INFLUENCE OF TELEVISION VIEWING AND VIDEO GAME PLAY ON PRESCHOOL CHILDREN’S COGNITIVE DEVELOPMENT IN MBOONI ZONE OF MAKUENI COUNTY.

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UNIVERSITY OF NAIROBI

JUNE 2014
DECLARATION
This research project is my original work and has not been submitted to any university or institution of higher learning for examination or for any other award.

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ABSTRACT
In the recent past, the media, especially TV and video games, has been of great concern to all parents and stakeholders in the education sector. This study was carried out in Mboonizone of Makueni county. It sought to establish the influence of TV viewing and video game play on children’s cognitive development in the zone. Finding out the types of TV programmes and video games children watch and play, the frequency and amount of time spent watching TV and/or playing video games and parental involvement and supervision during TV viewing and video game play were the major concerns of the study. Literature by renowned scholars was reviewed in order to have a reference for the study. Nine preschools, both public and private were sampled from the zone for the purpose of the study. The teachers in the sampled preschools, the preschool children and their parents formed the sample population for the study. Data was collected through questionnaires, interviews and document analysis. This was then coded for analysis and presented in tables, pie charts and bar graphs for easier understanding. This was followed by discussions of each finding and the conclusions. Recommendations were also given for further studies.
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**List of Acronyms and Abbreviations**

TV- Television.

KICD- Kenya Institute of Curriculum Development

MOEST- Ministry of Education, Science and Technology

ACT- Actions for Children’s Television.

DVD’S- Digital Versatile Disc.

DVR- Digital Versatile Recorder

SPSS- Social Science Statistical Package
CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Papalia, Olds and Feldman (2007) defined cognitive development as the changes and stability in mental abilities such as learning, attention, language, thinking, reasoning and creativity. These mental abilities together with brain development occur rapidly between conception and five years (National Scientific council on the Developing child, 2004). Cognitive development is majorly successful among children who receive supportive, nurturing care in a rich language environment before they enter preschool. As Burchinal (1996), Howes(1997), and Willms (2002) and the National Institute for Early Education Research (2003) findings show, such supportive and nurturing care can be offered through TV and / or Video game play between caregivers and the children. Their research was based on Piaget’s theory of cognitive development, which considered language as an indicator of cognitive development. Young children learn new words on an exponential rate, acquiring 10 or more words daily if properly socialized. Speaking to children and reading to them daily from an early age also promotes language development.

Another factor that helps promote development of cognitive abilities among children is learning opportunities. Children who get more opportunities to learn, develop better cognition because they will be able to add to their mental capacities by learning through these opportunities. Viewing television and playing video games is one of those activities. Vygotsky (1978) also emphasized that children’s learning can go to a greater extent when the children are given a chance to learn and support from other resources (teachers, parents or other older
children). This is called the Zone of proximal development. Goswami (2002) builds on cognitive development by emphasizing on sense organs as important part of cognitive development. Sense organs receive stimuli from the environment, which is used for concept formation. Defective sense organs collect defective stimuli resulting in wrong concepts being formed. Therefore, for children to learn, they have to interact with their environment using their senses, which send messages to the brain for concept formation leading to development of cognitive abilities. All these form a basis for experience, which is a factor influencing cognitive behavior according to Piaget’s work (Lourenco & Malchado 1996). According to vygotsky (1978), cognitive development occurs because of social interactions such as play. During the social interactions, children work with others to make decisions and solve problems. The children also interact with the environment, receive stimuli and respond to them. As children interact through pretend play and imagination, they help each other reflect upon, regulate their own cognitive behavior and gain a deeper understanding of the mind. Therefore, their cognitive abilities increase and eventually they gain the ability to function intellectually on their own.

In review of his work in 1986, Vygotsky gives the media as an example of the learning environment where children should be socialized for cognitive development to take place. Kiernan and Huerta (2008) stated that economic status of the family of the child determines development of cognition in them. Children from high economic status get more opportunities, resources and better training, which helps improve their cognitive development. The children also have an encouraging environment where there are people they can interact with and plenty of play materials to manipulate. In contrast, children from low economic status families lack resources and a suitable environment to manipulate. Scaffolding advocated for by Vygostky, is not available to them because adults are busy trying to make ends meet (Wertsch, 1985). Similar researches have been carried out in
Kenya. Mbugua (2011) carried out a research in Tetu zone, Nyeri County in, which better performance in cognitive learning among learners was associated to exposure to television with the help of the parents. Baru, (2012) through a case study in Wangige, Kikuyu district explored TV viewing and language development, which contributes to cognitive learning, and concludes that TV should be used as a learning aid and parents should monitor and supervise their children during viewing. A research by Fgatabu (2012) in Tiriki East Division recommended that TV viewing under parental supervision should be encouraged as it contributes to improved problem solving, a skill of cognitive learning.

1.2 Statement of the problem

There has been an outcry that media, especially the television and video games have affected children and their reasoning ability. More focus is on the negative aspect of it. A research done by Omoro (2012) within Nairobi County focused more on the negative impact of TV viewing and not the positive ones. According to Omoro (2012), children in the age groups between 2-17 years are affected in terms of education, behavior and social life and especially those with minimal parental guidance. Omoro (2012) gave examples of the negative effects such as obesity, aggression, fear and sleep disturbances. A case study carried out by Kioko (2009), an education coordinator in Mbooni zone reveals factors that affect cognitive development among them the media especially local radio stations, which affect children’s language development and in turn their cognition skills. It also discusses the parent’s negative attitudes towards media. As shown in the findings of the case study, the parents fail to see the positive side of the media especially it being a learning avenue. Based on this background therefore, the researcher set to determine whether TV and video games are in any way contributing positively to children’s cognitive learning.
1.3 Purpose of the study
The purpose of this study is to establish the influence of television viewing and video game play on cognitive development among preschoolers of Mbooni zone in Makueni County.

1.4 Research Objectives
The study sought to fulfill the following objectives:

i. To find out if the type of TV programmes and video games preschool children watch and play influence their cognitive development.

ii. To determine if the amount of time spent and the frequency of watching TV programmes and playing video games influences preschool children’s cognitive development.

iii. To establish if parental involvement during both TV viewing and video game play influences the preschool children’s cognitive development.

