FACTORS INFLUENCING CHILDREN'S VULNERABILITY TO ONLINE CHILD SEXUAL EXPLOITATION AND ABUSE (OCSEA) IN URBAN POOR SETTINGS: A CASE OF KIBERA SLUMS, NAIROBI COUNTY

OCHIENG MALATH AKINYI

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DECLARATION

I declare that this research report is my novel work, which has not been submitted to any other academic institution for the award of a degree.

OCHIENG MALATH AKINYI

T51/38410/2020

Signature: …  ……

Date: … 24th November, 2023……

DECLARATION BY SUPERVISOR

This research project has been submitted for examination with my approval as the academic supervisor

PROF. PAUL KAMAU

DEPARTMENT OF ECONOMICS AND DEVELOPMENT STUDIES

Signature: 

Date: November 27, 2023

DEDICATION

This work is dedicated to my son; Neillan Bryce Imora Okoth. May this achievement inspire you to pursue greater academic heights.

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ABBREVIATIONS AND ACRONYMS

APC	Association for Progressive Communications
CA	Communication Authority
CCK	Communication Commission of Kenya
CSAM	Child Sexual Abuse Material
COVID 19	Corona Virus of 2019
DCS	Directorate of Children Services
ECPAT	End Child Prostitution and Trafficking
EdTechs	Education Technologies
GSMA	Global System for Mobile Communications
ICT	Information Communication and Technology
IDI	In-Depth Interview
IDS	Institute of Development Studies
INTERPOL	International Criminal Police Organization
ISPs	Internet Service Providers
ITU	International Telecommunication Union
KCSE	Kenya Certificate of Secondary Education
KCPE	Kenya Certificate of Primary Education
KE - CIRT	Kenya Computer Incidence Response Team
KII	Key Informant Interview
KNBS	Kenya National Bureau of Statistics
NACOSTI	National Commission for Science, Technology and Innovation
NPA SEC	National Plan of Action against Sexual Exploitation of Children
NPA OCSEA	National Plan of Action to Tackle Online Child Sexual Exploitation and Abuse
OCSA	Online Child Sexual Abuse
OCSEA	Online Child Sexual Exploitation and Abuse
OVC	Orphans and Vulnerable Children
OVs	Operationalization Variables
PAC	Project Advisory Committee
SNT	Social Norms Theory
SPSS	Statistical Packages for Social Scientists
TdH NL	Terre des Hommes Netherlands
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund

ABSTRACT

Child Sexual Exploitation and Abuse (CSEA) is a universal problem with evident long-term effects. Its scope and practice have tremendously expanded and metamorphosed leading to its rapid spread. The metamorphosis stems from its practice through online platforms, different from the normal physical practice, hence dubbed Online Child Sexual Exploitation and Abuse (OCSEA). As a result, OCSEA has become widespread, including among urban poor settlements. This research sought to understand factors that influence children's involvement in OCSEA in urban poor settings, with a focus on Kibera slums in Nairobi County. This study adopted a cross-sectional study design, in which mixed methods (qualitative and quantitative) approaches were utilized. The study also builds its contexts from secondary resources, including literature to illuminate the current and past contexts and occurrences of OCSEA, including all aspects pertaining to OCSEA's metamorphosis. A structured questionnaire was utilized to collect quantitative data from parents who were beneficiaries of the Watch 24/7 Project to understand the extent of OCSEA's occurrence in urban poor settlements. Additionally, a key informant interview guide was used to collect qualitative data from five key informants deemed knowledgeable in the study area, having been involved directly in related projects.

The study found that the number of digital technologies accessed by children in the recent past had significantly increased, much of which was not monitored. The qualitative and quantitative data partially concurred that the increased proliferation of digital technologies, and the ease of access of such technologies among children and youth have contributed to increased incidence of OCSEA's occurrence. The respondents agreed that engaging their children in online safety discussions played a key role in reducing their children's proneness to OCSEA. In addition, 37% of the respondents affirmed that awareness levels influenced the occurrence of OCSEA compared to the 29.6% who did not. This was supported by the responses provided by key informants who opined that involvement in OCSEA is a function of ignorance and lack of awareness of active and potential victims of OCSEA. The study also found that monthly educative sessions on OCSEA were undertaken in the study site (Kibera) to enhance the awareness of parents, guardians and other caregivers on OCSEA.

The study further confirmed the existence of OCSEA within Kibera and affirmed that it is a form of child sexual abuse. They also agreed that they acquired knowledge on OCSEA from the Watch 24/7 Project which enabled them to confidently discuss online safety with their children to prevent the occurrence of OCSEA. They were able to stand with their children who dealt with psycho-social challenges brought on by OCSEA. They, however, demonstrated reluctance to report the occurrence of OCSEA cases yet they were conscious of the fact that engagement in OCSEA is a misconduct punishable by law.

The study concludes there exists a significant association between children's vulnerability and engagement in OCSEA activities. Further, the level of awareness on matters OCSEA by parents/caregivers is crucial as this defines their level and capacity to guide minors/children in the right behavioral. The study recommends a collective method for responding to and curbing the rise of OCSEA.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The access to internet offers opportunities for children to explore their creativity and increase their learning, with a corresponding increase in digital capabilities (Machimbarrena et al., 2018). Internet access is also a platform that offers varied opportunities for the execution of anonymous and sophisticated vices (United Nations Children's Fund, 2021; 2018). Such vices include but are not limited to online child sexual exploitation and abuse (OCSEA), a global vice which is propagated through online platforms. Other vices include pornography, hate-mongering and racism, violence, plagiarism, adultery, and theft (United Nations Children's Fund, 2021; Billingham & Parr, 2020).

For instance, Kenya saw a 7.81% increase in internet penetration from 83.4% in 2019 to 91.2% in 2020 (KNBS, 2021). Similarly, the number of internet facility suppliers also increased from 302 in 2019 to 366 in 2020, which is attributed to increased demand for internet services for the period under review (KNBS, 2021). The percentage distribution of the population who access ICT facilities in Kenya indicates that Nairobi region is by far well connected (318,664) with a corresponding high amount of monthly average spending on internet connectivity and average monthly amount spent on internet (KES 1,355) as of 2018 (Communication Commission of Kenya & Kenya National Bureau of Statistics, 2018). Table 1.1 highlights internet coverage for different regions in the country, with Rift Valley coming in second after Nairobi, and the Western region with the least number of populations accessing ICT facilities.

