

CHAPTER 1

1.0 Introduction

Alcohol is the oldest and most commonly abused drug in the world. It is a psychoactive substance but society has allowed its use by the public either socially or for medication.

The consequences of alcohol abuse are significant not only in terms of adverse health effects and health care costs but also in terms of lost earnings and decreased productivity. This study focused on the consequences of alcohol abuse on the enrollment of preschool in early childhood development education (ECDE) centers in Kiharu Division, Murang'a East District of Kenya.

1.1 Background to the Problem

Alcohol taking is on the increase among the rich and the poor Kenyans today. Alcohol is one of the illicit brews which is categorized into various types depending on the content of ethanol in it. For example Beer 5% v/v, Wines 12%v/v, Spirit 40%v/v. Chang'aa and other traditional brews contain varying amounts of ethanol, often as high as 90% v/v.

In chemical terminology, alcohols are a large group of organic compounds derived from hydrocarbons and containing one or more hydroxyl group. Ethanol (C_2H_5OH) is one of these classes of compounds, and is the main psychoactive ingredient in alcoholic beverages. Alcoholic beverages come in many forms: Those prepared by fermentation, that is, traditional brews (Busaa, Mnazi, Muratina among others and bottled beer) and those prepared by distillation such as wines and spirits (Chang'aa, Whisky, Vodka, Rum among others).

1.1.1 Definition of Alcohol

The *a-* in alcohol may alert some leaders to the fact that this is a word of Arabic descent, as is the case with algebra and alkali, *al* being the Arabic definite article corresponding to *the* in English. The origin of alcohol is less obvious. However its Arabic ancestor was Kuhl, a fine

powder most often made from antimony and used by women to darken their eyelids. Arab chemists came to use al Kuhl to mean any fine powder produced in a number of ways, including the process of heating a substance to a gaseous state and then re-cooling it. The English word alcohol derived through Medieval Latin from Arabic was first recorded in 1543 in this sense.

Arabic chemists also used al Kuhl to refer to other substances such as essences that were obtained by distillation, a sense first found for English alcohol in 1672. One of these distilled essences known as alcohol of wine is the constituent of fermented liquors. Today, alcohol refers to colourless volatile flammable liquid C_2H_5OH synthesized or obtained by fermentation of sugars and starches and widely used either pure or denatured as solvent and in drugs, cleaning solution, explosives and intoxicating beverages also called ethanol, ethyl alcohol, and grain alcohol. It also refers to any series of hydrocarbons which have general formula of $C_nH_{2n+1}OH$ and include ethanol and methanol.

Alcohol abuse is said to happen when one is said to suffer from alcohol intoxication, when the quantity of alcohol the person consumes exceeds the individual's tolerance for it and produces behavior or physical abnormalities. In other words, the person's mental and physical abilities are impaired. The person can't function and certainly should not be operating any psycho-motor activities.

Alcohol abuse begins with the basic and reward circuits in the brain which involve the chemical dopamine. However as time goes on, it becomes addictive resulting to behaviours that are considered damaging or destructive (to self and others).

There are several categories of non-beverage alcohols such as:

1. Methanol (CH_3OH) also known as wood alcohol which is chemically the simplest of the alcohols. It is used as an industrial solvent and also as an adulterant to denature ethanol and make it lethal to drink (methylated spirit). Methanol is highly toxic,

depending on the amount consumed. It may produce blurring of vision, blindness, coma and death.

2. Propyl alcohol (C_3H_7OH) also called isopropyl alcohol prepared and used as rubbing alcohol. It is toxic and not meant for drinking.
3. Butyl alcohol (C_4H_9OH) used in organic synthesis and as a solvent.

No one knows when beverage alcohol was first used; it was presumably the result of a fortuitous accident which occurred at least tens of thousand of years ago. However, the discovery of late Stone Age beer jugs has established the fact that intentionally fermented beverages existed at least as early as the Neolithic period, that is, 10,000 B.C Taba (1932). It has been suggested that beer may have preceded bread as a staple wine but clearly appeared as a finished product in Egyptian pictographs around 4,000 B.C.(Hughes(2001).

The earliest alcoholic beverages may have been made from berries or honey as stated by (Allen, Litten *et al*, 1997,) it may have been observed that wine brewing originated in the wild grape regions of the Middle East. Oral tradition recorded in the Old Testament (Genesis 9:20) asserts that Noah planted a vineyard on Mt. Ararat in what is now eastern Turkey. In Sumer, beer and wine were used for medicinal purposes as early as 2,000 B.C. Institute of medicine, (1996).

Contemporary writers observed that the Greeks were among the most temperate of ancient peoples. This appears to result from their rules stressing moderate drinking, their praise of temperance, and their practice of diluting wine with water, and their avoidance of excess in general. An exception to this ideal of moderation was the cult of Dionysus, in which intoxication was believed to bring people closer to their deity; Institute of Medicine. (1996)

While habitual drunkenness was rare, intoxication at banquets and festivals was not unusual Houghes (2001). In fact the symposium, a gathering of men for an evening of conversation, entertainment and drinking typically ended in intoxication (Litten and Baror (.1997). However, while there are no references in ancient Greek literature to mass drunkenness among the Greeks, there are references to it among foreign people's warnings against intemperance, especially at symposia, appear to become more frequent. Houghes (2001).

The Jews were reportedly introduced to wine during their captivity in Egypt. When Moses led them to Canaan (Palestine) around 1,200 B.C., they are reported to have regretted leaving behind the wines of Egypt (Numbers 20:5); however, they found vineyards to be plentiful in their new land. Around 850 B.C., the use of wine was criticized by the Retaliates and Nazarenes, two conservative nomadic groups who practiced abstinence from alcohol Kennedy. and Mukerji (1886).

With the dawn of Christianity and its gradual displacement of the previously dominant religions, the drinking attitudes and behavior of Europe began to be influenced by the New Testament. The earliest biblical writings after the death of Jesus (cir. A.D. 30) contain few references to alcohol. This may have reflected the fact that drunkenness was largely an upper-status vice with which Jesus had little contact. Mattson SN and Cain C (1965) have pointed out that Jesus used wine (Matthew 15:11; Luke 7:33-35) and approved of its moderate consumption (Matthew 15:11). On the other hand, He severely attacked drunkenness (Luke 21:34, 12:42; Matthew 24:45-51). The later writings of St. Paul deal with alcohol in details and are important to Christian doctrine on the subject. He considered wine to be a creation of God and therefore inherently good (1 Timothy 4:4), recommended its use for medicinal purposes (1 Timothy 5:23), but consistently condemned drunkenness (1 Corinthians 3:16-17,

5:11, 6:10; Galatians 5:19-21; Romans 13:3) and recommended abstinence for those who could not control their drinking.

In the late second century, several heretical sects rejected alcohol and called for abstinence. By the late fourth and early fifth centuries, the Church responded by asserting that wine was an inherently good gift of God to be used and enjoyed. While individuals may choose not to drink, to despise wine was heresy. The Church advocated its moderate use but rejected excessive or abusive use as a sin. Those individuals who could not drink in moderation were urged to abstain. Hughes (2001).

Protestant leaders such as Luther, Calvin, the leaders of the Anglican Church and even the Puritans did not differ substantially from the teachings of the Catholic Church: alcohol was a gift of God and created to be used in moderation for pleasure, enjoyment and health; drunkenness was viewed as a sin; Stephen Houghes (2001).

From this period through at least the beginning of the eighteenth century, attitudes toward drinking were characterized by a continued recognition of the positive nature of moderate consumption and an increased concern over the negative effects of drunkenness. The latter, which was generally viewed as arising out of the increased self-indulgence of the time, was seen as a threat to spiritual salvation and societal well being. Intoxication was also inconsistent with the emerging emphasis on rational mastery of self and world and on work and efficiency; Vroom, (1964)

While drunkenness was still an accepted part of life in the eighteenth century, the nineteenth century would bring a change in attitudes as a result of increasing industrialization and the need for a reliable and punctual work force; Rawat (1987). Self-discipline was needed in place of self-expression, and task orientation had to replace relaxed conviviality.

Drunkenness would come to be defined as a threat to industrial efficiency and growth. Problems commonly associated with industrialization and rapid urbanization was also attributed to alcohol. Thus, problems such as urban crime, poverty and high infant mortality rates were blamed on alcohol, although "it is likely that gross overcrowding and unemployment had much to do with these problems; Kennedy and Mukerji (1986). Over time, more and more personal, social and religious/moral problems would be blamed on alcohol. And not only would it be enough to prevent drunkenness; any consumption of alcohol would come to be seen as unacceptable. Groups that began by promoting temperance - the moderate use of alcohol - would ultimately become abolitionist and press for the complete and total prohibition of the production and distribution of beverage alcohol. Unfortunately, this would not eliminate social problems but would compound the situation by creating additional problems.

1.1.2 Alcohol Drinking in Africa

Alcohol was widely used in indigenous society. However, drunkenness was regarded as a disgrace. Indeed the problem of abuse of alcohol is associated with introduction of foreign ways of life. On the whole, the cultures restricted the use of alcohol to senior age groups and to special occasions often sanctioning the use of alcohol under strict conditions. The conditions spelt out not only elders could consume alcohol, but also when it could be consumed, such as when a baby was born, after a bumper harvest and during funerals. This is no longer the case today. The consumption of alcohol is no longer restricted to senior age-groups or to special occasions, instead alcohol is readily available to both adults and youth.

1.1.3 Alcohol and Alcoholism in Murang'a District

A typical Monday morning is usually a working day after a long weekend. Not so in

Murang'a. Here, school-children are often confronted by scenes of drunken men staggering back home. Along the town's streets, others lie hopelessly on the ground (as observed by the researcher). More can be seen imbibing alcohol from cheap plastic bottles or sachets. So bad is the craving for alcohol that some men have resorted to desperate measures to remain 'high.' They 'steal' cereals from family granaries and take them to bars in exchange for cheap alcohol. Some also secretly cart away utensils from their kitchens and sell them at a throw-away price. Families are falling apart, children are dropping out of school while women are complaining about their 'useless' husbands. Leaders and residents of Murang'a are calling for urgent measures to check drunkenness. For example, Lucy Maina (not her real name) aged 51 and hails from Iyego, Murang'a District, was accused of being in possession of 6 litres of chang'aa in contravention of the chang'aa prohibition Act (cap 70). The sources of information included the court file number (496/09), the accused person's neighbours at Kayole village, Kiharu division and the area sub-chief. The offender had separated from her husband and lived in a slum in Murang'a town with her 9 children none of which had gone to secondary school. The children were employed as casual workers within the town. Some of them were married.

The Government is blamed for failing to enforce laws on alcohol sale. According to liquor licensing regulations (cap 22) premises are required to open from 11.00 a.m. and close at 11.00 p.m. However, this is barely the case as most bars only close when the last customer leaves. Premises that observe the 11.00 p.m. rule open as early as 6.00 a.m. the following morning – even before retail shops selling grocery open. The liquor licensing board is mandated to control the number of alcohol retail outlets but Murang'a appears to be an exception. Along Biashara Street, there is only one retail shop and six bars, (observed by the researcher).

There are also a number of wines and spirits outlets that are patronized by college students who cannot afford alcohol. These outlets start receiving customers early and by 9 a.m., men can be seen lying on the pavements. Usually, their wives and mothers pick them from the streets to prevent them from shaming their families (observed by the researcher).

The brew has caused considerable damage in Murang'a. Roles such as farming and educating children have been left to women. A bar located along the main road that cuts across Murang'a North and Murang'a South districts host beggars of alcohol. Here motorists are usually shocked when they encounter revelers begging for alcohol. For example, Kamau (not his real name) was accused of being in contravention of penal code 3(1) of the laws of Kenya. He hailed from Mugeka village, Kiharu division. The offender's parents are farmers-cum-business persons operating a bar and hotel at Mugeka shopping centre of Kiharu division. The accused was at a bar operated by his sister when he attempted to forcefully enter the bar counter to take some bottles of beer for free. A scuffle ensued between them and the sister sought help from the administration police officers who arrested and planted bhang on him and subsequently charged with being in possession of bhang. This was in court no 2 of the SRM's court in Murang'a, court file no 58/09. The court recommended giving him community work at Kieni youth polytechnic in Kiharu division.

According to data from National Campaign against Drug Abuse (NACADA), Murang'a is fast gaining notoriety as a den of alcoholics. In 2009, Murang'a South District Commissioner Maalim Mohammed ordered chiefs to eradicate illicit brew within a hundred days (Sunday Nation, 4th April, 2009.) Women in Murang'a South District have taken to the streets several times to protest against increased lethal brews that have "robbed them of husbands and sons" and accused men of abdicating their roles in Murang'a. Charity Kageni says "maternity facilities are underutilized because men have lost interest in women" (Sunday Nation, 4th

April, 2009). They also accuse law enforcing units of looking away as men turn to zombies. Kahuhia location is the worst hit despite being among the first area to receive Christian missionaries (observed by the researcher).

In Murang'a North District, bar owners whose outlets sell alcoholic spirits packed in sachets have been put on notice. Unscrupulous traders have devised methods of sneaking in the sachets. Ironically the law against sachets came into being courtesy of former Kiharu M.P. Kembi Gitura's motion in parliament in 2003. Murang'a North District Commissioner George Natembeya withdrew licenses of some night clubs following claims that they had been turned into crime dens. A former member of the District liquor licensing court, George Kiboro, blames the government for the widespread problem. "Traditional brews are cheap and are not poisonous. If allowed they could serve as an alternative to the mushrooming illicit brew like chang'aa and makabo," he said.

Kiboro, now a civic leader in Kandara Murang'a South district, accuses police and Provincial Administration of abetting the illicit trade. He says the poor cannot afford hygienically made beer or spirits. "Why aren't they in such areas such as Muthaiga and Lavington in Nairobi" (Sunday Nation, 4th April, 2009)? He poses, referring to the two up market Nairobi estates. Among the many negative impacts, alcohol in Murang'a is taking its toll on children as it violates their rights as children. The rights of children have been debated and agreed upon by many world governments. World's concern with the care and development of children is contained in the documents that have been signed by many countries of the world. Those documents are:

- 1) The convention of the rights of a child.
- 2) The world conference on education for all
- 3) The world summit for children

1.2 Statement of the Problem

The Kenya government in conjunction with other countries has come up with various policies where children's education is concerned. Some of these policies are implemented while others are not. Mandatory enrolment into ECDE centers is one such policy. The workplace policy - information, education and training programs cover the following areas:

- ✓ Information on effects of alcohol and drug abuse.
- ✓ Information about the work environment in relation to alcohol and drug abuse.
- ✓ Measures to prevent such abuse from occurring.
- ✓ Available services to assist workers who may be abusing alcohol and drugs.

The other important policy is that of employing and integrating preschool teachers into primary school system. Their implementation has been riddled with many problems across the country. In Kiharu Division, the enrolment of pre-school children in ECDE centres has been generally low for a long period especially in those centres situated in public schools. Many factors might be contributing to the low enrolment. It is important for researchers to isolate enrolment-related variables if solutions are to be found for children to maximize benefits derived from school attendance.

Alcohol abuse is quite prevalent in the whole world. Problems related to alcohol are more or less similar in many African countries. In Kenya, most household problems are accelerated by abuse of alcohol. These problems include financial constraints and spousal abuse and neglect. However, it seems there is an information gap concerning alcohol consumption as a major cause of poor enrolment in school generally and in pre-school and Early Childhood Education and Development centres specifically. It is imperative for policy makers and all stakeholders in the education and allied sectors to be aware of the nature and extent of

alcohol abuse and its effect on school enrolment, especially pre-school where a firm foundation for a child's academic achievement is laid. This study thus tried to close gaps such as lacking research information, by investigating the effect of parental alcohol abuse and the number of children enrolled in pre-schools in Kiharu division, Murang'a East District.

The overall research problem addressed in this study was that despite the deteriorating conditions on enrolment of pre-school children in ECDE centre due to parental alcohol abuse, little has been done to analyze the impact of alcohol on education in Kiharu Division, Murang'a East District. This study is a right step in that direction, to begin to tease out those factors, and specifically, whether or not alcohol impacts enrolment in any way.

1.3 The Purpose of the Study

The purpose of the study was to investigate the impact of alcohol abuse on enrolment of Pre-school children in ECDE centres, Kiharu Division, Murang'a East District. A secondary purpose was to identify challenges, if any, faced by preschool learners from families where alcohol is abused.

1.4 Research Objectives

This study sought to contribute towards effective learning among pre-school children in Kiharu division, Murang'a East district by trying to close the gap where alcohol abuse and learning in preschool is concerned.

The study further purposed the following:

- 1) To find out factors leading to poor preschool enrolment in Kiharu division, Murang'a east district.
- 2) Document Kiharu community views on alcohol abuse and pre-school education in Kiharu division, Murang'a East district.

- 3) Investigate the relationship between alcohol abuse and enrolment in ECDE centers in Kiharu division, Murang'a East district.

1.5 Research Questions

- What factors contribute to pre-school enrolment in Kiharu division, Murang'a East district?
- What are the views of Kiharu Community on parental alcohol abuse and pre-school enrolment in Kiharu division, Murang'a East district?
- What is the relationship between alcohol abuse and pre-school enrolment in Kiharu division, Murang'a East district?

1.6 Significance of the Study

The findings of this study provide useful information to the community on children's right to education at all levels including pre-school. It also helps teachers and other stake holders to be more sensitive to pre-school children's enrolment rates in ECDE centers within their jurisdictions. The study is a pertinent tool for teachers, parents, local leaders and the government to come up with positive solutions to education right from pre-school to higher levels. More important perhaps, the study may attract government attention to put in place effective strategies for curbing alcohol abuse in Kiharu division, Murang'a East district.

This research is important in that it is the first time alcohol effect on learning of pre-school children has been proven using a scientific tool. Apart from significance of these findings, other stakeholders such Ministry of Education, provincial administration and parents stand to benefit since they could employ targeted interventions to address problems in education arising from alcohol abuse.

1.7 Limitations of the Study

The researcher encountered several limitations during data collection:

Financial constraints during the entire research process were some of them. The researcher looked for opportunities to minimize expenditure, including requesting for volunteers to help with data collection and providing non-monetary tokens of appreciation to participants as appropriate.

Unpredictable weather changes including heavy rainfall featured a problem but researcher armed herself with appropriate gear for bad weather.

It was not possible to cover the opinions of many parents, education officers and other sampled stake holders in the division as tracing all of them required considerable time, finances and other logistics.

Geographical factors made some areas inaccessible. Poor roads and fear of “Mungiki.” almost brought collection of data to a halt.