1.5 Research questions
This study was guided by the following questions:

i. How does the type of TV and video programme preschool children watch influence their cognitive development?

ii. How does the time spent and frequency of viewing TV and video programme influence preschool children’s cognitive development?

iii. How does parental involvement during TV and video viewing influence preschool children’s cognitive development?
1.6 Significance of the study

The researcher anticipates that the findings of the study will be found useful by institutions such as the Kenya institute of Curriculum development (KICD), which has the mandate of developing the curriculum for preschools and teacher training institutions. KICD may adopt aspects of the research and include video games to the curriculum. It will also need to include alternative training programmes for pre-service and in-service of preschool teachers to help them guide the children with the video games. The Ministry of Education Science and technology (MOEST), which is responsible for policy formulation will also benefit from the findings of the study. MOEST will use the findings to evaluate and review the policy to find out if it meets the demands of the children’s Act of 2001. They will find out if inclusion of TV and video game play into the curriculum will be of any significance. The research finding also will help the Ministry of Education Science and Technology in reviewing the existing policy and legislation on electronic media and particularly the TV and video games, which are popular among children, and put mechanisms in place to enforce the same now that it is key to the digital migration.

1.7 Limitations of the study

The study was limited by other factors that may promote cognitive learning such as heredity, maturation, economic status and outdoor play and are not included in the study. Being a survey research the data produced is likely to lack details or depth on the variables of this study as the study did not deal with the cause and effect between the variables. Securing a high response rate to the items on the instruments was hard to control.
1.8 Delimitations of the study

The study was particularly confined to Mboonizoneof Makueni county. The participants and respondents were from the selected preschools in the area, both private and public. The teachers in the preschool centers together with the parents also took part in the research. The study only considered the cognitive development of the children not other milestones such as physical or social development. The study used the following research instruments; questionnaires for teachers, interviews for parents and interviews for children.

1.9 Basic assumptions

The study was based on the following assumptions;

i. That TV viewing and video game play influences the children’s cognitive development.

ii. That all the respondents will provide honest responses to the items in the questionnaires and interview schedule.

iii. That when the documents are analyzed, there will be a standard measure and a true reflection of the children’s cognitive skills.
1.10 Definition of the key terms

**Cognition skills:** Being able to store and remember information, remain attentive, reason logically, solve problems logically and process both auditory and visual information quickly.

**Co-viewing:** process of viewing TV with another person.

**Parent:** Person who is charged with taking care of the preschool children while at home.

**Preschool:** An organized environment with structures, resources and professionals who cater for the children in the environment.

**Preschool children:** Children between two to seven years registered to a preschool.

**Preschool teacher:** A person who exposes children to various experiences while in school through planning and activities. They are usually guided by the curriculum.

**Private schools:** Are set up, managed and owned by private proprietors, NGOs, religious based organizations and community-based organization.

**Public schools:** schools owned and managed by local authority and their superior power is the government through the Ministry of Education.

**TV viewing:** The act of watching the activities taking place in a television.

**Video games:** Are games played using electronic gadgets.

**Video game play:** The act of playing video games.

**Zone:** Area of jurisdiction in which the study will influence.
1.11 Organization of the study

The research report is organized into five chapters. Chapter one has the introduction, which consists of the background of the study, statement of the problem, purpose of the study, the research objectives, research questions, significance of the study, limitations and delimitations of the study, basic assumptions of the study and the definition of the key terms. Chapter two focuses on the literature review, which is based on the sub-headings: types of television programs and video games children watch and play and their cognitive development, frequency and the time spent on TV viewing and video game play by children and their cognitive development and parental involvement and supervision during TV viewing and video game play and children’s cognitive development. Chapter three consists of the research methodology used in the study. It describes the research design, target population, sample and sampling procedure, research instruments, instrument validity, instrument reliability, data collection procedures and data analysis techniques. Chapter four is made up of data analysis both qualitative and quantitative and the data interpretation. Chapter five has the summary of the findings, conclusions and recommendations.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction
This section discusses literature review related to cognitive development and different aspects of TV viewing and video game play among preschool children. It looks at what others have said concerning the types of television programmes and video games children watch and play, the frequency and the time spend on the TV and video games and parental involvement and supervision during watching and playing of TV and video games all tied to the cognitive development of the children. Discussed also is the theoretical framework, which is a brief description of the theory upon which the study is based and the conceptual framework, a brief explanation of how the study variables interact.

2.2 Types of television programmes and video games, and children's cognitive development
The content of all TV programmes and video games watched and played by children all over the world can be classified into three main categories. These are educational, edutainment and non-educational programmes. Educational programmes and videos are those made to educate the viewer by providing new insights and ideas. Edutainment are those designed to teach something while entertaining the viewer at the same time while non-educational programmes and videos are those that captivate the viewer but do not stimulate any form of thought or learning. Each of these programmes has different influence on children’s cognitive development (Anderson & Kirkorian, 2006.) Campbell, Huston and Wright (1987); Crawley (2002); Castle and Lorch (1997); Eakins, Huston, Rolandelli and Wright (1991) found that educational TV programmes such as Se same street and mister Roger’s neighborhood inform its viewers by
capturing and maintaining their attention throughout the show by keeping them cognitively involved. The producers achieved this objective by keeping in mind the cognitive process of young children. The researchers also suggested that non-educational programmes cause excitement within the children, which dies immediately after the show. Edutainment games cause curiosity, which makes viewers yearn for more. To get the extra more, they read and ask questions to satisfy the curiosity. Huston, Campbell and Wright (1987) made these conclusions from a research they carried out in Texas among 200 children from low to moderate income families aged between 2 to 7 years over a period of three years. They also noted that the positive effects of educational programmes were strongest for children aged between 2 and 3 years. They also concluded that children who watched educative TV programmes spent more time reading than those who had watched non-educational programmes which Campbell and Wright (1987) associate to motivation to read that come from educational programmes.

Literature overview in Naigies and Mayeux (2001), suggested that children can learn words and their meaning from educational programmes. As the children watch and listen to what is been said, new words come up which they accommodate into their system. Linebarger and Walker (2005) argued that programmes such as Blue’s clues and Dora the Explorer which have characters who talk to the child, encouraging participation and inviting responses from the viewers were related to expressive language production and vocabulary. Language learning forms the basis for cognition. Linebarger and Walker (2005) also established a relationship between educational TV programmes and children’s academic skills. These programmes enhance children’s skills in problem solving and literacy, which promote cognitive development in
children unlike non-educational programmes, which leave little or no room for thought. They spoon-feed the viewer.

