping the smokers to stop smoking.

It will also serve as a reference data for counselling programme on how to use positive reinforcement and solution focused brief counselling technique on the smokers in order to curb the smoking menace as well as a valuable source of information for subsequent researchers in the same or related areas.

## **1.8 The Scope and Delimitation of the Study**

The study is on effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis. It covers twelve (12) secondary schools within Katsina metropolis. It is restricted to Katsina metropolis secondary school students both male and female.

The study used 2 counselling techniques, other techniques like cognitive restructuring and token economy were delimited and it covered only SS2 students of public

secondary schools within Katsina metropolis other levels of students such as SS3 students and JSS 1 – 3 were delimited.



## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter reviews literature on cigarette smoking which is the problem under investigation, in doing this the concept of cigarette smoking and the various aspects related to it were discussed. The second part of the review looked at the nature of the counseling techniques used in the study positive reinforcement and solution focused brief counseling techniques.

#### **2.2 Concept of Cigarette Smoking**

Ray (2008) indicates that cigarette is a French word – for a product consumed through smoking, it is manufactured out of a cute and finely cut tobacco leaves combined with other additive, which are then rolled or stuffed into a paper wrapped cylinder, which are ignited and inhaled usually through a cellulose acetate filter into the mouth and lungs.

Saul (2007) also indicated that tobacco smoking is the practice of smoking tobacco and inhaling tobacco smoke (consisting of particles and gaseous phases). The practice encountered criticism from its first import into the western world onwards, but embedded itself in certain strata of a number of societies before becoming widespread upon the introduction of automated cigarette rolling apparatus.

Nigang and Jeffery (2006) maintained that smoking is the most common method of consuming tobacco and tobacco is the common substance smoked. Tobacco is an agricultural product that is often mixed with additives and then combusted, the resulting smoke is then inhaled and the active substance absorbed through alveoli in the lungs or the

oral mucosa. Many substances in cigarette smoke trigger chemical reactions which heighten heart rate and alertness.

The General Surgeon Report (as cited by Escandon and Galvez, 2007) shows that cigarette cause lung cancer as well as bladder, cervix, oesophagus, kidney, larynx mouth, pancreas and stomach cancers. In fact as it was stated by Bergen (1999) that cigarette smoking is the largest preventable risk factor for morbidity and mortality in most countries.

Cigarette according to Escandon and Galvez (2007) is a drug with a business card (i.e. one that is socially welcome). Most people who smoke admit doing so with confidence because smoking carries less social stigma than the use of other substances such as alcohol or illicit drugs. And that is why the growth and consumption of it were known and become so popular that in many places throughout the world, government themselves are the owners of tobacco companies. It is believed in most societies that tobacco is an interesting social dilemma. It is a product that is legal for adults to use and that a significant proportion of adults enjoy using and expect to continue using, yet a substance that is responsible for more adverse health consequences and death than any other.

Ksir (2008) wrote that long before Christopher Columbus stumbled on to western hemisphere, the Indians were using tobacco. He traced the history of tobacco to a monk in 1497 who had accompanied Columbus on his second trip wrote a book titled “Nature Customs” it was in this book that first printed report of tobacco smoking was indicated.

Tobacco came from one of the two sources (1) Tobacco referred to a two – pronged tube used by natives to take snuff. But some early reports confused the issue by applying the name to the plant they in correctly thought was being used. Another idea as cited by Ksir (2008) is that the word developed its current usage from the province of tobaccos in

Mexico where everyone used the herbs. From the above it is clear that the herb that is rolled into the paper cylinder cigarette is what is referred to as tobacco: In Nigeria and elsewhere the two names cigarette and tobacco are almost similar in usage.

### **2.2.1 Pharmacology, Absorption and Metabolism of Nicotine**

Lamberg (2004) reported that Nicotine makes up 93% of all the alkaloids contained in the smoke of cigarette and it is responsible for the dependency level on cigarette because it begins acting on the neurons (brain cells) by first sedating them and then stimulating them.

Nicotine is a naturally occurring liquid alkaloid that is colorless and volatile, on oxidation it turns brown and smells much like burning tobacco(Kris, 2008). Cigarette smoke is being inhale by the users, inhalation is a very effective drug-delivery system; 90% of inhaled nicotine is absorbed. The physiological effect of smoking one cigarette have been mimicked by injecting about 1mg of nicotine intravenously (Kris, 2008).Nicotine is well established as one of the most toxic drugs known and a cigar contains enough nicotine for two lethal doses.

Chalton, (2004) stated that nicotine is primarily deactivated in the liver, with 80 to 90 percent being modified before excretion through the kidneys, part of the tolerance that develops to nicotine might result from the fact that either nicotine or tars increase the activity of the liver microsomal enzymes that are responsible for the deactivation of drugs. These enzymes increase the rate of deactivation and thus decrease the clinical effects of the benzodiazepines and some antidepressants and analgesics. The final step in eliminating deactivated nicotine from the body may be somewhat slowed by nicotine itself since it acts

on the hypothalamic to cause a release of the hormone that acts to reduce the loss of body fluids.

It is clear that cigarette smoking impair with good physical health of the smokers, and the earlier the age at which smoking is started the more smoking and the longer. It is being done and the greater the impairment to the body.

### **2.2.2 Physiological Effects of Cigarette Smoking**

Ray (2008) indicated that the effect of nicotine on areas outside the central nervous system has been studied extensively. Nicotine mimics acetylcholine by acting at several nicotinic subtypes of cholinergic receptor site. Nicotine is not rapidly deactivated and continued occupation of the receptor prevents incoming impulses from having an effect, thereby blocking the transmission of information at the synapse. The nicotine first stimulates and then blocks the receptor. Nicotine also causes a release of adrenaline from the adrenal glands and other sympathetic site and thus has, in part, a sympathomimetic action. Additionally, it stimulates and then blocks some sensory receptors, including the chemical receptors found in some large arteries and the thermal pain receptors found in the skin and tongue.

The symptoms of low-level nicotine poisoning are well known to beginning smokers, they include nausea, dizziness and general weakness while in acute poisoning nicotine causes tremors, which develop into convulsions, terminated frequently by death. The cause of death is suffocation resulting from paralysis of the muscles used in respiration. This paralysis stems from the blocking effect of nicotine on the cholinergic system that normally activates the muscles. With increase release of adrenaline it leads to an increase in coronary blood flow, along with vasoconstriction in the skin and increase heart rate and

blood pressure – the increased heart rate and blood pressure raise the oxygen need of the heart but not the oxygen supply (Ray, 2008).

Another action of Nicotine according to S. Ray (2008) which has negative health effect is that it increases platelet adhesiveness, which increases the tendency to clot. Within the central nervous system, nicotine seems to act at the level of the cortex to increase somewhat the frequency of the electrical activity that is to shift the EEG toward an arousal pattern.

Many health effects of nicotine are easily discernable in the smoking individual and the signs and symptoms often depend on the specific illness they cause as explained by Bergen (1999) – shortness of breath, this may be a sign of emphysema i.e. heart disease – chest pain – this may signal angina pectoris caused by insufficient blood flow to the heart.

- Difficulty of swallowing or persistent hoarseness – this may signal a cancer in the mouth or larynx

- Painless bloody urination may signal bladder cancer.

It is further maintained that cigarette smoking is the cause of 80 to 90 percent of deaths resulting from chronic obstruction lung disease – another 90,000 cigarette related premature deaths per year (Kris, 2008).

Tobacco smoking is estimated to lead to the premature death of approximately 6 million people worldwide and 96,000 in the UK each year (Action on Smoking and Health, 2016 b; World Health Organisation, 2013). A premature death from smoking is defined as a death from a smoking related disease in an individual who would otherwise have died later from another cause. On average this premature death involve 10 years of life lost (US Department of Health and Human Services, 2014). Many of these deaths occur in people

who have stopped smoking but whose health has already been harmed by smoking. It also happens to be the case that smokers who do not stop smoking lose an average of 10 years of life expectancy compared with non smokers and they start to suffer diseases of old age around 10 years earlier than non-smokers (Jha & Peto, 2014).

Tobacco is a public health priority. Recent reports like (the 2004 WHO Tobacco Initiative) as cited by Escandon and Galvez (2007) indicate that it is an outstanding preventable cause of death in the world – it further stated that

- The habit of smoking is currently responsible for 10% of deaths among adults throughout the world; five million people die every year because of it.
- In developing countries is well on its way to becoming the first cause of death.

Tobacco smoke contains biologically significant concentrations of known carcinogens as well as many toxics chemicals, some of these, including a number of tobacco specific nitrosamines are constituents of tobacco, largely as a result of the way it is processed, while others such as benzopyrine result from combustion of tobacco (Action on Smoking and Health, 2014b). These chemicals form part of the particulate matter in smoke. Tobacco smoke also contains gas, carbon monoxide (Co). Co is a potent toxin, displacing oxygen from haemoglobin molecules. However, acutely the amount of Co in tobacco smoke is too small to lead to hypoxia and the body produces increased numbers of red blood cells to compensate. The nicotine in tobacco may cause a small part of the increase in cardiovascular disease but none or almost none of the increase is risk of respiratory disease or cancer. It is the other components of cigarette smoke that do almost all the damage. It has been proposed on the basis of studies with other species that nicotine damages the adolescent brain but there is no evidence for clinically significant deficits in cognition or

emotion in adults who smoked during adolescent and the stopped (US Department of Health and Human Services, 2014).

Smokers who stop before their mid-30s have approximately the same life expectancy as never smokers (Doll, Peto, Boreham & Sultherland, 2014). After the age of 35 or so stopping smoking recovers 2 – 3 months of healthy life expectancy for every year of smoking avoided or 4 – 6 hour for every day. Sign and symptoms of tobacco related diseases, often depend on the specific illnesses they cause. There are many other symptoms of tobacco related diseases and those listed below are simple examples.

- Shortness of breath may be a sign of emphysema or heart disease.
- Chest pain may signal angina pectoris caused by insufficient blood flow to the heart or a heart attack.
- Difficulty of swallowing, or persistent hoarseness, may signal a cancer in the mouth or larynx
- Painless bloody urination may signal bladder cancer.
- The presence of any of the above common symptoms associated with tobacco use should prompt a visit to the doctor or hospital's emergency department.

### **2.2.3 Behavioural Effects of Cigarette Smoking**

Nicotine addiction is an extremely complex process that involves biological, psychological behavioural and cultural effects. The behavioural effects can be seen in the general performance of an individual smoker.

Heishman (1999) says that if nicotine addicted smokers are deprived of nicotine, their attention and cognitive abilities will be impaired and such deficits could be reversed if the person smokes or is given nicotine. So nicotine enhances focused and sustained their attention, recognition, mood and reasoning. (Passer & Smith 2007) Nicotine is an agonist

drug that increases the activity of a neurotransmitter it may enhance a neurons ability to synthesize, store or release neurotransmitters. It can also mimic the action of a neurotransmitter by binding with and stimulating postsynaptic receptor sites;

The above changes that are caused by nicotine can result into several unwanted acts which the society may frown at, as it is indicated by (Bloomfield et al, 2002). The physical and social setting in which – drug is taken can strongly influence a user's reaction, intense demand for it can cause or trigger compensatory physiological responses and cravings that leads to increased aggressiveness and intense desperation.

#### **2.2.4 Economic Cost of Smoking**

The economic costs of tobacco are immense, and they justify prosecution of a trade that its profits causing so much damage. Escandon and Galvez (2007) said that regular smokers of cigarette consume one packet a day, the price of that one packet times the number of weeks, months and years they will spend smoking they will squander the equivalent of the price of a good household appliance and even a good car or a house itself.

The economic costs of the use of tobacco at a national level are equally devastating as reported by (WHO) Tobacco Free Initiative, as cited by Escandon and Galvez (2007). “It reads apart from the huge expenditure in public health to treat the diseases caused by the habit of smoking, tobacco kills people when they are most productive, depriving their families of their financial support and the nations from their healthy workforce. Also people who smoke are also less productive as their diseases progress.

### **2.3 Causes of Tobacco Smoking**

Smoking is a behavior, as such we may think of it having causes and effects in the same manner as other human activities. Behaviour problem has been variously defined by



both laymen and professionals. It is simply defined as an action taken where it is not needed. This action is not regarded as normal, rather it is said to be deviating from what is socially acceptable. These behaviours are deemed deviant by teachers, parents, counselors and others (Odoemelam,2006). There are many causes underlying tobacco smoking among students. Some of the possible causes according to Okon (1984) include;

### **2.3.1 Poor Parental Supervision**

As individuals we often do things as a result of our background or feelings about our knowledge of things around us. Most importantly is our understanding of things. The son or daughter of a smoker might consider smoking as a pleasurable thing. He or she might not see anything wrong with it since his or her parent or at least one of them or an admired relation smokes.

Children of smoking parents are more likely to smoke than children with non-smoking parents. One study found that parental smoking cessation was associated with less adolescent smoking, except when the other parent currently smoked. A current study tested the relation of adolescent smoking to rules regulating where adults are allowed to smoke in the home. Results showed that restrictive home smoking policies were associated with lower likelihood of trying smoking for both middle and high school students.

It has been identified that parent who stay in 3-4 room apartment especially in cities or in communities where boys are given a room or two at the outskirts of the family find it difficult to effect control over their youths as they go out and come in any time unchecked. The youths capitalize on this to engage in taking hemp, cigarettes, alcohol or other dangerous substances especially at night, quite unknown to parents.

Over pampering or over protection of adolescents sometimes lead them to indulge in excessive tobacco smoking, even lead to trying hard drugs as well. When they are given huge amount of money they may likely mess up in finding ways to spend the money.

### **2.3.2 Peer Group Pressure**

Fawibe and Shittu (2011) maintained that many anti-smoking organizations claim that teenagers begin their smoking habits due to peer pressure, and cultural influence portrayed by friends. However, one study found that direct pressure to smoke cigarettes did not play a significant part in adolescent smoking. In that study, adolescents also reported low levels of both normative and direct pressure to smoke cigarettes. A similar study showed that individuals play a more active role in starting to smoke than has previously been acknowledged and that social processes other than peer pressure need to be taken into account. Another study's results revealed that peer pressure was significantly associated with smoking behavior across all age and gender cohorts, but that intrapersonal factors were significantly more important to the smoking behaviour of 12-13 year-old girls than same-age boys. Within the 14 – 15 year-old age group, one peer pressure variable emerged is significantly more important predictor of girls' than boys' smoking. It is debated whether peer pressure or self-selection is a greater cause of adolescent smoking. It is arguable that the reverse of peer-pressure is true, when the majorities of peers do not smoke and ostracize those who do.

Many smokers have recalled taking their first decision to try smoking when they were exposed to cigarette stubs. Many have also confessed that they took their first decision when they were exposed to cigarette which their fathers, uncles, or relations were smoking.

The question of whether to accept or reject at that time did not arise, since they did not choose to be born into such family.

Famous smokers used cigarettes or pipes as part of their images. Writers in particular seemed to be known for smoking. The popular author Kurt Vonnegut addressed his addiction to cigarettes within his novels. British Prime Minister Harold Wilson was well known for smoking a pipe in public as was Winston Churchill for his cigars. Sherlock Holmes, the fictional detective created by Sir Arthur Conan Doyle smoked a pipe, cigarettes, and cigars, besides injecting himself with cocaine, "to keep his overactive brain occupied during the dull London days, when nothing happened". The DC Vertigo comic book character, John Constantine, created by Alan Moore, is synonymous with smoking, so much so that the first storyline by Preacher creator, Garth Ennis, centred around John Constantine contracting lung cancer. Professional Wrestler James Fullington, while in character as "The Sandman", is a chronic smoker in order to appear "tough".

Often when people are disturbed emotionally, they do things on spur of the moment comfort the emotional problems. Many smokers have been known to smoke as a result of their wish to forget or eradicate a problem. These categories of people consider smoking as a drug that could help them to forget or tackle an emotional problem.

The use of cigarette at ceremonies and meetings has become an acceptable norm since they are made available and free for consumption, there could be some temptations of one to be actively involved. There is the belief that smoking reduces stress, it aids thinking, it is a cure for boredom and also associated with achievements by those who indulge in the habit of smoking.

This is the mark of maturity and sociability, some adolescent smoke just to show to the adult world that they have arrived and this is characterized by becoming a big person by doing what the seniors are doing; they want to impress other people that smoking is a sign of arrival to higher status in life.

### **2.3.3 The Mass Media**

The youth who will identify nothing regarding the names, taste and the use of tobacco are exposed to this information by the mass media like the newspaper, magazine, radio, television and video houses. For example the mass media has often times advertised cigarettes in such an attractive manner that youth who are itchy, explorative, and volatile always fall prey to it. The television presentations are always so glamorous that the adolescents are mostly likely to try them, and eventually go on using them.

Before the 1970s, most tobacco advertising was legal in the United States and most European nations. In the United States, in the 1950s and 1960s, cigarette brands were frequently sponsors of television shows-most notably shows such as *To Tell the Truth* and *I've Got a Secret*. One of the most famous television jingles of the era came from an advertisement for Winston cigarettes. The slogan "Winston tastes good like a cigarette should!" proved to be catchy, and is still quoted today. Other popular slogans from the 1960s were "Us Tareyton smokers would rather tight than switch!" which was used to advertise Tareyton cigarettes, and "I'd Walk a Mile for a Camel".

In the 1950s, manufacturers began adding filter tips to cigarettes to remove some of the tar and nicotine as they were smoked. "Safer", "less potent" cigarette brands were also introduced. Light cigarettes became so popular that, as of 2004, half of American smokers preferred them over regular cigarettes, in spite the fact that the idea of a "safer" cigarette is

a myth. Cigarettes that offer "low tar and nicotine" cause the smoker to smoke more or to inhale more deeply to get the same level of nicotine. According to the Federal Government's National Cancer Institute (NCI), light cigarettes provide no benefit to smoker's health.