1.8 Delimitations of the Study

This study covered those schools sampled from Kiharu division, Murang’a East district. The target groups from which information was sought included: Head teachers, preschool teachers, parents and local leaders. Other important information was collected from D.E.O’s and D.O’s offices and medical personnel in Murang’a district hospital.

1.9 Basic Assumptions

An assumption is any important fact that a researcher takes to be true without actually verifying it (Mugenda and Mugenda, 1999).

This study assumed that:-

1. Alcohol abuse is prevalent in Kiharu division, Murang'a East District.
2. Participants were honest in the information they shared with the researcher.
3. Some areas would not be accessible geographically or culturally and fear of certain groups of people e.g. Mungiki would pose a problem.
4. Head teachers of sampled schools were qualified and willing to assist the researcher.
5. Community members were aware of the ECDE programme and would be willing to support it.

1.10 Definition of Terms

Abstinence

A voluntary and habitual self-deprivation, especially from alcoholic beverages.

Alcohol abuse

Taking of alcohol beyond recommended amounts (usually by medical doctors).

Alcoholism

1. An addiction to alcohol, especially involving compulsive, excessive consumption.
2. The pathological effects of such overindulgence. — Alcoholic, (n).

Demography

Data on human population.

Enrolment

Admission of children between three to seven years to ECDE Centres

Mungiki`

A cultural religious sect that advocates for the return to traditional way of Life mainly found in central province of Kenya.

1.11 Organization of the Study

The present study is organized into five chapters. In chapter one, the background of the study is discussed while chapter two entails what has been reviewed, theoretical framework and conceptual framework of the study.

In Chapter three covers the research methodology. Specifically, the research design is indicated and a detailed profile of the target population outlined. In addition, methods of data collection are discussed as well as the validity and reliability of data collection instructions. Procedure for data collection and data analysis is outlined.

Chapter four presents research findings analysed according to different categories of the questionnaire. Frequencies and percentages of responses were calculated and the information listed down in tables, pie charts, histograms and brief narrations.

Chapter five encompasses summary of findings, conclusions and recommendations.

CHAPTER 2

2.0 LITERATURE REVIEW

2.1 Definition of ECDE

Recent years have seen a global endeavor to prioritize early childhood care and education as a foundation for later learning and development, as evidenced by Global Guidelines for Early Childhood Education and Care in the 21st Century (Association for Childhood Education International/ World Organization for Early Childhood, 1999). Such efforts are a response to a variety of complex social and economic trends. These forces, which are referred to here as “complex family stressors,” include but are not limited to, societal changes due to industrial revolution; the increased number of women with young children entering the labor force with two working parents, a rise in the number of single parents, and the dysfunctional traditional systems of child care and extended family support systems.

Specific emphasis is placed on the historical development of ECDE, the administrative organization, the collaboration among various agencies in Kenya curriculum, and teachers’ professional training. A relatively young profession, early childhood care and education (ECCE) has experienced tremendous growth at all levels.

Definitions of early childhood care and education differ around the world. Spodek, Saracho and Davis (1991) The more industrialized nations consider early childhood to be the period from birth through age 8; Southerland (1988), while developing nations focus on birth through age 6. Regardless of such determinations, the increased interest in early child education around the world reflects respective nations’ and/or societies’ philosophical beliefs about children. Accordingly, children are viewed as: growing plants that need nurturance, miniature adults, natural national resources that need to be nurtured, and/or future

investments, the sustenance of a society and its ability to compete in the technological age; Streissguth and Barr (1999)

The belief that early learning begets later learning and success, just like early neglect breeds later failure has been validated in both economic and education fields W.H.O. technical report series (1995). According to the World Development Report; Streissguth Barr (1999), education and economic development positively correlate making education intrinsic to development. Therefore, the potential long-term for children's cognitive and social development (Bandura (1977) have inspired increased interest in early childhood education and care. This is further championed by UNICEF'S health and nutrition programmes (,2002).

2.1.1 Historical Development of Early Childhood Care and Education (ECCE) in Kenya

Situated on the eastern coast of Africa, Kenya gained its independence from colonial rule in 1963. Nearly half of Kenya's population of 30 million is below 15 years. The infant mortality rate is 67.99 per 1,000 live births while the life expectancy is 46.5 years for men and 48.4 years for women. Kenya is a multilingual and multicultural nation, with 42 different ethnic groups. Languages spoken include Bantu, Arabic and Nilotic (Bogonkko, 1992). English is the official language and the main medium of instruction from pre-school to tertiary education. As a result, most children in Kenya are fluent in both languages, in the entire vernacular spoken at home. This multilingualism heightens Kenya's understanding of other cultures.

Kenya is the only African nation with an established early childhood education programme, and the initiative has had a significant impact on its citizens. Kenya perceives education as a key to success in life, facilitating social mobility and development; George Eshiwani (1993). A number of theoretical perspectives focus on education's pivotal role in human growth and

development; Eshwani (1993).

Modernization theorists contend that education transforms individual values, beliefs, and behaviours, which leads to development; Bogonko, (2006). As a result Kenya has seen a clamoring for and expansion of education at all levels, including nursery schools, childcare centers, kindergartens and pre-schools.

The first recorded school for young children in Kenya was founded at Rabbai (coast Province) in 1886 by the church missionary societies (Bogonko, 1992; Eshiwani, 1993). The first early care centres can be traced to the 1940s, when British established centres to serve both European and Asian children. During the same period, the colonial government established early childhood care centres for local children living on the tea, coffee, and sugar plantations. These centres were response to Mau Mau uprising.

The provision of early childhood development education (ECDE) in Kenya is a joint effort between households, communities and government. Over the last five years, the ECDE sub-sector has witnessed significant growth with ECDE centers having increased from 26,294 in 2000 to 31,879 in 2004. Total enrolment in public ECDE centres rose from 1,255,194 in 2000 to 1,602,721 in 2004. The Government Enrolment Rates (GER) at this level of education increased to 67.6% in 2004 from 44.8% in 2002.

Whereas the growth in enrolment is a welcome development, there is a concern over the GER in ECDE, at 57.6% when compared to that of the primary school level, which stood at 104.8% in 2003, Tum, (1996).

It can be inferred from this indicator that with the advent of Free Primary Education (FPE), some parents are circumventing the ECDE level by enrolling their children directly in primary school without going through ECDE.

In view of the importance of ECDE as the foundation for a quality education, all efforts must be made to improve enrolment at this level. Furthermore, pre-school education is of special

importance to children from poor background because it not only provides them with the basic knowledge and skills needed for primary school, but also provides them with essential nutritional requirements and other support services. This enhances their chances of success in primary school.

Various factors have been identified as contributing to the low performance of the sub sector relative to primary education. Most important is the provision of ECDE facilities, teachers' salaries, meals and teaching and learning materials, has largely remained the responsibility of parents and communities. Whereas Kenya Education Support Programme (KESSP) addresses some of these constraints, a more comprehensive intervention is necessary in the light of the new ECDE policy.

The Ministry of Education (MOE) has now development a comprehensive policy for the development of ECDE sub-sector in Kenya. Strategic plan's objective for the sub-sector is, therefore, to develop the strategies for the implementation of this policy.

2.1.2 Effects of Alcohol on Learning

The consequences of alcohol abuse are significant not only in terms of adverse health effects and health care costs but also in terms of lost earnings and decreased productivity.

In America, Dr. Streissguth of University of Washington studied attention, distraction and impulsive behavior problems in 475 young school age children whose mothers drank moderate amounts of alcohol during pregnancy. The study, conducted by the University of Washington, used sensitive neurological test measures called Continuous Performance Tasks (CPT) to determine endurance, persistence, organization, distractibility and impulsivity in this large group of 7-year-old children.

One test given is the AX-task. It is considered to be effective at assessing Attention Deficit Disorders. In this test, the child sits at a computer screen that is flashing single letters at one-second intervals. The child is asked to push a button when the letter "X" appears, but only when it was immediately preceded by the letter "A". The number of errors is then calculated for three different mother alcohol consumption levels (0-3 drinks daily, 3-4 drinks daily, and more than 4 drinks daily) to determine if there is any correlation between the amount of alcohol consumed and the number of errors the child makes on the test. The results showed that greater alcohol exposure resulted in far more errors on the AX task. The authors stated: "The direction of the effect is as predicted, with poorer performance associated with higher (alcohol) exposure." There was an 8% distraction rate for the 0-3 drink exposure children, a 14% distraction rate for the 3-4 drink exposure children and a 46% distraction rate for the children whose mothers drank more than 4 drinks per day. Average reaction times were about twice as slow for the more than 3 drink exposure children. The researchers stated:

"This study is important in demonstrating the continuing impact of prenatal alcohol exposure on attention and reaction time in 7-year-old children even after adjusting for a variety of other predictors and co-variables.

In another study of developmental observations of children and adolescents exposed to alcohol, a variety of neurological and school problems were detected among 500 children examined at numerous points in time, including day 1 and 2 of life, at 8 and 18 months, and then again at 4, 7 and 14 years. Mothers were primarily white, middle class, well-educated, married women at low risk for adverse pregnancy outcomes. Approximately 80% were drinking. This study lists the following principal findings:

- 1) Effects of prenatal alcohol exposure are clearly obvious at all ages from birth to 7

years; they were detected on a variety of behavioral measures.

- 2) For most outcomes, binge drinking has more serious consequences than steady drinking, and drinking early in pregnancy has more serious consequences than drinking in mid-pregnancy.
- 3) These alcohol effects cannot be explained away by any of 150 co-varieties considered, including parental education, nutrition, and smoking.
- 4) Profiles of alcohol-related scholastic and neurobehavioral deficit are shown by second grade. Data from teachers when the children reached age 11 revealed prenatal alcohol-related difficulties in classroom behavior, academic performance (particularly arithmetic), and information processing. At 14 years, continued prenatal alcohol effects on measures of attention and memory were observed, as well as on measures of phonological processing and numerical reasoning.

Significant reductions in several areas of intellectual functioning were found in preschool children whose mothers drank during pregnancy. The study, conducted by the Emory University School of Medicine and Georgia Mental Health Institute looked at 68 mother/child pairs, primarily low income and black, who were placed into three groups including: "never drank" (21 mothers), "stopped drinking" (22 mothers who stopped drinking just before the third trimester), and "continued to drink" (25 mothers who were exposed throughout pregnancy). The women did not use other drugs except for cigarette and marijuana use in about 12%. Average alcohol intake for both alcohol drinking groups was 2-3 drinks per day with approximately 21% of the women engaging in "binge" drinking episodes of more than 5 drinks per occasion.

Main results of the survey showed children's head circumference was much lower in the drinking groups measuring 34.7 cm for the "never drank" - 33.3 cm for the "stopped

drinking" - and 32.4 for the "continued to drink" (over 2 cm difference between the "never drank" and "continued to drink" groups). Scores for maths and reading/decoding were also significantly lower for the alcohol exposed groups. Using the Kaufman Assessment Battery for Children, the researchers calculated a maths score of 96.5 for the "never drank" group, 86.7 for the "stopped drinking" group and 84.8 for the "continued to drink" group (nearly a 12 point difference). Reading/decoding scores were significantly lower only for the "continued to drink" group dropping from 101.8 to 91.6 suggesting the importance of neurological growth in the "reading areas" of the developing brain during the last 3 months of pregnancy.

The test of sequential processing skills was much lower for the alcohol groups which included subtests for hand movement and reciting numbers and word order, each of which is stated to require short term memory processing. Short term memory processing, often called encoding, and is believed to be supported by the sub cortical structures of the brain. The researchers have also stated: "Taken together, these reports suggest that third trimester exposure may affect the developing hippocampus or allied structures, leading to deficits in the ability to encode visual or auditory information... Math's skills and pre-reading identification of words and letters are significantly lower in both alcohol groups. These findings suggest that alcohol-exposed children are likely to experience academic difficulties, and it is possible that some of these children will develop specific learning disabilities; Allan, Litten and Barbor (1997).

Language skills damage easily from light social drinking. Lower verbal comprehension and spoken language scores were found among 84 children at 13 months of age whose mothers drank an average of .24 ounces of absolute alcohol per day (about one-half drink per day).

The Bayley Scales of Infant Development was used to test language and comprehension. Test criteria included the following:

Says dada or equivalent, Jabbers expressively, Imitates words, Says 2 words, Names 1 object, Vocalizes 4 different syllables, Listens selectively to familiar words, Responds to verbal request, Inhibits on command, Shows shoes or other clothing or own toy.

Testing was given by a trained professional who was not aware of the mothers' drinking habits. The researchers adjusted for known confounding variables such as social class, educational level, use of other drugs, etc. Results were considered significant at the 0.05 level.

The researchers also stated that for the first time in alcohol brain research, it was found a single large dose of alcohol to pregnant rats resulted in memory loss to their offspring, but only after the offspring reached 2 years of age (This would be equivalent to a middle age human). The testing was set up with three different age groups of alcohol exposed rats (3 months, 12 months and 24 months) that were each exposed to a single large dose of alcohol while their mothers were pregnant.

In a study conducted at the University of Milan, Italy, it was found that a single dose of alcohol given on the 4th day of pregnancy to 10 rats "dramatically reduced" the levels of "strata dopaminergic receptors" in their offspring (the strata part of the brain includes the cerebral cortex). In fact, the alcohol-exposed offspring had only about half the concentration of the dopamine metabolite DOPAC in their brain tissue when compared to the non-alcohol exposed controls (1.09 Mg/mg compared to 2.03 ng/mg). Of interest, the same dose of alcohol given on the 13th day of pregnancy did not change the concentration of this dopamine metabolite. The researchers explain this timing observational change since the

rats brain (particularly the dopaminergic system) is developing rapidly on the 4th day and is nearly complete by the 13th day. The 4th day in a rat's pregnancy would coincide with the first month of a human pregnancy.

Acetylcholine is a neurotransmitter that is important in all brain cell functions, including proper memory function. In this research project, after rats were exposed to alcohol for prolonged periods, it was found that their acetylcholine levels were 25% lower than rats not exposed to alcohol.

Using brain scanning techniques called Magnetic Resonance Imaging (MRI), scientists have shown various neurological abnormalities among Fetal Alcohol Syndrome (FAS) children including - microcephaly (small head size), and reduced volumes in the cerebellum (brain area at the back of the head controlling coordination and movement), basal ganglia, and the area known as the diencephalic structures. Also, abnormalities have been identified in the nerves connecting both halves of the brain called the corpus callosum.

In another study, scientists from three California research universities including San Diego State University, University of California San Diego School of Medicine and the Scripps Research Institute, pooled their talents to investigate whether similar brain abnormalities would be present in non-FAS children whose mothers drank heavily during pregnancy.

In that study, researchers investigated two 16-year-old children (1 male, 1 female), who did not have FAS but whose mothers were considered "alcoholic" and drank heavily during pregnancy. Both children also had a history of behavior problems and cognitive impairments. Their IQ scores were 64 and 69.

Results from the MRI scan of both children showed "...reduced volumes were found for the

cerebrum and cerebellum. In addition, the proportional volume of the basal ganglia was reduced.....” These results, taken in conjunction with previous reports of two FAS children, suggest that of the structures evaluated, overall brain size and the volume of the basal ganglia are the most affected by a prenatal alcohol insult. Importantly, even in the absence of FAS, children exposed to alcohol inuter (during pregnancy) display proportionally smaller basal ganglia.

The authors further stated, the role of the basal ganglia in the behavioral teratogenicity of alcohol needs to be clarified. If the two human cases reported here and the two previously reported, are typical of the larger population of children exposed to alcohol parentally, we might expect to see some behavioral indications of the reduction in basal ganglia volume. In fact, some of the behaviors of FAS and prenatal alcohol exposure may be related to basal ganglia dysfunction. Gestational alcohol exposure has consistently been associated with preservative behavior, difficulty with spatial memory, and understanding behavioral outcomes. Interestingly, the basal ganglia have been linked to the ability to change behavioral set, spatial memory, and goal-directed behavior. Thus, some of the behaviors in children with prenatal alcohol exposure may be the result of abnormal development of the basal ganglia.” In a follow-up study, the scientists studied 20 male mice exposed to alcohol during gestation. Autopsy results of the animals’ brains showed a smaller area. The authors stated,

"Interestingly, the caudate-put amen has been suggested to be part of a general learning system, in that lesions (damage) to this area can produce widespread learning and memory deficits (24)."

A study was conducted with 15 children from the Yale Learning Disorders Unit whose mothers were known to have a history of heavy drinking during pregnancy. The 11 boys and

4 girls ranged in age from 6 to 18 years of age. Physical measurements showed that 60% of the children had a head circumference less than the 10th percentile (the term 10th percentile means 10% of the children should be expected to be below this level) while 20% of the children were below the third percentile. Fetal analysis is now reported to be the third most frequent disorder in which retardation is a component. The physicians at the Yale Learning Disorders Unit stated,

"Our own clinical experience in a learning disorders unit, as well as other reports, both human and animal, suggests that perhaps more subtle manifestations of Central Nervous System (CNS) dysfunction in the form of behavioral and learning difficulties might be significant but frequently overlooked problem in children exposed to ethanol (alcohol) in uterus."

The intent of their research was to investigate the growth, cognitive function and school performance in a group of learning-disabled children of normal intelligence born to heavy drinking women. It is the recommendation of the physicians that children experiencing school failure should be evaluated for indications of prenatal exposure to alcohol. Cognitive performance was measured using the Stanford form L-M, the Wechsler Pre-School and Primary Scale of Intelligence (WPPSI) and the Wechsler Intelligence Scale for Children (WISC). Although all children had a mean full scale IQ of 98.2, there were other problems with school performance. Hyperactivity was evident in all but one of the patients' school reports. Six were taking stimulant medication for their condition. The poorest scores on the intelligence tests were in the areas of coding, arithmetic, digit span memorization and information subtests. In conclusion the authors stated:

Our findings provide further support for the belief that milder degrees of Central Nervous

System dysfunction are frequently encountered in the offspring of alcoholic women, and suggest consideration of an expansion of the concept of fetal alcohol syndrome to include behavioral and learning deficits as manifestations of Central Nervous System involvement. An increasing body of evidence suggests a relationship between parental alcohol abuse and the development of disorders of activity and learning in their offspring's as, for example, in the symptom complex currently designated attention deficit disorder, this relationship is not exclusively mediated by social experience. Our data indicate a constellation of mild dysmorphic features of fetal alcohol syndrome, findings of hyperactivity and persistent school learning difficulties in children with normal intelligence born to heavy drinking mothers. Alcohol exposure in uterus (during pregnancy) may be an important, preventable determinant of attention.