Table 1. 1: Distribution of internet connectivity and expenditure

Regions	**No. of people Accessing ICT Facilities**	**Mean Amount (Kes) spent on the Internet [per month]**
Nairobi	318,664	1,355.0
Rift Valley	228,605	437.5
Central	96,649	929.7
Nyanza	93,734	1,061.0
Coast	30,003	488.1
North Eastern	27,306	373.5
Eastern	26,072	181.5
Western	16,613	742.8

Source: Communication Authority of Kenya & Kenya National Bureau of Statistics, 2018

Increase in the total fixed, wireless internet and related broadband subscription has also increased by 12% and 16.8% to 44.4 million and 26.9 million in 2020, respectively (KNBS, 2022; KNBS, 2021). The increase in internet usage in 2020 could perhaps be attributed to the move of social interactions (teaching, learning and entertainment) to online platforms due to the COVID-19 pandemic. Internet access across the country was significantly boosted by the Google balloon services which offered the internet to areas that previously lacked internet in Kenya, such as the remote parts of Kenya. Further, the increased internet access exposed an increased number of learners to online social media platforms where they could engage, or access other online content not limited to education materials. In Kenya for instance, in the period between 2020 and 2021, there were additional one million internet users (Communications Authority of Kenya, 2022). Over half of them (56%) were those between age 14 and 25. This could be interpreted as the increased number of adolescents and youths having internet access and who could be potential targets of OCSEA. This was found to have exposed the new and existing users of internet platforms to varied online crimes that include online abuse [sexual], phishing (attempt to acquire sensitive data through fraudulent solicitation), malware, and online fraud (Communications Authority of Kenya, 2022; KNBS, 2021).

Social media platforms have become an important apparatus for youth's interaction and access to information, especially those aged between 14 and 25 years (Kharono et al., 2022), but estimates of the actual number of youths using smartphones in Kenya are much harder to ascertain. It is even more challenging to ascertain the extent or magnitude of youth access to social media and related online content within the informal settlements' areas like Kibra. Besides the COVID-19 pandemic that catalysed ICT expansion in the country, other drivers include the high demand for social networking, gaming and video, and video calls among users, the majority of whom are children and youth (Communications Authority of Kenya, 2022).

Emergency situations have been touted as one of the key contributors to OCSEA owing to the fact that such emergencies put victims in a more vulnerable position both during and post-emergency (United Nations Children's Fund, 2019). For instance, during emergencies like floods, droughts, famines, conflicts and pandemics; children are often forced to skip or drop out of school and involuntarily resort to seeking alternative livelihoods to meet their basic needs. In most instances, these may OCSEA related activities (UNICEF, 2020b; Machimbarrena et al., 2018). Undoubtedly, evidence also suggests` that the COVID-19 pandemic contributed immensely to and encouraged the occurrence of OCSEA (UNICEF,

2021). This largely arose during the near-universal school closures where and when the use of digital platforms such as YouTube and WhatsApp were used for teaching and learning. It is such platforms that made minors more vulnerable and easy targets of OCSEA perpetrators (Finkelhor et al., 2021; United Nations Children's Fund, 2019). The extensive accessibility of children to the internet has provided the perpetrators and abusers the space to carry out their activities without the fear of being exposed (Machimbarrena et al., 2018).

In Kenya, like in other developing countries, the devastating impact of OCSEA can negatively affect a child's emotional, psychological and behavioural well-being, both in the short- and long term. OCSEA can entirely take place online or through online and in-person interaction between perpetrators and children. It is therefore critical that children are equipped with knowledge and skills to keep themselves safe in digital space.

Currently, Kenya has formulated policies and responses to address OCSEA and related vices. There are two national policies already in effect that stand out in addressing OCSEA: the National Information, Communication and Technology Policy of 2019; and the National Plan of Action against Sexual Exploitation of Children in Kenya 2018-2022 (NPA- SEC). The former establishes the broad activities to be implemented by the government to protect from OCSEA, while the latter outlines the activities and objectives associated with the prevention of OCSEA. In addition, the National Plan of Action on Online Child Sexual Exploitation and Abuse 2022-2026 (NPA-OCSE) which is entirely concerned with child online protection was recently launched. It is led by the Directorate of Children's Services and is pivoted on the 'We Protect' Model National Response, which is instrumental in enabling Kenya to assess its current response and identify gaps, prioritise its national efforts to bridge the identified gaps and enhance international cooperation and understanding.

The National Strategy on Child Online Protection led by the Communications Authority of Kenya (CAK) and encompasses the International Telecommunication Union (ITU) Guidelines on Child Online Protection is also in its development phase. Other relevant policies include the Sexual Offences Act, and the Computer Misuse and Cybercrimes Act, both of which criminalize acts associated with OCSEA, including the intention to commit such crimes. The Victim Protection Act seeks to protect victims of OCSEA from more harm and outlines support that minor victims get immediately post- abuse reporting. The recently enacted Children Act 2022 also comprehensively criminalizes online grooming although, there is still no clear

legislation and guidance on admissible evidence to prosecute making it hard to address OCSEA.

These laws and policies should be enforced nationally to curb the spread of OCSEA. It is in doing so that we shall not only protect potential child victims of OCSEA but all children.

The evidence highlighted above indicates that OCSEA has been recognized as a problem affecting children in Kenya. The highlighted policies further point to the urgency with which the country is keen on solving this challenge. However, there are salient implementation and policy gaps that impede OCSEA prosecution as well as inadequate stakeholder involvement for a multi-thronged preventative action which is a result of limited knowledge and awareness of the existence of OCSEA. Additionally, it seems that OCSEA-related policies are either recent or in infancy in development, which could mean that these documents have not been entirely disseminated to children who are the vulnerable population and the duty bearers who are held accountable. The level of awareness of the existence of such policies or responses could potentially be lower in low-resourced settings like Kibera slums where this research is proposed (Maingi, 2022). It is therefore against this background, that it is necessary to understand the influencers of OCSEA in the Kibera slums.

1.2. Problem Statement

Child online abuse is on the rise globally. This could be due to the increase in Internet access and the use of digital and related information and communication technology (ICT) (Morgan & Lambie, 2019; King et al., 2018), which has transcended even to the urban poor children and youth globally. In Kenya, statistics indicate a similar trajectory where there have been increases in internet access. For instance, in 2018, 13% of Kenyans had internet access which later increased to about 18% in 2019, (KNBS, 2020; Communication Authority of Kenya (CAK) & Kenya National Bureau of Statistics (KNBS) (2018). This means that with the increase in internet access at the school, individual and household levels in Kenya, children are increasingly having access to internet and related digital devices like smartphones and laptops/computers/tablets, which make them (children) more vulnerable to OCSEA due to the ease with which access to such platforms have been made, and considering that most OCSEA materials and recruitment platforms are available in these media (Ortega-Barón et al., 2021).

The existing literature indicates that OCSEA has received considerable attention among child protection actors in recent times (ECPAT, et al., 2021; Ramiro et al., 2019). This perhaps arises

from the ever-metamorphosing human trafficking, smuggling and sex tourism practice that has now evolved to include and/or target minors (We Protect, 2016). The perpetrators of this vice are in most cases anonymous to children but sometimes can be people in positions of trust and well-known to the affected children (UNICEF, 2021; UNICEF, 2020a, 2020b). It is therefore not clear as to which is the main influencer of OCSEA of the two (anonymous versus known individual) to help stakeholders tailor appropriate responses to address this problem.

The Disrupting Harm Report 2021 research findings state that between 5 and 13 per cent of internet-using children in Kenya, aged 12-17, reported experiencing online child sexual exploitation and abuse (OCSEA) however, it is believed this number is likely higher as most children do not disclose this information due to the stigma attached to the abuse.