According to Charren (2001), TV and video viewing of high quality less commercialized programmes causes children to be more receptive to learning, reading and to school in general. Charren (2001) noticed this in her own house with her two daughters. As a result, Charren came up with Action for Children’s Television (ACT), which fought for censorship of TV programmes for children. Bryson (2013) said educational TV programmes help children build analytical skills. This happens when caregivers help the children discuss the events in the programmes and predict what will happen next. This gives children negotiation skills, which are part of cognition skills. Bryson (2013) also talks of educational programmes as being non-abstract in nature thus giving a child a chance to understand abstract concepts with ease, unlike non-educational programmes and simulations that result to a lot of energy in children. Since the excitement in children disappears after the programmes, they lack constructive avenues to let out their energy. Bryson (2013) also associates motivation to read various books to TV and movie viewing. Children can be motivated to read a book on, which a certain programme is based. They then discuss the differences between the book and the programmes. This according to Bryson (2013) sharpens thinking skills, which are part of cognition.

Diehl and Toelle (2013) argue that educational TV forms basis for concentration, attention, higher grades and creativity in children compared to those who watched entertainment TV programmes. They found out that adolescents, whose parents permitted them to watch more educational programmes when young scored higher grades, read more books, placed greater value on achievement and showed more creativity. Those who watched more violent or purely entertainment programmes tend to do less well in school and had low grades overall. In another
study, they found that the benefits of educational TV were more noticeable for those with moderate exposure and for those who had lowest level of skills prior to viewing the programmes. From this, they concluded that what children watch on TV is an important predictor of later academic performance. They also agreed with the recommendations of American Academy of Pediatrics (1999), that children under the age of two should not watch any TV at all. They argued that such children are less able to systematically learn as much from TV as they do from human interaction. Though they may pay attention to video images, most TV does not offer the interactive and responsive content that infants need the most. It only captures their attention but does not facilitate meaningful learning. Entertainment programmes like cartoons and simulation video games have brought about many controversies. Griffith (1999) proposed that children could become aggressive by playing and watching violent video games and TV content. His research was carried in USA among a population of both small children and teens. Squire (2005) found playing games to be fundamentally a social experience with every participant showing a desire to share his game with others. While playing video games, learners come to know themselves through personal experience and critical reflection on their beliefs about the world (Begg, Dewhnurs & Macleod, 2005). Hill (2006) suggested that just like books, movies and TV shows, video games can be used in antisocial ways. Hill (2006) terms the games as inherently simplifications of reality. Bronson (2003) classifies digital games as play materials which are perceived as important in promoting literacy, scientific and critical thinking.

Pillay and Spring (2002) researched on digital games and children's subsequent performance on instructional tasks. They concluded that cause and effect games tended to encourage means-end analysis strategy, while adventure games encouraged inferential and proactive thinking. They also suggested that reading qualitative features implicitly displayed on
the computer screen requires schemas not only for processing information in the graphics but also for generating and transforming complex mental representations such as those required in problem solving. Mcvey (1997) and Provenzo(1991) suggested that digital games provide a fantasy and imagination rich environment where children can explore new worlds and take on new challenges. Gee (2003) and Dreyfous(1994) showed a significant correlation existing between game playing and children’s problem solving skill and cognitive style. Rosengren and Windahl(1989) asserted that viewing general entertainment and fiction programmes achieve low in education compared to those viewing educational programmes. Salomon (1984); Koolstraand Van der voort(1996) said entertainment TV does not engage the child’s mental effort. It makes few intellectual demands thus creating habits of intellectual laziness and disinterest in school. Funk (2002) cites studies, which found that games strengthen children’s engagement, information processing, problem solving and academic abilities.

2.3 Frequency and time spend on TV viewing and video game play and children’s cognitive development

Faliand Myoung(2013) found that children who watch TV and videos for more than two hours a day during ages 6-9 years showed a negative total effect at ages 8-9. This was associated to the frequency of the viewing, which leads to loss of interest in other activities. The health system in University of Michigan found that children who spend more time on TV, DVDS, DVR, videos and using a video game player have problems in their brain development. This is because the children replace important activities for brain development such as getting fresh air, playing imaginatively and being physically active with screen time (McDonough, 2009). Rossiter(1979) suggests that the average child spends more than 5 hours per day with TV and video games.
Rossiter (1979) associates this to the lack of interest in learning, as learning requires more mental effort than TV viewing.

A research undertaken by AnkAgungu, GustiAyuanDjauhar (2012) indicated that, children who watched TV and video between 1-2 hours per day and spent the rest of the day in a play group showed a higher cognitive development compared to those who watched for less than one hour and more than two hours and did not attend any play group. The researchers associated this to the balance that is made between TV viewing and physical play by the children’s parents. Sweetser (2012) and Rideout (2003) acknowledge that children who spend more time engaged in passive screen time have lower cognitive activity than those on active screen time. Christakis (2009); Fitzpatrick & Barnett (2013); Dubow (2010) and Zimmerman (2003) did a research on time spent on TV, video game play and the general screen time. The studies analyzed how the frequency of general screen viewing affected children’s cognition. The researchers concluded that all these viewing and game play during early childhood might be associated with lower levels of cognitive development and associated this to lack of balance between other activities that promote cognition and game play and TV viewing.

Pagani (2011) suggests that when children become habituated to viewing TV i.e. viewing and game play for long hours every day from an early age, it undermines their capacities to pay attention. The effects appear to be cumulative and persist into later childhood and adolescence. Perlmutter (2013) raises several concerns with reference to time spent on TV and video viewing and children. In the research, Perlmutter (2013) argues that the more time a child spends on TVs and videos, the more his or her motivation to explore and to engage self in creative activities is limited. Fantasy and creativity are critically important for appropriate brain development. The child also lacks direct appropriate responses when viewing which hinders language development.
necessary for cognition. Perlmutter (2013) concluded that the more time a child spends watching videos and TV, the more his cognitive development is interrupted because what is fed to the child’s brain during watching and gaming requires very little thought and leaves no room for questioning and the development of alternative understandings and explanations.

2.4 Parental involvement and supervision during TV viewing and video game play and children’s cognitive development

Perlmutter (2013) considered parental involvement during TV viewing and video game play and discovered that, in the presence of parents and other caregivers, children’s ability to fantasize, create alternatives scenarios and explore other realities are enhanced. This creates a brain that can think outside the box. This paves way for the ability to achieve novel solutions to problems. The parents also give appropriate responses in language. Children who watch TV alone do not receive such responses making them lag behind in their language as opposed to their counterparts who are supervised when watching. Cheng (2004) said that parents are more likely to discuss TV with their children when they are concerned that the media might affect their thought process. Rideout, Vandewater and Wartella (2003) Eakins, Fitch, Huston, Peters and Wright (1991); Woodard and Gridina (2003) found out that parents seem to worry less about actual screen time and more about the content of the TV programmes.