Changes in neurons in experimental and human brains have been well documented after exposure to varying levels of alcohol. However, another type of brain cell, called an astrocyte, has been found to suffer reduced quality after even very low levels of alcohol exposure. In fact, researchers in one study state, "Derangements in astrocyte growth and differentiation may be major contributors to the pathogenesis of brain abnormalities in the fetal alcohol syndrome."

Briefly, according to research By Mattson et al (1999), astrocytes serve a very important support role to our "thinking" primary brain cells called neurons, one of which is to literally pull nutrients from surrounding blood vessels and transport them to the neurons, almost like a vacuum cleaner. Another important role is to serve as the first stage to the "blood brain barrier" by attempting to detoxify toxic compounds that enter the blood, although the mechanism is far from fool-proof. Astrocytes are believed to be one of the first brain cells to

develop in the fetus.

In their research to determine the effect of alcohol on astrocyte growth, Dr. L. A. Kennedy (1986) and colleagues at the College of Medicine, University of Saskatchewan, Canada placed approximately 600,000 newborn mouse brain cells into nutrient rich Petri dishes to evaluate growth patterns after low level exposure to four alcohol concentrations (.0, .06, .12, .24 g/dl). These levels were chosen because they represent a range of alcohol levels to which the embryo and fetus might realistically be exposed in the uterus during periods of mild to severe states of maternal alcohol intoxication. After letting the cells establish themselves for 6 days, the researchers then exposed the brain cell groups to the varying alcohol levels for either 4 days (Experiment 1), 11 days (Experiment 2), 18 days (Experiment 3) and for the last brain cell group (Experiment 4) they waited 20 days before beginning a short 4 day exposure to the different alcohol levels.

The researchers stated the following results from their experiments,

"There was a significant treatment related reduction in protein content (protein is used as a basis for building brain cells), in Experiments 1, 2 and 3 but not in the delayed exposure in Experiment 4 explained by the fact that the main growth period was already over in experiment 4. The glutamine synthetase enzyme level was reduced at all alcohol concentrations (even the lowest dose) and in a dose-dependent manner. For instance, in the cells exposed to alcohol for 18 days (Experiment 3), this important enzyme was about 20% less in the .24 g/dl alcohol exposure level than in the non-alcohol exposed culture.... It appears from these investigations that brief periods of ethanol (alcohol) exposure can be as damaging as longer exposures, if the exposure occurs within a rather narrow window, or critical period, of astrocyte development. Moreover, functional specialization of astrocytes

(such as glutamine synthetics levels), appears to be more severely impaired by ethanol exposure, and at lower ethanol concentrations, than are either replication or growth."

2.1.3 Effects of Alcohol on Social Economic Setup

In economic terms, alcohol is a major contributor to impoverishing its victims and crimping their abilities to provide for their dependants by, for instance, paying school fees for children's education and associated costs. For example, using data compiled by the chemical dependency on public welfare in USA, it was estimated that \$ 107 million of these medical costs resulted from alcohol/ drug abuse treatment costs. Alcohol programme and health insurance, the costs of programme and health insurance administration, research, and medical facilities construction were estimated at \$ 11 million. Estimates for reduced productivity ranged from \$ 630 million, using a 14 percent reduction in productivity and without including imported household value, to \$ 1.19 million using a 21 percent reduction in productivity and including imported household value.

Between 2001 and 2002, the National Agency for Campaign against Drug Abuse (NACADA) commissioned the first-ever national baseline survey on the abuse of alcohol and drugs in Kenya. Targeting the general population, the survey brought together a great deal of information on substance abuse in the country. Significantly the survey observed that the use of alcohol, bhang and miraa has indigenous roots and that the three substances have been widely used in the indigenous society. There however exists no evidence that substance abuse had been part of indigenous society, which for the most part regarded drunkenness as a disgrace.

In light of this observation the rapid spread of substance abuse can be traced to the breakdown of the indigenous society and to the introduction of foreign influences that have

made a variety of substances available on a large scale.

According to NACADA, contrary to common assumptions the survey demonstrated that alcohol, tobacco, bhang and miraa are the substances that are most abused. The problem of substance abuse in the country is associated with introduction of foreign ways of life that have been undermining cultures of the indigenous society.

On the whole the cultures restricted the use of alcohol to senior age groups and to the special occasions. This is no longer the case today. Instead alcohol is readily available to all including young children of below 18 years.

The dangers substance abuse poses to the country are apparent in behavior that has resulted in violence and deaths in schools as well as in hundreds of people who have died as a result of drinking alcohol suspected to have been spiked with poisonous stuff such as battery acid, jet fuel, menthol or formaldehyde. The frequency as well as the type of substance abuse varies from province to province. Western province leads with highest prevalence of alcohol use at 90% followed by Nairobi at 89.9% then Rift valley at 86.1% followed by central province at 84.1%. North Eastern province posts the least prevalence at 15.6%. Miruka (2006)

The survey also shows that the prevalence, as well as the form, of substance abuse differs with the gender. Males, more than females, are more likely to have abused alcohol.

At the same time, religion determines the prevalence as well as the form of substance abuse.

In the same survey, it was reported that about one million people in central province out of a population of 4 million use alcohol roughly translating to one quarter of the population.

Some of the reasons given for high alcohol consumption in central province are, law enforcement agents do not always curb illegal substance use, indeed some police officers collaborate with those manufacturing and selling illicit brews.

The survey also revealed that most alcohols users start before they are 21 years of age.

The survey also shows that alcohol and substances abuse is closely associated with risky

sexual behaviours whose consequences can result to unplanned pregnancies, and sexually transmitted diseases. It can lead to quarrelsome, violent or criminal behavior. In this context, it appears to be one cause of unrest, arson, rape or death in the country's educational institutions.

It also disrupts social structures through misery, crime and violence. At the same time, it drains financial resources and destroys human resources which could have been directed to social and economic development.

At a recent NACADA workshop (2004), the Provincial commissioner - Central Province, Mr. Bernard Rugut, revealed that in central province 16.3% adults drink bottled beer, 17.7% second generation beer and around 20% take illicit brews - those brews brewed at home and other areas not licensed by the government as fit for human consumption.

At this workshop, youth were said to be most affected, and engage in alcohol abuse due to unemployment, idleness, poverty and changes in social systems. He pointed that heavy drinking has led to lack of attention to basic hygiene and high prevalence of casual sex.

Apart from death occurring as a result of excessive consumption of alcohol in central province, alcoholism had led to illness such as malfunctioning of central nervous, circulatory and digestive systems. Alcohol may affect development of the fetus during pregnancy, cause birth defects and give rise to fetal alcohol syndrome.

A baby of an alcoholic mother may exhibit low birth height, learning disabilities and a flathead face and cleft palate. Vision and visual acuity are reduced, hearing and taste buds get impaired.

Socially, it has led to break-up of families and children have found themselves out of school because all recourses are being used for alcohol consumption. It is estimated that 200,000 children have dropped out of school while a significant number have been neglected due to alcoholism in Nyeri alone. NACADA (2004) about seventy women complain each and every

day about their husbands who spend most of the time at drinking sprees thus not providing for their families. Rugut said rising alcohol abuse among the youth has ruined education, economy and social life. He said addiction of the youth could undermine development targets set out in Vision 2030 and the Millennium Development Goals.

"Makeshift bars in this region are already full by 9am where you find drunken young men and women lying down prostrate and sweating profusely," he said. (NACADA newsletter February Edition 2010).

Rugut said cheap alcohol is readily available with half plastic bottles of various concoctions retailing for as little as Sh10. This has prompted the provincial administration to crack down on alcohol outlets adding that fresh licenses for retailers in the most affected areas have been suspended. The PC said youth in the province could miss out on the benefits on initiatives such as Kazi Kwa Vijana, Youth Development Fund and Constituency Development Fund if the habit continues. A child needs to acquire an all round knowledge or information in order to cope with every day activities.

2.1.4 Alcohol Effects on Schooling and Enrolment

So far very few schools have concentrated on effects of alcohol on schooling and enrolment. In Kenya the only study done is by NACADA which concentrated with alcohol abusers below age 21. This study shows that apart from interfering with normal children growth, alcohol abuse is harmful to youth at this adolescent stage of their lives.

In this respect, alcohol abuse is associated with risky sexual behavior whose consequence can be unplanned pregnancies and sexually transmitted diseases. It leads to quarrelsome, violent or criminal behavior resulting to unrest, arson, rape or death in the country's educational institutions. It predisposes the youth to diseases and poor health. There is conflict with low,

poor academic performance which translates into dropping out of educational institutions, narrowing one's opportunities in life and into dropping out of educational institutions, and into an inability to get or keep jobs.

2.2 Theoretical Framework

Piaget (1970) proposed that children progress through an invariant sequence of four stages: sensor motor, pre-operational, concrete operational and formal operational; Sdorow (1990). Those stages are not arbitrary, but are assumed to reflect qualitative differences in children's cognitive abilities. Being controlled by the logical structures in the different developmental stages, learners cannot be taught key cognitive tasks if they have not reached a particular stage of development; Sdorow (1990).

Piaget (1985) suggested that learning process is iterative, in which new information is shaped to fit with the learner's existing knowledge, and existing knowledge is itself modified to accommodate the new information. The major concepts in this cognitive process include:

- **Assimilation:** it occurs when a child perceives new objects or events in terms of existing schemes or operations. Children and adults tend to apply any mental structure that is available to assimilate a new event, and they will actively seek to use a newly acquired structure. This is a process of fitting new information into existing cognitive structures
- **Accommodation:** it has occurred when existing schemes or operations must be

modified to account for a new experience. This is a process of modifying existing cognitive structures based upon new information.

- **Equilibration:** it is the master developmental process, encompassing both assimilation and accommodation. Anomalies of experience create a state of disequilibrium which can be only resolved when a more adaptive, more sophisticated mode of thought is adopted

Piaget's conception of equilibration (1985) implied a dynamic construction process of human's cognitive structure. There is no structure apart from construction because the being of structure "consists in their coming to be, that is, their being 'under construction'".

According to Piaget, young children make rapid intellectual advancements during the preschool years. They now engage in what Piaget has called preoperational thought, a new form of thinking that allows them to solve problems using some internal reflection. They can now think about objects or people that are not present, and can reflect upon things they cannot see, hear, touch, or act upon. They can imagine objects or people and represent them in make-believe, and can contemplate future events and recall past ones.

Piaget has proposed that preschoolers are still limited cognitively. They think in qualitatively different ways than adults. Their thinking is still perception-based, meaning that they rely heavily on the feel, touch, smell, taste, sound, and appearance of things in solving problems.

Piaget has described preschoolers' thinking as marked by fascinating errors in logic. Young children often conclude, for example, that inanimate objects that move are alive. Their thinking tends to be one-dimensional; they often centre on just one object or aspect of a problem at a time. They have trouble reversing activities or operations mentally. Their causal thinking, while more sophisticated than in infancy, is still faulty. They engage in transductive

reasoning, in which two unrelated events are placed into a causal relationship. Finally, they are still quite egocentric; they have trouble understanding the perspectives of others.

Bartlett first introduced the notion of schema as early as 1932 in order to explain why people reconstructed a story when recalling it so as to make more sense of it in terms of their own knowledge and experience. According to Piaget, the story is assimilated to pre-stored schemata based on previous experience. Sdorow (1990) defined a schema as "a data structure for representing the generic concepts stored in memory. In other words, schema is an "organizing and orienting attitude that involves active organization of past experience. Piaget (1984) Modern versions of schema theory incorporate many of Piaget's theory. For example, Atkinson and Shiffrin's concept of scripts (1977) proposed that such event schemata could be organized into a temporally ordered sequence of events. They examined all schema theories and identified four major processes: selection, abstraction, interpretation, and integration. It explicitly illustrates how memory and comprehension operate.

One of the central issues that cognitive psychologists are interested in is mental structure. According to schema theory, the knowledge we have stored in memory is organized as a set of schemata or mental representations, each of which incorporates all the knowledge of a given type of object or event that we have acquired account to the knowledge structure and emphasizes the fact that what we remember is influenced by from past experience. Schema theory provides what we already know. Schemata facilitates both encoding and retrieval. Moreover, the mental structures are active. Memory can be reconstructed through the integration of current experience with prior knowledge. In other words, schemata represent an active process and can change over time as a result of new experiences and learning.

There are two information resources: the incoming from the outside world and information already stored in memory. The analysis of the sensory information coming in from the

outside is known as *bottom-up processing* or data-driven processing because it relies on the data received via the senses. The information already stored in the memory in the form of prior knowledge influences our expectations and helps us to interpret the current input. This influence of prior knowledge is known as *top-down* or conceptual-driven processing. Schemata operate in a top-down direction to help us interpret the bottom-up flow of information from the world. Research on functions of the schema focused on the impact of prior knowledge on comprehension and memory (Bernstein, (1989)

General educational implications of cognitive theories:

1. Cognitive processes influence learning.
2. Learning difficulties often indicate ineffective or inappropriate cognitive processes, especially for children with learning disabilities, who tend to process information less effectively. Therefore, teachers need to be aware that all students are trying to learn something as well as what they are trying to learn.
3. As children grow, they become capable of increasingly more sophisticated thought.
4. People organize the things they learn. Therefore, teachers can facilitate students' previous knowledge and show how one thing relates to the other (i.e. helping students understand and make connections).
5. People control their own learning, ultimately students, not their teachers; determine what things will be learned and how they will be learned.

The cognitive theories proposed by both Piaget and Bernstein suggest that cognitive processes influence learning. Learning difficulties often indicate ineffective or inappropriate cognitive processes.

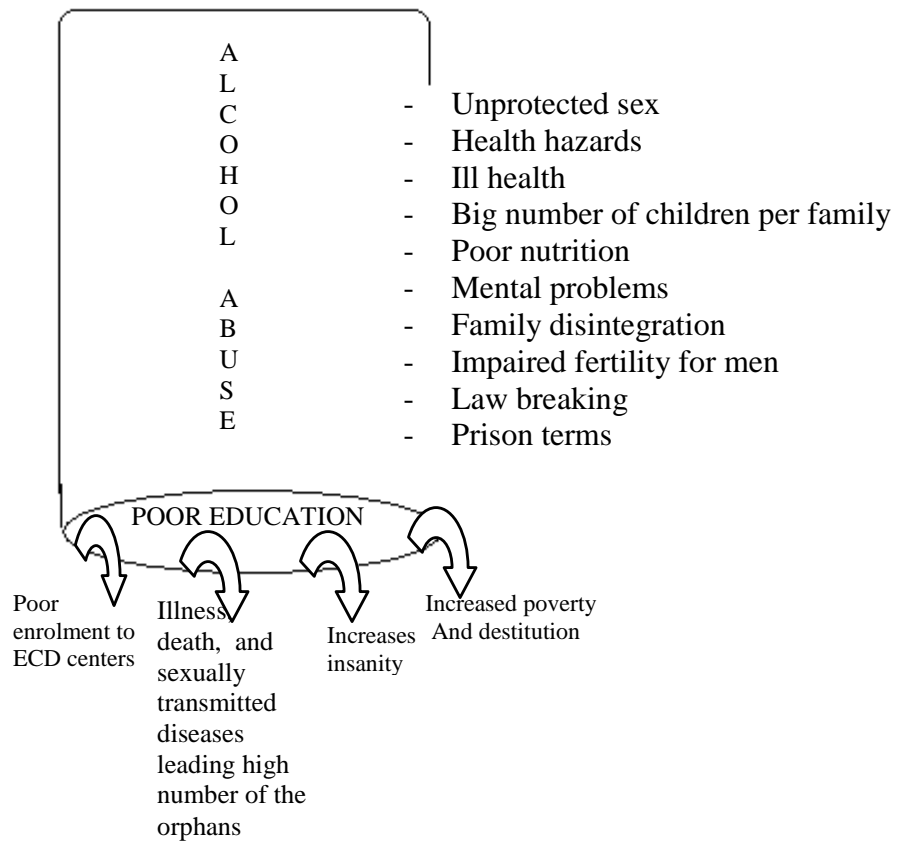
As seen earlier, many children with fetal alcohol syndrome might not attend schools or delay to enroll. This is due to increased health problems associated with cognitive environment.

Male parents as well play an important role in the development of a child. The child's mind is capable of assimilating and accommodating positive or negative ideas depending on the role models. The teachers then come in by showing how new ideas relate to previous learning because new information is most easily acquired when people associate it with things they have already learnt.

Thorough this study, it was noted that, Cognitive Theories proposed by both Piaget and Bernsten influence learning. Most children enrolled in preschools before age 3 were not able to cope with preschool work. It was further found out that children who had prerequisite knowledge in their first language assimilated the second language faster; the researcher concluded that new information is most easily acquired when people associate it with things they have already learned. Teachers should then show how new ideas relate to previous learning. The two variables were not part of the study although they were established during data collection.

2.3 Conceptual Framework

Several studies indicate that there is a relation between alcohol abuse and the state of pre-school education either in medical terms or resultant negative social economic effects. The present study sought to identify consequences of alcohol use and abuse on enrolment of pre-schoolers in Kiharu division, Murang'a East district. This study has captured alcohol abuse as the independent variable while preschool enrolment was the dependent variable. However; other dependent variables were established in the course of the study although they were not of concern to the researcher. The relationship of the independent and dependent variables is shown below.



Alcohol Abuse and Correlated Hazards

CHAPTER 3

3.0 RESEARCH METHODOLOGY

3.1 Introduction

In this chapter the following is discussed: The study design, independent and dependent variables, the study area, the target population, sampling and sampling procedure, data collection instruments, validity and reliability of research instruments, data collection procedure, data analysis and presentation and ethical considerations for the proposed research.

3.2 Research Design

The study was a descriptive cross-sectional research study aimed at finding out the relationship between poor early childhood education enrolment and alcohol intake in Kiharu Division, Murang'a East District. A descriptive cross-sectional research design is good for collecting data from a large population, too large to observe directly. It is also an excellent vehicle for measuring attitudes in population (Adams, and Schvaneveldt, (1995).

3.3 Population and Study Area

The study was carried out in Kiharu Division, Murang'a East District. The population of this study is defined as all parents of pre-school children and related stakeholders during the sampling period. There are five locations and fifteen sub-locations in Kiharu Division which are administratively headed by chiefs and sub-chiefs respectively. The division has three Educational Zones manned by Zonal Quality Assurance and Standard Officers. There are 38 public primary schools with equal number of ECDE centres. Out of these preschool centres, only 20 public primary schools were sampled where questionnaires were administered to head teachers and their respective pre school teachers.

Other respondents were 2 education officers from the DEO'S Office, provincial administration officers who included DO and Chiefs and 1 medical personnel.