Equally, the community plays a considerable role in promoting OCSEA either directly or indirectly. Directly is when the community in which the child lives is receptive to and promotes the occurrence of OCSEA, whereas indirectly is when there are for instance weak policies and responses that criminalize OCSEA (ECPAT, 2021). The increasing attention cast on OCSEA in the recent past, including the legal measures that have been instituted [country-wide and globally] indicates that it is a vice that has attracted global attention and warrants a remedy.

However, despite the prevailing occurrence of OCSEA as highlighted above, there is little evidence on targeted online child sexual exploitation and abuse interventions, specifically those targeting urban poor settlements (slums), including practical case studies responses that have worked in addressing OCSEA in urban poor settlements (Koçtürk & Yüksel, 2018).

Additionally, there is limited research highlighting the influence of parental/care giver involvement in their children's online engagement to prevent the occurrence of OCSEA (Morgan & Lambie, 2019). The knowledge limitation forms the basis of this research.

1.3. Research Questions

1.3.1 Broad Research Question

This research seeks to examine the factors that influence children's vulnerability to online child sexual exploitation and abuse (OCSEA).

1.3.2. Specific Research Questions

The below research questions directed the study, including the development of data collection tools that informed this research:

i. How does the level of awareness influence OCSEA's occurrence among children in slums?
ii. What is the influence of digital technologies on OCSEA's occurrence among children in slums? and;
iii. What is the influence of parental involvement on OCSEA's occurrence among children in slums?

1.4 Objectives of the Study

1.4.1 Broad objective

The study sought to understand the factors that influence children's vulnerability to online child sexual exploitation and abuse in informal settlements.

1.4.2. Specific Objectives of the study

The study had three specific objectives namely;

i. To examine the influence of awareness levels on OCSEA among children in slums.
ii. To examine the influence of digital technology on OCSEA's occurrence among children in slums
iii. To examine the influence of parental involvement on OCSEA's occurrence among children in slums.

1.5. Significance of the Study

OCSEA is a type of violence against children and remains a universal problem globally. Like other parts of the developing world, Kenyan children are faced with the dangers and realities of OCSEA. Internet together with its associated assistive devices like smartphones, computers/tablets/laptops, and smart television are some of the platforms through which OCSEA are spearheaded. Previously, the role of digital technologies or EdTechs and their associated effects on OCSEA's occurrence was limited, though some noteworthy initiatives – both government and non-government-led – are taking shaping to curb this emerging challenge. The increasing initiatives to provide increased internet-enabling infrastructure could further aggravate the OCSEA situation in the country, a situation that could be attributed to a limited

understanding of the side effects of digital platforms on OCSEA, including related reporting mechanisms among victims to curb this problem. Additionally, the magnitude of OCSEA in Kenya, and in the study site [Kibera] is still less understood. Hence, the necessity for incessant study on the topic to produce locally appropriate knowledge; which will apprise suitable policy preparation for the eradication of the practice. This research study is poised to help improve understanding of OCSEA in Kibera and Kenya as a whole.

This study also suggests recommendations for improvement in addressing OCSEA in the study site and the country at large. Such recommendations may be incorporated into the country's digital technology user guidelines for children to help alleviate OCSEA's occurrence. Prompt adoption of preventive OCSEA guidelines will be an indication that children can safely navigate the online space.

Evidence reveals that there is an increasing trend of OCSEA's occurrence in Kibera and could increase under emergency situations when physical or normal learning situation is disrupted (e.g., during the COVID-19 period when onsite schooling was closed) (KNBS, 2022; Communications Authority of Kenya, 2022; Ortega-Barón et al., 2021; APC, 2019; Government of Kenya, 2018). With this background, it was necessary to understand how the above indicators influence OCSEA in Kibera slums, Kenya, which is also the biggest slum in the country, hence potentially having high incidences of OCSEA. This study is poised to bridge the existing knowledge gap in the study area insofar as OCSEA's occurrence in Kibera slums is concerned and help inform relevant stakeholders, especially pertaining to the relationship between internet access and OCSEA. The study could also help in the development of targeted action-oriented solutions to OCSEA.

1.6. Assumptions of the Study

The assumptions made in this study include that within the study site, children are affected and engage directly or indirectly in OCSEA. It is further assumed that engagement in OCSEA by minors could be a result of lack of or limited parental or guardian involvement in the day-to-day activities of the children, making them (children) vulnerable to OCSEA. In addition, it is assumed that some if not all of the children who engage in OCSEA do so because they do not know/are unaware that they are engaging in OCSEA, involuntarily. We further assume that the study participants are knowledgeable about the magnitude of the OCSEA within their jurisdiction or sphere, and are informed on the factors that contribute to the occurrence of OCSEA in their environment.

In all these assumptions, we adopted an open mind and critically thought through the assumptions, paying particular attention to the assumptions and exploring them in detail through the study's tools. This is because assumptions may at times be misguided or incorrect and hence may give the wrong impression of reality. It is therefore important that a researcher be not blinded by assumptions even when collecting data because just because a researcher assumes that some things about the research/study are true, does not necessarily mean that they are true. The researcher had an open mind when exploring or gathering data on specific assumptions of the study, to help address issues of bias.

1.7 Scope and Limitation of the study

This study was limited to the study site, which is Kibera Slums. Kibera slums are divided into thirteen villages. The thirteen villages are Ayany, Gatwekera, Kianda, Kisumu Ndogo, Laini Saba, Lindi, Makina, Mashimoni, Salama, Silanga, Siranga, Soweto East, and Soweto West. The study focused on only six villages of Gatwekera, Lindi, Kianda, Ayany, Makina, and Laini Saba, due to their dynamic nature in terms of demographic composition as they host different or heterogeneous ethnic populations which make it (the study) generalizable to explain the OCSEA phenomenon. The limitation of the study to the above-mentioned villages was also due to both financial and time constraints.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This literature review section offers an overview of the context of slums in terms of access to, and use of technological devices to improve access to education, social interaction, and communication for children living in these areas. This study specifically focuses on Kenya, but the literature to be reviewed under this section was not limited to Kenya but also captured work in other countries and regional contexts to help draw conclusions or even compare situated OCSEA experiences. This section begins with a further understanding of OCSEA before delving into perceived variables that in one way or the other affect the occurrence of OCSEA. Subsequent subsections highlight salient findings obtained from the literature review.