According to Smith (1986) children who watch TV and videos under supervision by parents develop language fast as they converse with them and learn a lot because the content of what they watch is monitored and chosen to suit them. Smith (1986) advises parents to choose and monitor what children watch even if they cannot watch with them. Francis (2013) said that children model their parent’s behavior as in Bandura’s theory of social learning. Therefore, parents who watch TV and video programmes for long hours, their children also will do that. This
is so because children are wired to pick up from the environment what they observe quicker than what they hear.

Pediatrics Jordan, Hersey, McDivittandHeitzier (2006) suggested that parents who had set rules and guidelines concerning TV and video viewing found time to co view or supervise their children. These children’s performance in school was impressive compared with other children without such set rules. The pediatrics associated this to the social interaction offered to the children during TV and video viewing, which promotes language development, problem solving skills and critical thinking, which are all cognition skills. Huston and Wright (1996) agreed that educational programmes could support the acquisition of reading skills in families where there is parental encouragement across social strata but not in families that do not encourage their children to learn from TV. In families where children were left to watch TV and videos and were not provided any other form of support, these children showed reduced vocabulary and reduced reading scores. Lawrence and Woznaik(2001) in a revision they made on a consumer guidestated that parental monitoring is a key factor during TV and video viewing. The guidance from parents is needed to help children sort out influences of the fantasies created and to develop the ability to make sound decisions on their own. It stated that parent could teach their children critical viewing skills such as recognizing stereotypes, distinguishing fiction from factual, think about and describe alternatives. Griffins(2012) used Bandura’s work of social learning theory to build his research on. The researcher took modeling to mean the process of response acquisition. Griffins (2012)believed that human beings acquire attitudes and emotional responses through televised modeling. Therefore, as children are exposed to more TV, attitudes such as talking back to parents learned from watching compared to real life may steadily increase. The children model
parent’s involvement with the TV, mimic their behaviors, programmes viewed and hours spent. Lack of parental involvement in TV viewing may continue to increase those effects.

Reid and Frazier (1978) advocate for co-viewing of TV and videos by parents and their children. Parents can take the time to provide feedback to the children to enhance language development. They can also use the commercials to probe the children to think critically and come up with independent decisions or interpretations about the advertisement. The parents especially when watching together with the child can also clear the fantasies that children get. Austin, Bolls, Englebertson, Fujiyoka, and Weintroub (1999) pointed out that TV and parents comprise two of children’s most significant sources of information. Therefore, a parent can help a child form understanding by supervising what the child is watching and answering their questions. This provides many unannounced opportunities to help with discussions and explanations.

2.5 Theoretical framework

The theoretical framework for this study was pegged on the theory of Albert Bandura of social learning (1977). It states that behavior is learned from the environment through the process of observational learning. Bandura’s work modified by Griffin (2012) brings out the belief that children and adults acquire attitudes, and emotional responses through televised modeling. With the increase in children’s television exposure, attitudes such as talking back to parents that are learned from watching compared to real life may steadily increase. Children model parent’s involvement with the television, and mimic their behaviors; including types of programmes viewed and hours spent viewing. Lack of parental involvement in television viewing may continue to increase in mimicked behavior from characters seen in the TVs.

The individuals who are observed are models and may include the family members, characters from children’s TV and videos, peers and teachers from school. Children pay attention
to those models and encode their behavior, which they later imitate or copy regardless of whether the behavior is gender appropriate or not. The most popular model among children these days is TV. That is why Griffins in his work in 2012, a modification of Bandura’s social theory, advises parents to monitor their children’s learning environment to ensure it does not promote negativity and violence among learners.

### 2.6 Conceptual framework

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<th>Dependent Variable</th>
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<td>TV programmes and types of video games</td>
<td>COGNITIVE DEVELOPMENT</td>
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| Frequency and time spend on TV viewing and video game play | TV viewing and video game playing combined with Extraneous factors .e.g.  
Maturation  
Economic status  
Outdoor play | IMPROVED COGNITIVE DEVELOPMENT |
| Parental supervision and co-viewing of TV and/or video games | |

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Figure 2.1: The conceptual framework
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used to study the influence of television viewing and video game play on preschool children’s cognitive development in Mbooni zone. It is organized along the research design, target population, sampling procedures and sample size, research instruments, validity and reliability, procedure for data collection and data analysis.

3.2 Research Design

Orodho (2003) defines research design as the schemes, outline or plan that is used to generate answers to research problems. It is also defined as the structure the researcher has to use in undertaking the research. This research study was conducted using a survey research design. This is a design whereby the researcher makes effort to describe the issue of concern in a systematic and objective manner by addressing the questions ‘what is it?’ and ‘why is it?’ This design is deemed suitable because the findings would be easily generalized on the whole population of the zone. This helped make it easier for the researcher who only had to randomly select the participants to stand in for the whole population, which was very broad.

3.3 Target Population

According to Borg and Gall (1983) target population refers to the number of real or hypothetical set of people/subjects/events to, which a researcher wishes to generalize the findings of the study. The population for the study consisted parents, teachers and preschool learners in Mbooni zone. The zone has a total of 16 schools; 11 public and 5 private. All
public schools have one teacher and two for each private school. Therefore, the population of teachers was 21, 285 preschoolers and 285 parents. (Mbooni Zone ECD office, 2013)

Table 3.1 The target population in the research

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<th>SCHOOL</th>
<th>CATEGORY</th>
<th>NUMBER OF LEARNERS</th>
<th>NUMBER OF TEACHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mbooni AIC Preschool</td>
<td>Public</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Yambae Preschool</td>
<td>Public</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Uvi Preschool</td>
<td>Public</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Holy Angels Kindergarten</td>
<td>Private</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Suma Preschool</td>
<td>Public</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Nzaini Preschool</td>
<td>Public</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Shining Star Academy</td>
<td>Private</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>Mulooni Preschool</td>
<td>Public</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>Kikima county Preschool</td>
<td>Public</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>ST. Joakim Academy</td>
<td>Private</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>11</td>
<td>Mutitu SDA Preschool</td>
<td>Public</td>
<td>27</td>
<td>1</td>
</tr>
</tbody>
</table>
3.4 Sampling procedure and sample size

For this study, 16 preschools were subjected to multistage sampling where the preschools were categorized into two groups; private and public. Within the two categories, the researcher performed simple random sampling and came up with 9 preschools to participate in the research where 5 of them were public and 4 private. This was to ensure that the magnitude of sampling error was reduced and also ensure representation of each region of the zone. If the sample size increases, the shape of the sampling distribution of means becomes increasingly like the normal size (Hull, 2001). The 9 preschools sampled had a total of 13 preschool teachers; 1 for each public preschool and 2 for the private preschools. All the 13 teachers took part in the study.