3.3.1Independent Variables

This study cited three other independent variables: Education, Occupation and Alcoholism Status. Alcoholism was the area of concern to the researcher in this study.

3.3.2Dependent Variables

The dependent variable was the enrolment of pre-schoolers in Early Childhood Development Centres.

3.4 Sampling

Random sampling, the purest form of probability sampling, was used to obtain the subjects to participate in the study. Each member of the population had an equal and known chance of being selected (Mugenda and Mugenda, 1999). Random sampling technique was used to selected 32 parents with Pre School going children. That is, those between 20 and 49 age bracket. Other stakeholders such as education officers, provincial administration and medical officers were selected according to their areas of jurisdiction.

3.4.1 Sampling Frame

The representative sample and the population was as follows:

Sample Group	Actual figure		Regions Covered
Parents of pre-school Children	Parents		Kiharu Division (sampled areas) Gikandu location. Municipality and Gaturi location
	20 – 45 years	32	
Head teachers/pre schoolteachers	20:20		Primary schools in Kiharu Division
DEO/ECDE Programme Officer	1:1		District Education Office
Medical Experts	1		Muranga District Hospital
DO and Chiefs	1:3		Kiharu Division

3.5 Instrument of Data Collection

One instrument, questionnaire, was utilised to gather information from respondents.

Questionnaires are commonly used to obtain important information about the population. Each item in the questionnaire is developed to address a specific objective, research question or hypothesis of the study (Mugenda and Mugenda, 1999). The researcher had to analyse the information obtained from each questionnaire item.

3.6 Validity and Reliability

Validity is concerned with establishing whether the questionnaires content was measuring what it was supposed to measure (Adams, and Schvanveldt,1985), Mugenda and Mugenda

1999). Pre testing of data collection tools was done and necessary adjustment made in consultation with the researcher's supervisors. In order to validate the data collection instruments, the following procedure was used:

- 1) The researcher looked for people to act as real despondence
- 2). All ambiguities noted by dummy respondents were collected

To ensure the effectiveness of questionnaires, a pre-test was carried out. The researcher piloted the questionnaire with a small representative sample. That enabled the researcher to find out if:

The questions were measuring what they were supposed to measure

- The wording was clear
- What responses were provoked
- If there was any research bias

3.7 Procedure for Data Collection

The researcher collected data in Kiharu Division by administering questionnaires to parents between 20-49 years of age, head teachers/pre school teachers from sampled primary schools, DEO/ECE Programme Officer and DO/ Chiefs and medical expert. These questionnaires were categorized according various groups of respondents.

3.8 Data Analysis

Information on the preschool enrolment in ECDE Centres in Kiharu Division, Murang'a District was ascertained through a questionnaire. Percentages and frequency distribution were used to analyze the data. The obtained data were analyzed and findings interpreted in the light

of the stated objectives.

There was also a marriage of both quantitative and qualitative analysis giving their importance in enriching nature when they are pragmatically blended together. (Gall and. Gall 1997) these types of analyses complement each other in that they are naturally inclusive. The fact that each method has its own weaknesses and strengths, the marriage of both tends to overcome the weaknesses of each method by incorporating the strength of one method to overcome the weakness of the other.

Both quantitative and qualitative method of analysis can constitute alternative ways of viewing the world, but may not necessarily be correct or incorrect. They just reflect what is actually happening. The blending of both methods in a single analysis can lead to insight on the multiple aspects that might be unattainable without such integration. Furthermore the combination of both methods may enhance the validity of the study findings. This factor alone makes the integration of the two methods highly effective.

3.9 Ethical Considerations

The following were the legal requirements before proceeding for data collection: a permit from the ministry of education, a letter from the University, letters from Provincial Administration (DC's Office), and District Education Office. These legal documents were presented to all the target respondents for the following purposes:

1. They explained the purpose of the study. Respondents needed to be aware of the purpose of the study for them to cooperate.
2. They were evidence that the researcher was genuine and there was nothing to hide
3. A brief assurance of confidentiality was included in those letters.
4. The permit had specific deadline dates by which the completed questionnaire was to be returned. That gave respondents enough time to respond without inconveniencing

them. Two to three weeks were sufficient

CHAPTER 4

4.0 DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS OFFINDINGS

4.1 Introduction

This chapter interprets the qualitative data collected from the respondents.

4.2 Characteristics of the Sample

This section describes the characteristics of the parents sampled as well as other stake holders in relation to alcohol abuse and enrolment of preschool children in ECDE centres in Kiharu division, Murang'a East district.

4.2.1 Age and Sex of Parents

The analysis sample of respondents reveals that there were a total of 12 parents of the age bracket 20-29 years. Of these, 3 were male representing 25% and 9 females representing 75%. There were 7 parents of the age bracket 30-39 years. Of these, 3 were males representing 43% of the sample bracket while 4 were females representing 57% of the sample bracket. Also there were 13 parents of the age bracket 40-49 years. Of these 5 were male representing 38% while 8 were females representing 62%.

The total number of parents is 32 as shown in Table 4.1 below.

Table 4.1 Ages and Sex of Parents Surveyed

Age bracket	Males	Females	Total
20 – 29 yrs	3	9	12
30 – 39 yrs	3	4	7
40 – 49 yrs	5	8	13
TOTAL	11	21	32

This information is further captured in the histogram shown below in Figure 4.1

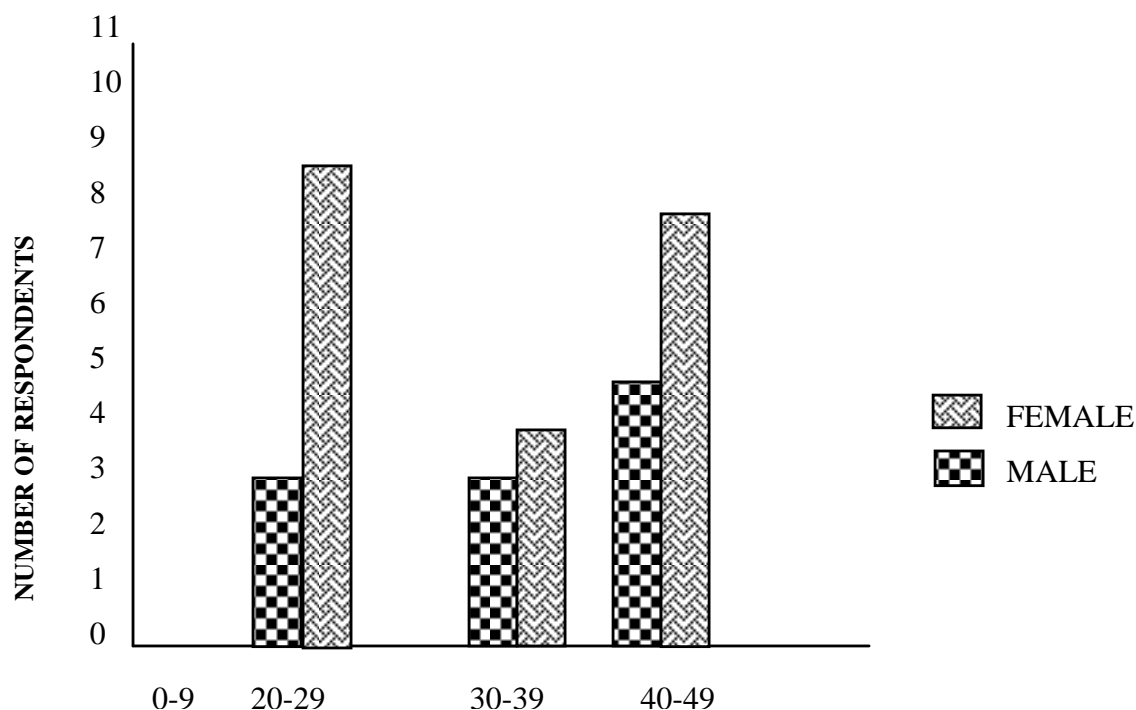


Fig 4.1 Sex and Age Bracket of Parents Surveyed

Apparently parents in Kiharu start bearing children after the age of 20 years as observed from the study. The researcher was unable to get parents of the age bracket 30-39 years because they were mainly involved in economic activities outside Kiharu.

4.2.2 Age and Sex in Relation to Alcohol Abuse and Enrolment

Data analysis revealed that of the male parents aged between 20-29 years, 33% engaged in alcohol abuse while 2 (66%) did not engage in alcohol abuse. Of the female parents in the same age bracket 4 (44%) engaged in alcohol abuse while 5 (56%) did not engage in alcohol abuse. Of male parents in this age bracket who engaged in alcohol abuse did not enroll his child in ECDE centre. Of the two male parents who did not engage in alcohol abuse both took their children to ECDE centers. Of the 4 female parents who engaged in alcohol abuse, 2

(50%) did not take their children to ECDE centers while 2 (50%) took their children to ECDE centers. The female parents who did not engage in alcohol abuse all took their children to ECDE centers.

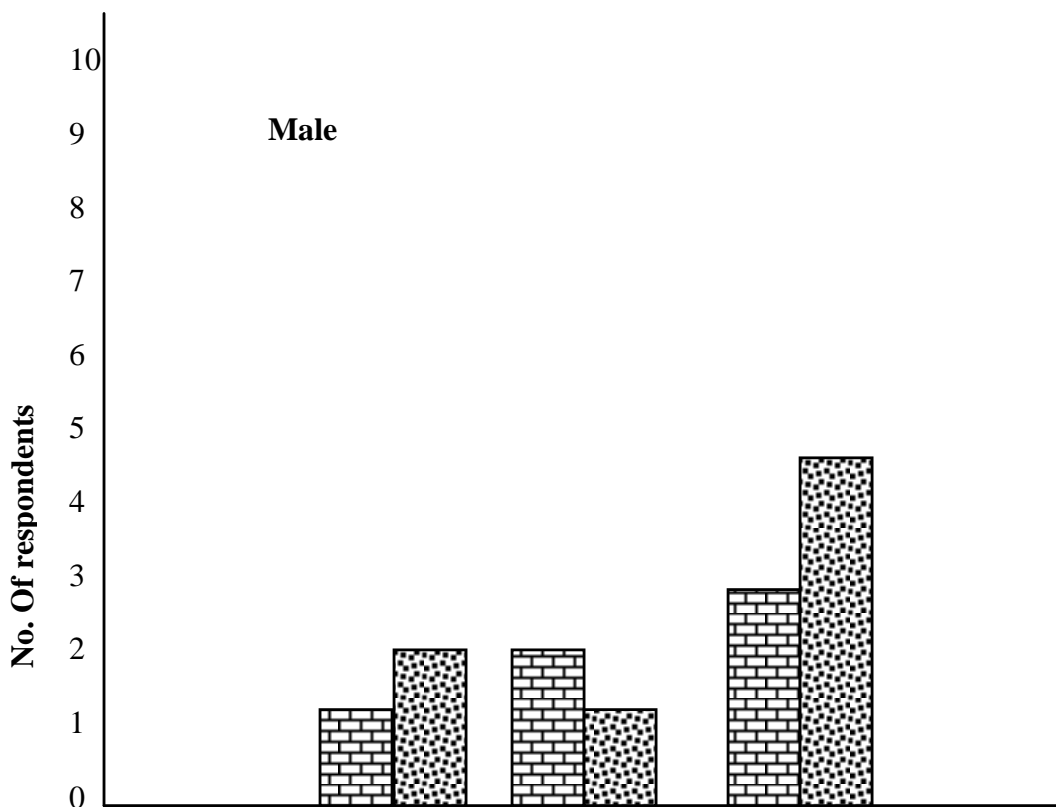
Of the parents in the age bracket 30-39 years, of the 3 male parents, 2 (67%) engaged in alcohol abuse while 1 (33%) did not engage in alcohol abuse. Of the 4 female parents in the same age bracket 2 (50%) engaged in alcohol abuse while 2 (50%) did not engage in alcohol abuse. Of the 2 male parents in the age bracket 30-39 who engaged in alcohol abuse, 1 (50%) did not take his children to ECDE centre while 1 (50%) took his children to ECDE centre. Of the 2 female parents who engaged in alcohol abuse, one did not take her children to ECDE centre while 1 (50%) took her children to ECDE. Of the 1 male parent who did not engage in alcohol abuse, he took his children to ECDE centre (100%). Of the 2 female parents who did not engage in alcohol abuse, 1 (50%) did not take her children to ECDE centre while 1 (50%) took her children to ECDE centers.

Of the 5 male parents age bracket 40-49 years, 3 (60%) engaged in alcohol abuse while 2 (40%) did not.. Of the 8 female parents in the same age bracket, 3 (38%) engaged in alcohol abuse while 5 did not (63%). Of the 3 male parents who engaged in alcohol abuse, 2 did not take their children to ECDE centre while 1 (33%) did. Of the 2 female parents who engaged in alcohol abuse 2 (67%) did not take their children to ECDE centers, while (33%) did. Of the 2 male parents who did not engage in alcohol abuse, both took their children to ECDE centers (100%). Of the 5 females who did not engage in alcohol abuse in the same age bracket, all took the children to ECDE centers (100%).

The analysis of this data is captured using Table 4.2 and Figures 4.1(a) and 4.1(b)

Table 4.2 Ages and Sex in Relation to Alcohol Abuse and Enrolment

Age Bracket	Gender	Alcohol Status and Enrolment Status					
		Abused			Abstained		
		No. Abused	No. Enrolled	No. Not Enrolled	No. Abstained	No. Enrolled	No. Not Enrolled
20-29	Male	1	1	0	2	2	0
	Female	4	2	2	5	5	0
30-39	Male	2	1	1	1	1	0
	Female	2	1	1	2	1	1
40-49	Male	3	1	2	2	2	0
	Female	3	1	2	5	5	0
Total		15	7	8	17	16	1



0-9 10-19 20-29 30-39 40-49

Fig 4.2(a) Male Parents and Alcohol Abuse in Relation to Age

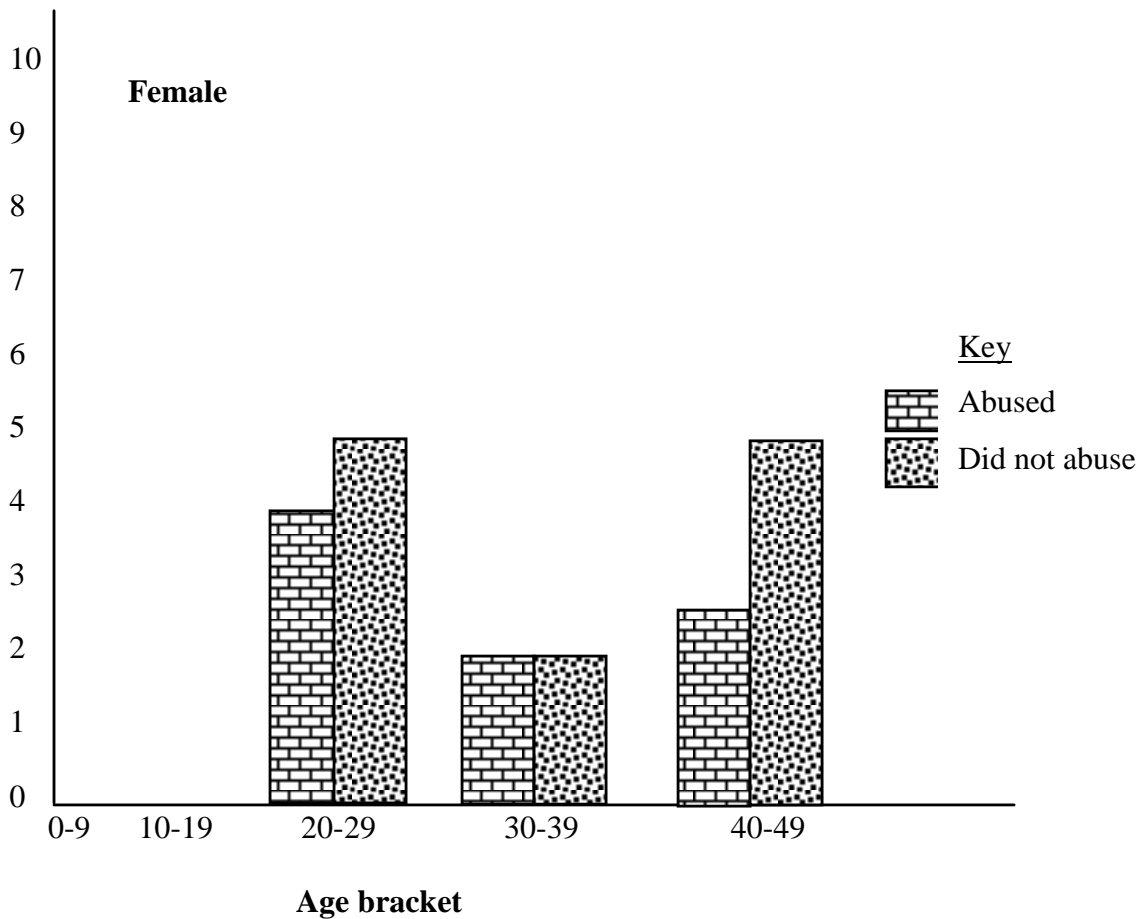


Fig 4.2(b) Female Parents and Alcohol Abuse in Relation to Age

Considering age of parents, enrolment of their children to ECDE centers in relation to alcohol status, only one female parent who did not abuse alcohol did not also take her children to ECDE centers.

4.3 Marital Status

Of the total number of 21 females sampled, 3 (14%) were married, 6 (29%) were divorced, 3 (14%) were widowed and 9 (43%) were single. Of the total number of 11 males sampled, 5 (46%) were married, 3 (27%) were divorced, 3 (27%) were widowed while none were single

parents. This analysis is reflected in Table 4.3 and also in Figures 4.3 below.