2.2. Theoretical Literature Review

2.2.1. The Social Norms Theory (SNT)

This study was guided by the social norms theory (SNT), which was invented and first used by Perkins and Berkowitz in 1896 to address students' patterns of alcohol use (Perkins & Berkowitz, 1986). It is informed by the term 'social norm' that draws its empirical and theoretical literature from economics, health sciences, sociology, moral psychology, political science, anthropology and law (Cislaghi & Heise, 2018). The definition of social norms varies across these fields and in some cases contradict one another. For instance; anthropologists have defined social norms as how societal standards operate in varied cultures (Geertz 1973); sociologists have fixated on how societal standards motivate individuals to behave (Durkheim 1895 [1982]; economists have discovered how observance of standards affects actions of the marketplace (Akerlof 1976; Young 1998a) and; legal researchers have flaunted societal standards as effectual substitutes to legal guidelines, as they may adopt undesirable externalities and deliver beckoning apparatuses at low or no cost (Ellickson 1991; Posner 2000). These definitions often form an amalgamation of social guidelines that vary from basic etiquette to the most critical moral roles (Chung & Rimal, 2016; Young, 2015; Bell & Cox, 2015). In a simple definition, social norms refer to the often unwritten, informal rules that outline the appropriate, acceptable and/or obligatory behaviours in a given setting that guide actions within a particular setting. Contemporary practitioners that utilize this theory often utilize the work of Cialdini and team in defining social norms, which in this context encompass

one's belief concerning: a) what others approve and disapprove of (injunctive norms); and b) the actions of others in one particular group (descriptive norm) (Cislaghi & Heise, 2018).

Proponents of this theory aver that the immediate environment and related interpersonal influences like peer pressure have a significant effect on one's behaviour change, hence understanding one's behaviour and related changes can be best understood from these lenses (interpersonal influences and environment). For this reason, peer influence is perceived to play a leading role in individual behaviour and related decision-making. The theory contends that peer influences are largely affected by perceived norms rather than actual norms. This implies that the space between actual and perceived norms is a misperception, which forms the basis for social norms theory.

The SNT is best known for its effectiveness in explaining causative behaviours, as was best and first used by Perkins and Berkowitz in 1986 in explaining the reduction in alcohol consumption and alcohol-related accidents among college students. This is because it envisages that interventions designed to correct misperceptions will have a positive effect on most individuals by revealing the actual / healthier norm which will lead to the individual's minimal participation in their potentially harmful behavior or be encouraged to adopt protective, healthy behaviours. The Social Norms Theory has also been applied in explaining causative factors in sexual assault cases among vulnerable populations (younger children, girls, women etc.), including related prevention, which makes this theory suitable in explaining the occurrence of OCSEA among children and youth (Cislaghi & Heise, 2018).

In addition, SNT argues that an individual's behaviour is influenced by such misperceptions, especially on how our peers act and think. Therefore, underestimation of behaviour problems in our peers will demotivate us from participating in problematic actions, whereas overestimation of problem behaviours in our peers does have a causal effect leading to increased problem behaviour on our part. The SNT maintains that addressing misperceptions of regarded norms will most ultimately increase the preferred behaviour and vice versa. It is therefore plausible to argue that social norms theory and related interventions seek to avail correct information concerning peer group norms to address salient misperceptions of norms. These are SNT's strengths, which make the theory relevant, applicable and practical in addressing OCSEA, which has been on the increase recently, and to a significant level occasioned by the increased access to digital devices and internet platforms. OCSEA could also be viewed from the lens of peer pressure and related misperceptions and perceived norm as that peer accepted norm/practice.

It is also important to consider the limitations of SNT before adopting and applying it. These limitations include: the amount of information received by the targeted audience should be adequate to attain an impactful reach; ensuring that the sources of information are reliable and credible to ensure appealing information is relayed; that poorly gathered data in the inception phases could result in poor choice and unreliable data of normative information that could enhance misperception; and that information must be communicated credibly and reliably to correct any possible misperception (Cislaghi & Heise, 2018). This is because the targeted respondents in this study are likely to question information presented to them due to the misperceptions they hold.

The limitations notwithstanding, the SNT when appropriately used can be very instrumental in altering individual behaviour by prioritising altering misperception at the level of the group. Moreover, SNT and its interventions can be used in conjunction with other intervention approaches or singularly/alone. In applying this theory, the researcher considered respondents who have previously interacted with OCSEA information from a reliable and credible source in this context; the parents who participated in the Watch 24/7 Project. This guaranteed the effectiveness of obtaining the required information. It is posited that the most effective social norm approach and interventions are those that contain targeted information, and speak to the problems of the at-risk population (Cislaghi & Heise, 2018; Perkins & Berkowitz, 1986), which makes this theory applicable and adaptable in this study to help understand the occurrence of OCSEA and possible mitigation practices for the vice. This theory further recommends that for a targeted message to be attained, there is a need for a considerable amount of data collection and research to help understand the situation and context of the targeted population, which justifies this study. This study was therefore conducted interactively, the targeted respondents were actively engaged thereby obtaining quality information that addressed potential misperceptions in the study and presenting correct information to inform action at national and grassroots levels.

2.3. Empirical Literature Review

Online child sexual exploitation and abuse (OCSEA) has two components – that of online child sexual abuse (OCSA) and online child sexual exploitation (OCSEA) (UNICEF, 2021; Açar, 2020). The two components are more often used interchangeably, with the only distinguishing aspect being the aspect of underlying perception or view of exchange (Özçalık & Atakoğlu, 2021; Açar, 2020). OCSEA refers to situations where an adult or groups of adults engage in

online [internet-based] sexual activities with a child or children who, according to the relevant legal frameworks or instruments, have not attained the legal age of sexual activities (UNICEF, 2021; INTERPOL & ECPAT, 2018). Alternatively, OCSEA is defined as the engagement in online sexual activities with a minor where the use of threats, coercion force; or abuse is made of an identified position of trust, influence or authority over the child, including the immediate and extended family; or abuse is done of an especially vulnerable position or situation of the minor, particularly due to her/his mental or physical disability or dependence condition (UNICEF, 2021; UNICEF, 2020a; Jonsson et al., 2019; UNICEF, 2019; Koçtürk & Yüksel, 2018). OCSEA also occurs when a second party [mostly a perpetrator] monetarily benefits, through online sexual activity involving a minor or minors. For instance, the perpetrator may lure and engage or encourage a minor to engage in sexual activity with him/her or another party for purposes of selling videos or images from such practices for money. In other cases, the second party may recruit a minor to engage in sexual activity but it is him/her [second party] who is paid and the minor only paid a 'commission' for her/his participation (Hutson et al., 2018; De-Santisteban et al., 2018). Activities that constitute this practice include but are not limited to sexual exploitation and solicitation of a child or adolescent in prostitution and, situations where a minor or other person is offered or promised varied forms of remuneration, payment, money, consideration in return for the minor engaging in sexual activity, even when such payments or considerations are not made or provided (UNICEF, 2021; UNICEF, 2020b; Finkelhor et al., 2020)

In practice, OCSEA can entirely transpire online or via a blend of online and in-person connections between perpetrators and children (Machimbarrena et al., 2018; Hutson et al., 2018). There are different forms through which OCSEA manifests itself, including but not limited to sexting, sexual extortion, sharing of child sexual abuse material (CSAM), live streaming of child sexual activities (Finkelhor et al., 2020; Hutson et al., 2018) and online grooming – discreet dissemination of child sexual abuse materials and contents to minors of very young age (May-Chahal et al., 2018). The advancement in technology and increased accessibility of the internet, have made OCSEA witness a practical metamorphosis, with clandestine techniques, including the lure of children by trusted persons to play a critical role (Hutson et al., 2018). Online grooming is defined as the situation where a minor is exposed to materials and/or information intended to introduce or prepare her/him for explicit online sexual activities (Finkelhor et al., 2020; UNICEF, 2020b). This emerging practice is increasingly gaining traction among minors and is leveraging the contemporary contexts where minors have

increased access to digital devices through which OCSEA perpetrators can easily reach them (Patchin & Hinduja, 2019; Meridian et al., 2018).