In the United States, it was believed by many that tobacco companies are marketing tobacco smoking to minors. For example, Reynolds American Inc. used the Joe Camel cartoon character to advertise Camel cigarettes. Other brands such as Virginia Slims targeted women with slogans like "You've come a Long Way Baby".

In 1964, the Surgeon General of the United States released the Surgeon General's Advisory Committee Report on Smoking and Health. It was based on over 7000 scientific articles that linked tobacco use with cancer and other diseases. This report led to laws requiring warning labels on tobacco products and to restrictions on tobacco advertisements. As these began to come into force, tobacco marketing became more subtle, with sweets shaped like cigarettes put on the market, and a number of advertisements designed to appeal to children, particularly those featuring Joe Camel resulting in increased awareness and uptake of smoking among children. However, restrictions did have an effect on adult quit rates, with its use declining to the point that by 2004, nearly half of all Americans who had ever smoked had quit.

Many nations, including Russia and Greece, still allow billboards advertising tobacco use. Tobacco smoking is still advertised in special magazines, during sporting events, in gas stations and stores, and in more rare cases on television. Some nations, including the UK and Australia, have begun anti-smoking advertisements to counter the effects of tobacco advertising.

The actual effectiveness of tobacco advertisement is widely documented. According to an opinion piece by Henry Saffer, public health experts say that tobacco advertising increases cigarette consumption and there is much empirical literature that finds a significant effect of tobacco advertising on smoking, especially in children. A Dutch tobacco company manufactures "Pink Elephant" vanilla-flavored cigarettes, and "Black Devil" chocolate-flavored cigarettes.

Exposure to smoking in movies has been linked with adolescent smoking initiation in cross-sectional studies. Films tend to have a high incidence of smoking behaviour vis-a-vis the general population. According to a study of movies created between 1988 and 1997, eighty-seven percent of these movies portrayed various tobacco use, with an average of 5 occurrences per film. Il-rated movies had the greatest number of occurrences and were most likely to feature major characters using tobacco. Despite the declining tobacco use in the society, the incidence of smoking in 2002 movies was nearly the same as in 1950 movies.

There have been moves to reduce the depiction of protagonists smoking in television shows, especially those aimed at children. For example, Ted Turner took steps to remove or edit scenes that depict characters smoking in cartoons such as Tom and Jerry. The Flintstones and Scooby-Doo, which are shown on his Cartoon Network and Boomerang television channels.

#### **2.3.4 Depression**

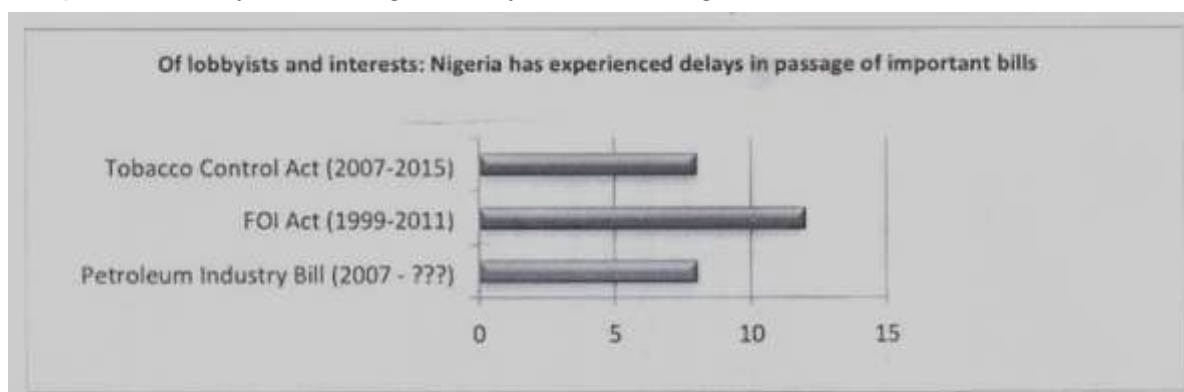
Nicotine directly affects, alter and takes control of specialized receptor cells in the brain which is responsible for regulating wellbeing, mood and memory, many disadvantaged adolescents face the future without hope and are confronted with economic,

social, and different forms of discrimination, sometimes with impossible living conditions. They resort to smoking in order to modify their moods and cope with the challenges of life.

## **2.4 Government Efforts at Curbing Tobacco Consumption in Nigeria**

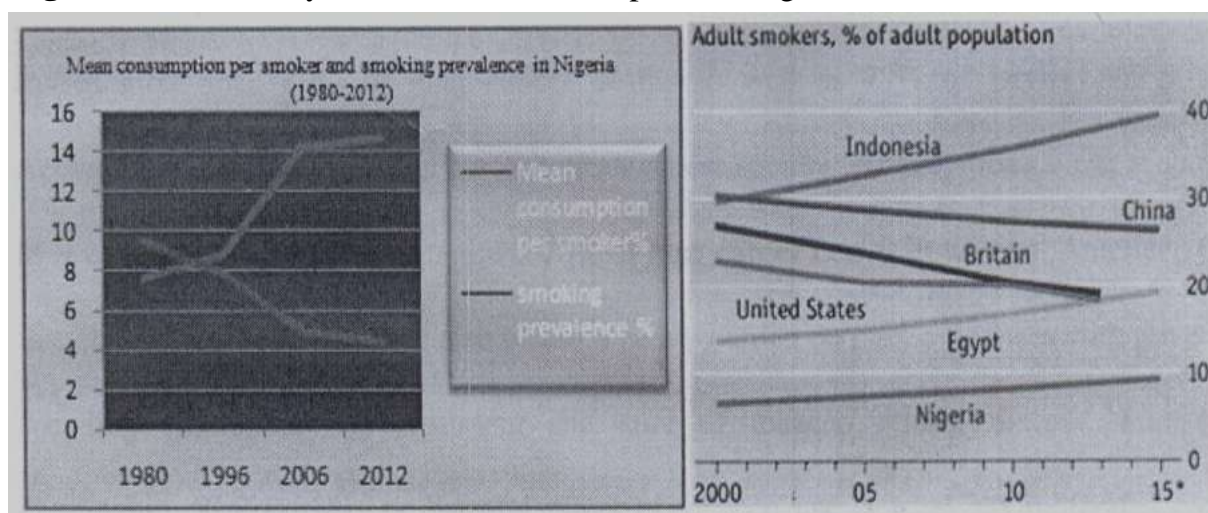
Till date, Nigeria has passed only two pieces of legislation aimed at controlling tobacco consumption among its citizens. These are the 1990 Tobacco (Smoking) control decree and the 2015 Tobacco control Act. The 1990 tobacco (smoking) control decree banned smoking in certain public spaces, and advertisement of tobacco products among other provisions and remained in place until 2014 when the country signed the WHO Framework Convention on Tobacco Control. However, the bill took years to be incorporated into Nigerian laws. The slow passage of the bill and increasing health challenges led to the suing of big tobacco in 2007 by three Nigerian states (Lagos, Gombe and Kano) and the Federal government. “Big tobacco”, a collective name used to refer to British American Tobacco, Phillip Morris (Altria) and International Tobacco for \$38.6 billion. Subsequently the Nigerian government withdrew the suit without any reasons adduced for its withdrawal. It is speculated that Big Tobacco may lobbied the Nigerian government to have the cases withdrawn. Big tobacco has always influenced legislation aimed at restricting their activities or affecting their profits. In 2008, a draft reading of the Tobacco control bill passed through second reading in the Nigerian senate and then it went 'missing'. In 2009, British American Tobacco (BAT), controller of the largest share of Nigeria's tobacco market allegedly coordinated lobbying efforts in stalling passage of the Tobacco control bill, Premium Times Nigeria,(2012). That same year, the Tobacco control bill passed through the senate but never received the required Presidential assent.

**Figure 2:** Delays in Passage of Key Tobacco Regulations



The National Tobacco Control Act shares similarities with the 2005 WHO Framework Convention on Tobacco Control (FCTC). A quick comparison of the 1990 Tobacco Control Decree and 2015 Tobacco Control Act is highlighted below:

**Figure 3:** Trend analysis of tobacco consumption in Nigeria



**Source:** Economist, JAMA, WHO

A lot of Nigerians are also exposed on a daily basis to Environmental Tobacco Smoke (ETS) also known as 'second-hand smoke'. Overall, 29.3 % of the populations are exposed in restaurants, while 17.3% are exposed to smoke in the workplace.

Second-hand smoke poses serious health risks worldwide, especially among infants. In fact, exposure to second-hand smoke is one of the leading causes of preventable deaths. In a recent study published in the Journal of American Medical Association, (JAMA),



smoking causes more than 80% of lung cancer deaths as well as 77% of larynx cancer deaths. According to data published on the American cancer society website, tobacco use accounts for 87% of lung cancer deaths in men and 70% of lung cancer deaths in women, American Cancer Society, ACS (2017). Tobacco also places a heavy burden on public finances with government spending enormously on treatment and cure of tobacco related disease, Smoke Free Partnership, SFP (2014). The harmful effect of tobacco use is what has motivated countries over the world to implement control measures on the consumption and advertisement of tobacco. The Nigerian government has over the years implemented measures aimed at controlling tobacco consumption among its population.

#### **2.4.1 Legal Issues and Regulation**

On 27 February 2005 the World Health Organization Framework Convention on Tobacco Control, took effect. The convention is the world's first public health treaty. Countries that sign on as parties agree to a set of common goals, minimum standards for tobacco control policy, and to cooperate in dealing with cross-border challenges such as cigarette smuggling. Currently the World Health Organization declares that 4 billion people will be covered by the treaty, which includes 168 signatories. Among other steps, signatories are to put together legislation that will eliminate secondhand smoke in indoor workplaces, public transport, indoor public places and as appropriate, other public places.

#### **2.4.2 Tobacco Control Decree 1990 Tobacco Control Act 2015**

1. Restriction of smoking in Cinema, theatre, offices, public transportation, lifts, medical establishments, schools and Nursery institutions.

Comprehensive prohibition of smoking contained in the second schedule to the Act.

Prohibition now extends to restaurants, bars, places of worship, police stations, etc.

2. Restriction of tobacco adverts in Newspaper, Magazines, Radio, Television, Cinema, Billboards, and handbills

Restriction of tobacco adverts and any public statement, communication, representation or reference that promotes or publicizes tobacco or a tobacco product or encourages use or draws attention to the nature, properties, advantages or uses of the product. Also restricts product stacking and product displays of any kinds or size; the use of any advertisement or promotion of a tobacco product aimed at the public where the name or any part of the name of the product being advertised is used as or is included in a tobacco product trademark.

3. Tobacco packages to contain certain information such as Federal Ministry of Health Warnings inscribed on the package and the-amount of tar and on Nicotine stated on the pack.

Clear distinctions in s.4 of the Act, providing regulations pertaining to the export, import and transportation/ transfer of tobacco products within the country. Signs are to be placed on retail outlets that the law prohibits sales to underage persons. Responsibility also placed on retailer to dismiss persons. Also every package containing a tobacco product shall have at least two un-obscured health warning labels and/or health messages, covering 50% of the principal display or total surface area

4. Penalties for smoking between N100 and 1,000 Penalties and/or imprisonment terms of between 1 month and 2 years

Penalties increased to N25,000 or to imprisonment for a term not exceeding six months, or to both.

5. Advertisement of tobacco products carries a fine of N5,000 and imprisonment term not exceeding 3 years.

In accordance with s.18 advertisement of tobacco products imposes fines not exceeding five hundred thousand naira, or to imprisonment for a term not exceeding three years, or to both.

### **2.4.3 Age Restrictions and Taxation**

Many countries have a smoking age, In many countries, including the United States, most European Union member states, New Zealand, Canada, South Africa, Israel, India, Brazil, Chile, Costa Rica and Australia, it is illegal to sell tobacco products to minors and in the Netherlands. Austria, Belgium, Denmark and South Africa it is illegal to sell tobacco products to people under the age of 16. On 1 September 2007 the minimum age to buy tobacco products in Germany rose from 16 to 18, as well as in Great Britain on 1 October 2007. In 46 of the 50 United States, the minimum age is 18, except for Alabama, Alaska, New Jersey, and Utah where the legal age is 19 (also in Onondaga County in upstate New York, as well as Suffolk and Nassau Counties of ton" Island. New York). Some countries have also legislated against giving tobacco products to (i.e. buying for) minors, and even against minors engaging in the act of smoking. Underlying such laws is the belief that people should make an informed decision regarding the risks of tobacco use. These laws have a lax enforcement in some nations and states. In other regions, cigarettes are still sold to minors because the fines for the violation are lower or comparable to the profit made from the sales to minors. However in China, Turkey, and many countries children have little problems buying tobacco products, because they are often told to go to the store to buy tobacco for their parents.

Cigarettes have become very expensive in places that want to reduce the amount of smoking in public. Many governments introduced excise taxes on cigarettes in order to reduce the consumption of cigarettes. Money collected from the cigarette taxes are frequently used to pay for tobacco use prevention programs, therefore making it a method of internalizing external costs.

In 2002, the Centers for Disease Control and Prevention said that each pack of cigarettes sold in the United States costs the nation more than \$7 in medical care and lost productivity. That's over \$2000 per year/smoker. Another study by a team of health economists finds the combined price paid by their families and society is about \$41 per pack of cigarettes.

ACN (2014) maintain that substantial scientific evidence shows that higher cigarette prices result in lower overall cigarette consumption. Most studies indicate that a 10% increase in price will reduce overall cigarette consumption by 3% to 5%. Youth, minorities, and low-income smokers are two to three times more likely to quit or smoke less than other smokers in response to price increases. Smoking is often cited as an example of an inelastic good; however, i.e. a large rise in price will only result in a small decrease in consumption. Many nations have implemented some form of tobacco taxation. As of 1997, Denmark had the highest cigarette tax burden of \$4.02 per pack. Taiwan only had a tax burden of \$0.62 per pack. Currently, the average price and excise tax on cigarettes in the United States is well below those in many other industrialized nations.

Cigarette taxes vary widely from state to state in the United States. For example, South Carolina has a cigarette tax of only 7 cents per pack, the nation lowest, while New Jersey has the highest cigarette tax in the U.S.: \$2.575 per pack. In Alabama, Illinois,

Missouri. New York City, Tennessee, and Virginia, counties and cities may impose an additional limited tax on the price of cigarettes. Due to the high tax rate, the price of an average pack of cigarettes in New Jersey is \$6.45, which is still less than the approximated external cost of a pack of cigarettes. In Canada, cigarette taxes have raised prices of the more expensive brands to upwards of ten CADs.

In the United Kingdom, a packet of cigarettes typically costs between £4.25 and £5.50 (\$8.50/\$11.00) depending on the brand purchased and where the purchase was made. The UK has a strong black market for cigarettes which have formed as a result of the high taxation and it is estimated that 25-30% of all cigarettes smoked in the country avoid UK taxes.

Several Western countries have also put restrictions on cigarette advertising. In the United States, all television advertising of tobacco products has been prohibited since 1971. In Australia, the Tobacco Advertising Prohibition Act 1992 prohibits tobacco advertising in any form, with a very small number of exceptions (some international sporting events were accepted, but these exceptions were revoked in 2006). Other countries have legislated particularly against advertising that appears to target minors.

#### **2.4.4 Package Warnings**

Some countries like Nigeria also imposed legal requirements on the packaging of tobacco products. For example in the countries of the European Union, Turkey, Australia and South Africa, cigarette packs must be prominently labeled with the health risks associated with smoking. Canada, Australia. Thailand, Iceland and Brazil have also imposed labels upon cigarette packs warning smokers of the effects, and they include graphic images of the potential health effects of smoking. Cards are also inserted into

cigarette packs in Canada. There are sixteen of them, and only one comes in a pack. They explain different methods of quitting smoking. Also, in the United Kingdom, there have been a number of graphic NHS advertisements, one showing a cigarette filled with fatty deposits, as if the cigarette is symbolizing the artery of a smoker.

Currently in Australia, almost 70% of the cigarette packet (including 1/3 of the front, the whole back and both sides) are covered in either graphic imagery or health factoids. These warnings depict graphic images of the effects of smoking as well as information about the names and numbers of chemicals and annual death rates. Television ads accompany them, including video of smokers struggling to breathe in hospital. Since then, the number of smokers has been reduced by one quarter. Singapore similarly requires cigarette manufacturers to print images of mouths, feet and blood vessels adversely affected by smoking.

France has the additional requirement of listing on the side of all packaging the percentages of tobacco present, compared to the weight of the paper and additives present. For one U.S. manufacturer of cigarettes sold in France, the side list indicates only 85.0% is tobacco, 9.0% are the additives, and paper constitutes another 6.0% of the total weight of a cigarette. Filters are not part of the formula. The additives are syrup sprayed on the chopped tobacco leaf on the conveyor belt and is a combination of the 599 additive ingredients as submitted to Member of Congress Henry Waxman in a 50 page list by the five major U.S. tobacco companies during his Congressional Hearings on April 14, 1994.

#### **2.4.5 Smoking Bans**

With no laws or norms to ban Nigerians from tobacco consumption, its usage continued to be a matter of individual choice. Hence adults in families and the general

society abuse the substance unrestrictedly and publicity thereby becoming model tobacco users for the younger Nigerian. This coupled with the enticing advertisements depicting tobacco use as a social grace and other developmental psycho-social circumstances may push adolescent to tobacco substance abuse. Thus, the substance is abused by the youth as much as it's available because they are too young to picture the long term consequences of tobacco abuse and addiction.