Table 4.3 Marital Status of Respondents

Married Status	Males	Females
Married	5	3
Divorced	3	6
Widowed	3	3
Single	0	9
Total	11	21

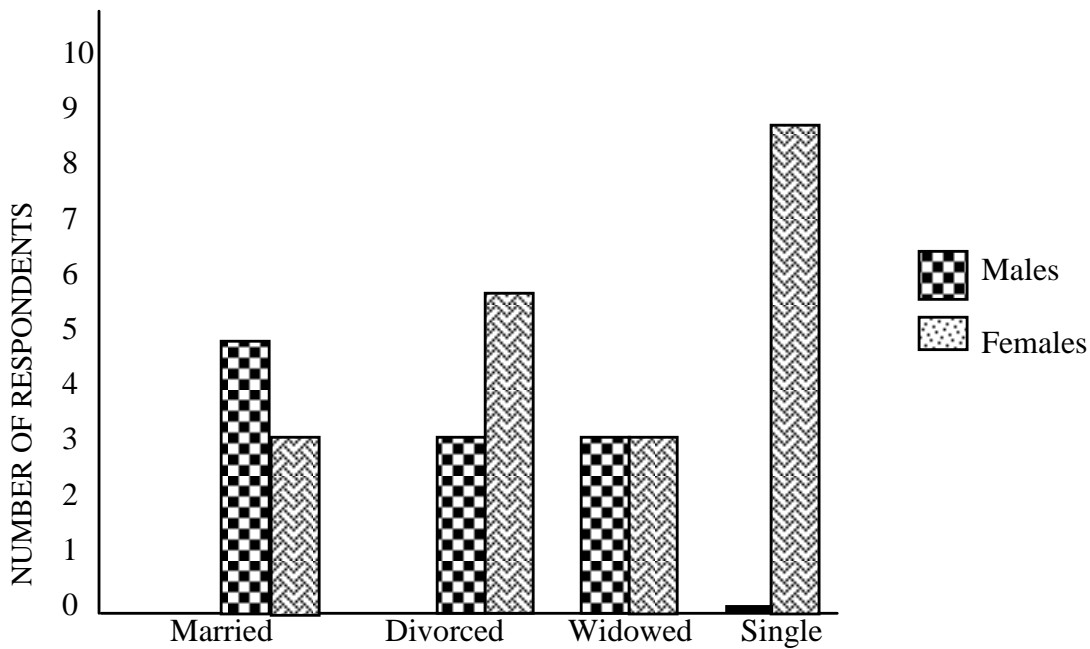


Fig 4.3 Marital Status of Respondents (Parents)

The study shows that more female parents lead single life than male parents.

4.3.1 Marital Status, Alcohol Abuse and Enrolment of Children in ECDE Centres

The analysis of the sample respondents revealed that of the 5 married males, 1 engaged in alcohol abuse while 4 did not. Of the 1 male parent who engaged in alcohol abuse, he did not take his children to ECDE centres, while the 4 who did not engage in alcohol abuse took their children to ECDE centres. Of the 3 female married parents, none engaged in alcohol abuse. Of the 3 married female parents abstaining from alcohol, all took their children to ECDE centres.

Of the 3 male divorced parents, 2 engaged in alcohol abuse while 1 did not. Of the 2 male divorced parents who engaged in alcohol abuse, all did not take his children to ECDE centre. Of the 6 divorced female parents, 4 engaged in alcohol abuse, while 2 did not. Of the 4 female divorced parents, 2 did not take their children to ECDE centres while 2 did.

Of the three widowed male parents, 2 engaged in alcohol abuse while 1 did not. Of the 2 who engaged in alcohol abuse, 1 did not take his children to ECDE centres while 1 did. Of the one who did not engage in alcohol abuse, he took his children to ECDE centres. Of the 3 widowed females, 1 engaged in alcohol abuse, while 2 did not, the one who engaged in alcohol abuse did not take her children to ECDE centres. Of the two who did not engage in alcohol abuse, both took their children to ECDE centres.

There were no single male parents in the present study. Of the 9 female single parents, 5 engaged in alcohol abuse while 4 did not. Of the 5 female parents who engaged in alcohol abuse, 3 did not take their children to ECDE centres, while 2 did. Of the 5 female single parents 4 took their children to ECDE centres while 1 did not. The analysis is captured in Table 4.4 below.

Table 4.4 Marital Status, Alcohol Status and Children’s Enrolment in ECDE Centres

Marital status	Gender		Alcohol status					
	Males	Females	Abused Alcohol			Did not Abuse Alcohol		
			No.	No. Enrolled	No. Did not enrol	No.	No. Enrolled	No. Did not enrol
Married	5		1	0	1	4	4	0
		3	0			3	3	0
Divorced	3		2	2	0	1	1	0
		6	4	2	2	2	2	0
Widowed	3		2	1	1	1	1	0
		3	1	1	0	2	2	0
Single								
		9	5	1	4	4	3	1
Total	11	21	15	7	8	17	16	1

This information is captured in the histogram shown in Figure 4.4.below

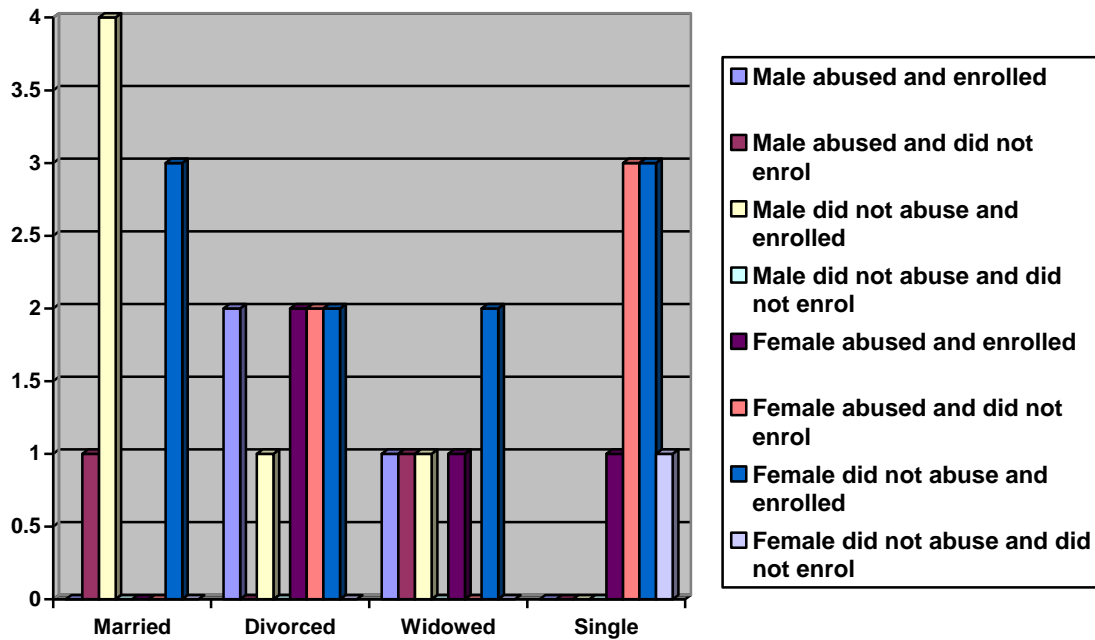


Figure 4.4: Marital Status, Alcohol Status and Children’s Enrolment in ECDE Centres

The survey shows that single parenting affects enrolment of pre-school children

None of the married females took alcohol while those who are single are seen to have engaged in alcohol abuse. Only one of five married men abused alcohol.

4.4 Education Level of Parents along Gender Lines

Of the 21 female parents sampled, 12 (57%) reached primary level while 9 (43%) reached secondary level. None reached tertiary and other levels of education. Of the 11 male parents sampled 6 (55%) reached primary school while 3 (27%) reached secondary school level and 2 (18%) reached tertiary levels. The analysis is reflected in Table 4.5 below.

Table 4.5: Education Levels of Parents by Gender

Educational Level	Males	Females
Primary	6	12
Secondary	3	9
Tertiary	2	0
Others	0	0
Total	11	21

The results above are represented in the pie charts shown in Figures 4.5(a) and 4.5(b) below.

A) Males

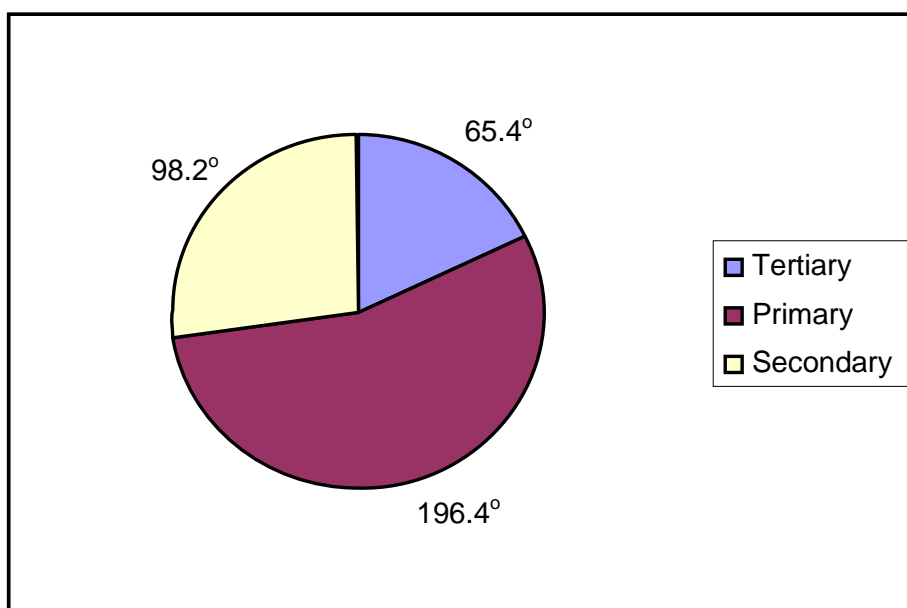


Figure 4.5(a): Education Levels of Male Parents

B) Females

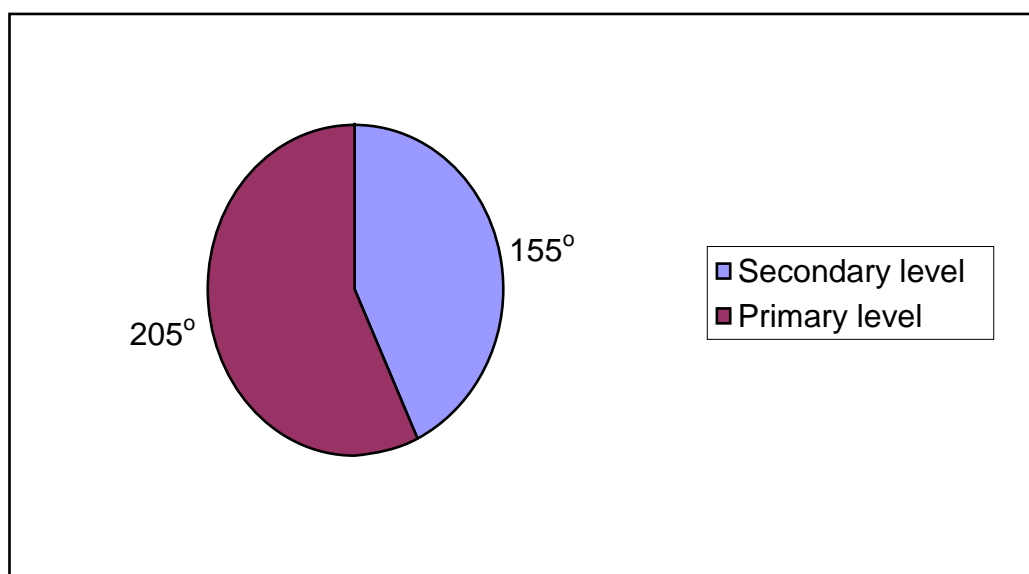


Figure 4.5(b): Education Levels of Female Parents

From Table 4.6 and Figures 4.4(a) and 4.4(b), nearly all respondents had secondary education and below.

4.4.1 Education Level, Alcohol Abuse and Enrolment of Pre-school Children in ECDE Centres

Of the 6 male parents who reached primary school level, 3 were engaged in alcohol abuse while 3 were not. Of the 3 who were engaged in alcohol abuse, 2 did not take their children to ECDE centres while 1 did. Of the 3 who did not engage in alcohol abuse, all took their children to ECDE centres. Of the 12 females who reached primary school level, 7 engaged in alcohol abuse. Of the 7 who were engaged in alcohol abuse, 4 did not take their children to ECDE centres while 3 took. Of the 5 who did not engage in alcohol abuse, 4 took their children to ECDE centres while 1 did not.

Of the 3 male parents who reached secondary school level of education, 2 engaged in alcohol abuse while 1 did not. Of the two who engaged in alcohol abuse both did not take their

children to ECDE centres. While the 1 who did not engage in alcohol abuse took his children to ECDE centres. Of the 9 female parents who reached Secondary level of education, 2 engaged in alcohol abuse while 7 did not. Of the 2 who engaged in alcohol abuse, 1 did not take her children to ECDE centres while 1 took. Of the 7 females who did not engage in alcohol abuse, they all took their children to ECDE centres. Of the 2 males who reached tertiary and higher levels of education, they did not engage in alcohol abuse and took their children to ECDE Centres. The information is captured in Table 4.6 and also reflected in Figures 4.6 (a) and 4.6 (b) below.

Table 4.6: Education Levels, Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres

Educational level		Alcohol Status					
		Abused			Did not Abuse		
	Gender	No.	No. Enrolled	No. Did not Enrol	No.	No. Enrolled	No. Did not Enrol
Primary	Male	3	1	2	3	3	0
	Female	7	3	4	5	4	1
Secondary	Male	2	0	2	1	1	0
	Female	3	2	1	6	6	0
Tertiary	Male	0	-	-	2	2	0
	Female	0	-	-	0	-	-
Total		15	7	8	17	16	1

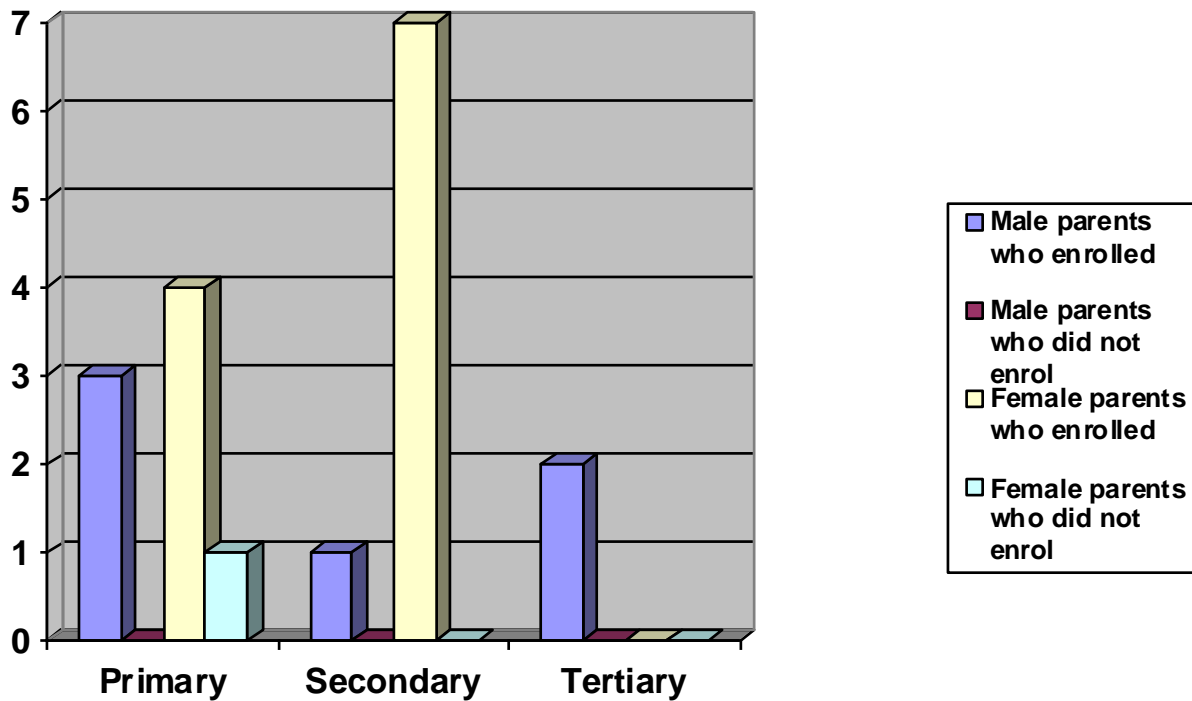


Figure 4.6 (a): Education Levels, Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres.

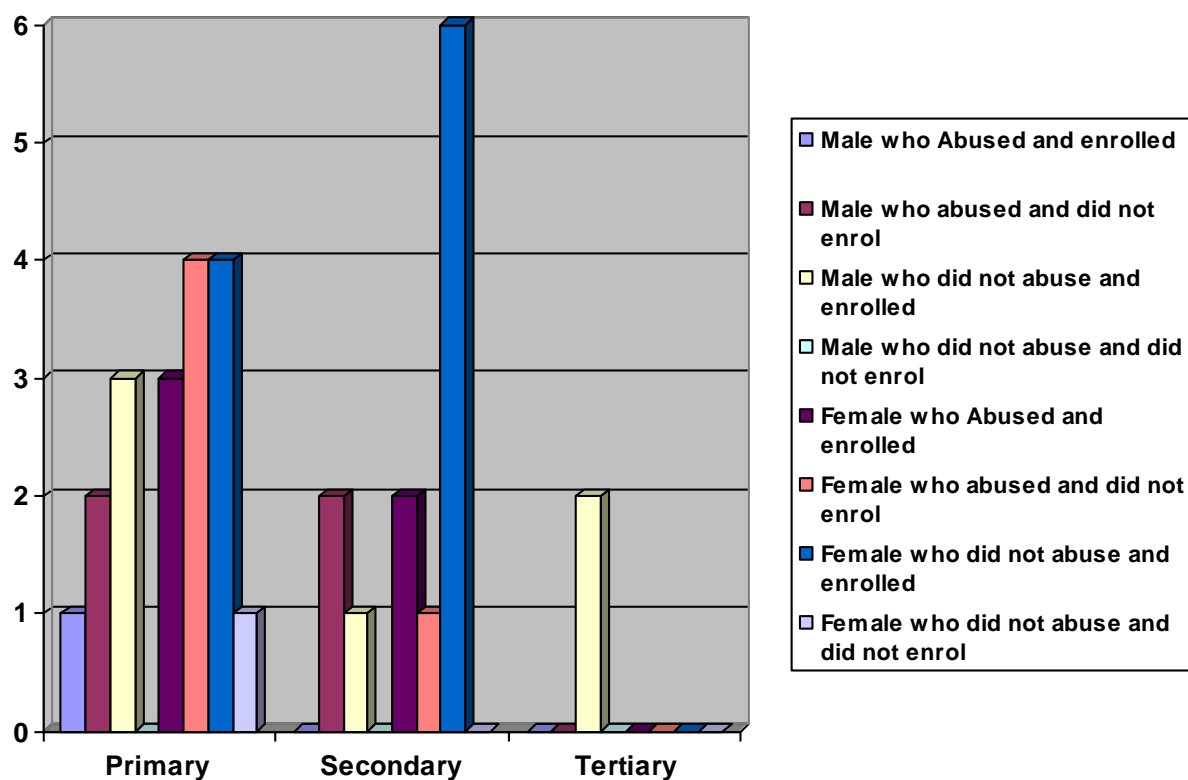


Figure 4.6(b): Education Levels, Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres

According to the study, both education level and alcohol abuse influence preschool enrolment. Both male and female who reached primary school level only, are seen to have abused alcohol more and did not enroll their children in ECDE centers. Those who reached secondary and tertiary levels did not abuse alcohol and took their children to ECDE centres.