2.3.1. Digital Technology's Prevalence/Access and OCSEA among urban poor areas

Children living in urban informal settlements experience unique challenges in accessing education, both pre- and during the COVID-19 pandemic period (Islam et al., 2021). For instance, children residing in slums globally, including those in Kenya (Njeru, 2010), India (Tripathi, 2019; Siddiqui, 2017), Brazil (Schmidt, 2014), Pakistan (Sattar & Zhang, 2017), and Indonesia (Cho, 2020), have had to live with challenges related to financial inadequacies, unavailable education and employment opportunities. In Kenya, India, and Pakistan, limited distance learning opportunities were identified as key barriers to participating and/or accessing quality education opportunities and related instructional materials that exist online (Islam, 2021).

Despite these challenges, the provision of distance learning through education technology platforms that include access to and use of the internet by both teachers and learners was on the increase in the urban poor settlements. In Kenya for instance, learners [children, youth (both boys and girls), and women] in Kibera slums were offered internet (dubbed TunapandaNET) for learning and teaching by Tunapanda Institute (APC, 2019; Miliza, 2018) to increase their participation in online and offline learning, whereas in Nigeria through its 'Slum2School' program, which is a virtual learning platform initiated in mid-2020 provided remote learning services that entailed provision of digital devices and internet to learners for learning (Campos, 2020). Among the devices provided to slum children for learning were smart phones, laptops and tablets accompanied by assistive devices like headphones to support their participation in online class learning.

Consequently, children in slums were able to access and use such devices for online learning, including accessing other online content that may or may not be linked to educational content (Ramiro et al., 2019). Such ICT support to children in slums has broken the hitherto assumed digital divide barrier that existed between the privileged and underprivileged learners in urban areas, and which hindered access to digital media to the underprivileged.

As a result, more and more children, both from privileged and underprivileged households in urban areas have become even more vulnerable to OCSEA, this cuts across the economic divide. Where perpetrators are also present to lure potential victims. Evidence indicates that children from underprivileged contexts are potentially more susceptible to OCSEA trap due to

the promises of financial returns when they engage in online sexual activities for money, a situation that they may be involuntarily content with owing to their economic situations and the increasing need to support their families economically (Islam, 2021; Hirschtritt et al., 2019). It is therefore not surprising to find a high number of children, especially adolescents, engaging in various income-generating activities to support their parents and augment their household incomes (Raha et al., 2021; Ahmed et al., 2020; Emon et al., 2020).

Against this backdrop, there is a mix of views of digital technology on education, with the pro-digital technology proponents seeing it as a tool for an enhanced reach of educational materials that guarantee universal access to equal quality content to learners, thereby addressing the issues of equity and equality in provisioning of educational materials (Ochieng' & Ngware, 2022; Ochieng & Gyasi, 2021). On the other hand, children can reap the benefits of digital technology only if the safeguarding concerns, especially those pertaining to OCSEA are put into consideration. It is clear thus that access to digital technology by children without regulation, can lead to children accessing and joining OCSEA-related practices, especially where and when there are promises of financial incentives.

2.3.2. Parental/caregiver Involvement and OCSEA among urban poor areas

Parental involvement in children's daily lives is critical, especially in informing their holistic development (Islam, 2021; Suizzo, 2007). Literature shows that parental and wider community involvement in their children's education motivates them (children) to have more interest in their education owing to the existing support system from parents and/or the wider community (Özçalık & Atakoğlu, 2021; Abuya et al., 2018). Evidence indicates that the more a parent is involved in their children's education, including in detailed exercises that their children take, whether via digital/online platforms or onsite classroom plays a crucial role in stimulating their learning and mental growth (UNICEF, 2021; Đurišić & Bunijevac, 2017).

At the early childhood level, parents can be engaged in their learners' learning activities by engaging them [children] in activities like looking at book pictures, reading, storytelling, drawing and counting, gaming, playing together, and walking together. These are critical in boosting children's self-esteem and self of belonging and building trust between them and their parents (UNICEF, 2021; Emeagwali, 2009). Such trust is the foundation for a deeper connection between a child and a parent. As such, this could help children engage and/or confide in their parents and/or guardians on complex and sensitive matters like OCSEA when they encounter them (Özçalık & Atakoğlu, 2021; Hirschtritt et al., 2019). This establishes a

trusted space in which children are likely to open up and seek guidance when confronted with OCSEA issues (Abuya et al., 2018; Whittle et al., 2015). Evidence that contains consistent information indicates that a parent involved in their children's in-school and out-of-school activities have a better chance of identifying their children's problems, including those pertaining to OCSEA, and the reverse is true (Özçalık & Atakoğlu, 2021).

2.3.3. Level of Awareness and OCSEA in urban poor areas

While it is evident that OCSEA is ripe among children and youth, it is rarely exposed or discussed by victims. This is largely due to a lack or limited awareness of OCSEA, including its various forms, on the part of key stakeholders (parents, teachers, and learners themselves) and in other parts due to the existing fear of stigmatization by the public (Abuya et al., 2018). For this reason, it becomes difficult to understand the magnitude of occurrence, including knowing the most prone age-group and the platforms and/or channels through which they are most susceptible.

It is an undisputed fact that without data/statistics or awareness about a problem, OCSEA becomes difficult to address since quantification of the problem is difficult (Morgan & Lambie, 2019; Martin, 2016). The challenge in getting information on OCSEA at the individual, household, and community level could be a function of socio-cultural barriers that hinder open discourse on the topic due to inherent stigmatization, hence rendering it incomprehensible for policy-oriented action to solve the problem on a large scale. In addition, literature and or information in the public domain that could educate victims or potential victims is only recently emerging, considering that attention to this problem has gained traction in the recent past (Bickart et al., 2019). Further, OCSEA and all its related forms including human tracking and smuggling, which play a pivotal in the advancement of OCSEA are continually undergoing metamorphosis and perpetrators are always changing their approach or tactic of recruiting minors to the practice. This means that if key stakeholders are not up to date with the ever-changing tactic, many of the ways through which perpetrators operate could become difficult to identify and stop, making the vice continue unabated (Özçalık & Atakoğlu, 2021; Ramiro et al., 2019; Jonsson et al., 2019). Within the Kenyan urban poor community, particularly Kibera, several community dialogues have been held to disseminate information on OCSEA, including modes of engagement and targeted populations to help prevent the problem's further spread (APC, 2019; Miliza, 2018). It must be noted however that such programs or initiatives are limited in scope which would mean further spread of OCSEA in Kibera due to limited awareness of OCSEA occurrence among potential OCSEA victims. The limited awareness

levels, reach, and resources to scale the mentioned dialogue intervention could however mean that minors in the vulnerable category like those residing in urban poor areas like Kibera are more disadvantaged and are more prone to misinformation or lack thereof, and possibly participate in OCSEA involuntarily.