Several countries such as the Republic of Ireland, Latvia, Estonia, France, Finland, Norway, Canada, Australia, Sweden, Singapore, Italy, Indonesia, India, Lithuania, Chile, Spain, Iceland. United Kingdom, Slovenia and Malta have legislated against smoking in public places, often including bars and restaurants. Restaurateurs have been permitted in some jurisdictions to build designated smoking areas (or to prohibit smoking). In the United States, many states prohibit smoking in restaurants, and some also prohibit smoking in bars. In provinces of Canada, smoking is illegal in indoor workplaces and public places, including bars and restaurants. In Australia, smoking bans vary from state to state. Currently, Queensland has total bans within all public interiors (including workplaces, bars, pubs and eateries) as well as patrolled beaches and some outdoor public areas. There are, however, exceptions for designated smoking areas. In Victoria, smoking is banned in train stations, bus stops and tram stops as these are public locations where second hand smoke can affect non-smokers waiting for public transport, and since July 1st 2007 is now extended to all indoor public places. In New Zealand and Brazil, smoking is banned in enclosed public places mainly bars, restaurants and pubs. Hong Kong banned smoking on 1 January 2007 in the workplace, public spaces such as restaurants, karaoke rooms, buildings, and public parks. Bars serving alcohol who do not admit under-18s have been exempted till

2009. In Romania smoking is illegal in trains, metro stations, public institutions (except where designated, usually outside) and public transportation.

According to Adenijo, (2001) "tobacco is a major industrial crop and is fast coming a major source of cash income for some peasant farmers in West Africa. He added that Niger and Ivory Coast are leading in the production of tobacco in West Africa. According to the international cancer congress (as cited in Folawiyo, 1998) wild claims are made by anti-tobacco people, some alleged that insanity was inherited from parents who used tobacco. Judge blamed cigarettes for corrupting the morals deadening the sense of young people. As scientist began to look more closely at the physiological effects of smoking, it was noted by one cancer authority that the increase in the incidence of pulmonary carcinoma is due largely to the increase in cigarette smoking. In the United Kingdom the Health Education Authority, in its 1995 report confirmed that cigarettes smoke contained more than 4,000 chemicals of which many are known to be toxic, carcinogenic or magnetic. Then report estimates that 121,000 people per year die prematurely as a result of smoking. The causes of death were divided as 38 percent cancer of which two third are lung cancers, 34 percent heart and circulatory disease and. 28 percent respiratory illness. This physiological effect of smoking was supported by Nigerian Television authority (NTA) News reported of 31<sup>st</sup> may, 2000 which stated that tobacco constitutes 70% of cancer causative agents. According to Kuti 2001(3) "over 9 million Nigerian smoke and over 3.5 million smoke more than 20 sticks a day". He added that the chemicals in cigarette damage the eyes, nose and throat with infections. Carbon dioxide, a component of the smoke, he said, enters the blood stream and combines with haemoglobin to form carbon haemoglobin, a substance which interferes with the body's ability to obtain and use oxygen from blood.



## **2.5 Gender Difference among Students Smokers**

There seems to be significance differences in the way men and women acquire and use cigarette. Body differences in physiology make women more vulnerable to the men to the effect of nicotine. Males are usually introduced to cigarette smoking by some of the same sex, while females by some one of the opposite sex (Stephens, 1991). There is high rate of tobacco and cannabis abuse and that of men were found to be more common in the use than women. Heishman (1999) stated that "men cite nicotine; women say social intangibles are behind urge to smoke". This finding was supported by Perkins (1999) who stated that 'nicotine clearly drives a man's desire to smoke, but it may be less of catalyst for women. He however added that it does not mean nicotine is not important for women but that the external, pleasure of smoking such as holding smelling of a cigarette seem to be more important to them which he said is in contrast to men, nicotine seems to influence men's smoking most than the external factors. He added "women appear to be less sensitive to different doses of nicotine than men".

Nigeria has one of the lowest smoking prevalence rates among females, estimated at 1% of her population. This in comparison to countries like Papua New Guinea, Chile and the Russian Federation, which have smoking prevalence rates of 34%, 28% and 27% respectively among females. Smoking prevalence is low when compared to alcohol prevalence rated at 6.7% of the entire population aged 15 and above. WHO (2014). The median amount spent on one pack of 20 manufactured cigarettes is N187.70. The Nigeria Global Adult Tobacco survey, GATS, (2015) published by the WHO (2013) showed that the median monthly expenditure on manufactured cigarettes was N1202.5 Naira. On the whole, Nigerians spend an average of N7.45 billion on tobacco monthly, and N89.5 billion

yearly. Trend figures reveal that the mean consumption per smoker has increased along with the number of adult smokers while smoking prevalence appears to have been on a decline (See figure 4 below). It is however important to note that the growth in Nigeria's population has resulted in no significant reduction in smoking prevalence over the years. As of 1980, 9.5% of Nigeria's population was 6.5 million, while 4.4% of Nigeria's population as of 2012 was 7.4 million.

## **2.6 Positive Reinforcement Counselling Technique**

Skinner is the theorist behind operant conditioning, proposed positive reinforcement as a useful method of modifying behaviour. Grey (2017) maintained that positive reinforcement is an effective way to change behaviour without implementing unpleasant methods. Positive reinforcement is simply adding something to someone's environment that consequently increases how much or often he/she behaves in a certain way. A reinforcer is anything that occurs at or around the time of an act that tends to increase the probability of that act occurring again.

A positive reinforcement is simply something that the subjects wants, something that will get you better results and make you and your subject feel great in the process Schreiner (2012).

Positive reinforcement is anything that happens at or slightly after the time of a behaviour which makes that behaviour more likely to occur in the future. The key to understanding positive reinforcements, especially in the case of human beings, is that having a clear picture of the underlying drives and motivations of the unique organisms you are working with is absolutely essential – because a reward to one person is a ‘punishment’ to another.

Even a stimuli as seemingly golden as praise can have the reverse effect on a trainee and actually cause the desired behaviour to die out rather than occur more often Schrener (2012) what is important in counselling is getting into the head of the person you are working with and setting up your reinforcement schedule from your clients frame of reference.

In trying to pull out some behaviour using positive reinforcements you've got to get inside the skill of your trainee and clearly understand that person's psychology, and to proffer it when you see the behaviour you want not before. And you have got to stay patient if in spite of a good reinforcement schedule your trainee slides back into old, unwanted set of behaviours. You have got to commit to the idea that overtime if the positive reinforcement has been chosen wisely and implemented at the right time it will start to exert a visible effect over behaviour Schreiner (2017).

Coon (2010) maintain that positive reinforcement can be an effective learning tool when used appropriately, sometimes this type of learning occurs naturally through normal interactions with the environment. In other cases, people are able to use this behavioural technique to help teach new behaviours. Some important thing to consider when using positive reinforcement include type of reinforcement that will be used and the schedule that will be employed to train the new behaviour.

Positive reinforcement technique is a behaviour management system in which reinforcers are dispensed for a variety of classrooms or school behaviours. The consequences brought about by a particular behaviour can be pleasant or unpleasant for the individual and others. In other words, it is a concept that determines the increase and

frequency of behaviour. Reinforcement may take the form of comments, money, e.g. (salaries) smile, handshakes, clap, a nod, provision of sweets among others.

This is technically different from every day conversations when people use the term 'reinforcement' to mean a reward. Usually a reward is something given in return for service, merit or achievement. Sometimes both terms are used interchangeably; therefore reinforcement is the process of using a reinforcer to increase the frequency of behaviour (Microsoft Encarta, 2008).

### **Types of Reinforcement**

Every animal habitually persist in an act which gives pleasure and desist from each act that gives pain. Woolfolk and Mccuneicolish (1984) maintained that there are four types of reinforcements ...

- Positive reinforcement, adding something to enforce the result (you do this, you get this)
- Negative reinforcement
- Punishment
- Extinction

#### **1. Positive Reinforcement**

Positive reinforcement is a way of increasing the probability that an operant will occur when reinforcers (positive) are applied. It works by presenting a motivating/reinforcing stimulus to the person after the desired behaviour is exhibited, making the behaviour more likely to happen in future, Akinade (2005). Positive reinforcement occurs when a behaviour is strengthened as a result of receiving a positive

condition. Akinboye (1988) indicates that positive reinforcement is the addition of a reward following a desired behaviour. It is used to strengthen weakly emitted behaviour.

In operant conditioning, positive reinforcement involves the addition of a reinforcing stimulus following a behaviour that makes it more likely that the behaviour will occur again in the future. When a favorable outcome, event or reward occurs after an action, that particular response or behaviour will be strengthened.

Akinade (2005) maintained that positive reinforcement is the most effective when it takes place immediately after a behaviour, this means that the shorter the amount of time between a behaviour and a reward, the stronger the connection between the two.

## **2. Negative Reinforcement**

Schreiner (2012) reported that negative reinforcement is a term described by B.F Skinner in his theory of operant conditioning. In negative reinforcement, a response or behaviour is strengthened by stopping, removing or avoiding a negative outcome or aversive stimulus. Aversive stimuli involve some types of discomfort, either physical or psychological. Behaviours are negatively reinforced when they allow you to escape from an unwanted stimuli that are already present or allow you to completely avoid the aversive stimuli before it happened. It is a kind of subtraction of something from the situation in order to avoid a negative result.

Akinade (2005) affirms that in negative reinforcement probability is increased because something is removed or withdrawn (Skinner as cited in Akinade, 2005). Stopping of any aversive stimulus after a response to it typically act as a negative reinforcement. It produces its effects by removing a host of aversive stimuli.

Negative reinforcement should not be thought of as a punishment procedure with negative reinforcement, you are increasing a behaviour, whereas with punishment, you are decreasing a behaviour.

Negative reinforcement according to Kelly, (2013) occurs when certain stimulus (usually an aversive stimulus) is removed after a particular behaviour is exhibited. The likelihood of the particular behaviour occurring again in the future is increased because of removing or avoiding the negative consequence.

A clear example of negative reinforcement is, a girl does the dishes (behavior) in order to stop her mother's nagging (aversive stimulus). The idea of reinforcement whether positive or negative is to increase the behaviour, in positive reinforcement it is adding something positive in order to increase a response while in negative reinforcement is taking something negative away in order to increase a response.

### **3. Punishment**

According to Kelly (2013) punishment is a process by which a consequence immediately follows a behaviour which decreases the future frequency of that behaviour. It is one of the type of reinforcement whereby there is positive punishment and negative punishment.

Positive punishment according to Kelly (2013) works by presenting and aversive consequence after an undesirable behaviour is exhibited, making the behaviour less likely to happen in the future, while negative punishment happens when a certain reinforcing stimulus is removed after a particular undesired behaviour is exhibited, resulting in the behaviour happening less often in the future. With punishment, the end result is to try to decrease the undesired behavior.

#### **4. Extinction**

Passer & Smith (2007) explained that the term extinction was first used by renowned Russian physiologist, Pavlov, in course of his research on classical conditioning. Pavlov successfully conditioned his dog to salivate at the sound of a bell but eventually when the dog repeatedly heard the bell but never got food. He observed that the dog stop salivating at the sound of the bell, if it was no longer followed by food. Pavlov called this 'extinction'.

It is simply, weakening of a conditioned response over the course of time, gradually resulting in the said behaviour either decreasing or disappearing. In operant conditioning according to Passer & Smith, (2007) the focus is on reinforcement and extinction occur when the positive reinforcer that fosters or maintains the target behaviour is removed. The behaviour will cease to happen or die away.

#### **Schedules of Reinforcement**

Reed, P (2007) maintain that a schedule of reinforcement is a protocol or set of rules that a teacher, counsellor or parent will follow when delivering reinforcers.

Broadly speaking there are two categories of reinforcement schedules continuous schedule and intermittent schedule (Reed, P. 2007).

1. A continuous schedule of reinforcement (sometimes abbreviated as CRF) according to Reed, P. (2007) occurs when reinforcement is delivered after every single target behaviour and is more often used when teaching new behaviours, while intermittent schedule of reinforcement (INT) means reinforcement is delivered after some behaviours or responses but never after each one.

In a classroom setting, a teacher that uses continuous schedule of reinforcement means that he would deliver reinforcement after every correct response from his

student and that how it should be in counselling sessions in order to strengthen the behaviour.

2. Intermittent schedules of reinforcement. There are four basic types of intermittent schedules of reinforcement. These are Fixed-Ratio (FR). According to Reed, P. (2007) a fixed-interval schedule means that reinforcement becomes available after a specific period of time. The schedule is abbreviated into F1 followed by the amount of time that must pass before reinforcement become available, e.g. an F12 would mean reinforcement becomes available after 2 minutes has passed an F120 means 20 minutes must pass and so on.
  - Variable – Ratio Schedule (VR) According to Cooper (2007) in variable ratio schedule of reinforcement the delivery of reinforcement will “vary” but must average out at a specific number, it can be any number but it must be defined. For example after one correct response, then after 3 more correct responses etc.
  - Fixed – interval schedule (F1) A fixed-interval schedule also according to Cooper (2007) becomes available after a specific period of time. It is followed by the amount of time that must pass before reinforcement become available.
  - Variable –interval schedule (VI). According to Cooper (2007) the variable-interval schedule of reinforcement means the time periods that must pass before reinforcement become available will “vary” but must average out at a specific time interval. Again the time interval can be any number but must be defined.

### **Primary and Secondary Reinforcement**

Reinforcement can be categorized into two. Primary and secondary reinforcement Cooper (2007).



- Primary reinforcement – is the most basic form of reinforcement. These reinforcers satiate the basic biological drives in organism, they include food, water, air, sleep and sex. Primary reinforcement aids in the survival of the species.
- Secondary reinforcement according to Kelly (2013) is associated with primary reinforcement, it is the process of learning or conditioning in order to understand association for example, food is a primary reinforcer, money buys food. Therefore, money in this case is a secondary reinforcer, its value is relative to the primary reinforcer, which in this case is food; money, prize, praises, good grades etc are all example of secondary reinforcement.

## **2.7 Solution Focused Brief Counselling Technique**

Solution – focused brief therapy (SFBT) also called solution – focused therapy, solution building practice therapy was developed by Steve de Shazer (1940- 2005) and Insoo Kimberg 1934 – 2007) and their colleagues beginning in the late 1970s in Milwaukee, U.S.A. (Trapper, McCollum, Gingerich and Franklin, 2010). The entire solution-focused approach was developed inductively in an inner city outpatient mental health service setting in which clients were accepted without previous screening De Jong, P2 Berg (2007).

The developers of SFBT spent hundreds of hours observing therapy sessions – over the course several years, carefully noting the therapists questions, behaviours and emotions that occurred during the sessions and how the various activities of the therapists affected the clients and the therapeutic outcome of the sessions (De Jong & Berg 2007).

Solution –focused brief therapy has not only become one of the leading schools of brief therapy, it has become a major influence in such diverse fields as business social

policy, education, criminal justice, child welfare and domestic violence offenders. It is a practical goal-driven model, a hall mark of SFBT is its emphasis on clear, concise, realistic goal negotiation Kin (2003).

SFBT approach assumes that all clients have some knowledge of what would make their life better, even though they may need some (at times, considerable) help describing the details of their better life and that everyone who seeks help already possess at least the minimal skills necessary to create solutions (De Shazer, Dolan et al 2007).

Solution focused brief therapy is considered to be the right technique in the treatment of cigarette smoking because it is goal directed which the main aim of the smoker is to quit smoking. Solution focused brief therapy is different in many ways from traditional approaches to treatment. It is a competency –based model which minimizes emphasis on past failings and problems, and instead focuses on client's strengths and previous successes. There is a focus on working from the clients understanding of his/her concerns /situations and what the client might want different (De Shazer, Dolan et al, 2007). It is a short term goal-focused therapeutic approach which helps client change by constructing solutions rather than dwelling on problems. It concentrates on the individual's capabilities to change and create hope with a focus on positive points, it is target oriented, aiming at building solutions and responses for components and problems. It is based on the fact that positive constructive change is evitable. Therefore the grounds which are likely to change are to be discussed in this method (Joker & Ghaderi, 2015).

The basis of solution focused brief counselling approach is counsellor's trust in the client to make changes in life and utilize their own internal resources. This study will show the techniques and methods of solution focused brief approach which could help the

client/student to recognize their weakness and strength points. Trepper et al (2010) outline the basic tenants that in form solution-focused brief therapy as follows.

- It is based on solution-building rather than problem solving
- The therapeutic focus should be on the clients desired future rather than on the past problems or current conflicts
- Clients are encouraged to increase the frequency of current useful behaviours
- No problem happens all the time. There are exceptions – that is times when problem could have happened but didn't – that can be used by the client and therapist to co-construct solutions.
- Therapists help client find alternatives to current undesired pattern of behaviour cognitions, and interaction that are within the clients repertoire or can be co-constructed by the therapists and clients as such.
- Differing from skill-building and behaviour therapy intervention, the model assumes that solution behaviours already exist for clients.
- It is asserted that small increments of change lead to large increments of change.
- Clients solution are not necessarily directed or related to any identified problem by either the client or the therapists.
- The conventional skills required of the therapist to invite the client to build solutions are different from those needed to diagnose and treat client problems.

Solution-focused brief therapy can stand alone as a therapeutic intervention or it can be used along with other therapy styles and treatment Iveson (2002) counsellors in SFBCT focuses on finding solutions rather than emphasizing problems, they encourage students to envision their preferred future and assist them in finding ways to make their future a reality.

Many of the techniques use in SFBCT are question based, which enable the client to create their favourable future and challenges the student/client to think about exceptions to perceived problems (Guterman, 2006) in an effort to resolve the issues.

Questions and compliments are the primary tools of solution-focused brief counselling technique. The counsellors in SFBT deliberately refrain from making interpretations and rarely confront their clients; instead they focused on identifying the clients goals, generating a detail description of what life will be like when the goal is accomplished and the problem is either gone or coped with satisfactorily (Simon, and Berg 2006).

One way of understanding the practice of SFBT is displayed through the acronym MECSTAT, which stands miracle questions, exception questions, coping questions, scaling questions, time-out, Accolades and Task (McGee, Del Vento & Bavelas, 2005).

### **The Miracle Question**

The miracle question or “problem is gone” question is a method of questioning that a therapist or a counsellor can utilize to invite the client to envision and describe in detail how the future will be different when the problem is no longer present.