All the 133 children in the sampled preschool were subjected to stratified random sampling, where they were divided into two non-overlapping groups i.e. a group of those who had access to TV and/or Video games at home and a group without access to TV and/or video.
games. For each group, the researcher carried out simple random sampling to have a sample from the group with access and another sample from the group without access to represent the whole population. The researcher identified 37 children from the group with access to TV and/or video games and 30 from the group without access to the same. In total 67 children took part in the research. All the 67 parents of the sampled 67 children took part in the research too. This choice of samples enabled the researcher to take care of the diversities in the population and the findings could be easily generalized on the entire zone.

3.5 Research Instruments

Data was gathered using questionnaires, interviews and documentary analysis. A questionnaire for the teacher (appendix 1) was developed with four parts. Part A contained demographic content where the respondent was required to fill in personal details such as gender, age and level of education. Part B required respondent to assess the children’s cognition skills on a five-point scale on provided statements. A score of 1 indicated poor and a score of 5 indicated excellent. This is because the teachers spent more time in school with the children and the cognition skills been assessed determine the child’s performance and behavior in class. The teachers were a rich source of the information on strength of the cognitive skills. Part C contained open ended questions to assess what the teachers thought about TV and video games children watch and play and their influence on cognitive development.

An interview schedule (appendix 2) was prepared for the parents to assess their involvement in their children’s TV viewing and video gaming and to also assess what they felt and thought about the TV and video games. Children also had an interview (appendix 3) to assess what types of programmes they watch and the games they played, how much time they spend on TV viewing and video game play and whether their parents supervised what they
watched and played or co-viewed with them. This was also accompanied by a section of storytelling between the children and the researcher whereby the researcher had a chance to assess some of the children’s cognition skills such as reasoning, sequencing of events etc. Some documents such as children’s workbooks and their progress records were used to provide relevant information on the children such as their academic performance, and background information.

3.6 Validity and reliability

According to Joppe (2000), validity determines whether the research truly measures that which it intends to measure or how truthful the research results are. To check on content validity, the instruments were given to my colleagues and supervisor as the panel of experts before piloting was done. To establish this, all the instruments were piloted to check on responses given by the respondents and whether they were relevant to the study. Reliability refers to the consistency of scores or answers from one administration of an instrument to another, from one set of items to another (Fraenkel & Wallen 2006). Reliability was established through use of test re-test technique. Here the researcher administered a prepared questionnaire to some of the participants sampled to take part in the research and after two to three weeks administered the same instrument to the same sampled participants. The results of the two admissions were then compared and were found to be consistent thus reliable.

3.7 Data collection procedures

The researcher had an introduction letter from the University of Nairobi. The letter was used to seek for permission to conduct the research in the sampled preschools. The researcher personally visited the selected schools to monitor and supervise the respondents as they participated. The questionnaire tool was filled as the researcher was waiting in order to clear misconceptions and misunderstanding as they arose. This also helped reduce mishandling and
misplacement of the questionnaires. Arrangements were made for the researcher to visit the parents and children in their homes for a one on one interview and observation. The researcher sought permission from the teacher to access the relevant documents required for the research also. The schedule of activities were drafted, showing activities to review, successes to uphold and failures to address on daily work plan to avoid omissions and tackle areas requiring improvement. Once the instruments were collected, the researcher examined them for completeness, comprehensiveness, consistency and reliability.

3.8 Data analysis

This is the process of systematically applying statistical and/or logical techniques to describe and illustrate, condense and recap and evaluate data (Shamoo & Resnik 2003). The data had to be edited to ensure accuracy and reliability. It also had to be organized along the research questions or objectives (Kombo & Tromp 2006). The data for this research was analyzed both qualitatively and quantitatively. Responses were coded, processed and tabulated by using the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequency distribution, percentages, graphs and charts were used. For qualitative data, the researcher had to monitor the responses given in order to establish the pattern of the responses, organize and tabulate them appropriately.

3.9 Ethical concerns

The researcher treated the information given by the respondents together with their identity with confidentiality. Their names were withheld and where necessary data was grouped. Children were not forced to participate or bribed and their parents or guardians consent was sought before they participated.
CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction
This chapter presents findings of the study based on the research questions and objectives.

4.1 Demographic information of respondents.
The respondents involved in the study included thirteen teachers, sixty seven preschool children and sixty seven parents. Their demographic information is given in the tables and their responses to general questions in the instruments.

Table 4.1 Distribution of respondents by sex

<table>
<thead>
<tr>
<th>Sex</th>
<th>Teachers</th>
<th>Parents</th>
<th>Child Age</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3</td>
<td>16</td>
<td>28</td>
<td>32%</td>
</tr>
<tr>
<td>Female</td>
<td>10</td>
<td>51</td>
<td>39</td>
<td>68%</td>
</tr>
</tbody>
</table>

Source: field data 2014

From table 4.1, 32% of the whole population of 147 people who took part in the study was male while the remaining 68% was female.
Table 4.2 Respondent’s level of education

**Teachers**

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>11</td>
<td>16.4%</td>
</tr>
<tr>
<td>Secondary</td>
<td>23</td>
<td>34.3%</td>
</tr>
<tr>
<td>College</td>
<td>13</td>
<td>19.4%</td>
</tr>
<tr>
<td>University</td>
<td>20</td>
<td>29.9%</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Parents**

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untrained</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Certificate</td>
<td>5</td>
<td>38.5%</td>
</tr>
<tr>
<td>Diploma</td>
<td>7</td>
<td>53.8%</td>
</tr>
<tr>
<td>Degree</td>
<td>1</td>
<td>7.7%</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>100%</td>
</tr>
<tr>
<td>Secondary</td>
<td>23</td>
<td>34.3%</td>
</tr>
<tr>
<td>College</td>
<td>13</td>
<td>19.4%</td>
</tr>
<tr>
<td>University</td>
<td>20</td>
<td>29.9%</td>
</tr>
<tr>
<td>Total</td>
<td>67</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: field data 2014*

From the 13 teachers who took part in the study, 5(38.5%) had acquired training to certificate level, 7(53.8%) had a diploma and 1(7.7%) had a degree in Early childhood education as shown in table 4.2. The table 4.2 for parents’ level of education shows that 20(29.9%) parents had attended university, 13(19.4%) had attended college, 23(34.3%) secondary and 11(16.4%) primary education.