2.4. Conceptual Framework

A conceptual framework is a visual presentation of a phenomenon the organization that gives form and shape to the whole system, supports, and holds together all other elements in a coherent structure (Mugenda and Mugenda, 2008). It progressively reinforces and retains research on the path by offering clear associations from the literature to the research goals and questions as well as contributing to the preparation of the research design (Goetz, 1984; Bliss et al., 1983).

Literature suggests that the independent variables that influence OCSEA include parental/guardian involvement, the prevalence of digital technologies in the study area, as well as the level of awareness of OCSEA among the study population. The intervening variable in this context **(*see Figure 2.1*)** is the government through the existing guidelines and framework.

The mentioned independent variables are literature-led and could therefore be important to explore this aspect using primary data to understand whether the literature or secondary data's findings are consistent with primary data. The conceptualization of this framework was informed by an in-depth review of the literature on the study topic, with a particular focus paid to the occurrence of OCSEA in urban poor settings. The emergent themes in the literature review formed the basis of this study's conceptual framework.

This study's conceptual framework outlined three guiding variables as indicated in **Figure 2.1,** namely the independent variable, the dependent variable and the intervening variable which interact with each other consequently as shown by the arrows.

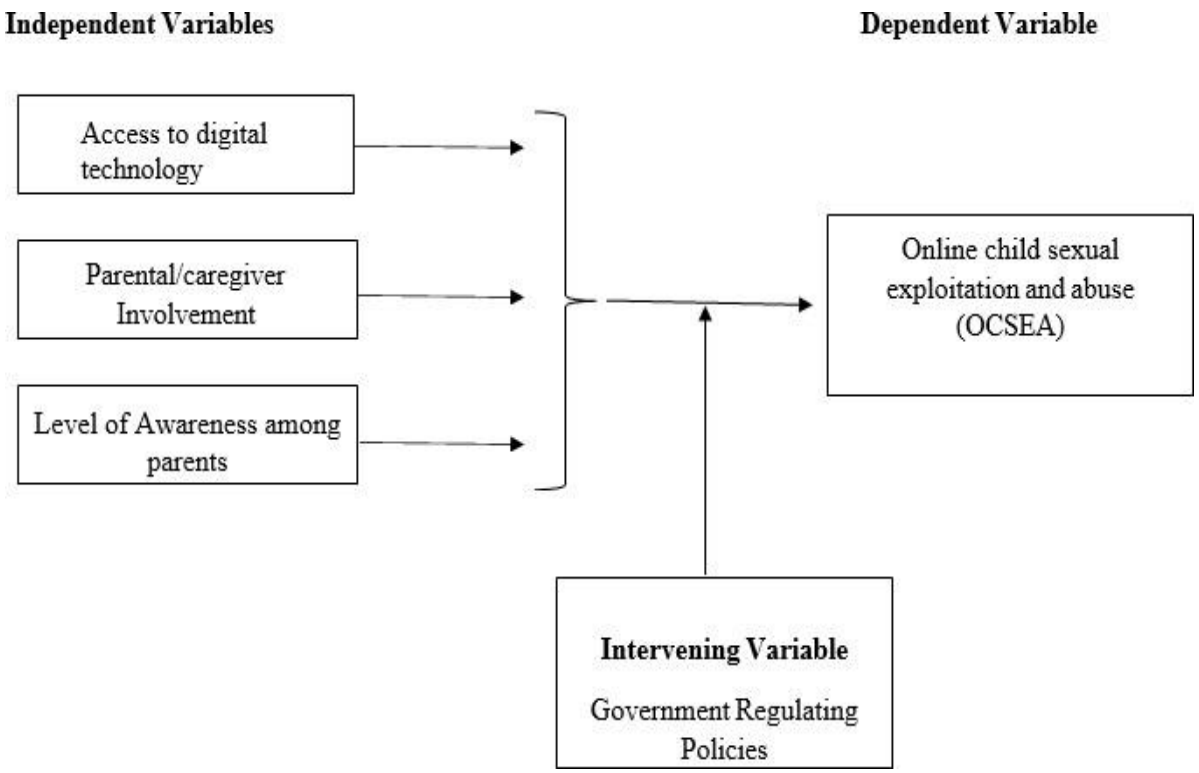
For instance; access to digital technologies by minors without supervision contributes to the occurrence of OCSEA. The more accessible digital devices and the Internet are to children the higher the chances of OCSEA occurrences and vice versa.

Parental/caregiver involvement also plays a significant role in the occurrence of OCSEA, where higher parental involvement in supporting children during online interaction low chance of OCSEA occurrence and vice versa.

OCSEA's occurrence on the other hand is dependent on the ability of parents/caregivers to control or regulate the access to digital devices by children. The level of awareness of OCSEA by parents/caregivers determines the extent to which parents/caregivers can guide or support vulnerable children or victims of OCSEA. Awareness raising targeting parents/caregivers can take the form of community sensitization sessions and campaigns whose impact can be measured through the number of cases of OCSEA occurrence reported to the authorities and reduced cases of OCSEA in Kibera and behaviour changes attributed to the campaigns.

Government regulating frameworks like policies, especially on controlled access to digital content, determine the level of OCSEA's occurrence. The number of OCSEA occurrence cases reported to the authorities should be acted upon as dictated by the laid-out guidelines and policies. OCSEA is a criminal offence punishable by law; pursuing, arresting and prosecuting perpetrators is a sure way to protect children from it.

Figure 2.1: Conceptual Framework



Source: Own conceptualization 2022

2.5 Summary of Literature Review

The literature reviewed shows that there is a paucity of research focusing on the relationship between digital devices and the occurrence of OCSEA among marginalized children residing in urban slums. However, their emphasis or much research delved into the positives of digital devices in promoting equity in access to information and learning materials digitally with no consideration for the safety of children when interacting in the online space.

The reviewed literature for this section highlighted OCSEA as one of the issues that children in the urban poor have to deal with when using unmonitored digital devices for learning or entertainment. Again, most of the reviewed literature focused on tertiary institutions and students in those institutions, or a mere comparison of the situational analysis and comparison of rural and urban children.

Access to digital technologies by children helps them to expand their intellectual and social capacities. However, the captured evidence from the reviewed literature reveals that unmonitored access can lead to children accessing and engaging in OCSEA-related practices. The consequences of this phenomenon are dire and may distract children, especially from using digital technologies for education and entertainment purposes, thereby hindering their optimum and/or holistic development. Parents who are actively involved in their children's learning activities through varied digital platforms, including active monitoring of the children's engagements with and on digital platforms have high potential to prevent the occurrence of OCSEA within their households and in the wider community.

Adduced evidence further points out that the stigma attached to OCSEA makes it difficult to quantify the affected population. This equally affects the awareness levels among children and their parents/caregivers.