A traditional version of the miracle question would go like this

*“I am going to ask you a rather strange question (pause). The strange question is this (pause) after we talk, you will go back to your (work, home, school) and you will do whatever you need to do the rest of the day, such as taking care of the children, cooking dinner, watching T.V and so on. It will be time to go to bed. Everybody in your household is quiet and you are sleeping in peace. In the middle of the night, a miracle happens and the problem that prompted you to talk to me today is solved! But because this happens while you are sleeping, you have no way of knowing that there was an overnight miracle that solved the problem. [Pause] so, when you wake up tomorrow morning, what might be the small change that will make you say to yourself ‘wow, something must have happened the problem is gone” (Berg, & Dolan,2001).*

While it is relatively easy to state, the miracle question requires considerable skill to ask well. The question must be asked slowly with close attention to the persons non-verbal communication to ensure that the pace matches the person's ability to follow the question. Initial response mostly include a sense of "I don't know". There are many different version of the miracle question depending on the context and the client (Berg, & Dolan, 2001).

**Scaling Question:** These are another set of questions the SFBT therapist use; scaling questions invite clients to employ measuring and tracking of their own experience, scaling and measuring are useful tools to identify differences for clients Iveson (2002) for example by asking clients to establish their own polarity and then, measure their progress – forwards and backwards towards the more desirable pole. SFBT innovated language to make this invitation to more internal rigor sound natural to clients what is "the worst the problem has ever been" (zero or one). What is the best thing could ever be?" (10). The client is asked to rate their current position on their own scale.

(Pichot& Dolan, 2003) questions are used to elicit useful details of behaviour to measure by resources and support (e.g. what's stopping you from shipping one point lower down the scale?"). Clients are then invited to calibrate their own progress precisely.

**Exception– Seeking Questions:** Proponents of SFBT insist there are always times when the identified problem is less severe or absent for clients. The counsellor seeks to encourage the client to identify these occurrences and maximize their frequency what happened that was different? The goal is for clients to repeat what has worked in the past and support confidence in taking more and more "baby steps" towards their ideal scenes de Shazer, Steve (1994).

## **Coping Question**

Coping questions in SFBT are designed to elicit information about client resources that will have gone unnoticed by them. Even the most hopeless story has within it examples of coping that can be drawn out e.g. “I can see how things have been really difficult for you, yet I am struck by the fact you get up each morning and do everything necessary to get the kids off to school. How do you do that? The curiosity and admiration can help to highlight strengths without appearing to contradict the clients perception of the problem. The first part of the question is for the client to validate their story, the second part is also to them a trust but one that counters the problem – undeniably they cope, and coping questions start to gently and supportively challenge the problem –focused negative (Guterman, Meceas & Ainbinder, 2005).

Problem-free talk: Solution focused therapist attempt to create a judgment free zone for clients where what is going well, what areas of life are problem free are discussed. Problem-free talk can be useful for uncovering hidden resources, to help the person relax, or become more naturally proactive, for example solution focused therapists may talk about seemingly irrelevant life experiences such as leisure activities, meeting with friends, relaxing and managing conflict. This often uncovers client values, beliefs and strengths. From this discussion the therapist can use these strengths and resources to move the therapy forward. For example; if a client wants to be more assertive, it may be that under certain life situations they are assertive. This strength from one part of their life can then be transferred or generalized to another area where new behaviour is desired (Iveson, 2002; Jones, 2008).

It is in this problem free period or areas you find most of the resources to help the client. It also relax them and helps build rapport, and it can give you ideas to use for treatment (Stephen, 2014). Everybody has natural resources that can be utilized. These might be events or talk about friends or family. Even negative beliefs and opinions can be utilized as resources.

Resources here means clients internal competencies, skills and resources and their support social network. Therapist empower clients to identify their own resources by way of scaling questions, problem-free talk and during exception – seeking (Pichot & Teri (2003).

### **Solution Focused Brief Techniques Template**

The working template of SFBT is meant to be used as a guideline to learning the process of SFBT. According to Mectcalf (2011) the template provide the step by step and questions to ask that will promote collaboration between the counsellor and the client. The following are the suggested questions under each heading to help start the process of SFBT.

Phase I: Introduction and building a rapport. Introduce yourself, greetings and explanation that you are an SFBCT therapist. Some of the expected questions from the counsellor.

- My name is .....
- Pleasantries
- What brings you here?
- How is cigarette smoking a problem to you?
- Is it a problem for anyone else? How is it a problem for others?
- What effect does it have on you?

Listen, read and clarify the client's response.

Phase 2: Goal setting through miracle question.

Through the miracle question that will be asked by the counsellor both of them can collaborate to set the clients goals and the client will consent that these are his goals of seeking for counselling.

For example:

- How would things be different when the problem is solved? .... for you...for others.
- How would you know coming here is worthwhile?
- What would you be doing differently?
- What would other people notice?

Listen, read and clarify the responses.

Phase 3: Use of Scaling question

Clients would be ask on a scale from 1 to 10, with 1 being your goals not achieved and 10, your goals completely achieved.

- How or where would you rate yourself today?
- Where would you like to be on the scale at the end of the term?

Reading, clarifying and listening the responses.

Phase 4: Researching for Exceptions and Existing Resources in clients life

The therapist will engage the clients and teach them how to notice their problem free period when the problem is not there, this happens through exception questions and existing resources.

Such questions includes:-

- Tell me about times when you felt happy without the problem
- When was the last time you had a better and free day.
- What small changes would you notice?



- What things are tough, how do you cope?
- How have you dealt with similar problems in the past?
- What have you learned from previous experiences like this that might be useful in this situation?

Remember to ask for detail – what else? (Gingerich & Eisengart, 2000).

Reading or listening and clarification of client's response.

Phase 5: Application of exception to the future for strength and solution

To project their exceptions into the future, the counsellor explains how to draw a scale from 1 – 10 with the application of existing resources in them.

- What would it take for that to happen more often in the future?
- Who has to do what to make it happen again?
- What is the most important thing for you to remember to do to make sure that (the exception) has the best chance of happening again?
- What is the next most important thing?

Through scaling questions counsellors can track their progress towards goals and incremental changes.

- Where would you rate things today?
- What number where you as the problem was at its worst?
- What will you notice if you moved up one or two numbers towards your goal?

Once the counsellor is given a number, he or she explores how that taking translates into action talk.

Phase 6: Development of Presupposing Change

The counsellor needs to be attentive to positive changes (however small) that occur in their client's lives. Therefore, the questions of presuppose change can be useful in assisting clients to recognize such changes.

- What's different or better since I saw you last time?
- What has helped you to move forward?
- What else helped? (ask several times for more)
- What difference did that make for you?

This question invites clients to consider the possibility that change (Perhaps positive change) has recently occurred in their lives.

If evidence of positive change is unavailable, the counsellor can pursue a line of questioning that relates to the client's ability to cope.

Questions such as

- How come things aren't worse for you?
- What stopped total disaster from occurring?
- How did you avoid falling apart?

These questions can be followed up by the counsellor positively affirming the client with regard to any action they took to cope and discuss how the 'new self' 'smoke free' will be emerged.

#### Phase 7: Termination (Compliment and Task)

When the client reports that things are better, inquire about whether they think. It is time to stop or take a break, if the client decides to terminate, the following question is necessary for the reassurance of the process:

- What did we do during our time together that you find helpful, if anything?  
(Gingerich & Eisengart, 2000 Mectcalf, 2011: Sobhy & Cavallaro, 2010).

## **2.8 Theoretical Framework**

### **2.8.1 Classical Conditioning Ivan Pavlov**

In the early twentieth century, Russian physiologist Ivan Pavlov did Nobel prize-winning work on digestion (Mackintosh, 1983) while studying the role of saliva in dogs digestive processes, he stumbled upon a phenomenon labelled “psychic reflexes”. While an accidental discovery, he had the foresight to see the importance of it. Pavlov’s dogs restrained in an experimental chamber were presented with meat powder and they had their saliva collected via a surgically implanted tube in their saliva glands. Over time he noticed that his dog will begin salivation before the meat powder was even presented, whether it was by the presence of the handle or merely by a clicking noise produced by the device that distributed the meat powder.

Fascinated by this finding, Pavlov paired the meat powder with various stimuli such as the ringing of a bell. After the meat powder and bell (auditory stimulus) were presented together several times, the bell was used alone. Pavlov’s dogs as predicted, responded by salivating to the sound of the bell (without the food). The bell began as a neutral stimulus i.e. the bell itself did not produce the dogs salivation. However by pairing the bell with the stimulus that did produce the salivation response, the bell was able to acquire the ability to trigger the salivation response. Pavlov therefore demonstrated how stimulus-response bonds are formed which some educators consider as the basic building blocks of learning. Pavlov dedicated much of the rest of his career further exploring this findings. Mackintosh, N.J. (1983).

The technical terms in the theory, the meat powder is considered an unconditioned stimulus (UCS) and the dog's salivation is the unconditioned response (UCR). The bell is a neutral stimulus until the dog learns to associate the bell with the food. Then the bell becomes a conditioned stimulus (CS) which produces the conditioned response (CR) of salivation after repeated pairings between the bell and food (Passer & Smith, 2007).

## **Basic Principles of Classical Conditioning**

### **1. Acquisition**

In Passer & Smith (2007) it is stated that acquisition refers to the period which a response is being learned. When Pavlov continues to pair the tone of a bell and the food and the dog eventually learns to salivate by hearing the tone of a bell. Each pairing is called a learning trial, after several learning trials the dog associates the tone with food and salivates, and can salivate even if the tone is not followed with the food. Salivation now becomes a conditioned response elicited by a conditioned stimulus (tone of the bell). Once the conditioned response (CR) is established, it may persist for a long time. Thus the intent of aversion therapy, to cause the association to produce strong dislike to an unwanted behaviour.

### **2. Extinction and Spontaneous Recovery**

If classical conditioning is to help organisms to adapt to their environment, there must be a way to eliminate the conditioned response (CR) when it is no longer appropriate. The process to achieve this is called extinction.

Extinction is a process in which the conditioned stimulus (CS) is presented repeatedly in the absence of the (UCS) unconditioned stimulus causing the conditioned response (CR) to weaken and eventually disappear. Each occurrence of the conditioned stimulus (CS) without the unconditioned stimulus (UCS) is called an extinction trial. When

Parlov repeatedly presented the tone without the food, the dog eventually stopped salivating to the tone.

And the reappearance of a previously extinguished CR after a rest period and without new learning trials, this process is called spontaneous recovery.

### 3. Generalization and Discrimination

This is another principle of classical conditioning as discussed by Passer & Smith (2007) Pavlov found that once a conditioned response (CR) is acquired, the organism often responds on only to the original condition stimulus (CS) but also to stimuli that are similar to it. The greater the stimulus similarity, the greater the chance that a conditioned response CR will occur. A dog that salivates to a medium-pitched tone is more likely to salivate to a new tone slightly different in pitch than to a very low or high pitched tone. This is called stimulus generalization. But if an organism is able to discriminate between an irrelevant stimulus and those that may signal danger or otherwise, that is called stimulus discrimination (Passer & Smith 2007, Skinner, 2009).

Classical conditioning also can decrease arousal and attraction to stimulus, this is the process used in positive reinforcement technique which attempts to condition an aversion (a repulsion) to a stimulus that triggers unwanted behaviour by pairing it with noxious unconditioned stimulus (Passer & Smith, 2007). And it can increase arousal and attraction by pairing it with desirable stimulus.

### **2.8.2 Operant Conditioning**

Operant conditioning is a type of learning in which behaviour is influenced by the consequences that follow it. It was first explored by Thorndike (1898) and later developed by another psychologist Skinner 1938. Edward L. Thorndike explore how animal learn to

solve problems. He built a special cage, called a puzzle box, that could be opened from the inside by pulling a string or stepping on a lever. Thorndike placed a hungry animal such as a cat, inside the box. Food was put outside, and to get it the animal had to learn how to open the box. The cat scratched and pushed the bars, paced, and tried to dig through the floor. By chance, it eventually stepped on the lever, opening the door. Performance slowly improved with repeated trials, and over time the cat learned to press the lever soon after the door was shut (Passer & Smith 2007).

The performance of the cat improved slowly, Thorndike concluded that the animals did not attain insight into the solution. Rather with trial and error, they gradually eliminated responses that failed to open the door and become more likely to perform the actions that worked. Thorndike called this process instrumental learning because an organism's behaviour is instrumental in bringing about certain outcome Charles (2009). Thorndike also proposed the law of effect, which states that in a given situation, a response followed by a satisfying consequence will become more likely to occur and a response followed by an annoying consequence will become less likely to occur.

Skinner in developing this theory identified several types of consequences, prominent among them are reinforcement and punishment with reinforcement, a response is strengthened by an outcome that follows it. Strengthened is defined in operant conditioning by Skinner 1938 as an increased in the frequency of a response. The stimulus or event that increases the responses is called the reinforcer. Food pellets are reinforcers because they increase the rat's frequency of lever pressing. Once a response becomes established, reinforcers maintain it, the rat keep pressing the lever because it continues to receive food.

In contrast to reinforcement, punishment occurs when a response is weakened by outcomes that follow it. Take the lever pressing rat. Suppose things are change so that pressing the lever delivers a brief electric shock rather than food. If lever pressing decreases (which it will) then the electric shock represent a punisher, a consequence that weakens the behaviour. It is narrated in Passer and Smith (2007) that according to Skinner the developer of operant conditioning that behaviour is governed by its consequences, 2 major types of reinforcement strengthen responses and two major types of punishment weakens them, operant behaviour is also weakened by extinction.

Positive reinforcement according to Passer and Smith (2007) occurs when a response is strengthened by the subsequent presentation of a stimulus. A rat receive food pellets when it presses the lever and eventually begins to press the lever more often. A new employee, praised by her boss for completing a small project quickly, begins to complete more of her projects on time. The stimulus that follows and strengthen the response is a positive reinforcer food, drink, comforting, physical contact, attention, praise and money are common positive reinforcers.

Negative response Skinner noted that when a response pays off, it is more likely to occur in the future. Sometimes behaviours pay off not only when they lead to the presentation of praise, money and so on but also when they enable us to get rid of or avoid something we find aversive. For example taking aspirin pays off because it relieves headache i.e. a response is strengthened by the subsequent removal or avoidance of an aversive stimulus the aversive stimulus that is removed is called negative reinforce. Negative reinforcement does not mean punishment but a procedure that help in removing a stimulus that is unwanted.

Operant extinction as clearly indicated by Skinner, in Passer & Smith (2007) is the weakening and eventual disappearance of a response because it is no longer reinforced. When previously reinforced behaviours no longer pay off we are likely to abandon and replace them with more successful ones. In other words when non reinforced responses persist to happen then this is called resistance to extinction. Non reinforced responses may stop quickly that is; low resistance or they may keep occurring hundreds or thousands of times i.e. high resistance. Resistance to extinction is strongly influenced by the pattern of reinforcement that has previously maintained the behaviour. Operant extinction often provides a good alternative to punishment as a method for reducing undesirable behaviours.

Aversive punishment is also another feature of operant conditioning it involves actively applying aversive stimuli such as painful slaps, electric shock and verbal reprimands a response is weakened by the subsequent presentation of a stimulus like spanking, scolding, and so on, for example, a child touching hot stove burner. The pain delivered by the burner makes it less likely that the child will touch it in future. Aversive punishment can produce rapid results, an important consideration when it is necessary to stop a particular dangerous behaviour. The above theory is highly related to positive reinforcement technique, all the features of it can be used to strengthening or weaken and eventually extinct an unwanted behaviour.

### **2.8.3 Social Learning Theory by Albert Bandura**

One of the influential learning theories, the social learning theory (SLT) was formulated by Albert Bandura. The social learning theory emphasizes the importance of observing and modelling the behaviours, attitudes, and emotional reactions of others. Thus it focuses on learning by observation and modelling. The theory originally evolved from



behaviourism but now includes many ideas of cognitivists. As a result it is sometimes called social cognitive theory.

### **Basic Concepts**

The social learning theory also known as observational learning or modelling says that people can learn by watching other people perform the behaviour, observational learning explains the ability of children to learn behaviours by watching the behaviour of the people around them, and eventually imitating them. This is very true of cigarette smoking and elder siblings. They want to blend with them and not stand out. The theory has 4 basic steps. They are:-

#### **Step 1: Attention**

Social cognitive theory implies that you must pay attention to learn. If you want to learn from the behaviour of the model (the person that demonstrates the behaviour) then you should eliminate anything that catches your attention other than him. Also, the more interesting the model is, the more likely you are to pay full attention to him and learn.

#### **Step 2: Retention**

Retention of the newly learned behaviour is necessary. Without it, learning of the behaviour would not be established and you might need to get back to observing the model again since you were unable to store information about the behaviour. A very good retention make the learned behaviour permanent and make extinction of such behaviour difficult.

#### **Step 3: Reproduction**

When you are successful in paying attention and retaining relevant information and acts, this step requires you to demonstrate the behaviour. In this phase, practice of the behaviour by repeatedly doing it perfect the learner.

#### Step 4: Motivation

Feeling motivated to repeat the behaviour is what the learner needs in order to keep on performing it. This is where reinforcement and punishment come in you can be rewarded by demonstrating the behaviour properly and punished by displaying in appropriately (Bandura, 2006).

After his studies, Bandura was able to determine three basic models of observational learning which include:-

- i. A live model, which includes an actual person performing the behaviour.
- ii. A verbal instruction model which involves telling of details and descriptions of behaviour.
- iii. A symbolic model which includes either a real or a fictional character demonstrating the behaviour live, via movies, book and other media sources (Bandura, 2006).

Social learning theory talks about how both environmental factors such as school, home and peers and cognitive factors such as students personality (interest) interact to influence human learning and behaviour such as learning some unwanted behaviours (cigarette smoking). It focuses on the learning that occur within social context. It considers that people learn from one another, including such concepts as observational learning, imitation, and modelling (Bandura, 2007).

#### **2.8.4 Reality Therapy**

Uba (1989) defines reality therapy as a therapy that leads all patients towards reality and towards grappling successfully with the tangible aspects of the real world. The theory was founded by Glasser (1965). It is fundamentally a rational approach to dealing with

problems. A great deal of faith in clients ability to solve their difficulties through rational means is basic to this approach.