4.5 Religious Affiliations of Parents

Of the 32 respondents, 6 (19%) were Muslims, 15 (47%) were Catholics, 7 (22%) were Anglicans while 4 (12%) were P.C.E.A. and other denominations as shown in Table 4.7 below.

Table 4.7: Religious Affiliations of Parents

CHURCH	FREQUENCY	PERCENTAGE
Muslims	6	19
Catholics	15	47
A.C.K.	7	22
P.C.E.A & others	4	12
Total	32	100%

This data is represented in Figure 4.7 below.

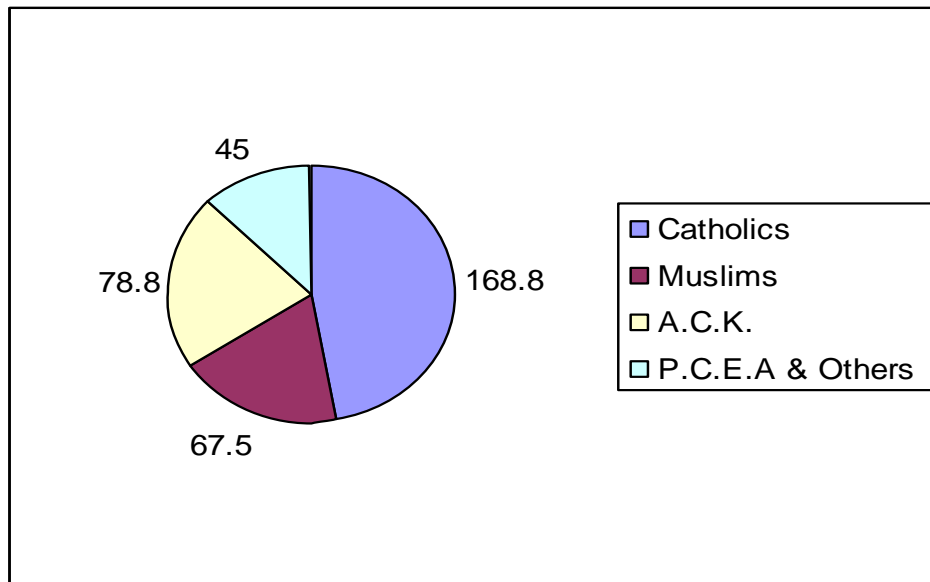


Figure 4.7: Religious Affiliations of Parents

It was revealed that this society is multi-denominational.

4.5.1 Religious Affiliation, Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres

The analysis of the sample respondents revealed that of 6 Muslims respondents, 5 were not engaged in alcohol abuse while 1 was engaged. Of the 5 who were not engaged in alcohol abuse, 4 took their children to ECDE centres while 1 did not. Of the 1 who was engaged in alcohol abuse, he did not take his children to ECDE centres. Of the 15 Catholics respondents, 7 were engaged in alcohol abuse while 8 were not. Of the 7 who were engaged in alcohol abuse, 3 did not take their children to ECDE centres, while 4 did. Of the 8 who did not engage in alcohol abuse, they all took their children to ECDE centres. Of the 7 Anglican respondents, 3 were engaged in alcohol abuse while 4 were not. Of the 3 who were engaged in alcohol abuse, 2 did not take their children to ECDE centres, while 1 did. Of the 4 who did

not engage in alcohol abuse, they all took their children to ECDE centres.

Of the 4 PCEA and other denominations respondents, 2 engaged in alcohol abuse while 2 did not. Of the 2 who engaged in alcohol abuse, they did not take their children to ECDE centres while the 2 who did not engage in alcohol abuse did.

The data collected is reflected in Table 4.8 and in the Figure 4.7 below.

Table 4.8: Religious Affiliation, Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres

Religion	Alcohol Status			
	Abuse		Do not Abuse	
	No. Enrolled	No. Not Enrolled	No. Enrolled	No. Not Enrolled
Muslims	0	1	4	1
Catholics	4	4	7	0
Anglican	1	3	3	0
P.C.E.A and Others	0	2	2	0
Total	5	10	16	1

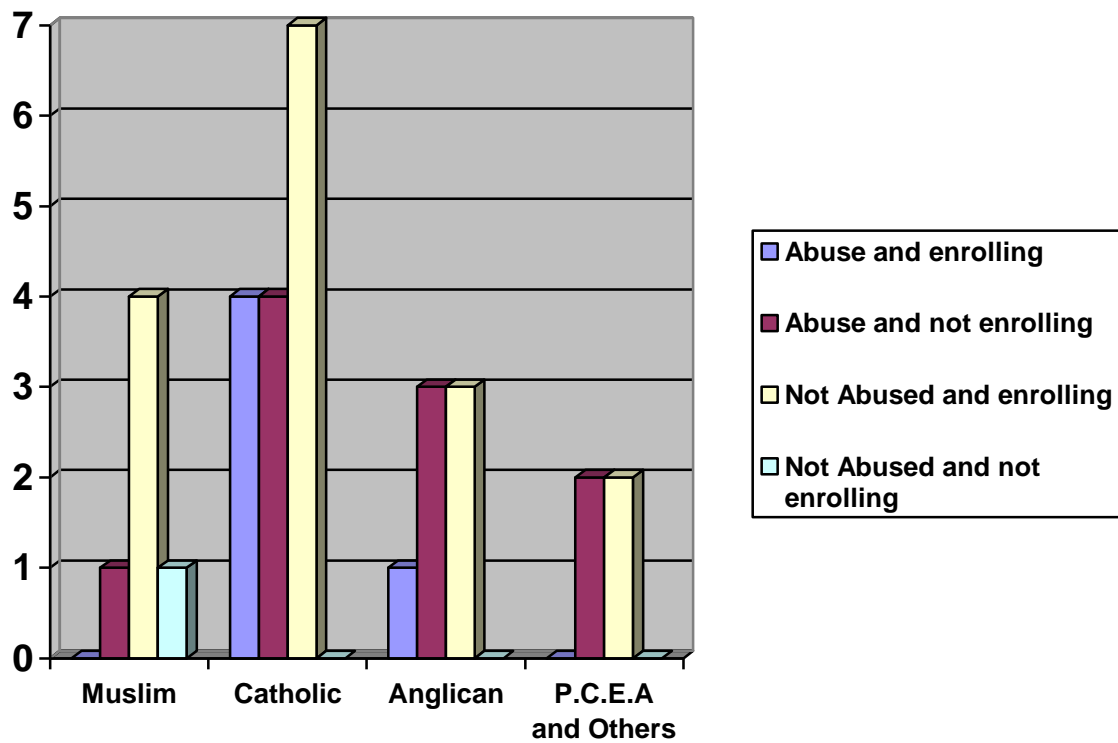


Figure 4.8: Religious Affiliation, Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres

According to the present study, alcohol abuse does have a negative impact on enrolment of pre-school children in ECDE centers. It was surprising, however that although many parents professing Catholicism abused alcohol, they took their children to ECDE centres. On the other hand, parents professing Islam did not abuse alcohol but did not take their children to ECDE centers. Future research may pursue these interesting, and somewhat contradictory, findings.

4.6 Employment Status of Parents (Occupation)

Of 21 female respondents, 3 (14%) were formerly employed, 6 (28%) were self employed, while 12 (58%) were unemployed. Of the 11 male respondents, 3 (33.3%) were formerly

employed, 4 (44.4%) were self employed, while 4 (44.4%) were unemployed. This data is captured in Table 4.9 and in Figure 4.9(a) and 4.9(b) below

Table 4.9: Employment Status (Occupation) of Parents

Status	Males	Females
Employed	3	3
Self Employed	4	6
Unemployed	4	12
Total	11	21

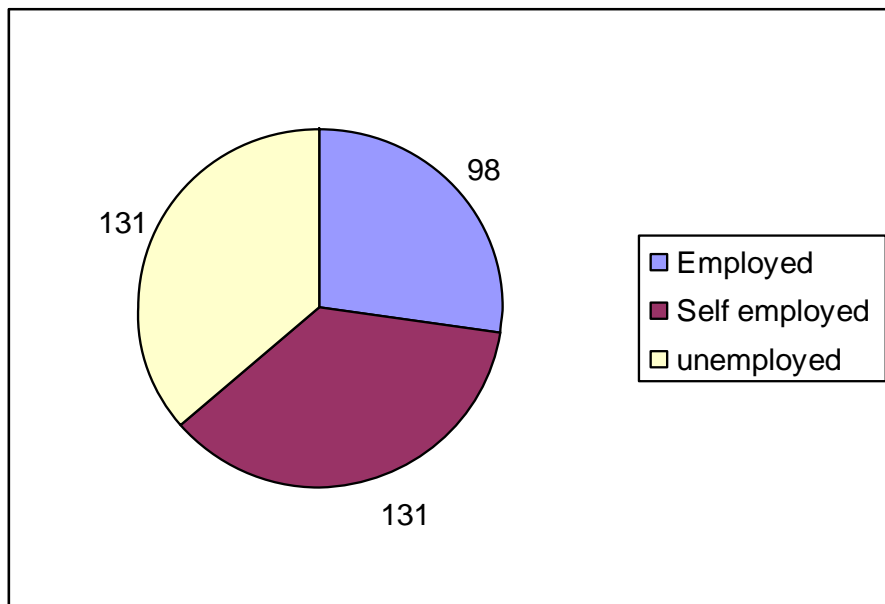


Fig: 4.9(a) Employment Status (Occupation) of Male Parents

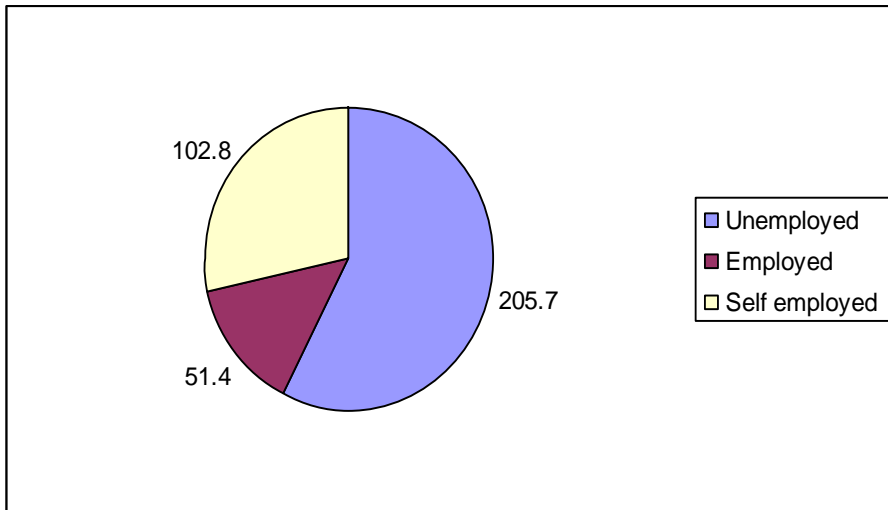


Fig: 4.9(b) Employment Status (Occupation) of Female Parents

The study shows that the unemployed are more than the employed.

4.6.1 Employment Status (Occupation) of Parents, Alcohol Abuse, and Enrolment of Pre-School Children in ECDE Centres

Of the 3 male respondents who are employed, 1 engaged in alcohol abuse while 2 did not. Of the 2 employed female respondents none abused alcohol. All of the above took their children to ECDE centres.

Of the 4 self employed male parents, 2 engaged in alcohol abuse while 2 did not. Of the 2 who engaged in alcohol abuse, 1 did not take his children to ECDE centres. Of the 2 who were not engaged in alcohol abuse, both took their children to ECDE centres.

Of the 6 self employed female parents, 3 engaged in alcohol abuse while 3 did not. Of the 3 who engaged in alcohol abuse, 2 took their children to ECDE centres while 1 did not. Of the 3 who did not engage in alcohol abuse, 2 took their children to the ECDE centres while 1 did

not.

Of the 4 unemployed male respondents, 3 engaged in alcohol abuse while 1 did not. Of the 3 who engaged in alcohol abuse, all of them did not take their children to ECDE centres. Of the 1 who was not engaged in alcohol abuse took his children to ECDE centres.

Of the 12 unemployed female respondents, 6 engaged in alcohol abuse while 6 did not. Of the 6 who engaged in alcohol abuse, 3 did not take their children to ECDE centres, while 3 took. Of the 6 who did not engage in alcohol abuse they all took their children to ECDE

The above data is captured in Table 4.10 and Figure 4.10 below.

Table 4.10: Employment Status (Occupation), Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centres

Occupation	Gender	Alcohol Status					
		Abuse			Not Abuse		
		No.	Enroll	Not Enroll	No.	Enroll	Not Enroll
Employed	M	1	1	0	2	2	0
	F	0	0	0	2	2	0
Self Employed	M	2	1	1	2	2	0
	F	3	2	1	3	2	1
Unemployed	M	3	0	3	1	1	0
	F	6	3	3	6	6	0
Total		15	7	8	17	16	1

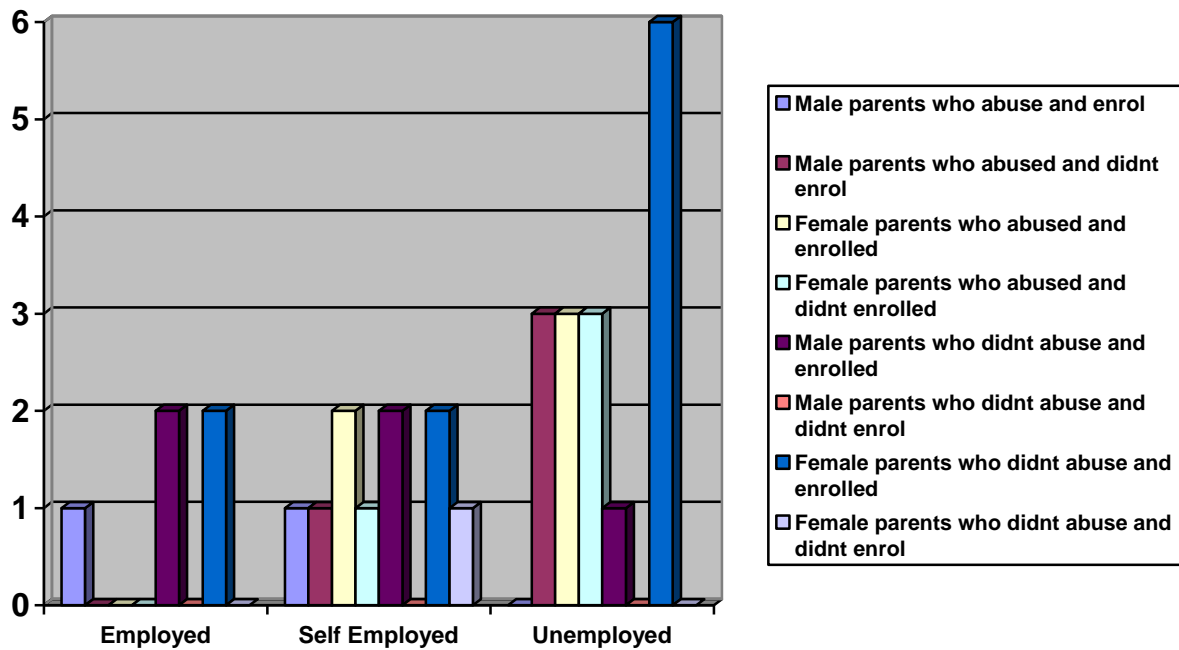


Figure 4.10: Employment Status (Occupation), Alcohol Abuse and Enrolment of Pre-School Children in ECDE Centre.

The employed parents tend to enroll their children in ECDE centers whether they abuse alcohol or not. The self employed have an equal chance of either engaging in alcohol abuse or not and enrolling their children to ECDE centers or not. The number of parents who abused alcohol and did not enroll their children to ECDE centres is seen to be high.

4.7 Head Teachers Report on ECDE

This section presents analysis of the data collected from the head teachers on their perception of the impact of parental alcohol abuse on enrolment of learners in ECDE centres.

Head teachers were randomly selected from 20 different schools. They were not profiled because the study mainly targeted the impact of parental alcohol abuse on enrolment of pre-school children in ECDE centres. The sample selected had an enrolment of 20 to 60 learners which included baby class to pre-unit.

4.7.1 Pupil’s Enrolment Range in Pre-Schools in Kiharu Division

Of the 20 schools sampled, 1(5%) school had an enrolment range below 30 pupils, 6 (30%) schools had enrolment ranging between 30-39 pupils, 7(35%) schools had enrolment range between 40-49, 3(15%) schools had a population of pupils ranging between 50-59, 2 (10%) schools had pupils ranging from 60-62 and only 1 (5%) school which had 70 pupils.