The observed gaps in literature offered an opportunity that particularly focused on the role of digital devices, awareness levels, and parental involvement in the context of urban informal settlements. The researcher therefore delved into understanding the proximate issues and factors the children in informal settlements had to contend with when using digital devices.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This section outlines the way the research was administered. It highlights the adopted research design, the target population, the sample procedure and size, the study guides to be used, the data collection procedure, the data analysis techniques employed in processing the collected data, and the ethical considerations considered in this study.

3.2 Hypotheses of the Study

This section describes the hypotheses that guide the methodology employed in this research. Hypotheses are statements that can be tested by scientific research, and determine the direction of analysis, based on the study objectives. The analysis of this study is guided by the following hypotheses stated in null form;

1. **H_0:** Awareness levels do not have an effect on OCSEA among children in Kibera Slums.

2. **H_0:** Parental involvement does not have an effect on OCSEA among children in Kibera Slums.

3. **H_0:** Digital technology does not have an effect on OCSEA among children in Kibera Slums.

3.3 Research Design

A cross-sectional study design was adopted for this study. Both quantitative and qualitative approaches was utilized. The quantitative data informed this study, whereas the qualitative data was used to support and/or triangulate the quantitative data. A qualitative approach was adopted for this research to help the researcher understand respondents' perceptions of the topic of study, the lived experiences of victims, and ideas or opinions of the study community which can best be explored using a qualitative approach.

The researcher adopted this study design due to its ability to measure prevalence of a phenomenon at a particular point in time. It is also inexpensive and valuable in establishing preliminary evidence for advanced research studies in the future.

In addition, a case study design was adopted for this research to obtain contextual, in-depth, and concrete knowledge about OCSEA. For the qualitative component, a key informant interview (KII) guide was used to collect data from key informants, whereas, for quantitative data, a closed-ended questionnaire was used to collect data among parents.

It is important to note that with qualitative approaches, data may be collected through various means including interviews, questionnaires, and written accounts by subjects or observations by the researcher(s). This kind of research is appropriate for contexts or disciplines in which little knowledge exists makes the qualitative approach suitable for research for purposes of obtaining additional information that complements quantitative data and even for triangulating quantitative data, and was therefore suitable for the OCSEA research (Donalek, 2004).

The researcher also identified what she sought to discover and then intentionally set aside these ideas; a situation dubbed 'bracketing'. 'Bracketing' is important in helping a researcher to stay within the scope of the study, and hence limit possible deviations that may occur in a study. This is because it is only through this practice that the researcher was able to see and understand targeted or precise experiences from the respondents' viewpoint (Donalek, 2004; Streubert & Carpenter, 2002).

3.4 Target Population

This research study drew its target population from the Directorate of Children Services, Ministry of Public Service, Youth and Gender Affairs, and organizations that have previously intervened in OCSEA in Kibera Slums. Representation of parents of the beneficiaries and the community resource persons all of whom jointly took part in the OCSEA intervention dubbed 'The Watch 24/7' Project were also selected as respondents.

The Watch 24/7 Project was a National Postcode Lottery funded project implemented by Childline Kenya in partnership with Terre des Hommes- Netherlands. It was implemented in Nairobi (Kibra-Sub County specifically Kibera Slums) County for one year (2021) and supported children affected by Online Child Sexual Exploitation (OCSE) through counselling support, rescue, referral and education. The project also equipped parents with the requisite knowledge and skills on child online safety and the ability to report potential cases of OCSEA.

The parents/caregivers of children victims of OCSEA were also provided with psychosocial support to help cope with the trauma of their children who were affected by OCSEA and also to be able to care for their children during the healing process and to sustain positive behaviour change.

The Government officials, CSOs and community actors were engaged at different levels through case conferences, project advisory committee meetings and community forums within the community. This study targeted a population of 150 parents from the Watch 24/7 Project and referred to this group as the treatment group. The study targeted an additional 14 parents in Kibera Slums who did not participate in the project, referring to this cohort as the control group. Table 3.2 illustrates the target population for quantitative data.

Additionally, qualitative respondents were drawn from the project's advisory committee (Watch 24/7 Project), these participants directly designed, oversaw implementation, appraised, supervised and guided the project's delivery. This committee comprised 11 participants as captured in Table 3.1.

Table 3. 1: Target Population (qualitative data)

Organization/Entity	**Department(s)**	**Population**
Project Advisory Committee (Watch 24/7 Project)		
Ministry of Public Service, Youth and Gender Affairs	Directorate of Children Services	3
Religious Leaders	Religion	2
Ministry of Interior and Security	Internal Security	2
TdH-NL	Programs	2
Childline Kenya	Programs	2
Total		**11**

A total of 150 parents directly benefitted from this project as shown in Table 3.2. These parents were this study's target population.

Table 3. 2: Target Population for Survey (Quantitative data)

Kibera Community		
Parents from the treatment group	Kibera Community	150
Parents from the control group	Kibera Community	14
Total		**164**

3.5 Unit of analysis

The Kibera slum parents were the study's primary unit of analysis. The primary information was gathered through surveys which were executed by the research assistants to the selected respondents within the study site.

The highlighted unit of analysis was categorized into two; the parents who participated in the Watch 24/7 project and 14 parents who did not take part in the Watch 24/7 project but live within the study site. These 14 parents acted as a control group to help validate the research findings. Analysis of the study's data helped to determine the actual extent of vulnerability of Kibera's children to OCSEA. Table 3.3 gives a snapshot of the data needs for this study.

Table 3. 3: Data needs and data collection methods' table

Research Objective	Data Needs	Data-Collection Method
Examine the influence of awareness levels on OCSEA among children in Kibera Slums.	Individual awareness levels	Field Study
Examine the influence of digital technology on OCSEA's occurrence among children in Kibera Slums	Digital technology access/prevalence	Field Study
Examine the influence of parental involvement on OCSEA's occurrence among children in Kibera Slums	Level of parental involvement	Field Study

Source: Own conceptualization 2022

3.6 Sampling Procedure and Technique

The researcher adopted purposive sampling. Purposive sampling is 'used to select respondents that are most likely to yield appropriate and useful information' (Kelly,2010) and is a way of identifying and selecting cases that will use limited research resources effectively (Palinkas et al., 2015). Considering that the selection of respondents was based on special situations – direct involvement in the targeted response and, being deemed or judged by the researcher to be knowledgeable in the research area and the targeted programme. This sampling method was essential in helping the researcher pay attention to particular respondents of interest to help answer the study's research questions.

3.6.1 Recruitment Procedure

The specific criteria adopted for this study entirely relied on the primary researcher. She worked closely with the Childline Kenya programmes department which availed the participant lists of the 150 parents who participated in the Watch 24/7 Project. The contacts were generated from the participant list which had the names, genders, contacts and locations of the parents

who are the researcher's population target. It is from this list that the Researcher derived the sample size for this study.

The researcher then screened the sample population to establish their ability to offer valuable insights on this study. They were reached through telephone calls with messages inviting them to participate in the study and simple demographic questions were also asked to verify whether they meet the study criteria. This was done prior to their informed consent to voluntarily participate in the study.