The theory requires people to know themselves very well, know their needs and the best ways these needs could be achieved in a reasonable way. To Glasser as cited by Uba (1989) human beings are motivated by the need to relatedness and respect, he believes that people are driven by the needs to relate to others and be respected by others.

Carew (1986) believes that in reality therapy the first need is fulfilled by love relationship. That is one must have involvement with at least another person who cares and for whom one cares, but that person be in touch with reality to gain strength and encouragement to cope with reality. And that responsible behaviour is that behaviour which fulfils one's needs in a way that does not deprive others of the opportunity of fulfilling their own needs.

The above view of human nature by Glasser disagrees with that of Sigmond Freud, the founder of psychoanalysis who viewed human beings as victims of unconscious determinants which motivate them to seek immediate fulfillment of basic needs namely those of sex and aggression (Uba,1989). Glasser maintain that when people cannot meet their needs. The need for shelter, recognition or even the basic need of food, sex and clothing then characteristics way of manifesting their failure might be reflected in stealing, vandalism, smoking, breaking of laws, alcoholism and so on.

Nwagu (1996) itemized the assumptions of reality as

1. That all categories of psychological problems including those usually referred to as neurosis, psychosis, delusions and depressions have common origin. The inability of the individual to fulfill his basic needs.

2. That it is purely misguided to assume that all kinds of problems of an individual arise from internal situation of the individual
3. That every individual has a number of basic needs to satisfy, and develop behaviour problems in the course of his inability to fulfill these needs.
4. That of all the basic needs the individual has to satisfy in the course of his life two are of focal significance in the maintenance of his mental health namely, the need to love and the need for self worth.
5. That an individual develops anti-social or delinquent behaviour not because they are born to do so, but because of relating responsibly with the wider society as they attempt to satisfy their basic needs.
6. That those individuals who know how to related effectively with the world in their course of satisfying their basic needs are said to be responsible.
7. That man is born with self-actualizing tendencies which are to be channeled in therapy towards positive end.
8. That people lose contact with reality or develop symptoms of delusions and depression not because something down their mental structure is diseased but because they approach life equations unrealistically.
9. That people who are under psychological stress and crises deny reality of their immediate world not for any underlying cause but their personal circumstances of life.

In essence looking at the above assumptions of reality – therapy one can conclude that reality therapy emphasizes two major concepts:-

1. The need for love and the need for self worth.

## 2. The concept of responsibility.

Reality is achieved when one feels that one is worthwhile to oneself and that one is loved by others. And those who fulfill their needs at the expense of others are said to be irresponsible.

The issue of cigarette smoking is therefore not to be looked at as an issue of mental illness or a disease from within but a behavioural problem related by the individual. That is, he/she is the architect of his own problem either as a result of his inability to satisfy his basic needs or because his or her approach to life is false and unrealistic thus needs a straight forward and realistic approach to change.

### **2.9 Review of Empirical Studies**

Many research works have been carried out on cigarette smoking cessation and the ways that will help to achieve its cessation both locally and internationally. Behavioural Reinforcement Counselling Technique has been found to be effective in the treatment of many behavioural problems. A study conducted by Adeusi, Gesinde, Alao, Adejumo and Adekeye, (2015) conducted study on differential effect of behavioural strategies on the management of conduct disorder among adolescents in correctional centres in Lagos State. The design utilized is a 3 x 2 factorial design. The population for this study was one hundred and eighty six (186). The sample size employed for this study is 90 adolescents. Two correctional centres (male only and female only) were purposively selected because they have similar features where adolescents that meet the research diagnostic criteria for conduct disorder are found. Among the 90 participants, 15 were randomly assigned into each of the two experimental groups (Positive Reinforcement Counselling Technique and Behavioural Rehearsal) and the control group. A sum total of 45 participants were involved

at each of the Special Correctional Centres. The descriptions of participants are as follows: 45 girls and 45 boys; the age range is between 10 to 17 years (10-13 years was 35 constituting 38.9% while participants between 14-17 years were 55 constituting 61.1% of the sample. Analysis of data and test of hypothesis revealed that hypothesis one which states that there is a significant difference in the treatment of conduct disorder of participants exposed to Positive Reinforcement Counselling Technique and behavioural rehearsal when compared with participants in the control groups was accepted because the result of the findings was significant. The hypothesis was tested using analysis of variance and the result of the analysis revealed  $F(2,87)=46.622$ ,  $p<0.05$ . The findings indicated that Positive Reinforcement Counselling Technique and behavioural rehearsal are both effective in the treatment of conduct disorder among adolescents. The reason for this result is as a result of the eight weeks exposure of the participants to their respective treatments. This study is in agreement with the findings of Shobola (2007) and Aderanti and Hassan (2011) that Positive Reinforcement Counselling Technique is an effective intervention in the treatment of all forms of antisocial behaviours such as-smoking, stealing, rebelliousness, and socially undesirable behaviours among others.

Although the second hypothesis states that there is a significant difference in conduct disorder of participants exposed to Positive Reinforcement Counselling Technique and behavioural rehearsal, the result of the analysis was not significant; therefore, the hypothesis was rejected. The mean scores indicated that the participants in Positive Reinforcement Counselling Technique group displayed a higher conduct disorder level (66.033) after exposure to the technique compared to the participants in the behavioural rehearsal group (65.433). The result implies that both interventions were effective and again

the result of the hypothesis is an affirmation of the theory and previous studies that are carried out on Positive Reinforcement Counselling Technique and behavioural rehearsal (Baker & Scarth, 2002; Aderanti & Hassan, 2011).

Adeyemi, Durosaro and Esere (2010), investigated the efficacy of positive reinforcement and self-control techniques in remedying truancy among school-going adolescents in Ilorin, Kwara State, Nigeria. The design was a pre-test, post-test control group quasi-experimental design. The sample consists of 30 truants aged 14 to 16 years. Different types of researcher-developed instruments were used as pre-test, post-test, and follow-up periods for identifying the truants and testing the effectiveness of treatment conditions. Data collected were analysed with ANCOVA and Scheffe test, when treatment groups were compared with the control group, those in treatment group reported less truancy behaviour traits than their counter parts in the control group. Lack of behavioural effect on control group could be linked to differential quality of delivery of intervention. Based on this finding, it was recommended that group counselling be made a regular feature in the execution of teaching and learning processes in secondary schools curricula in Nigeria.

Ahmed (as cited in Bello, 2013) investigated the effects of group counselling on the level of absenteeism among secondary school students in Daura Zonal Inspectorate of education of Katsina State, Nigeria. Forty (40) samples participated in this study using pre - test/ post-test design. Findings revealed that positive reinforcement is effective in reducing absenteeism among secondary school students; also the technique is not gender sensitive.

In a study conducted by Pettit (2013), in the city of Missouri United states of America with a population of a seven old boy to test the impact of Positive Reinforcement

on non-compliant behaviour. The subject was a seven year old boy on Autism spectrum in a self-contained classroom setting. Frequency data was taken for one month, when the behaviour was ignored, and the following month when the positive Reinforcement was implemented a test was generated and showed a significant difference in the student's behaviour between the first and the second month. This concludes that Positive reinforcement did minimize this student's non-compliance behaviour. It is recommended that further studies are conducted in other grade and age level, as well as in a whole group.

According to Beaman & Wheldall (2000), positive reinforcement have been accepted as an effective means of controlling student's behaviour and have been supported by empirical research to be effective.

Nnodum (2014), investigated the efficacy of Positive Reinforcement (PR) and Self-control (SC) in the management of aggression among Pupils. The treatment is a quasi-experimental type that adopted pre-test, post-test treatment control group using a 3x2 factorial matrix, with treatment conditions on the row and gender in the column. There were three experimental groups comprising of two treatment groups and a no treatment control group. The participants comprised of 30 pupils who were randomly selected from a purposively chosen school in Owerri North Local government Area of Imo State, Nigeria and randomly assigned to the experimental conditions. Different types of researchers' developed and validated test instruments were used at pre-test, post-test and follow-up periods for identifying aggressors and testing the effectiveness of the treatments. Two null hypotheses tested at 0.05 level of significance guided the study. Data collected were analysed with ANCOVA and Scheffe test. The results revealed among others that positive reinforcement and Self-control were effective and superior to the control condition in



reducing aggression. It also showed that positive reinforcement was more effective than Self-Control both at post-test and follow-up periods in reducing aggression.

Cohen and Lichtenstein (1990) in a study assessed over 200 smokers intending to quit. Those who failed to quit reported high stress levels at baseline, and this continued at the same high stress level over the subsequent 1, 3 and 6 month test periods. In contrast, the small group of successful quitters reported steadily reducing levels of stress over time, so that after 6 months they had become significantly less stressed. Crucially, their stress levels at pre-quit baseline were identical to those of non-quitters; hence, it was not just the less stressed individuals who managed to quit. A similar pattern was reported by Parrott (1995) in a smoking cessation study undertaken at two London health centres. Significantly, reduced levels of stress were found after 3 and 6 months of confirmed smoking cessation, despite stress levels at baseline being almost identical for successful and non-successful quitters. Hence, a significant reduction in stress after quitting was not an artefact of lower stress at baseline, while stressful life events were also unchanged for both groups over the study period (Carey, 1993).

Bello (2007), observed that in our immediate environment, oncology and Radiotherapy centre. Ahmadu Bello University Teaching Hospital (Nigeria), the incidence of tobacco related cancers especially laryngeal, or pharyngeal and oral cavity cancers is on the rise especially in males. Head and neck cancers are the commonest among male patients in the centre and it accounted for 26.72% of all cancer cases brought to the centre from its inception to June 2003. 65.96% of cancers in males and 13.01% of cancers in females are head and neck cancers. This may not be unconnected with the proliferation of "smoking shelters" in especially Nigerian urban areas inviting more people into smoking.

It is important to note that research studies reveal that smokers' risk of developing disabling illness particularly cancer of the lung is more strongly affected by the amount of cigarette he/she smokes daily. This is to say a smoker who starts early, smoke regularly and continue to smoke faces the biggest rise of serious health hazards than one who quits smoking while still young.

According to Bello (2007) Research evidence has shown that many smokers got into the habit at teenage (adolescence) although some started before the age of 10 years. A study conducted by the National Drug Law Enforcement Agency (NDLEA, 1991) shows those students who smoke cigarette began early in life. 91 out of 279 students found to be smokers started before the age of 10 while the remaining greatest source of influence among students, 55.6% indicated friends as their smoking source of influence.

A study conducted by American cancer society researchers (2015). It was revealed that almost half of the deaths (48.5%) from different types of cancer combined are attributable to cigarette smoking. The authors based their calculations on the records of almost 346,000 adults age 35 and older who died of these 12 cancer types in 2011. They used data from several sources including the 2011. They used data from several sources including the 2011 National Health Interview Survey and the Cancer Prevention Study II. They estimate almost 168,000 of the deaths were attributable to smoking.

Lung cancer had the largest percentage of deaths attributable to smoking with 80.2% followed by Larynx (voice box) cancer with 76.6%. About half the deaths from oral cavity/throat cancer, esophagus cancer, and bladder cancer were attributable to smoking.

Tahere and Reza (2008) in their study conducted on 946 health professional students in Mashhad University of Medical Sciences in Iran whereby a standard self administered

questionnaire consisting of socio-demographic data, participant smoking status, family and peer smoking, attitudes and beliefs about smoking, awareness of cigarette negative effects and reasons for smoking cessation was used.

The results shows that among the students, 18.3% reported having ever tried or experienced with cigarette smoking. The overall prevalence of cigarette smoking was 9.8% with significant differences in prevalence rates by gender, 17.6% among males and 4.2% among females. Starting and continuing smoking was significantly correlated with the family cigarette consumption habits. The most common reason to start smoking was friends(24.9%) and the most important reason to continue smoking was personal life distress (17.6%). The majority of participants (92.3%) reported that they were aware of the hazards of smoking. A significant difference regarding awareness smoking hazards was observed between smokers and non-smokers. The most important preventive factor for cigarette smoking was religious beliefs (69.1%).

A study conducted by Fawibe and Shitu (2011) on prevalence and characteristics of cigarette smokers among undergraduates of the University of Ilorin, Nigeria assessed 250 medical and 1550 non-medical students selected by multistage random sampling technique in the university. A self-designed questionnaire was used to obtain information from the participants, statistical analyses of the data obtained were performed using the SPSS program version 13.0. Numerical variables were expressed as mean  $\pm$  standard deviation and the t-test was used to compare the differences for statistical significance. Categorical variables were expressed as percentages and the chi-square ( $\chi^2$ ) test was used to test for statistical significance of the observed difference. The male to female prevalence ratio among current smokers was 3.8:1 of the 99 current smokers, 95(96.6%), made up of

84(88.4%) males and 11(11.6%), female had smoked for more than one year. The prevalence rate of current smoking was significantly ( $C^2 = 11.64$ ,  $P = 0.001$ ) lower among medical students (2/234; 0.9%) compared to other students (97/1520; 6.4%).

Owonaro and Joshua (2015) conducted a study on cigarette smoking practices, perceptions and awareness of government policies among pharmacy students in Niger Delta University in south-south Nigeria. This study evaluated the smoking habits and associated contextual correlates among pharmacy students in a tertiary institution in Bayelsa state, Nigeria. A descriptive cross sectional research was conducted involving 210 students and utilizing pre-tested and validated questionnaires. Data was analysed with SPSS 16. Majority of respondents (66.4%) were aged 21 – 25 years; the male – female ratio was 1:0.9 and 99.3% were Christians. Smoking prevalence was 12.9% and more prevalent among males; age of smoking was between 16 – 20 years, (40.1%); majority (83.3%) smoked 1 – 5 sticks of cigarette per day; 16.7% and 33.3% respectively of males and females quitted smoking at the time of the study. Reasons given for quitting included knowledge of health hazard (100%), to set a new example (83.3%) and as a result of advice from relations and friends (50%); the students exhibited a very positive perception on smoking and its cessation. There were no correlations of smoking habits with age and gender but with the level of studies. Respondents demonstrated very low levels of awareness of World No Tobacco Day and the Nigerian Tobacco control Decree. The study relates to the current research because they both explore the practice of cigarette smoking among Nigerian students.

The application of Solution-Focused Brief Therapy (SFBT) with students and in school settings has grown over the past 10 years and has been applied to a number of behavioural and academic problems. Sundstrom (1993) compared a single session of SFBT

with a single session of interpersonal psychotherapy for depression for the treatment of depressed college students. The sample comprised 40 female undergraduate psychology students at a Middle Western University who scored in the mild to moderately depressed range (10 -29) on the Beck Depression inventory. Thirty four percent of the sample met diagnostic criteria for major depression according to the inventory to diagnose depression. Subjects were randomly assigned to the experimental or control group, and then given the battery of outcome measures. Measures included the Beck Depression Inventory (BDI) the Depression Adjective Checklists (DACL), the Rosenberg Self-Esteem Scale (SES), and the Counsellor Rating Form-Short form (CRF-S) treatment consisted of one 90-minutes counselling session – SFBT for the treatment group and IPT for the comparison group. Sessions were conducted by 21 female counsellors who were licensed social workers, licensed psychologists, psychology interns or advance psychology graduate students.

To assure adherence to treatment protocols, clinicians participated in separate 2-hour training sessions for each condition, and all counselling sessions were videotaped and rated by research assistants who were blind to the treatment condition. A follow-up interview was conducted within a week to 10 days after treatment at which time subjects completed the BDI, DACL, SES, and CRF-S MANOVA analysis of pretest – to post-test intervention BDI and DACL scores showed that both treatment conditions produced significant positive change, and that neither treatment produced significantly better outcomes than the other. SES score revealed no change across time for either treatment condition. Lack of significant differences between treatments in CRF-S scores indicated counsellor characteristics did not contribute differently to treatment outcome.

Smock, Trepper, Wetchler, McCthim, Ray and Pierce (2008) compared solution focused group therapy (SFGT) with a traditional problem-focused treatment for level 1 substance abusers. The outcome of the research on the effectiveness of solution-focused group therapy is minimal, especially in treating substance abusers. In their study, client were measured before and after treatment to determine therapeutic effectiveness. Client in the solution focused group significantly improved on both the Beck Depression Inventory and the outcome questionnaire. The clients in the comparison group did not improve significantly on either measure. Therapist skill level and adherence to theoretical models were measured in each group to reduce confounding variables.

Cotton (2010) used recursive frame analysis RFA to conduct a single case investigation of Insoo Kim Berg's question utilization talk in a solution-focused brief therapy (SFBT) session. Due to lack of process research that explores how SFBT questions facilitate change the authors investigated how Berg's solution language influenced a client to respond in session. The purpose of this case study was to explore how SFBT questions served as interventions to facilitate change. The research questions for this study was twofold: (a) how does Berg's language influence conversation and (b) how is client influenced by Berg's questions in a therapeutic context? The findings suggest that Berg's questions serve as interventions for change as noted by patterns in the therapeutic conversations.

Also, Newsome (2005) worked on the impact of SFBT with a group of at risk students in a junior high school. A total of 26 students participated in eight group sessions of SFBT in a junior high school located in central Ohio. Compared with pretreatment assessments, students participating in SFBT had higher scores on behavioural and social

scales at post treatment and at six-week follow-up. This finding uncovered the external assessments completed by parents and teachers.

The application of Solution-Focused Brief Therapy (SFBT) with students and in school settings has grown over the past 10 years and has been applied to a number of behavioural and academic problems. Sundstrom (1993) compared a single session of SFBT with a single session of Interpersonal Psychotherapy for Depression (IPT) for the treatment of depressed college students. The sample comprised 40 female undergraduate psychology students at a Midwestern University who scored in the mild to moderately depressed range (10-29) on the Beck Depression Inventory. Thirty-four percent of the sample met diagnostic criteria for Major Depression according to the Inventory to Diagnose Depression. Subjects were randomly assigned to the experimental or control group, and then given the battery of outcome measures. Measures included the Beck Depression Inventory (BDI), the Depression Adjective Checklist (DACL), the Rosenberg Self-Esteem Scale (SES), and the Counsellor Rating Form-Short Form (CRF-S). Treatment consisted of one 90-minute counselling session - SFBT for the treatment group and IPT for the comparison group. Sessions were conducted by 21 female counsellors who were licensed social workers, licensed psychologists, psychology interns, or advanced psychology graduate students.