**Figure 4.1** Response on whether TV and/or Video games benefit children
During the process of data collection, the researcher asked both teachers and parents whether TV and/or video games had any benefit to the children in anyway. This was before narrowing the question to the dependent variable. As shown in figure 4.1, seven teacher and 28 parents believe that TV and/or video games benefit the children in different ways, four teachers and 15 parents believe that children don’t benefit in anyway but rather learn undesirable behaviours and two teachers and 24 parents didn’t know whether TV and/or video game was of benefit to children.

4.2 Findings on types of TV programmes and video games and their influence on children’s cognitive development.

The responses given by parents who had access to TV and/or video games during the interview were as shown in figure 4.2.
The figure 4.2 shows the different types of TV programmes and video games and the percentage number of parents who advocate for their children to watch the said programmes. From the figure, it is clear that 22 of the 67 parents interviewed allowed their children to watch and play educational programmes only. From the figure, 28 parents allowed their children to watch and play edutainment programmes, while 10 parents allowed their children to watch and play non-educational programmes. The remaining 7 parents allowed their children to watch all types of programmes without restriction.

The parents who allowed their children to watch educational programmes only associated their children’s good performance especially in language and number work activities to the programmes. The parents who advocated for edutainment programmes argued they help the brain development of their children and also their social aspect. The 10 parents who allow their
children to watch non educational programmes argued that TV and video games do not in any way help children’s growth and development. The parents who allowed children to watch TV and play video games without restriction argued they did not see the need to restrict their children and that the TV and video games keep children busy so that they don’t disturb their parents. One parent actually mentioned that the TV and video games in her house were the ‘baby sitter’ for her children. The parents without access did not know the different types of programmes and their impact on children’s cognitive development.

The responses the children gave during the interview concerning the programmes they watched were similar to those of their parents. The 26 children who watched educational and edutainment programmes and video games gave examples such as junction juniors, generation 3, machachari, dora the explorer, just for kids etc. Those who watched non educational programmes talked excitedly about wrestling, the Beat. Euro truck simulator 2 etc. from their work books, the 26 children who watched and played educational and edutainment programmes had a good handwriting and could present ideas well especially in form of drawings. All these children were among the average learners in their respective classes. The children however showed difficulties in interacting with other learner especially during outdoor activities.

From the questionnaires, 60% of the teachers who participated advocated for educational and edutainment programmes, 37% advocated for all programmes including non educational programmes and 3% had no idea about the different types of programmes that exist and the children watch. This is as shown figure 4.4
Figure 4.3 Responses given by teachers on types of programmes children should watch

Responses given by teachers on types of programmes

Source: field data 2014

For the 50 children who watched and played educational and edutainment TV programmes, their cognition skills were assessed by the teachers and the results were as shown in table 4.3
Table 4.3 Assessment of Cognition skills of children who watch and play educational and edutainment programmes

<table>
<thead>
<tr>
<th>Cognition skills</th>
<th>Excellent</th>
<th>Very good</th>
<th>Good</th>
<th>Average</th>
<th>Poor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reasoning</td>
<td>10</td>
<td>20</td>
<td>15</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Attention span</td>
<td>20</td>
<td>8</td>
<td>11</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Perception</td>
<td>18</td>
<td>13</td>
<td>5</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>Recall/ memory</td>
<td>17</td>
<td>12</td>
<td>13</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>Problem solving</td>
<td>7</td>
<td>20</td>
<td>6</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: field data 2014

It is clear that the children performed well cognitively and this was associated to the programmes they watch on TV and play on video games. These findings support Diehl and Toelle (2013) findings that educational and edutainment TV programmes form the basis for concentration, attention, higher grades and creativity in children compared to non educational programmes. A slight contradiction emerges in the findings of the research by Salomon (1984); Koolstra and Van der Voort (1996). In their research, these researchers argued that edutainment TV engages the children’s mental effort making very few intellectual demands making the children lazy intellectually. However from the findings of this study, it has been proven that such children are very intellectually active in class and perform very well in all activities requiring cognitive energy (Cambell, Huston & Wright 1987). The remaining 17 children showed an average result on their cognition skills. They did not perform well as the 50 children whose results are shown in table 4.3.

4.3 Findings on Frequency and time spend on TV viewing and video games and children’s cognitive development.

From the questionnaires, the teachers were required to give their view on the number of hours children should be allowed to watch TV and play video games at home. The responses were as shown in table 4.4

Table 4.4 Number of teachers and hours they recommended
<table>
<thead>
<tr>
<th>Hours per Week.</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Hrs and below</td>
<td>3</td>
<td>23.0%</td>
</tr>
<tr>
<td>5-20 hrs</td>
<td>5</td>
<td>38.5%</td>
</tr>
<tr>
<td>20-40 hrs</td>
<td>2</td>
<td>15.4%</td>
</tr>
<tr>
<td>40 and above</td>
<td>1</td>
<td>7.7%</td>
</tr>
<tr>
<td>No idea</td>
<td>2</td>
<td>15.4%</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: field data 2014*

From the results in table 4.4, it is clear that at least 38% of the teachers agree that children’s screen time should be controlled and regulated for children to use the extra time doing other activities such as playing outdoors with parents or other children. The table also shows that 15.4% of the teachers did not know why the time should be regulated and controlled.

The interview with the parents with access to TV and/or video games showed the following results.

**Table 4.5 Number of parents with access to TV and/or video games and Hours they recommended.**

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 hrs and below</td>
<td>6</td>
<td>16.2%</td>
</tr>
<tr>
<td>5-20 hrs</td>
<td>2</td>
<td>5.4%</td>
</tr>
<tr>
<td>20-40 hrs</td>
<td>9</td>
<td>24.3%</td>
</tr>
<tr>
<td>40 and above</td>
<td>13</td>
<td>35.1%</td>
</tr>
<tr>
<td>No idea</td>
<td>7</td>
<td>19.0%</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: field data 2014*

From the data in table 4.5, it is clear that most of parents had no control over the number of hours their children watch TV and play video games as shown by the large number of parent in the category of 40 and above. The 19% of the parents who had no idea how long children watch and play video games are not at home with the children and are not interested in what the children watch and for how long. Another 35.1% of the parents know their children are exposed
to the TV and/or video games for longer times but allow them anyway. Table 4.5 shows that, only 5.4% to 16.2% of parents seem to control the screen time for their children.

The 30 parents with no access to TV and/or video games when asked what advice they would give to parents about number of hours children should spend while watching and playing TV and video games provided different responses as shown in table 4.6.