This data is presented in Table 4.11 below and also in the corresponding histogram, Figure 4.11

Table 4.11: Pupils' Enrolment Range in 20 ECDE Centres of Kiharu Division

Enrolment range	Number of schools	Percentage
Below 30 pupils	1	5%
Between 30-39 pupils	6	30%
Between 40-49 pupils	7	35%
Between 50-59 pupils	3	15%
Between 60-69 pupils	2	10%
Over 70 pupils	1	5%

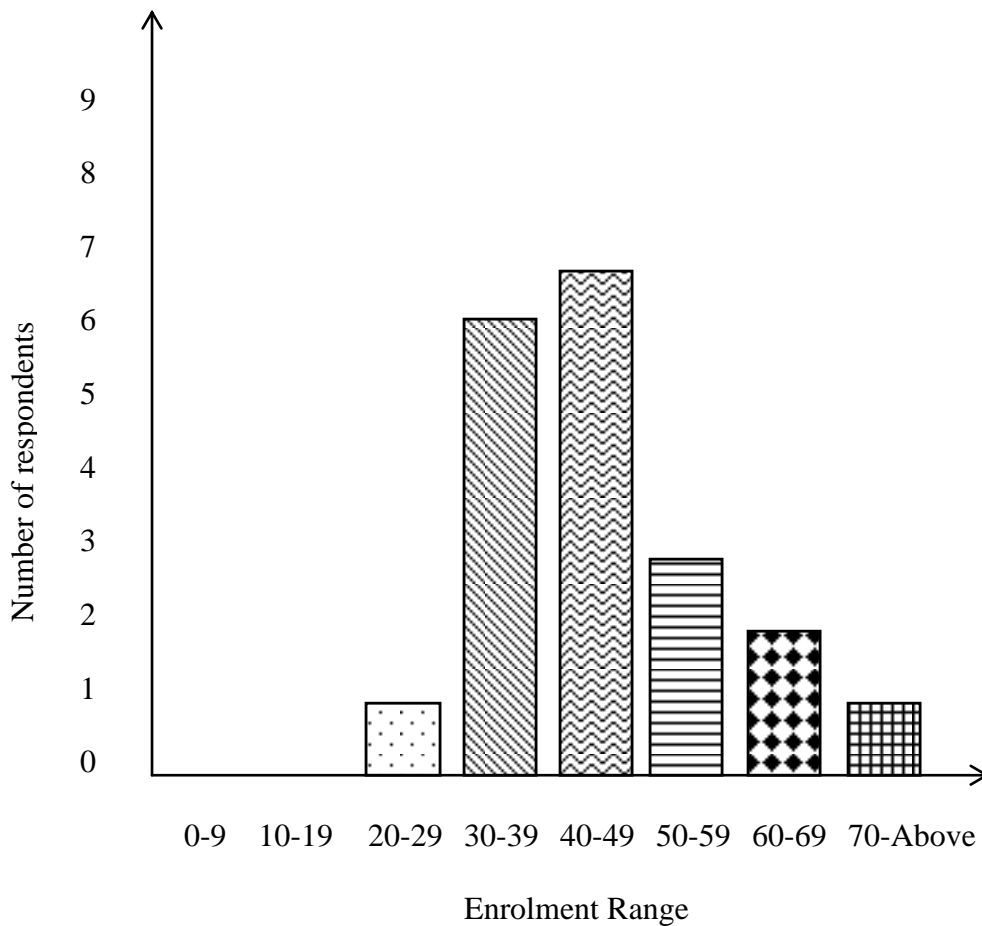


Figure 4.11: Pupils’ Enrolment Range in 20 ECDE Centres of Kiharu Division

The average enrolment of learners in preschools in Kiharu Division ranges mainly between 30-49 pupils.

4.7.2 Enrolment in Pre-School Children by Gender

Of the 20 pre-schools under review, six (6) of them had more boys than girls, while 4 reported more girls enrolled than boys. Of the total number of preschool pupils, 233 were boys while 209 were girls. Thus on average 53% of the total numbers of pupils enrolled were boys while 47% were girls. This data is presented in Table 4.12 below and also in the corresponding pie chart, Figure 4.12

Table 4.12: Distribution of Enrolment by Gender and School

Name of the school	Boys	Girls
Rurii primary	20	22
Mjini primary	25	30
St. Mary's primary	19	21
St. Joseph primary	25	32
Konguini primary	23	19
Nyakihai primary	26	10
Kiangatia primary	23	21
Thangathi primary	25	14
Githuri primary	15	12
Gikandu primary	32	28
Mbiri primary	32	38
Maragi primary	19	23
Githundi primary	19	15
Kimathi primary	29	28
Kambirwa primary	22	37
Mirira primary	15	17
Gikuu primary	19	19
Mamumbu primary	22	24
Githuguya primary	16	21
Gakurwe primary	34	28

Enrollment in terms of gender is captured in the pie-chart below:-

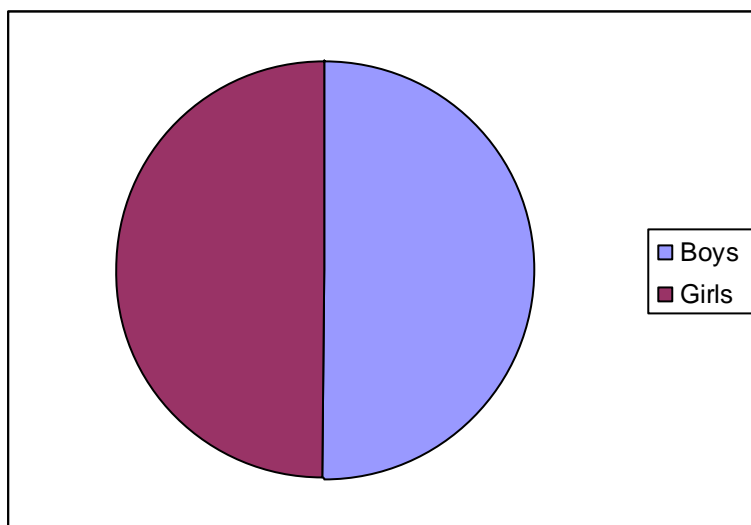


Figure 4.12: Enrollment of Pre-School Children in ECDE Centres by Gender

All the schools reported gender balance of pre-school children.

4.7.2 Benefits of ECDE

All headteachers who responded to the questionnaire were unanimous in recognizing the benefit of ECDE for the community. They all stated that ECDE provides a firm educational foundation for children before they undertake primary school education, thus giving them an early head start in their educational life.

4.7.3 Challenges of ECDE in Kiharu Division

Twenty head teachers were asked to identify the challenges they face in providing ECDE services to children. Five respondents identified financial constraints, 2 identified attitude and awareness, 3 food shortage, 3 alcoholism, 2 divorce, 2 lack of facilities, 2 family conflict and 1 migration. This information is reflected in Table 4.13 and in Figure 4.13 below.

Table 4.13: Challenges facing ECDE Centers

Head teachers	Percentage	Challenges
5	25%	Financial Constraint
2	10%	Attitude and Awareness
3	15%	Food Shortage
3	15%	Alcoholism
2	10%	Divorce
2	10%	Lack of Facilities
2	10%	Family Conflict
1	5%	Migration

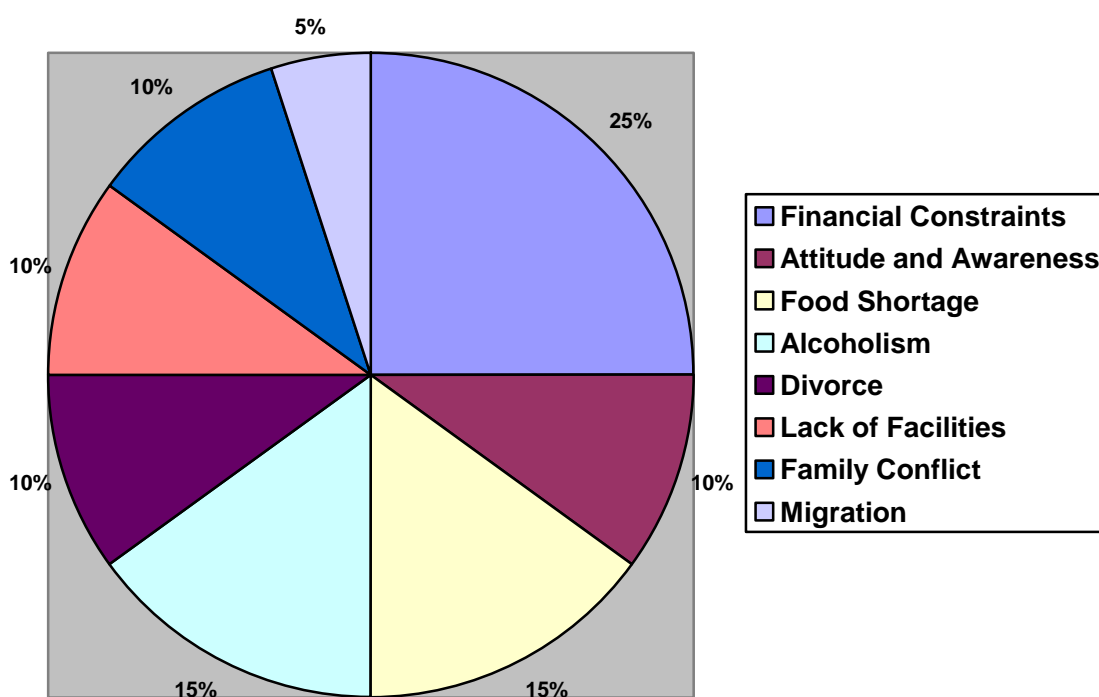


Figure 4.13 Challenges facing ECDE Centers

Many head teachers reported financial constraints as one of the challenges facing ECDE centres. These financial constraints may lead to stress which push parents towards alcoholism. Alcoholism then becomes both a cause and a consequence of this financial problem.

4.7.4 Attendance among Pre-Schoolers in ECDE Centres of Kiharu Division

On attendance of the 20 schools sampled, 5 (25%) had an attendance of over 90% of pupils each week, while 15 (75%) reported an attendance of between 60% - 80% every week. No school reported attendance of below 60 % every week. The data is captured in Table 4.14 and Figure 4.14 below.

Table 4.14: Attendance among Pre-Scholars in ECDE Centres of Kiharu Division

Attendance Range	No of Schools	Percentage
90%	5	25%
60%-80%	15	75%
Below 60%	0	0

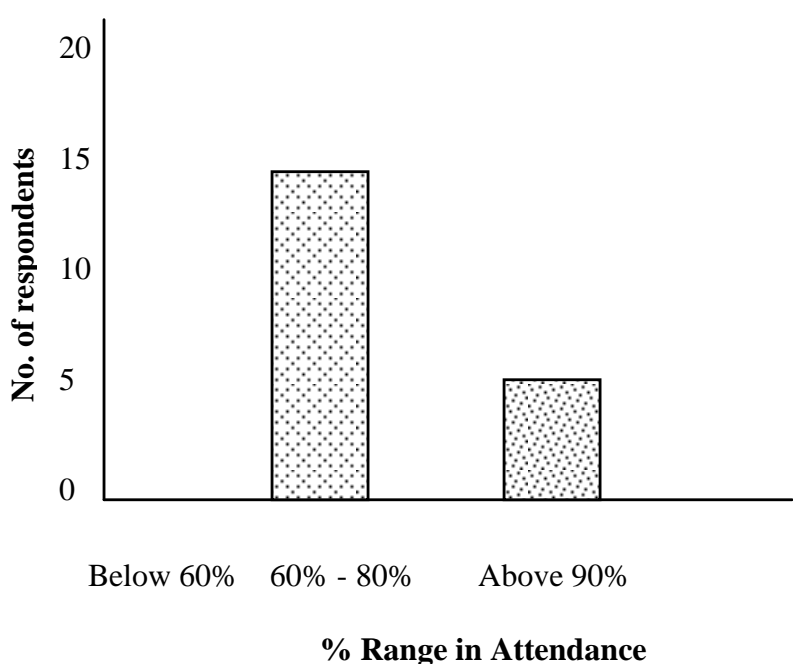


Fig 4.14 Attendance among Pre-Scholars in ECDE Centres of Kiharu Division

Reasons for Non-Attendance

Many head teachers gave various reasons for non-attendance of pupils to class in the sampled schools. The reasons were categorized as, ignorance, apathy, financial constraints, domestic problems and sickness. Of the 20 schools sampled, 4 (20%) reported ignorance as a factor, 4 (20%) reported apathy, 8 (40%) reported financial constraints, 6 (30%) reported domestic

problems as a contributing factor 1 (5%) reported sickness as a contributing factors. Three (15%) pre-schools did not indicate any reason and these reported over 90% attendance.

The data is captured in Figure 4.15 below.

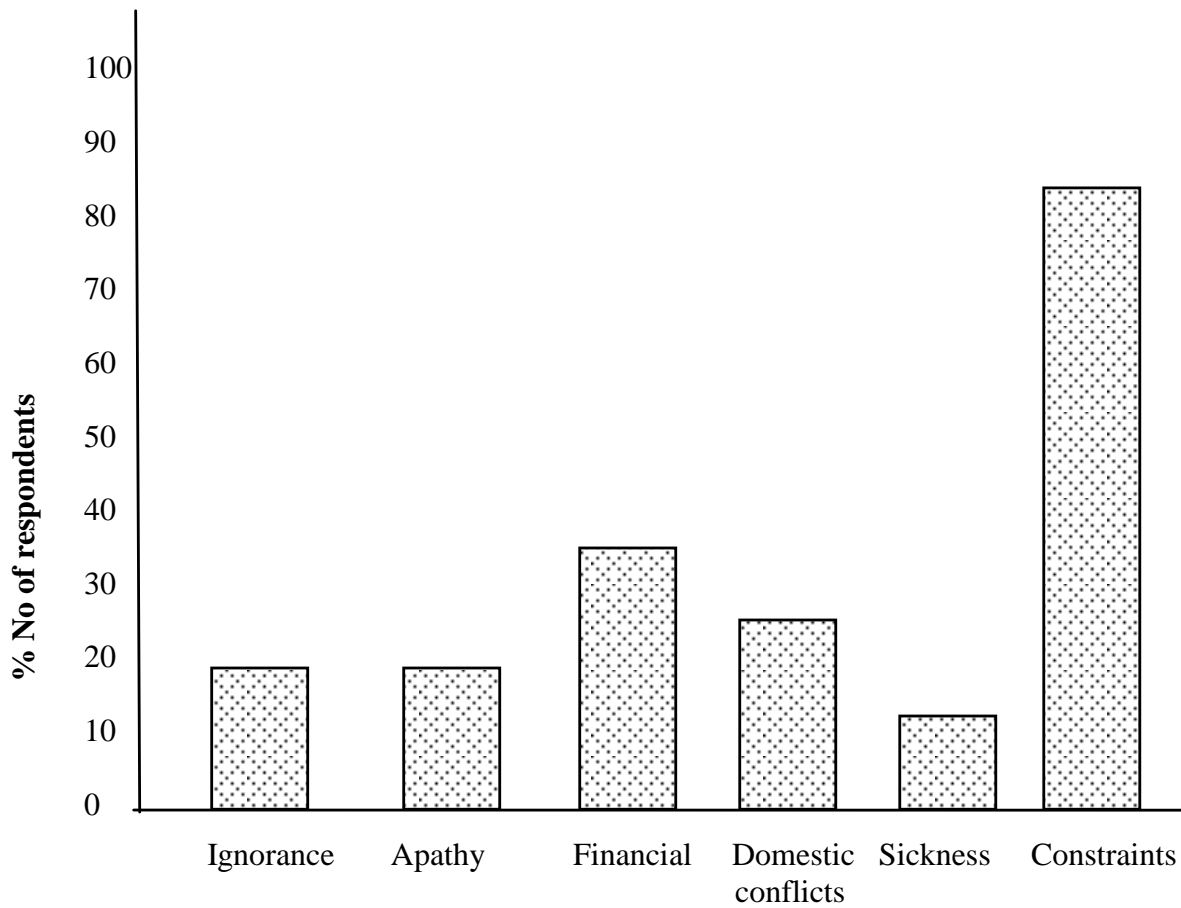


Fig 4.15: Reasons for Non Attendance

The study shows that the attendance of pre-schoolers is mostly affected by financial constraints and sickness.

4.7.6 School Feeding Programmes

Of the 20 schools sampled, 13 (65%) have ECDE feeding programmes in the school while 7 (35%) have no such programmes. The information is captured in Figure 4.16 below

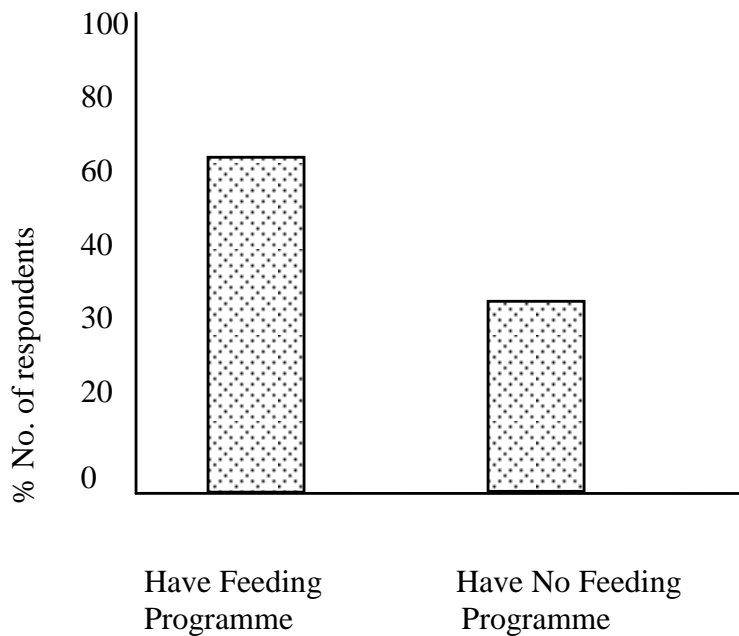


Fig 4.16: ECDE School Feeding Programme

The mode of payment was unanimously poor. This is due to high poverty rate as the study revealed

4.7.7 Community Perception on E.C.D.E

Of the 20 schools, 18 (90%) agreed that the community values ECDE while 2 (10%) reported that the community did not value it.

The data is captured in the histogram shown below.

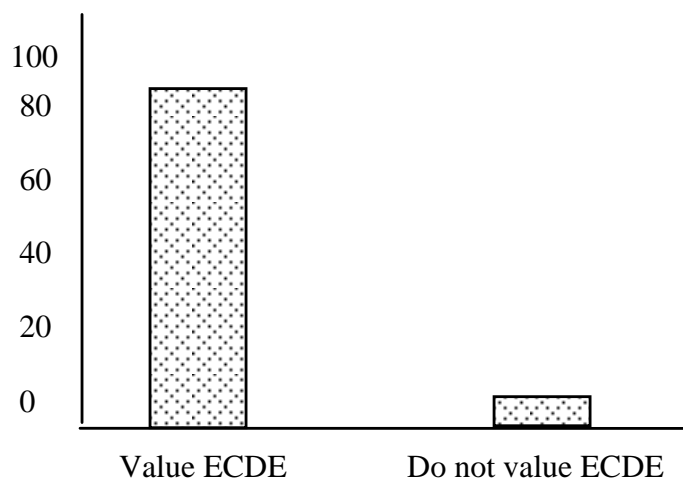


Fig 4.17 Community Perception on ECDE

4.8 Findings from the District Education Officer (DEO) of Kiharu Division

According to the statistics at the Kiharu Division Education Office, there are forty one pre-schools in Kiharu. The population of preschool pupils in these institutions is high. The community, according to the DEO, values early childhood education. According to the DEO, the main challenge facing provision of ECDE in Kiharu is financial - where parents are not able to raise school fees for their children. Financial constraints in turn affect the proper running of ECDE centres as essential facilities and resources cannot be provided without finances.

Another challenge identified by the DEO is poverty, which is an extension of the above. The community is generally poor and majority of pupils attending public institutions are generally from a poor background. They are therefore generally malnourished. The hunger contributes to lack of concentrations in the class. These pupils thus do not get the full value of early childhood education.