To assure adherence to treatment protocols, clinicians participated in separate 2-hour training sessions for each condition, and all counselling sessions were videotaped and rated by search assistants who were blind to the treatment condition. A follow-up interview was conducted within a week to 10 days after treatment at which time, subjects completed the BDI, IDACL, SES, and CRF-S. MANOVA analysis of pre-to post-intervention BDI and DACL scores showed that both treatment conditions produced significant positive change,

and that neither treatment produced significantly better outcomes than the other. SES scores revealed no change across time for either treatment condition. Lack of significant differences between treatments in CRF-S scores indicated counsellor characteristics did not contribute differentially to treatment outcome.

Cockburn, Thomas and Cockburn (1997) evaluated the impact of SFBT on psychosocial adjustment and return to work for patients with orthopedic injuries. The study sample comprised 48 patients and their spouses, referred by an orthopedic surgeon to a rehab program designed to prepare patients for work re-entry. Subjects were randomly assigned to one of four groups, following a Solomon Four Groups design. The intervention for treatment groups 1 and 3 consisted of 6 weekly one-hour sessions of SFBT plus the standard rehab program. Treatment was implemented by the first author and followed a standard protocol (Jack Cockburn, personal communication, April 18, 1999). Control groups 2 and 4 received only the standard rehab program. Pre-test data were collected from treatment group 1 and control group 2 using the Family Crisis Oriented Personal Evaluation Scales (F-COPES). Post-test data were collected from all 4 groups using the FCOPES and the Psychosocial Adjustment to Illness Scale-Self-Report (PAIS-SR). Subjects' spouses also completed the PAIS-SR at post-test. Because pre-testing was shown to have a consistent effect across treatments, analyses were based on ANOVAs for the post-test data only. Analysis of F-COPES data indicated significant between groups differences on all 3 subscales used in the study. The authors concluded that patients in the SFBT groups had significantly better psychosocial adjustment and social supports than patients in the control group. Within 7 day after completion of treatment, 68% of subjects in the treatment groups had returned to work as compared to only 4% of subjects in the control groups. By 30 days



after treatment, 92% of the SFBT patients had returned to work as compared to 47% of control group patients.

All the review on the empirical studies were one or the other related to this study either on cigarette smoking, aversive technique or solution focused brief counselling technique.

## **2.10 Summary**

This chapter has reviewed the conceptual framework of the key variables which include overview of cigarette smoking, overview of positive reinforcement technique and solution focused brief counselling techniques. Other aspects reviewed are theoretical framework such as classical conditioning of Ivan Pavlov, operant conditioning Thorndike and Skinner, social learning theory by Bandura, reality therapy by Glasser and Theory of cognitive Dissonance by Festinger. All the theories cited have direct or indirect influence on both techniques and the problem being studied because most of them recommend different counselling techniques/approach in assisting the cessation or reduction of cigarette smoking to individual who smoke. Most of the theories and techniques reviewed in this work are non-African and had been used and proved effective in their areas. It is the wish of the researcher to work and apply some of these theories and techniques to treat certain bad behaviours in Nigeria which cigarette smoking among senior secondary school students in Katsina metropolis is one of them. A lot of empirical studies were also reviewed so far none of the researchers centred their work on the combine effects of positive reinforcement and solution focused brief counselling techniques to treat cigarette smoking among senior secondary school students. This makes this study unique because it combine a replacement or a substitute to an unwanted behaviour and straight or direct counselling to the client.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the methodology for this study in the following subthemes, Research design, Population of the study, Sample and sampling technique, Instrumentation, Validity of the research instrument, Reliability of the research instrument, Procedure for data collection and procedure for data analysis.

#### **3.2 Research Design**

The design adopted in this study was quasi-experimental, involving pre-test and post-test design. The design involves a researcher administering a pre-test, implement a treatment manipulation and then measured the same variable, as was measured with the pre-test with post test (Cohen, Manion & Morrison, 2007). The rationale for the choice of this design is because it lacks full laboratory control and laboratory isolation, as it take place outside the laboratory setting. According to Emmanuel (2013) most researchers in education use quasi-experimental research design, because it must be conducted on real students without disrupting the education process of the school.

#### **3.3 Population of the Study**

The population of this study consist of 1,049 students who were identified to be cigarette smokers from the 12 senior secondary schools within Katsina metropolis.

The researcher used the hook on nicotine checklist (HONC) to determine those students who are into the habit of smoking. It was developed by Difranza (2002) is a 10 item instrument which its response is use to determine the onset and dependence on cigarette

smoking. Any student who scored 50 and above was selected to form the population of the study.

**Table 1**Distribution of Population of Students that Smoke Cigarette in each school

<b>S/N</b>	<b>Name of School</b>	<b>Total of SSS</b>	<b>Smokers</b>
1	Family Support Senior Secondary School, Katsina.	377	50 are smokers
2	Government College (Day Wing) Katsina	4,362	163
3	Government College Pilot Katsina	1,365	70
4	Government Girls College (Senior) Katsina	2,015	77
5	Government Pilot Secondary School Kofar Sauri	2,037	72
6	Government School for the Blind Katsina	233 (blind)	-
7	Government Senior Secondary School Dutsen Safe	1,500	43
8	Government Senior Secondary School Kambarawa	1,836	47
9	Government Senior Secondary School Kofar Kaura	3,171	122
10	Government Senior Secondary School Kofar Yandaka	5,680	143
11	Katsina College Katsina (Senior)	3,812	136
12	Sir Usman Nagogo College of Arabic & Islamic Studies Katsina	3,035	126
<b>Grand Total</b>		<b>29,423</b>	<b>1,049 smokers</b>

Source Ministry of Education Katsina State.

### **3.4 Sample and Sampling Technique**

Two senior secondary schools were selected within Katsina metropolis using purposive sampling technique. The rationale for the choice of this technique was due to the fact that the researcher is only interested in students that smokes hence they were identified with the help of school counsellor or career master/mistress, then they were involved in the study. Forty(40) students were purposively selected from the target schools. 10 male and 10 female students of Government College Katsina and 10 male and 10 female from Government Senior Secondary School Kofar Yandaka. The locations of these schools is such that it covers the deep and densely populated areas of the Katsina metropolis. The

sample of the study is therefore 40 students smokers from the two schools selected. The selection was based on their agreement and desire to quit smoking.

### **3.5 Control of Extraneous Variables**

The term extraneous variable is use to refer to any other factor that might compound the treatment effect on the dependable variable in the study and most importantly how these variables can be control to maximize internal validity. There is always a need for the researcher to identify intervening variables their control become necessary so that the researcher attribute changes observed in the dependent variable thereby ruling out the possibility of alternative explanations. This study will utilize the following ways to control the extraneous variables.

**Subject's interaction** –this refers to the interaction of subjects from different groups. The threat is controlled by selecting the subjects in the treatment groups in different schools. Two schools are used 20 students from each school. Students who are identified as cigarette smokers from school (A) received positive reinforcement technique treatment while those in school (B) received solution focused brief counselling technique treatment. The two schools are located at different areas within the metropolis.

**Instrumentation:** This refers to the changes that may occur in the measuring instrument to avoid the same instrument being used for both pre-test and post-test. All the items in instrument are objectively constructed and validated by the experts in the field of the study.

**Testing Twice:** This refers to the effects of first testing upon the scores of a second testing. To control this, the test items of the cigarette smoking rating scale are framed in such a way that the subjects of two sample schools responded in same manner.

**Absenteeism and Absent mindedness:** In order to ensure that the subjects attend the treatment sessions physically and psychologically, the researcher present the treatment during the usual school hours in a separate venue provided by the principal encouraged the subjects to be free and relate positively with each other in order to have a friendly environment.

**Language effects on the respondents:** Despite the fact that cigarette smoking rating scale is originally constructed in English language the researcher assisted in translating it to Hausa language where necessary in order to facilitate the respondents understanding of the items.

### **3.6 Instrumentation**

The instrument for data collection was a 26 items of cigarette smoking rating scale developed by Difranza, Savageau, Mcveil, Coleman and Wood (2002). The scale has 26 items based on the components of 5 points rating scale. The instrument consists of two main sections: Section A sought for respondents personal data such as names and gender. Section B include the main questions made of 26 items.

The instrument is a 26 item scale developed by Difranza (2002) participants were required to respond to each item on a five liker scale ranging from extremely true to not at all. The scale was adopted because it has been widely used in the literature to assess the level of cigarette smoking. Some items were amended to suit the environment of the subjects of the study.

#### **3.6.1 Description of the Instrument**

The 26 items cigarette smoking rating scale consist of a series of descriptive phrases regarding how the subjects has been feeling or acting with regards to cigarette smoking.

Phrases of extremely true, usually true, moderately true, slightly true and not at all are use to describe the subject involvement into the habit. The subject was asked to indicate how much each statement applies to his/her recent experiences. It was created in the form of self-report for the subjects to complete. All the items were related to cigarette smoking and how the subjects feels about it.

### **3.6.2 Scoring of the Instrument**

Responses to items on the cigarette smoking rating scale were expected to be extremely true (5) usually true (4) moderately true (3) slightly true (2) and not at all (1). The highest possible score was 130.  $5 \times 26 = 130$  and the lowest possible score was 26.  $1 \times 26 = 26$ .

### **3.6.3 Validity of the Instrument**

Copies of the instrument were given to the three supervisors and three lecturers in the Faculty of Education, Ahmadu Bello University, Zaria for validation, observations and comments. Their observations and comments were in-cooperated in the final copy of the instrument.

### **3.6.4 Pilot Testing**

For the purpose of ascertaining reliability of the instrument, pilot testing was carried out. This is to ensure that the instrument can elicit the desired information from the respondents. For this reason 20 students of GSS Kofar Kaura were used because they have similar characteristics of the research population. The data collected was analysed using statistical package of Pearson Product Moment Correlation formula. Then test-retest technique was used to determine the reliability index of the instruments.

### **3.6.5 Reliability of the Instrument**

The pilot study was carried out using 20 students of GSS Kofar Kaura who share similar characteristics with the population of the study. The students level of smoking scores were recorded twice known as first and second test scores. The reliability of the test instrument using the Pearson Product Moment Correlation test retest was 0.88. This implies the test items are eligible for the main study as confirmation of test reliability by Spiegel, M. (1992) and Stevens, J.(1986). According to them instrument is considered reliable if its reliability coefficient lies between 0 and 1 and that the closer the calculated reliability coefficient is to 0 zero, the less reliable the instrument is and the closer the calculated reliability coefficient is to 1, the more reliable the instrument is. With reliability index of 0.88 it therefore confirms the reliability of the data collection instrument used for the study.

### **3.7 Procedure for Data Collection**

The data collection involved three phases, the pretest, the treatment and the post test stages.

#### **The Pretest**

A letter of introduction was collected from the Department of Educational Psychology and Counselling Ahmadu Bello University, Zaria. It was given to Katsina Zonal Education office, who then introduced the researcher to the principals of the schools concerned.

The researcher relied mainly on the counsellors /discipline masters and career masters of the school in identifying students who are smokers. The teachers were trained on the procedure of identifying students with cigarette smoking habit by recording their responses based on the items of hook on nicotine checklist and the instruments was collected for analysis and selection for participation in the study.

## **Treatment Phase**

Two different intervention programme were implemented to the two treatment groups. 20 of the participants of government college Katsina were subjected to positive reinforcement technique training and 20 participants from government senior secondary school Kofar Yandaka were subjected to solution focused brief counselling technique.

Each of the training last for six consecutive weeks with two meeting days in a week, each session last for 30 minutes, separate 2 days for each group, during this time the effect of the 2 counselling techniques were tested and recorded.

## **Post test**

The third stage was the post test. At the end of the six weeks treatment, the two groups were post-tested to determine the effect of the positive reinforcement counselling technique and solution focused brief counselling technique respectively on minimizing tobacco smoking among senior secondary school students.

A follow-up was made by the researcher one month after the post-test, this is to ensure that there was no relapse after treatment.

## **3.8 Procedure for Data Analysis**

The six research questions were analysed using both descriptive and inferential methods. The descriptive statistics was used to present the demographic data, means and standard deviation were used to answer the research questions, hypotheses were tested using the inferential statistics of paired sample t-test and independent t-test. All hypotheses were tested at 0.05 level of significance.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

The study chapter presented data collected from the field a total of 40 senior secondary school students from two schools within Katsina metropolis were involve in the study. The statistical package of version IBM (International Business Machine) 23 was used to analyse the data obtained from two groups of 20 students each who were pretested and post-tested. The first groups were exposed to positive reinforcement technique and the second group were exposed to solution focused brief counselling techniques. The first section presents the bio data variables in frequencies and percentage distributions. These include gender, study group, number of cigarettes smoked per day and their school. The second section answers the research questions using the descriptive mean statistics. The third section tests the six research hypotheses with inferential statistics of paired sample t-test for hypotheses 1 and two, while Independent t-test was used for hypothesis three and the Analysis of Covariance (ANCOVA) was used to determine effect in hypotheses 4, 5 and 6. All the hypothesis were tested for rejection or acceptance at 0.05 alpha level of significance. Summary of findings were itemized and discussion of the findings.

#### 4.2 Results

Analysis of bio data variables in frequencies and percentage

Table 4.1 Distribution of subjects into experimental groups

Experimental Group	Frequency	Percent
Focused brief counselling	20	50.0
Positive reinforcement	20	50.0
Total	40	100.0

Table 4.1 shows the distribution of subjects into experimental groups. From the table twenty (20) students were treated using positive reinforcement techniques representing

50.0% while another twenty (20) students were treated using solution focused brief counselling technique representing 50.0% making a total of 40 students/respondents for this study.

Table 4.2 Distribution of subjects by schools

<b>Experimental Group</b>	<b>Frequency</b>	<b>Percent</b>
GDSS K/Yandaka	20	50.0
GC Katsina	20	50.0
Total	40	100.0

Table 4.2 above shows that two schools were used for this study. The first one government day secondary school Kofar Yandaka comprised of 20 students and government college Katsina also comprised of 20 students.

Table 4.3 Distribution of subjects by gender

<b>Experimental Group</b>	<b>Frequency</b>	<b>Percent</b>
Male	20	50.0
Female	20	50.0
Total	40	100.0

Table 4.3 shows the distribution of subjects by gender whereby 20 or 50.0% are male and 20 or 50.0% are female.

### **Answers to Research Questions**

The six research questions raised were answered below using descriptive statistics of mean scores and standard deviations.

Question One: What is the effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis?

Table 4.3.1: Descriptive statistics on effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Variable	Tests	N	Mean	SD	Mean Difference
Scores	Pretest	20	78.3000	22.983	35.000
	Posttest	20	43.3000	23.48146	

Results of the descriptive mean statistics showed that difference exist between the pre-test and post test scores of the smoking level of the students in secondary schools in Katsina metropolis. The pre test and post test scores are 78.3000 and 43.3000 respectively with a mean reduction difference of 35.000. This implies that there is positive effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Question Two: What is the effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis?

Table 4.3.2: Descriptive statistics on effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Variable	Tests	N	Mean	SD	Mean Difference
Scores	Pretest	20	70.4000	22.983	35.000
	Posttest	20	49.5000	23.48146	

Results of the descriptive mean statistics showed that remarkable difference exist between the pre test and post test scores of the students in secondary schools in Katsina metropolis. The pretest and post test scores are 70.4000 and 49.5000 respectively with a mean reduction difference of 35.000. This implies that there is positive effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Question Three: What is the effect of positive reinforcement technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis?

Table 4.3.3: Descriptive test on effect of positive reinforcement technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Variable	Tests	N	Mean	SD	Mean Difference
Scores	Male	10	48.8000	26.00342	1.000
	Female	10	47.8000	20.50908	

Results of the descriptive statistics showed that there is no significant difference in the mean scores of secondary schools in Katsina metropolis. Their mean scores are 48.8000 and 37.800 with a mean an insignificant mean difference of 1.000. This clearly shows that both male and female have the same mean scores and implies that positive reinforcement the treatment is effective for both male and female and therefore gender friendly.

Question Four: What is effect of solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina?

Table 4.3.4: Descriptive statistics on effect of solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

### Descriptive Statistics

Dependent Variable: scores					
Tests	Study groups	N	Mean	Std. Deviation	Mean Difference
Male	Pretest	10	86.1000	15.87066	30.6
	Post test	10	55.5000	24.9540	
Female	Pretest	10	54.7000	20.12213	11.2
	Post test	10	43.5000	7.67753	

Results of the descriptive statistics that there is effect of solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis. The descriptive statistics showed that the pre test scores of male and

female were 86.1000 and 54.7000 respectively while their post test scores significantly reduced to 55.500 and 43.5000 by male and female respectively. A mean reduction of 30.6 among male and a mean reduction of 11.2 among female smokers. This indicate that there has been remarkable effect for both male and female in their habit of smoking cigarettes.

Question Five: What is relative effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis?

Table 4.3.5: Descriptive statistics on relative effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis.

Dependent Variable: scores							
Tests	Study groups			N	Mean	Std. Deviation	Mean Difference
Pretest	Solution focused brief counselling technique positive reinforcement	20	20	78.3000	22.98306	7.9	
				70.4000	23.88657		
Post test	Solution focused brief positive reinforcement	20	20	43.0000	23.48146	6.5	
				49.5000	18.99446		

The descriptive statistics showed that there is no major relative difference in the effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis. The descriptive statistics showed that the pretest values are 78.3000 and 70.4000 by solution focused brief counselling and positive reinforcements techniques respectively. On the other hand their post test scores are 43.3000 and 49.5000 by solution focused brief and positive reinforcements techniques respectively. This means that both groups has the same effect on reducing cigarette smoking.