Table 4.6 Number of parents without access to TV and/or video games and Hours they recommended.

<table>
<thead>
<tr>
<th>Hours per week</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 hrs and below</td>
<td>1</td>
<td>3.3%</td>
</tr>
<tr>
<td>5-20 hrs</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>20-40 hrs</td>
<td>8</td>
<td>26.7%</td>
</tr>
<tr>
<td>40 and above</td>
<td>12</td>
<td>40%</td>
</tr>
<tr>
<td>No idea</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: field data 2014*

From the data in table 4.6, 40% of the parents argue that the more the screen time the more the benefits to the children. Table 4.6 also shows that 20% and below agree with regulation and control of the screen time. However, 3 parents did not have any recommendation to make in terms of hours children should spend on screens.

At least 25% of the children with access to TV and/or video games revealed that their parents control the duration they spend on the said media. One child actually pointed out that, during weekends nobody is allowed to turn on the TV before one o’clock. They usually play outside with their siblings, take a shower then sleep or watch TV or play video games. These children showed remarkable growth in their cognition skills when assessed by their teachers. Their workbooks were also neat and contained well presented correct work. From the study, 57% of the children could not give an estimate on the number of hours they watched TV or played video games. They rather mentioned phrases such as ‘every day after school’ or ‘every time I
wake up on Saturday and Sunday until mummy comes to watch the evening news’. From such statements, it was clear that their screen time was not regulated and controlled. In their workbooks, these 57% presented their work well but was incomplete and some parts incorrect. The remaining 18% could not give a number or a statement on the same. They simply said they didn’t know.

The 30 children with no access to TV and/or video games expressed their feelings on the same. Among them, 8% said that during school days other children should only watch one programme and three over the weekend. When the progress records for these children were assessed by the researcher, it was found that they were older than their classmates and were also average students. Another 69% talked excitedly of how they would watch TV and/or play video games every time after school and all day during the weekends because their parents are always out at the shamba or working in other people's homes. The remaining 23% were not sure. They argued that their parents are strict and they are not sure if they would let them watch and play TV and/or video games all the time. All this information is summarized in the graph below.

Figure 4.4A summary of responses given by teachers, parents and children on frequency and time spend on TV and/or video games
Source: field data
Figure 4.5 Assessment Scores on cognition skills of children with access and those without access to TV and/or video games.

Source: field data

From figure 4.5, children who spend limited time on their TV and/or video games show remarkable performance in their cognition skills as cleared outlined. For the children without access to TV and/or video games, their performance in terms of cognition skills is average. This can be attributed to other activities they engage in during their day to day life like imaginative play and physical play out in the open. The findings of this study are in support of McDonough (2009) research findings in which he suggests that uncontrolled screen time causes brain development problems in children as they replace important activities such as playing imaginatively and physically out in the field. In this study, this was evidenced in the assessment results of the children who spend a great deal of time on the screens. Studies by Pagani (2011) and Perlmutter (2013) are also in agreement with the findings of this study that long hours on the screen undermine capacities to pay attention which limits the self creativity of the children.
4.4 Findings on parental involvement and supervision during TV viewing and video game play and children's cognitive development.

During the study, 18% of the parents who took part in the research and had access to TV and/or video games said that they always watch TV and play video games with their children. Another 12% only supervised the children as they watch and play and 4% occasionally played video games and watched TV with their children. The remaining 66% said they had no time to watch or play video games with the children or even supervise them. This is shown in the figure 4.6

Figure 4.6 Responses by parents on involvement and supervision

![Responses by parents on involvement and supervision](image)

Source: field data 2014

During the study also, 20% of the parents with no access to TV and/or video games and who responded yes to the question of whether given a chance they would own a TV and/or
video games said that the TV and video game will give them an activity to do with their children while at home. Another 10% of them also advised the parents who own TV and/or video games to be involved and to supervise what their children watch and play and to also guide the children so that they don’t copy or model all what they see in such media.

During the interview with children, 25% of the children with access to TV and/or video games said that their parents watch and play video games with them. Another 30% of the children said that their parents don’t watch or play with them but have installed security codes unknown to the children to restrict the children from watching or playing programmes and videos that don’t benefit them in any way. A group of children about 15% said that their parents don’t watch TV or play video games with them but play outdoor games with them such as football, hide and seek, hit the dodgeretc over the weekend. The remaining 30% said their parents are never at home to supervise them while watching TV or playing video games or even choose what the children watch or play.

From the work books, 55% of the children who watch with their parents or what they watch is controlled perform very well in school work, present their answers well and have a good handwriting. They show enthusiasm in class work and their class attendance is remarkable. However, 15% who play outdoor games with parents are well sociable, perform very well and show minimal or no signs of anti-social behavior. Another 30% lag behind in class work, low class attendance, very good handwriting but present incorrect answers and depict all sorts of anti-social behaviors including aggressiveness.

In the questionnaires, 70% of the teachers advised parents to make sure they monitor what the children watch and play and should always create time to watch and play with their children. The remaining 27% advised parents who can’t be involved in their children’s TV
viewing and video game play to get rid of the TVs, or introduce control codes and look for alternative ways of spending time with them. The remaining 3% were not sure of what was expected hence left the question blank.

Figure 4.7 Assessment Scores on cognition skills.

From figure 4.7, children who enjoy supervised screen time show remarkable performance in their cognitive skills. The children who are not supervised, watch and play what they want perform poorly as compared to their counterparts who are supervised. For the children without access to TV and/ or video games perform very well as those with access. This is because their parents always monitor what the children do knowingly and unknowingly. These findings support Pertmutter’s (2013) findings that parental supervision and involvement enhances ability to fantasize which leads to improved cognition skills. Reid and Frazier (1978) in their study findings established that co-viewing provides feedback for language development and critical thinking. The findings of this study show that too.
CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
This chapter presents a summary of the other chapters, conclusions made based on the findings of the study and recommendations.

5.1 Summary
The purpose of the study was to find out the influence of TV viewing and video game play on preschool children’s cognitive development in Mboonizone of Makueni county. The study was carried out based on the types of TV programmes and video games children watch and play, frequency and time spend on TV viewing and video game play and parental involvement and supervision during TV viewing and video game play. The research design used for the study was descriptive survey. The sample for the study was 9 preschools out of which 5 were public and 4 were private, 13 teachers, 67 parents and 67 children. 3 research instruments were used; questionnaires for preschool teachers, interviews for parents and children and documentary analysis.