Another challenge cited was high absenteeism. This, according to the DEO, could be a reflection of poverty, family conflicts, lack of proper family cohesion and alcoholism. Generally, some children are forced to miss school in order to participate in family income

generating activities.

Another challenge noted was negative attitude toward ECDE. The DEO posited that this problem is caused by cynicism on the part of parents towards the importance of ECDE. Cynicism on its part is an escape from reality because ultimately the parents are unable to pay for ECDE due to poverty. To escape from this reality, parents resort to cynical behavior, negative attitude and conviction that ECDE has no importance in the life of their children.

The DEO identified one of the benefits of ECDE as providing a firm academic foundation to the children. This has been the most important benefit of ECDE that was identified by all the stakeholders surveyed in this project. With firm academic foundation children are thus able to pursue their education/ academic life smoothly and easily hence enabling them to achieve their full potential in life.

The other benefit identified by the DEO. was the smooth transition from pre-school to standard one that pupils who have completed ECDE experience. They are way ahead in terms of the start of their primary school life. This minimizes the time wasted by teachers who get children enrolled directly into standard one when children do not attend pre-school, teachers are forced to suspend standard one syllabus and start laying the foundations which should have been laid at E.C.D.E centers. The disruptions continue in subsequent classes and by the time these pupils are finishing their primary education, what should have been taught is usually not achieved. As a result, a lot of time, money and other resources are wasted trying to make these pupils catch up.

The D.E.O. further agreed that alcohol abuse has a negative effect on E.C.D.E. in Kiharu. He identified these effects as neglect of children by parents who abuse alcohol.

4.9 Report of Provincial Administration

The survey would not have been successful without the input of the provincial administration who is the central player in implementing and guiding government policies. Education and social welfare are central government policies.

4.9.1 Alcohol Abuse and Crime

The respondents were unanimous that they deal with crimes related to alcohol abuse. Specific crimes include domestic violence, petty theft, disorderly behaviours, and neglect of children, rape and assault. Of the crimes reported in the past years, 2 chiefs and the D.O (3 respondents) reported assault as the most prevalent crime. One respondent reported domestic violence as the most prevalent. Disorderly behavior was second followed by neglect of children, petty theft and rape.

The data captured was as follows: Assault was reported as most prevalent (45%) of all cases, followed by disorderly behavior (20%), domestic violence (18%), and neglect of children (10%), petty theft (4%) and case of rape (3%). There was a total of 2500 cases of crimes related to alcohol abuse. Of these, 1125 involved domestic violence, 250 cases involved neglect of children, 100 cases involved petty theft and 75 cases involved rape.

The data is reflected in Table 4.6 below.

Table 4.15: Prevalence of Crimes Related to Alcohol Abuse in Kiharu Division

Nature of Crime	No. of Cases Reported	% of total
Assault	1125	45
Disorderly behavior	500	20
Domestic violence	450	18
Neglect of children	250	10
Petty theft	100	4
Rape	75	3
Total	2500	100

The data is captured using the pie chart shown in Figure 4.18 below.

The study reveals that the highest crime rate is assault, the least being rape.

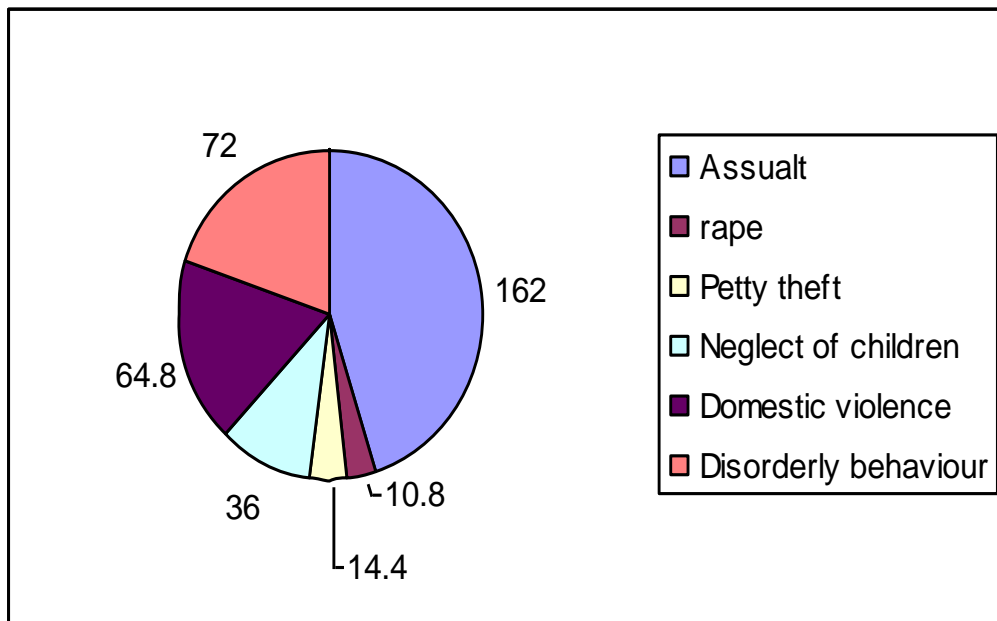


Figure 4.18: Prevalence of Crimes Related to Alcohol Abuse

4.9.2 Gender and Crimes Related to Alcohol Abuse in Kiharu Division

The survey attempted to capture the relationship between gender, crime and alcohol abuse. Of the crime of assault 743 (66%) was committed by men while 382 (34%) was committed by women. On disorderly behavior, 375 (75%) was committed by men while 125 (25%) was committed by women. On domestic violence, 400 (89%) was committed by men while 50 (11%) cases were committed by women. On neglect of children, 190 (76%) cases were committed by men while 60 (24%) cases were committed by women. On petty theft, 40 (40%) cases were committed by men while 60 (60%) cases were committed by women. On rape, 75 (100%) cases were committed by men and 0 (0%) cases were committed by women. The data above is captured in table 4.16 below and also in histogram, Figure 4.19

Table 4.16: Gender and Crimes Related to Alcohol Abuse

Nature of Crime	No. of Cases Reported	
	MEN	WOMEN
Assault	743	382
Disorderly behavior	375	125
Domestic violence	400	50
Neglect of children	190	60
Petty theft	40	60
Rape	75	0
Total	1823	677

This information is captured in Figure 4.18 below.

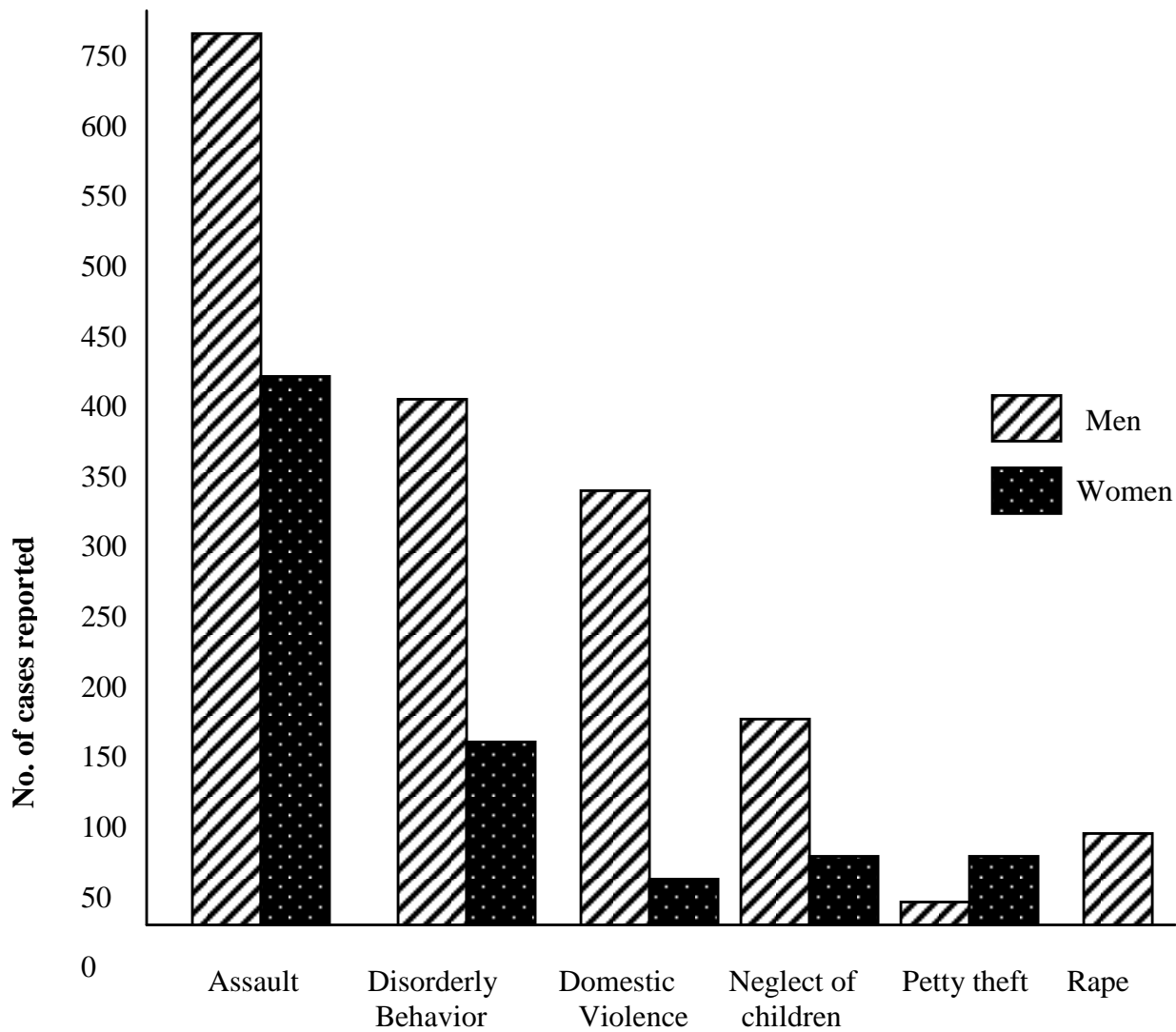


Fig 4.19: Gender and Crimes Related to Alcohol Abuse

According to the study, both men and women commit crimes. However, the percentage of men committing those crimes is higher than that of females.

4.10 Findings from Medical Experts (Respondent)

During data collection, only one medical expert was consulted. He reported that alcohol abuse was a big challenge in Murang'a District and cases of alcohol-related complications are

referred to Murang'a District Hospital on a regular basis. He listed the following alcohol-related complications as the most common in the hospital: Withdraw syndrome, hypoglycemia, and respiratory distress. Sometimes these medical complications result to death although death due to alcohol-related complications was less than 1%. The doctor indicated further that over 50% of the abusers are men, the most commonly abused alcohol being second generation wines and spirits (e.g., Chang'aa).

On child care, the doctor reported that children of alcoholics are generally neglected since their parents spend their time at alcohol dens, therefore exhausting all their resources. The children were also likely to miss important government health-related programmes which target children enrolled at ECDE centres for wider coverage. Examples of such programmes are: Immunization, vitamin A supplementation and de-worming. On the benefits of the ECDE to the community, the doctor agreed that the ECDE is very important since early childhood education is a critical determinant of what a person will be in adult hood. In addition, the government uses the ECDE centres to reach young children during implementation of ministry's health programmes.

CHAPTER 5

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives an overview of major findings of the study. From the findings, the researcher drew important conclusions after which some recommendations and suggestions for further researcher were made.

5.2 Overview of the Study Findings

This study tried to find out the relationship between alcohol abuse and enrolments of preschoolers in ECDE centres.

There were 32 male and female parents in the study. Of these, 6 male parents engaged in alcohol abuse while 9 female parents also engaged in alcohol abuse. Of the 6 male parents who engaged in alcohol abuse, 4 of them did not take their children to ECDE centres while 2 did. Of the 9 female parents who engaged in alcohol abuse, 5 of them did not take their children to ECDE centres while 4 did. Of the 17 parents who did not abuse alcohol, 5 were male parents and 4 of them took their children to ECDE centres while 1 did not.

Twelve female parents did not engage in alcohol abuse. Of these, 9 took their children to ECDE centres, while 3 did not. The total numbers of children who were taken to ECDE centre were from 19 families while those who were not enrolled in ECDE centres were from 13 families.

From the above, the research concluded that families where alcohol is abused have a preponderance to deny their children enrolment to ECDE centres. For example, of the 6 male parents who engaged in alcohol abuse, 4 of them did not enroll their children in ECDE centres. This is a 67% probability of families who abuse alcohol not taking their children to ECDE centres. Only 33% of families who abused alcohol did not take their children to ECDE

centres. This was the case where the head of the family (father) was engaged in alcohol abuse.

Where the mother engaged in alcohol abuse, 56% of the families in this situation failed to enroll their children in ECDE centres. So from the study, alcohol abuse plays a major role in impacting negatively on enrolment of pre scholars in ECDE centres. This problem is usually compounded by other factors, such as age of the parents, their economic status, marital status and religious affiliation. For example, the study showed a preponderance of male parents aged between 30-40 years to engage in alcohol abuse. For female parents, in the same age group, the chances for alcohol abuse are almost 50%.

As far as marital status is concerned, those families in stable marriages tend to avoid alcohol abuse and do enroll their children in ECDE centres. But cases of divorce tend to compound the problem of alcohol abuse, with the chances of parents engaging in this vice increasing by 67.5%. This can be attributed either to frustrations of divorced parents trying to drown their sorrows in alcohol or frustrations due to lack of economic support from their partners. But alcohol abuse can be said to have contributed in increase of cases of divorce. So it is both a cause and a consequence of divorce.

As for widows the tendency for male parents to engage in alcohol abuse increased by 60% while for female widowed parents the chances decrease by 60%. This can be attributed to increased responsibilities on the female parents who are now forced to shoulder the role of both the father and the mother. The father on the other hand is usually overwhelmed by responsibilities and tends to take the bottle. There were no single male parents involved in the study, but for the female single parents there was almost a 50% chance for them to abuse alcohol. As for those female single parents who abuse alcohol, the chances of them failing to enroll their children in ECDE centres is almost 75%. Education plays a very major role in preventing alcohol abuse and encouraging parents to enroll their children in ECDE centres.

The more a parent is educated, the less the chances of abusing alcohol and the higher the chances of enrolling their children in ECDE centres.

But the study revealed an interesting observation. Those male parents who reached higher level of education but could not find formal employment tend to abuse alcohol and subsequently deny enrolment of their children to ECDE centres. The chance of female parents who have reached higher levels of education to engage in alcohol abuse is almost negligible despite not finding formal employment and they do take their children to ECDE centres. As for religion, this can positively or negatively influence enrolment of pre school children to ECDE centres. The study revealed that though Catholics tend to abuse alcohol, the same are very active in enrolling their children in ECDE centres. Muslims on the other hand tend to avoid alcohol abuse but do not put premium to enrolment of their alcohol status to enroll their in ECDE centres or not.

5.3 Conclusion

Occupation and economic status greatly influence individuals to either abuse alcohol or not and to enroll their children to ECDE centers or not. For example, the choices of those in formal employment to abuse alcohol are almost negligible. The study revealed that all those in formal employment whether they abuse alcohol or not tend to enroll their children in ECDE centres. This can be attributed to economic empowerment of those in formal employment. As for those in self employment, a chance of them abusing alcohol is almost 50-50. Those whose businesses are successful tend to avoid alcohol abuse and do enroll their children in ECDE centres. But those whose businesses are not so successful tend to abuse alcohol and avoid taking their children to ECDE centres. This case applies to both male and female parents. The biggest contributor to alcohol abuse and failure to enroll in ECDE centres is unemployment. The combination of unemployment and alcohol abuse almost

automatically leads to children not being enrolled to ECDE centres. The consequences of unemployment and lack of hope in life leads to irresponsible behavior, apathy in life and cynicism. This is very big social disease that needs to be addressed urgently. The study also concluded that for school enrollment there is almost an equal numbers for boys and girls. But there is a general decline of enrolment because majority of respondents (head teachers) indicated that F.P.E had a negative impact on enrollment in ECDE centres. This is due to financial constraints; this is because parents pay for enrollment in ECDE centre while enrolment to primary schools is free. Therefore, parents directly enroll their children to primary schools.

All stakeholders are unanimous, that alcohol abuse has a very negative effect on enrolment in ECDE centres in Kiharu Division. The negligence of children by parents who abuse alcohol is a big social problem.

5.4 Suggestion for Further Research

This study could not adequately capture all the variables that lead to decreased enrolment in ECDE centres because it was limited to Kiharu Division. Further research should be conducted in neighboring divisions to compare and contrast cases of enrolment in ECDE centres in those other divisions. As was seen in the present research, some factors which were unique and different in neighboring divisions can impact positively enrolment in Kiharu division if considered.

Secondly another area that needs further research in how people of Kiharu can be empowered to become economically self sufficient because as was seen in this study poverty was the greatest contributor to increasing cases of alcohol abuse. The effects of religion on alcohol abuse and enrollment in ECDE centres needs to be investigated further because religion was cited as one of the variables likely to affect and/or influence people's perceptions of alcohol

and ECDE.

The provincial administration was also involved in the study to capture the effects of alcohol abuse and prevalence of crime and neglect of children. The provincial administration was unanimous that alcohol abuse tends to increase cases of crime and neglect of children. The provincial administration agreed that most of the cases of alcohol abuse arise out of consumption of illicit brews. It is suggested that legalizing and regulating production and consumption all of illicit brews will lead to a drop in cases of alcohol abuse. This is another area that needs further research.

5.5 Recommendations

- To further define the dimension of the problem and identify those factors important to the design of an appropriate education programme for early childhood development education, there is a need for further study of society's attitude towards early childhood development education.
- Despite limitations that this study has, the data obtained from it shows that there is a need to develop a comprehensive health education programme where information about effects of alcohol and organizations like alcohol anonymous will be encouraged.
- According to statistics of Kiharu division office, there are 41 pre schools institutions in Kiharu. These are not evenly distributed. There is a tendency to have some areas, especially urban centres, having a higher concentration of ECDE centres. This is a big challenge towards enrolment of the children to these centres. The ECDE centres needs to be evenly distributed.

- There is need for net working with other development partners to find means of empowering the community on poverty eradication especially for single parents.
- Donors should be encouraged to support school feeding programmes which the study showed encouraging enrolment to early childhood learning centres.
- Availability of alcohol drinks should be reduced e.g. controlling production and distribution.
- Social problems need to be addressed. Another area that needs further research is the impact of corruption on alcohol abuse and enrollment in ECDE centres.

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