Question Six: What are the relative effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis?

Table 4.3.6: Descriptive statistics on relative effect of there is no significant difference in the relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Dependent Variable: scores					
Tests	Study groups	N	Gender	Mean	Std. Deviation
Pretest	Solution focused brief	10	Male	84.5000	20.82867
		10	Female	72.1000	24.41061
		20	Total	78.3000	22.98306
	Positive Reinforcement	10	Male	86.1000	15.87066
		10	Female	54.7000	20.12213
		20	Total	70.4000	23.88657
	Total	20	Male	85.3000	18.04118
		20	Female	63.4000	23.53139
		40	Total	74.3500	23.48000
	Focused brief	10	Male	48.8000	26.00342
		10	Female	37.8000	20.50908
		20	Total	43.3000	23.48146
Post test	Positive Reinforcement	10	Male	55.5000	24.95440
		10	Female	43.5000	7.67753
		20	Total	49.5000	18.99446
	Total	20	Male	52.1500	25.04160
		20	Female	40.6500	15.35295
		40	Total	46.4000	21.31305
	Focused brief	20	Male	66.6500	29.34599
		20	Female	54.9500	28.12655
		40	Total	60.8000	28.98382
Total	Positive Reinforcement	20	Male	70.8000	25.70398
		20	Female	49.1000	15.89737
		40	Total	59.9500	23.78531
	Total	40	Male	68.7250	27.31017
		40	Female	52.0250	22.74439
		80	Total	60.3750	26.34742

From the descriptive statistic test, there is no relative difference in the relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis. In the descriptive statistics, among the solution focused brief technique the pretest scores for male and female are 84.5000 and 72.1000 respectively. Among the positive reinforcement

techniques the pretest scores are 86.1000 and 54.7000 respectively. On the other hand the post test scores of the solution focused brief technique are 48.8000 and 37.8000 for male and female respectively, while the post test scores of the positive reinforcements technique are 55.5000 and 43.5000 for male and female respectively. This shows that the relative effect for both male and female among students of positive reinforcements and solution focused brief techniques is relatively the same.

### Hypotheses Testing

Six null hypotheses were formulated and tested at 0.05 alpha level of significance using inferential statistics of paired sample t-test independent test and Analysis of Covariance (ANCOVA).

**Hypothesis One:** There is no significant effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Table 4.4.1: Paired sample t-test statistics on effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Variable	Tests	N	Mean	SD	Mean Difference	Df	t	p
Scores	Pretest	20	78.3000	22.983	35.000	19	4.352	0.002
	Posttest	20	43.3000	23.48146				

*p calculated <0.05, t computed >1.96 at df 19*

Table 4.4.1 showed that  $t = 4.352$  while  $p = 0.002$  which is lower than the 0.05 level of significance. The pre-test and post test scores are 78.3000 and 43.3000 respectively with a mean reduction difference of 35.000. This implies that there is positive effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis. Therefore the null hypothesis which state that there is no significant

effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis is hereby rejected.

**Hypothesis Two:** There is no significant effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Table 4.4.2: Paired sample t-test statistics on effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis.

Variable	Tests	N	Mean	SD	Mean Difference	Df	t	p
Scores	Pretest	20	70.4000	22.983				
					35.000	19	4.352	0.002
	Posttest	20	49.5000	23.48146				
<i>p calculated &lt;0.05, t computed &gt;1.96 at df 19</i>								

Table 4.4.2 above showed that  $t = 4.352$  while  $p = 0.002$  which is lower than 0.05 level of significance. The pre test and post test scores are 70.4000 and 49.5000 respectively with a mean reduction difference of 35.000. Therefore the null hypothesis which state that there is no significant effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students in Katsina metropolis is hereby rejected. This implies that there is significant effect of solution focused brief counselling technique on cigarette smoking among secondary school students in Katsina metropolis.

**Hypothesis Three:** There is no significant effect of positive reinforcement technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis.



Table 4.4.3: Independent t – test on effect of positive reinforcement on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Variable	Tests	N	Mean	SD	Mean Difference	Df	t	p
Scores	Male	10	48.8000	26.00342	1.000	18	1.050	0.307
	Female	10	47.8000	20.50908				

*p calculated <0.05, t computed >1.96 at df 18*

Table 4.4.3 showed that  $t = 1.050$  while  $p = 0.307$  which is greater than the 0.05 level of significance. The mean scores are 48.8000 and 47.800 with a mean an insignificant mean difference of 1.000. This clearly shows that both male and female have the same mean scores and implies that the treatment is effective for both male and female scores and therefore gender friendly. Therefore the null hypothesis which state that there is no significant difference in the effect of positive reinforcement technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis is hereby accepted and retained.

**Hypothesis Four:** There is no significant effect of solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Table 4.4.4: Analysis of Covariance (ANCOVA) statistic on effect of solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Dependent Variable: scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected model	10017.900 <sup>a</sup>	3	3339.300	9.980	.000
Intercept	143760.100	1	143760.100	429.633	.000
tests	4368.100	1	4368.100	13.054	.001
gender	4708.900	1	4708.900	14.073	.001
tests*gender	940.900	1	940.900	3.812	.002
Error	12046.000	36	334.611		
Total	165824.000	40			
Corrected Total	22063.900	39			

### Descriptive Statistics

Dependent Variable: scores				
tests	gender	Mean	Std. Deviation	N
Pretest	Male	86.1000	15.87066	10
	Female	54.7000	20.12213	10
	Total	70.4000	23.88657	20
Post test	Male	55.5000	24.95440	10
	Female	43.5000	7.67753	10
	Total	49.5000	18.99446	20
Total	Male	70.8000	25.70398	20
	Female	49.1000	15.89737	20
	Total	59.9500	23.78531	40

Results of the Analysis of Covariance statistics showed that the calculated p value of 0.002 is lower than the 0.05 alpha level of significance and the computed F value of 3.812 is greater than the 3.000 F critical value. The descriptive statistics showed that the pre test scores of male and female were 86.1000 and 54.7000 respectively while their post test scores significantly reduced to 55.5000 and 43.5000 by male and female respectively. This indicate that there has been remarkable effect for both male and female in their smoking of cigarettes. Therefore the null hypothesis which state that there is no significant effect of solution focused brief counselling technique on cigarette smoking among male and female senior secondary school students in Katsina is hereby rejected.

**Hypothesis Five:** There is no differential effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis.

Table 4.4.5: Analysis of covariance on relative effect of positive reinforcement and solution based brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis.

**Tests of Between –Subjects Effects**

Dependent Variable: scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected model	16632.550 <sup>a</sup>	3	5544.183	11.028	.000
Intercept	291611.250	1	291611.250	580.044	.000
tests	15624.050	1	15624.050	31.078	.000
Groups	14.450	1	14.450	.029	.866
tests*Groups	994.050	1	994.050	1.977	.164
Error	38208.200	76	502.739		
Total	346452.000	80			
Corrected Total	54840.750	79			

a. R Squared = .303 (Adjusted R Squared = .276)

The Analysis of covariance statistics showed that the calculated p value of 0.164 is greater than the 0.05 alpha level and the computed F value of 1.9777 is lower than the 3.000 F critical value. The descriptive statistics showed that the pretest values are 78.3000 and 70.4000 by focused brief and positive reinforcements techniques respectively. On the other hand their post test scores are 43.3000 and 49.5000 by focused brief and positive reinforcements techniques respectively. This means that both groups has the same effect on reducing cigarette smoking. Therefore the null hypothesis which state that there is no significant difference in the relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis, is hereby accepted and retained.

**Hypothesis Six:** There are no significant difference in the relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Table 4.4.6: Analysis of covariance statistics on the relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

**Tests of Between-Subjects Effects**

Dependent Variable: scores					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected model	23656.150 <sup>a</sup>	7	3379.450	7.803	.000
Intercept	291611.250	1	291611.250	673.281	.000
tests	15624.050	1	15624.050	36.078	.000
Groups	14.450	1	14.450	.033	.856
Gender	5577.800	1	5577.800	12.878	.001
tests*Groups	994.050	1	994.050	2.295	.134
Tests *gender	540.800	1	540.800	1.249	.268
Groups*gender	500.000	1	500.000	1.154	.286
Tests*Groups*gender	405.000	1	405.000	.935	.337
Error	31184.600	72	433.119		
Total	346452.000	80			
Corrected Total	54840.750	79			

a. R Squared = .431 (Adjusted R Squared = .376)

**Descriptive Statistics**

Dependent Variable: scores					
Tests	Study groups	gender	Mean	Std. Deviation	N
Pretest	Focused brief	Male	84.5000	20.82867	10
		Female	72.1000	24.41061	10
		Total	78.3000	22.98306	20
	Positive Reinforcement	Male	86.1000	15.87066	10
		Female	54.7000	20.12213	10
		Total	70.4000	23.88657	20
	Total	Male	85.3000	18.04118	20
		Female	63.4000	23.53139	20
		Total	74.3500	23.48000	40
	Focused brief	Male	48.8000	26.00342	10
		Female	37.8000	20.50908	10
		Total	43.3000	23.48146	20
Post test	Positive Reinforcement	Male	55.5000	24.95440	10
		Female	43.5000	7.67753	10
		Total	49.5000	18.99446	20
	Total	Male	52.1500	25.04160	20
		Female	40.6500	15.35295	20
		Total	46.4000	21.31305	40
	Focused brief	Male	66.6500	29.34599	20
		Female	54.9500	28.12655	20
		Total	60.8000	28.98382	40
	Positive Reinforcement	Male	70.8000	25.70398	20
		Female	49.1000	15.89737	20
		Total	59.9500	23.78531	40
Total	Total	Male	68.7250	27.31017	40
		Female	52.0250	22.74439	40
		Total	60.3750	26.34742	80

From the ANCOVA statistics test above, there is no significant difference in relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis. Reasons being that in the tests versus groups versus gender, the calculated p value of 0.337 is greater than the 0.05 alpha level while the computed F value of 0.935 is lower than the 3.000 F critical value. In the descriptive statistics, among the solution focused brief counselling technique the pretest scores for male and female are 84.5000 and 72.1000 respectively. Among the positive reinforcement techniques the pretest scores are 86.1000 and 54.7000 respectively. On the other hand the post test scores of the focused brief technique are 48.8000 and 37.8000 for male female respectively. While the post test scores of the positive reinforcements technique are 55.5000 and 43.5000 for male and female among students of positive reinforcements and solution focused brief counselling techniques is relatively the same. Therefore the null hypothesis which state that there is no significant difference in the relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis, is hereby accepted and retained.

### **Summary of the Findings**

The findings of this study revealed that;

1. Positive reinforcement counselling technique had effect in reducing cigarette smoking among senior secondary students of Katsina metropolis ( $p = 0.002$ ).
2. Solution focused brief counselling technique had effect in reducing cigarette smoking among senior secondary school students in Katsina metropolis ( $p = 0.002$ ).

3. Positive reinforcement technique had effect in reducing cigarette smoking among male and female senior secondary school students in Katsina metropolis ( $p = 0.307$ ).
4. Solution focused brief counselling technique had effect in reducing cigarette smoking of male and female senior secondary school students in Katsina metropolis ( $p = 0.002$ ).
5. There is no significant relative effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis ( $p = 0.164$ ).
6. There is no significant relative effect of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among male and female senior secondary school students in Katsina metropolis ( $p = 0.337$ ).

### **4.3 Discussion**

This study investigated the effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students. Two treatment techniques (positive reinforcement and solution focused brief counselling techniques) were experimented on two experimental groups of 20 students per group. The results of the experiment at post-test level indicated that the use of positive reinforcement and solution focused brief counselling techniques to reduce cigarette smoking among senior secondary school students in Katsina metropolis can successfully be used to tackle the habit of cigarette smoking.

Hypothesis one aimed at finding out if positive reinforcement could be used as a technique on cigarette smoking among senior secondary school students. The result indicated that significant effect exists between the pretest and post-test, mean scores of the

subjects that were exposed to positive reinforcement counselling technique. This showed that positive reinforcement counselling technique can be used to reduce or stop cigarette smoking habit by students. By this finding the first null hypothesis which states that, there is no significant effect of positive reinforcement technique on cigarette smoking among senior secondary school students in Katsina metropolis is rejected. The result revealed that students treated with positive reinforcement technique on cigarette smoking had a pretest mean score of 78.3000 and lower post-test mean score of 43.3000 on cigarette smoking rating scale (CSRS) instrument. The student's cigarette smoking behaviour was reduced by 35.000. The lower the mean the higher the effect of the treatment. By comparing the pre-test and post-test mean scores of the treatment group it showed that positive reinforcement counselling technique affected students cigarette smoking habit level by reducing it.

The positive result could be due to obvious reasons and benefits the students derived during the counselling sessions. These benefits might have helped them to understand the danger and negative effects of cigarette smoking. This finding is in line with the first assumption of the study which states that positive reinforcement technique will have positive effect on cigarette smoking among senior secondary school students in Katsina metropolis. The implication of this finding is that when appropriate and desirable behaviours are reinforced the positive effect of reinforcement would be seen in subject's change in behaviour. Theoretically, the findings were supported by the theorists such as Edward Thorndicke's law of effect. Ivan Pavlov, Albert Bandura social learning, and B.F. Skinner. The law of effect states that behaviour that brings about a satisfying effect is apt to be performed again. Whereas behaviours that brings about negative effect is apt to be suppressed: Pavlov states that most of our learning is associated with the process of

conditioning from the beginning and conditioning not only help us in learning what is desirable but also help in eliminating, avoiding or unlearning of undesirable habits, unhealthy attitudes through deconditioning social learning theory opined that all behaviours are learned through combination of positive and negative reinforcements. This theory asserted that learning takes place by receiving information, observations and modelling. The theory further stressed that experiencing reinforcements make learning highly effective. The finding that positive reinforcement had significant effect on behaviour remediation was further supported by Skinner (1983) who postulated that for effective behaviour remediation positive reinforcement is superior to punishment, hence the use of positive reinforcement as behaviour intervention plays a significant role in behaviour management technique. This finding is also in line with that of Bello (2013) who revealed from investigation of effect of positive reinforcement and response cost on attention deficit hyperactivity disorder symptoms among primary schools pupils in Kano state. The null hypothesis showed there exist a significant effects of positive reinforcement on cigarette smoking among students. This showed a reduction in the level of cigarette smoking among students in the experimental group.

The findings of hypothesis two testing revealed significant effect between the pretest 70.4000 and post-test 49.5000c mean scores of the subjects exposed to solution focused brief counselling technique. When comparing the mean of pretest and post test scores, the effectiveness of solution focused brief counselling technique was remarkable. It showed that solution focused brief counselling technique is capable of reducing the habit of cigarette smoking among senior secondary school students. The hypothesis which states



that there is no significant effect of solution focused brief counselling technique on cigarette smoking among senior secondary school students is hereby rejected.

The findings confirmed the work of Joker and Ghaderi (2015) which evaluate the effectiveness of solution focused brief counselling technique on increase student's self-perception. The experimental group received 30 sessions of solution focused brief counselling technique. Data were analysed by covariance test. The result showed that solution focused brief counselling technique increased student's self-perception and its components such as self-esteem and self-admission.

To further support that SFBCT is an effective technique Smock, Trepper, Wetchler et al (2008) compared solution focused group therapy (SFGT) with a traditional problem focused treatment for level 1 substance abusers. The outcome of the research on the effectiveness of solution focused group therapy is high, especially in treating substance abusers. In their study, clients were measured before and after treatment to determine therapeutic effectiveness clients in the solution focused group significantly improved on both the Beck Depression Inventory and the outcome questionnaire. The clients in the comparison group did not improve significantly on either measure.

The study raised a research question to compare the relative effects of the two techniques above. This comparison revealed that no much difference exist between the effectiveness of positive reinforcement technique and solution focused brief counselling technique. It means the two techniques had effectiveness in reducing cigarette smoking habit among students. This could be attributed to the systematic way in which the researcher handled the techniques that made the subjects to see the negative consequences of cigarette smoking.

This result concurred with the assumption that the positive reinforcement and solution focused brief counselling techniques will have positive relative effects on cigarette smoking among male and female senior secondary school students in Katsina metropolis.

Equally revealed is the fact that gender has no influence in the effectiveness of both positive reinforcement technique and solution focused brief technique. The findings of this research showed that each technique is effective on both male and female which concurred with assumptions 3 and 4 which states that positive reinforcement technique will have positive effect on cigarette smoking among male and female senior secondary school students and that solution focused brief counselling technique will have positive effect on cigarette smoking among male and female secondary school students in Katsina metropolis.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1 Summary**

This chapter presents the summary of the study, conclusions drawn based on findings of this study. Recommendations and suggestions for further studies were also made.

The study investigated the effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among senior secondary school students in Katsina metropolis. The researcher wanted to know the effects of positive reinforcement and solution focused brief counselling techniques on cigarette smoking among secondary school student in Katsina metropolis. In order to test the effects these technique would have on the subjects, six research objectives, six research questions and six null hypotheses were tested at  $\leq 0.05$  level of significance. Out of the six hypotheses that were tested three were rejected and three were retained. Hypotheses 1, 2 and 4 were rejected as they were found to have significant effects on cigarette smoking mean scores of the subjects in the treatment. While hypotheses 3, 5 and 6 were retained as they were found not to have significant effects on cigarette smoking mean scores among male and female subjects in the treatment. Literature related to cigarette smoking positive reinforcement and solution focused brief counselling techniques were reviewed to give insight into the aforementioned variables. Some theories were also reviewed by the researcher, prominent among the theories reviewed were, Operant conditioning by B.F Skinner, classical conditioning by Ivan Parlov. The study also had an overview of some related empirical studies.