The data collected during the study was analyzed and presented in form of tables and charts based on the research questions. From the findings of this study, it is clear that children who watched educational and edutainment TV programmes and video games perform much better in terms of cognition skills than those who watch and play non-educational TV programmes and video games. It was also clear that children who had controlled and limited screen time combined with other outdoor activities performed very well when their cognition skills were assessed. The study also showed that children, who had a chance to co-view, play with their parents or what they watched and played was supervised performed better in their
cognition skills than their counterparts who watched and played unsupervised TV and video games.

For the children who watched and played all types of TV programmes and video games without parental involvement and supervision for long periods of time only sharpened their eye-hand coordination which leads to good handwriting but could not provide correct answers and reason logically in case of a situation requiring problem solving skills. The children without access to TV and/or video games, showed an average performance in cognition skills. This was associated to the outdoor play they engaged in and other extraneous factors not included in the study.

5.2 Conclusion

The following conclusions were made from the findings of this study. The successes in cognitive skills cannot all be attributed to TV viewing and video game play. There are other extraneous factors such as outdoor play, age and maturity that contribute to cognitive development of children. Parents and caregivers should come up with ways of regulating what children watch and play in TV and video games. The frequency and time spend on TV and/or video games should also be regulated and limited. Parents should also create time to co-view TV programmes and video games with their children. They should also balance their children’s screen time with other activities out in the open field. For the parents without access to TV and/or video games, they should be creative and come up with activities to carry out with their children so that they provide effective role models to them. Having constant role models in their lives, the children grow to be independent and successful.

Teachers too can play a role of creating awareness among parents and other caregivers on importance of spending quality time with their children. This can be achieved through co-
viewing of TV programmes, playing video games and/or playing out in the field. They should also constantly assess cognitive skills of children in their care in order to be able to identify any developmental problem that may be in existence in the children from an early age. The teachers should do this in consultation with the parents of the children. Every caregiver should be open and willing to promote cognition skills in the children.

**5.3 Recommendations**
The researcher recommended the following:

i. Organizations dealing with the welfare of children should come together and create awareness among parents and other caregivers on importance of controlling content and screen time for children from an early age.

ii. The government should provide information to caregivers of children on media and its influence on children through workshops, seminars, refresher courses and educational tours.

iii. The curriculum planners should inculcate the reading culture among children from an early age to keep them busy and leave them limited screen time. Reading will nurture the cognitive skills of both children with access to TV and/or video game and those without access.

**5.4 Recommendations for further research**

i. A research should be carried to investigate the different types of TV programmes and video games available in the market for children currently. The existing researches need to be updated.

ii. A research to investigate the link between children’s overall performance in class and the time spend with caregivers and role models.
iii. A research on the influence of TV viewing and video game play on children’s other developmental milestones e.g. social, physical and emotional.

iv. Since this study was limited to one zone, a replica of the study can be done in another area.
REFERENCES


APPENDICES

Appendix 1: Questionnaire for Preschool Teachers

Instructions for answering the questionnaire

i. The questionnaire is in three sections. Kindly respond to all sections appropriately.

ii. Do not write your name anywhere in this paper.

iii. The information you provide will be kept confidential.

iv. Please tick only one response.

PART A

Please indicate using a tick (✓) on the correct option or fill in appropriately in the blank space provided where applicable.

1. State your gender.  Male □  Female □

2. Indicate the name of your school…………………………………………………………

3. What is the category of your school?  Private □  Public □

4. What is your age category?  30 or below □  31 to 35 □
    36 to 40 □  40 and above □

5. Tick your highest level of education  KCSE □  Diploma □

Degree □  Others specify………………………………………………

6. How many years have you been teaching young children?
   1-5 years □  6-10 years □  11-15 years □
   □
16 years and above

PART B

Assess the following cognition skill among the sampled children on a scale of 1 to 5 where 1 is poor and 5 is excellent by placing a tick (√). Let your class interaction with the children guide you. For the sample of the children with access to TV & /or video games tick using a RED pen and for children without access tick using a BLUE pen.

KEY

1-poor  2-average  3-good  4- very good  5 excellent

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<th>Cognition Skills.</th>
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<td>Reasoning.</td>
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PART C

1. Do you own a television set?

2. What is your attitude towards children’s television viewing?

3. In your own words, for how long should children watch TV in a day?
4. Do you think TV viewing in any way influences the children’s cognitive skills. Explain.

5. What is your advice to parents about children’s TV viewing and video gaming.

6. Do the types of TV programmes children watch influence their cognitive skills?
Appendix 2: Interview Schedule for Parents

Those with access to television and/or video games

1. Why do you own TV and/or video games in your home?

2. Do your children access them?

3. Which programmes do they watch in the TV’s or play in the video games?

4. For how long do the children watch and play TV and video games in a day?

5. Do you watch TV or play video games with the children or do you supervise them?

6. When not watching TV or playing video games, what else do the children do?

7. Do you face any challenge while supervising, playing or watching TV with your children?

8. In your own assessment do TV and video games benefit children’s cognition skills in any way?

9. Talk about your children’s performance in school. Do you attribute it to the TV watching and video gaming they engage in?

10. What advice or recommendation do you give to other parents about their children and TV and video games?

Those without access to TV and/or video games

1. What is your attitude towards media such as TV and video games?

2. Given a chance or opportunity to own such media, would you take it?

3. What activities do your children engage in at home when there is no school?

4. Do you think TV and video games are of any benefit to your children and you?

5. Talk about your children’s performance in school and their cognitive abilities.
6. Do you think TV and video games can influence such performance and abilities in any way?

7. Do you spend time with your children? How long and what activities do you engage in?

8. What advice or recommendation would you give to other parents on media especially TV and video games?
Appendix 3: Interview Schedule for children

1. Do you have access to TV or video games at home?

2. Where are they placed? (location)

3. How long do you watch TV or play video games in a day?

4. Which programmes do you watch?

5. Which characters do you wish to be like from the programmes you watch?

6. Tell me what happened in the last episode of the programmes you watched.

7. Predict what will happen in the next episode.

8. Do your parents watch TV or play video games with you?

9. Are they always there when you use the TV or the video games?

10. When you are not watching TV or playing video games, what else do you do?

11. Do you invite your friends to come to your home to watch TV or play video games with you?
Appendix 4: Documents

Children’s workbooks

1. How the child performs in different activity areas.
2. Presentation of answers to the questions given.
3. The presentation of ideas in form of drawing.
4. The handwriting depicting the skill of eye-hand co-ordination.

Progress records

1. The performance in number work, creative activities and language skills.
2. Developmental problems of the child.
3. Class attendance of the children.
4. The child’s strength and weaknesses when interacting with others in and out of class.