The research design adopted for the study was quasi-experimental design using pre-test, post test groups. The population of the study comprised of 1,049 senior secondary school students who are identified to be smokers through the use of hook on nicotine checklist (HONC) from 12 secondary schools within Katsina metropolis. Out of which forty(40) students were selected as the sample through the use of purposive sampling technique. Procedure for data collection were discussed. 26 items cigarette smoking rating scale was adopted as instrument for the study procedures for data collection and data analysis were equally discussed. Analysis for the data obtained from the study were presented and discussed. Summary of the major findings were also itemized. Lastly summary of the study, conclusions, recommendations and suggestions for further studies were also considered.

## **5.2 Contributions to Knowledge**

The following contributions are hereby made to knowledge.

1. Positive reinforcement counselling technique is an effective behaviour management technique among senior secondary school students on cigarette smoking.
2. Solution focused brief counselling technique is an effective behaviour management technique on cigarette smoking among senior secondary school students.
3. Both positive reinforcement and solution focused brief counselling techniques can be effectively used to manage cigarette smoking habit among male and female students in senior secondary schools.

### **5.3 Conclusion**

The findings of the study has shown that positive reinforcement technique had effects in reducing cigarette smoking among secondary school student, solution focused brief counselling technique had effect in reducing cigarette smoking, thus, positive reinforcement technique and solution focused brief counselling techniques have effects in reducing cigarette smoking for both male and female and there is no significant different between the two techniques in reducing cigarette smoking of male and female senior secondary school students in Katsina metropolis. Therefore positive reinforcement and solution focused brief counselling techniques can be used side by side in co-educational schools in treating cigarette smoking habit.

### **5.4 Recommendations**

Based on the findings of this study, the followings were recommended.

1. The stakeholders and students should be exposed to training in the use of positive reinforcement technique in addressing cigarette smoking habit.
2. The stakeholders and students should be exposed to training in effective use of solution focused brief counselling technique in addressing cigarette smoking habit.
3. Students both male and female should be exposed to the use of positive reinforcement techniques to help in reducing cigarette smoking.
4. Students should be exposed to training on the use and relevance of solution focused brief counselling techniques in solving the problem of cigarette smoking.
5. It is recommended that the two techniques can be used simultaneously in reducing the cigarette smoking habit.

## **5.5 Suggestions for further studies**

Based on the scope and findings of this study, the following suggestions were made for further studies.

1. Studies should be carried out on effectiveness of positive reinforcement and solution focused brief counselling techniques or other behaviour problems such as school absenteeism, bullying, drug addiction and so forth.
2. Similar study should be carried out on cigarette smoking using other behaviour management techniques like cognitive restructuring, social skills, techniques, cognitive behaviour therapy and others.
3. The scope of this studies covers senior secondary school students, a replica of the study should be carried out using higher institutions of learning.

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## APPENDIX I

### CIGARETTE SMOKING RATING SCALE

#### Section A: Bio-Data of the Respondents

1. Name of School \_\_\_\_\_
2. Senior Secondary Class \_\_\_\_\_
3. Gender: Male [   ] Female [   ]
4. How many number of cigarette sticks do you smoke in a day 1–5[   ] 6 – above[   ]

**Section B:** Rate how true each of the following is of you about cigarette smoking, from extremely to not at all. Use the following 5 point scale.

#### Keys:

Extremely True        -        ET  
 Usually True            -        UT  
 Moderately True       -        MT  
 Slightly True           -        ST  
 Not at All                -        NA

S/N	Items	ET	UT	MT	ST	NA
1	I smoke cigarette					
2	When I stay too long without cigarette I get impatient					
3	When I see other people smoking I want a cigarette.					
4	When I feel stressed I want a cigarette					
5	When I smell cigarette smoke I want a cigarette					
6	When I stay too long without a cigarette I get strong urges that are hard to get rid of.					
7	I rely on smoking to take my mind off being bored.					
8	I smoke more than five (5) cigarette stick a day					
9	After eating I take a cigarette					
10	When I stay too long without a cigarette I get nervous					
11	I feel restless if I don't smoke					
12	I feel like quitting smoking cigarette					
13	When I stay too long without a cigarette I lose my temper more easily					
14	I rely on smoking to focus my attention					
15	I rely on smoking to deal with stress					

16	I smoke because I have so many problems					
17	I would go crazy if I do not smoke					
18	I smoke less than five(5) cigarette sticks a day					
19	I enjoy smoking cigarette					
20	I smoke because I cannot stop smoking					
21	I tried to quit smoking, but cannot					
22	I feel like am addicted to tobacco					
23	I sometimes find it hard to concentrate because I couldn't smoke					
24	I sometimes feel irritable because I couldn't smoke					
25	I smoke now because it is really hard to quit					
26	I feel like I have a strong craving to smoke.					

Source: Difranza, et al (2002)

## APPENDIX II

### The Hooked on Nicotine Checklist

		NO	YES
1.	Have you ever tried to quit, but couldn't?		
2.	Do you smoke <u>now</u> because it is really hard to quit?		
3.	Have you ever felt like you were addicted to tobacco?		
4.	Do you ever have strong cravings to smoke?		
5.	Have you ever felt like you really needed a cigarette?		
6.	Is it hard to keep from smoking in places where you are not supposed to?		
	When you haven't used tobacco for a while... Or when you tried to stop smoking...		
7.	Did you find it hard to concentrate because you couldn't smoke?		
8.	Did you feel more irritable because you couldn't smoke?		
9.	Did you feel a strong need or urge to smoke?		
10.	Did you feel nervous, restless or anxious because you couldn't smoke?		

**Reference:** DiFranza JR, Savageau JA, Fletcher K, Ochene JK, Rigotti NA, McNeill AD, Coleman M, Wood C. Measuring the loss of autonomy over nicotine use in adolescents: The Development and Assessment of Nicotine Dependence in Youths (DANDY) Study. *Archives of Pediatric Adolescent Medicine*. 2002; 156:397-403.  
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# DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING



Faculty of Education  
AHMADU BELLO UNIVERSITY, ZARIA

Email: [epc@abu.edu.ng](mailto:epc@abu.edu.ng)

Vice-Chancellor: Professor Ibrahim Garba, B.Sc, M.Sc (ABU), Ph.D, DIC (London) FNMGS

Head of Department: Dr. Aisha I. Mohammed, B.Ed, M.Ed, Ph.D (ABU)

Our Ref: ZONA touch

Date: 2/3/2019

OFFICE, KASIM  
METROPOLIS, KASIM  
STATE

Dear Sir,

## STUDENTS' FIELD RESEARCH

The Department of Educational Psychology and Counselling, Ahmadu Bello University, Zaria, requires each student working for a Degree to complete a research Project Thesis/Dissertation. They are therefore required to collect data for the research studies.

Most of them will need to be allowed access to certain relevant documents and some valuable information which you may have.

Please, give assistance as much as possible.

### TOPIC OF RESEARCH:

Effects of positive Reinforcement and Solution  
focused brief Counselling techniques on cigarette  
smoking among Secondary School Students in Kasim  
metropolis, Kasim State

Thank you for your continuous cooperation.

Yours sincerely,

Research Advisor

**HEAD OF DEPARTMENT**  
EDUCATIONAL PSYCHOL & COUNSEL  
FACULTY OF EDUCATION  
AHMADU BELLO UNIVERSITY, ZARIA



## **APPENDIX III**

### **Treatment Package Using (Positive Reinforcement Counselling Technique)**

#### **First Session (1<sup>st</sup> Week)**

The first session will mainly be for creating a cordial relationship between the counsellor and the participants.

- After selection and identification of the student ready for the treatment, the researcher will group them in a class or any venue provided by the principal.
- The researcher will introduce herself, the students will also introduce themselves by name, class and age.
- The researcher will establish rapport, that is show care, warmth, understanding and try to establish a strong belief and relationship for the smokers to open-up with the researcher.
- The researcher will now explain to participants the purpose of their meeting and how the participants can benefit from the session. The researcher will then administer the pre-test.
- The session will continue with the participants filling the daily records for the day.
- The students will be assured of confidentiality of what will be discussed and their identity will be confidential. Students will be given assorted chewing gum, sweets and chocolate as appreciation and emphasis on the importance of attendance will be made. Students will be allow to ask questions and the researcher make clarifications.

#### **Second Session (2<sup>nd</sup> Week)**

The researcher will introduce the second session with encouraging and motivating phrases and questions such as what made you happy yesterday? What are you expecting today? At this session the researchers focus is on the student's current behaviour.

The researcher will ask questions like -

- Did you smoke cigarette today?
- How many cigarette did you smoke today?
- How many cigarette do you smoke per day?
- Have you for once contemplate quitting smoking?
- What stop you from quitting?

- What do you intend to do tomorrow?

The participants will be given the daily records to fill, which they will fill there in, where the researchers saw improvement she will give some positive reinforcement in form of what the student like best from best drink, assorted chew gum, sweets, cola, biscuits etc. The smokers will be discourage from blaming their problematic behaviour on society, parents, environment, peers or any other thing. And they will be taught on how to replace negative urge of smoking with something positive and beneficial. The session will be close for the day till next session.

### **Third Session (3<sup>rd</sup> Week)**

The researcher will review the previous sessions, and ask the clients to assess their personal behaviour and see if the personal behaviour is working to encourage the smokers progress in life. This is one of the function of positive reinforcement counselling technique to encourage the client to assess his personal life.

- The smokers will be asked to examine their smoking habits and determine if smoking will be beneficial to their lives progress.
- The smokers will be encourage to take decision after thorough evaluation of the advantages and disadvantages of smoking.
- If the smokers, personally decides that smoking does not contribute to their healthy life styles, the smokers will be ask to evaluate the amount of money they spent on smoking.
- The smokers can quantify the amount of money spent on smoking and will be counselled to take decision on whether they continue to waste money on smoking or quit and spend the money in improving their health and lives. Students smokers will be given the daily records to fill, where the researcher saw improvements the counsellor will give some reinforcement in form of what the students like such as assorted drinks, sweets and chewing gum.

### **Fourth Session (4<sup>th</sup> Week)**

The researcher will welcome the students and appreciate their efforts of attending and she will revised the previous sessions with them.

At this point the smokers will be ready and willing to develop an action plan. This is the right time when the smokers are expected to explore possible alternatives to smoking. The researchers role is to help the smokers to quit, therefore there is the need to help the smokers to develop an action plan to quit smoking. The researcher will use the following guidelines to

- The smoker must be assisted to change the attitude of failure as his behaviour into success behaviour.
- The smoker would be assisted to make plans that are within the smokers capabilities.
- The smokers plan should not be absolute instead the smokers plan should be towards problem solving and successful living.
- The smoker should be guided and assisted to make concrete plans in substituting the smoking habits with chewing sticks, chewing gum, sweets, biscuits, water, etc.
- The smoker's plan should be immediate and should be reevaluated if it does not work and substitute plan should be made.

The participants will be given daily records to fill, where the researcher show improvement she will give some positive reinforcement inform of assorted sweet, biscuits and chewing gum and sticks.

### **Fifth Session (5<sup>th</sup> Week)**

The researcher will try to be closer to the students and try to make them feel free with her by asking them some questions on the previous discussions. Once the participants were assisted to develop an action plan, the researcher will not entertain any excuse from the smokers, instead the smokers will be encouraged to try the followings:

- When the smoking urge or crave comes, the smoker is encouraged to do something. If the smoker refuses to do something at this point, smokers quit plan may be doom.
- The smokers will be encouraged to substitute cigarette for sweets, chewing gum, chewing sticks, fruits etc.
- Whenever the smoker feels like smoking, the smoker remembered the consequences and harmful effects.
- The smoker will also be request to spend more time in places he/she cannot smoke.
- The smoker can replace smoking with long walks or juggling

- The smoker should participate in exercises which could take the smoker's mind off the desire to smoke.
- And he should keep busy and active so as not to feel the urge to smoke.
  - The smoker should avoid situations that will lead to smoking
  - Whenever the smoker feels like smoking, eating fruits, sweets or chewing gum or stick will be an alternative.

Students smokers will be given the daily record to fill. If the researcher see any improvement she will give some positive reinforcement inform of sweets, chew gum, drinks etc.

### **Sixth Session (6<sup>th</sup> Week)**

The researcher will appreciate the students, encourage them and inform them that today will be the last meeting with the researcher.

- In appreciation the researcher will distribute packs of assorted sweets, biscuits, chewing sticks, chewing gums and toilet soaps to the participants.
- The participants will fill in the daily records.
- They will be encouraged to abide by what was discussed in the earlier sessions and try to quit smoking.
- The researcher will then administer a post test to them, this will help to determine effect of the technique (positive reinforcement counselling techniques)
- The researcher will appreciate the students again and bid them farewell with the promise of coming back for follow-up after one month.

## **APPENDIX IV**

### **Treatment Phase II**

#### **Experimental Group II: Solution Focused Brief Counselling Technique**

##### **First Session (Week 1)**

- The researcher will come with the participants to the session and introduce herself, each participant will also introduce himself or herself.
- The researcher will then discuss the group expectations and the goals (that is to help them reduce and if possible quit smoking cigarette)
- The researcher will tell them that each session will involve group therapy, feedback and discussions based on the previous and present sessions.
- The researcher will show love, care and understanding and try to establish a strong belief and relationship for the participants to open-up with her.
- The cigarette smoking rating scale will then be administered on the participants (pre-test)
- The researcher will appreciate the participants for their commitment and cooperation during the session and will encourage them to attend the next session.

##### **Second Session (Week 2): Goal setting through miracle question**

- The researcher will welcome the participants to the second session and revisit the previous discussions. The researcher will allow them to ask questions while she answers them.
- The participants will be asked questions on the descriptions of their problem, such as:-
  - What brings you here today?
  - How is cigarette smoking a problem to you?
  - Is it a problem to others?
  - What effect does it have on you?
- The researcher will now read or listen and clarify the responses that will follow.
- The researcher will then explain to them the importance of miracle question to them and then ask the miracle question to them thus:

“Now I want to ask you a strange question, suppose that while you are sleeping to night and the entire house is quiet, a miracle happens. The miracle is that the problem which brought you is solved. However because you are sleeping, you didn’t know that the miracle has happened. So, when you wake up tomorrow morning, what will be different that will tell you that a miracle has happened and the problem that brought you is solved?”

- The researcher will ask them to describe their differences from their point of views and what others will be doing and experiencing.
  - How will things be different when the problem is solved? For you and for others?
  - How will you know coming here is worth-while?
  - What will you be doing differently?
  - What will other people notice?
  - How will you know you don’t have to come here again?
- The researcher will now read, listen and clarify their responses.
- The researcher will express words of appreciation and encourage them to attend the next session.

### **Third Session (Week Three)**

Use of scaling question

- The researcher will welcome the participants to the third session, revise the previous session, and allow for questions and answers. The assignment responses will be collected.
- The researcher will then ask the participants to state their problems on a scale from 1 – 10 with 1 being your present state of cigarette smoking cessation not achieved and 10 your achievement in quitting cigarette smoking.
  - Where would you rate yourself?
  - Where would you like to be on the scale at the end of the term?

The researcher will then give them assignment:

What is the state of your cigarette smoking now as well as your level of trying to quit?

What do you hope to achieve by participating in this group for the next 3 weeks?

- The researcher will express words of appreciation and encourage them to attend the next session.

#### **Fourth Session (Week Four)**

- The researcher will welcome the participants to the fourth session and revise the previous discussion, questions from the participants will be answered by the researcher. The assignment will be collected.
- The researcher will engage the participants in how to notice their exception period i.e. when the problem is not there or a little of it, through exception questions like:
  - Tell me about times when the problem is less troubling or when it is not happening.
  - Tell me about times you felt the happiest
  - When was the last time you feel you had a better day?
  - Tell me about times when you cope better with the problem
  - What is the difference about the times when the problem is better?
  - What small changes will you notice?
  - When things are tough, how do you cope?
  - Tell me what has worked in the past even if only for a short time.
  - How have you dealt with similar problems in the past?
  - What have you learnt from the previous experiences like this that might be useful in this situation?
- The researcher will read, listen and clarify the responses of the participants.
- The researcher will give assignment attempting to put the learned exception times into practice.
- The researcher will express words of appreciation and encourage the participants to attend the next session.

#### **Session Five (Week 5)**

- The researcher will welcome the participants for the 5<sup>th</sup> session and revise the previous discussion, questions and answers will follow and assignment will be collected.

- The researcher will explain to them how to project their exception into the future, by drawing through a scale from 1 – 10 where 1 means every change likes that of the exception existing resources in them.
- What will it take for that to happen more often in the future?
- Who has to do what to make it happen again?
- What is the most important thing for you to remember to do to make sure that the exception has the best chance of happening again?
- What is the next most important thing to remember?
- The researcher will then ask the participants where things would need to be for him or her to feel that the goals of treatment had been met or that therapy had been successful.
- The researcher will give assignment: A letter from the older and wiser self” Assume that you have grown up to be a healthy, wise old man/woman and you are looking back at this period of your life. What would this older and wiser man/woman suggest to you, which will help you to get to where you are now in your life?
- The researcher will express words of appreciation and encourage the participants to attend the next session.

### **Session Six (Week Six)**

- The researcher will welcome the participants to the 6<sup>th</sup> session and revise the previous discussions. Questions and answers will follow. The assignment will be collected.
- The researcher will ask the participants the questions of presupposed change. Questions such as, “what is the different or better since I saw you last time?” This question will invite the participants to consider the possibility that change (perhaps positive change) will recently occur in their lives.
- If evidence of positive change is not available the researcher will ask questions relating to the participants ability to cope.  
Questions such as:
  - How come things aren’t worse for you?
  - What stopped total disaster from occurring?
  - How did you avoid falling apart?



These questions will be followed up by the researcher positively affirming the participants with regard to any action they will take to cope and discuss how they will be a non cigarette smokers; a new them without cigarette would emerge. And will encourage them to maintain that non-cigarette smoking habit.

The researcher will now to conclude the session by

- Asking questions for the reassurance of the process
- Reminding and encouraging the participants to practice the skills they will learn.
- Appreciate the participants for them dedication and cooperation from the beginning to the end.
- Finally, the post-test will be administered to all the participants.