The other 14 parents not involved in the project but who took part in this study were selected through convenience sampling method from the study sites (Gatwekera, Lindi, Makina, Ayany, Kianda and Laini Saba). They were exposed to the same households' approach applied to the 150 parents. Engaging this control population validated the Researcher's findings. It was assumed that they might be objective in giving their response compared to the respondents from the Watch 24/7 Project who could be biased in their response.

3.6.2 Sampling Size

As per the qualitative respondents, the researcher selected at least 50% of the respondents. Since the committee had 11 persons, the targeted sample size was 6 key informants. This decision was guided by qualitative research principles where no universally accepted sample size range is considered to be adequate for a sample size. For instance, Onwuegbuzie and Leech (2007) on their part fail to attach precise number limitations nonetheless, encourage qualitative researchers to collect data using varied data collection tools targeting respondents deemed well-informed on the study area to give in-depth, detailed and contextual evidence on the subject of study. Onwuegbuzie and Leech's (2007) assertion guided this study where the researcher targeted the key informants to get detailed and contextual information from project personnel who are perceived to have detailed information on the case study.

The sample size was derived from the 150 parents who participated in the educative sessions under the Watch 24/7 Project. Random sequencing was applied on the 150 which is the finite sample to help determine the lowest and the highest number which gives an equal chance to be included as a participant. This was convenient since it helped the Researcher replace the unavailable respondents with the next number in the sequence.

A sample size formula was then applied to the target population which then left the Researcher with 56 respondents as the sample size she intended to target. This was determined using the sample size determination formula below:

$$\text{Sample size, } n = N * \frac{\frac{Z^2 * p * (1-p)}{e^2}}{[N - 1 + \frac{Z^2 * p * (1-p)}{e^2}]}$$

Where:

N = Population size,

Z = Critical value of the normal distribution at the required confidence level,

p = Sample proportion,

e = Margin of error

Table 3. 4: Sampling size

Particular	Value
Population Size (N)	150
Critical Value (95% confidence level) (Z)	1.96
Margin of Error (e)	0.05
a) Sample Proportion (uncertain) (p)	0.5
b) Sample Proportion (p)	0.05

$= (150* (1.96^2) *0.5*(1-0.5)/ (0.05^2)/ (150 – 1+(1.96^2) * 0.5* (1-0.5)/ (0.05^2)))$

N=56

The other 14 parents comprising the control group were selected through a convenience sampling method from the study sites (Gatwekera, Lindi, Makina, Ayany, Kianda and Laini Saba). The researcher engaged at least 2 (male and female) respondents from nearby households from project site whose quota met the household characteristics of the treatment group. The selected parents were asked questions on what motivates or pushes children to engage in OCSEA among other related questions. As a result, the researcher collected data from 54 respondents from the treatment group out of the targeted 56 and all 14 respondents from the control group. The total number of primary respondents in this study was 70 (treatment and control group). The researcher was satisfied with a response rate of 97%.

3.7 Research Instruments

The study used two sets of tools - a key informant interview guide for collecting qualitative data, and a section comprising of quantitative tool (survey questionnaire) that was administered to parents. This means that the KII guides were tailor-made to have questions that suite the

qualitative respondents while a survey/questionnaire tool was administered to the main respondents (parents). The KII questions in Kibera and the survey/questionnaire for parents focused on OCSEA prevalence in Kibera. The qualitative respondents were persons who had directly participated in the design of the program right from the program's conceptualization through to securing the program's donor support and throughout the program's implementation. The survey targeted parents or caregivers who had direct contact with beneficiaries. In summary, the tools targeted to collect both qualitative and quantitative data on participants/respondents' knowledge or understanding of the OCSEA intervention, OCSEA situation in the country as well as the study site (Kibera), knowledge of legal and policy responses as pertains to OCSEA in the country, parental involvement in responding to OCSEA, achievements that have been made in the fight against OCSEA at the community level.

3.7.1 Pilot Study

The researcher carried out a pilot test on the two sets of tools to determine how well they could assist the researcher in obtaining the sought responses. The piloting was done with the local non-governmental institution that implemented the Watch 24/7 Project, and targeted staff who were not directly involved in the project but those who work in other programs. Two pilot tests were administered, one with a senior program staff and another one with a mid-level staff from a different program. The researcher intended to review the tools before the data collection exercise. Such adjustments if not addressed have the potential to influence responses, most often negatively leading to the collection of poor-quality data.

3.7.2 Validity of the Research Instruments

The researcher used a triangulation approach to validate research instruments, using varied data sources (primary and secondary) and different investigators as Research Assistants to help arrive at a desired conclusion or interpretation (Creswell & Poth, 2013; Denzin, 1989), guided by this study's research objectives and questions. Denzin (1989) in his book describes four kinds of triangulation for improving the credibility of both qualitative and quantitative research, including, i) methodological triangulation, ii) source triangulation, iii) theory triangulation, and iv) investigator triangulation. Guided by Denzin's (1989) approach, the researcher used investigator triangulation, where she employed the services of two Research Assistants (researchers) to help in the collection and analysis of the data. By having the Research Assistants involved in the collection and analysis of data, the researcher was able to make comparisons to ascertain the results' consistency across multiple research participants.

3.7.3 Reliability of the Research Instruments

An instrument's dependability is determined by the degree to which it produces reliable outcomes following repeated measurements (Cooper and Schindler, 2008). The reliability of quantitative research instruments was done by Cronbach's alpha coefficient to help determine the internal consistency between items, especially in determining how well a set of items/questions measures a given feature of the test. The reliability of this study's quantitative instruments was therefore tested using Cronbach's Alpha method, determined by the data collected from the pilot exercise. Cronbach's alpha is essential in measuring scores' internal consistency that falls along a continuum. The Statistical Packages for Social Sciences (SPSS) was used to determine Cronbach's alpha on data collected from the pilot exercise with a value greater than or equal to 0.7 will be considered sufficiently reliable by the researcher (Kubai, 2019). The researcher 0.8, indicating that the tools were reliable. Additionally, the researcher correlated multiple items within a test to estimate the coefficient of reliability (Cronbach, 1951; Kubai, 2019). It is important to note that an individual item of a test may have an insignificant or small correlation with true scores, while higher items may have a higher correlation. For example, a 4-item test may correlate 0.30 while a 10-item test may correlate 0.70. Coefficient alpha is also used to determine reliability for item particular variance in a unidirectional test. Where and when the alpha coefficient is low, it implies that the items have less in common or that the test is too short (Cortina, 1993).

3.8 Data Collection Procedure

An analytical cross-sectional study is a type of quantitative, non-experimental research design. The primary data was collected through the administered structured questionnaire and a key informant guide. The secondary data from the literature review sought from government reports either by downloading from their websites and where this is not possible, making requests for such documents by email or physical visit to concerned departments complemented and validated the findings of this research.

3.9 Data Analysis Technique

Content analysis was used in analysing the data obtained from the case study and secondary data/literature. This is a critical aspect of quality research, where underlying messages need to be explored to offer hidden messages to inform action and the topic's stakeholders. Data captured in the recorders used for interviews was transcribed verbatim to ensure that no information or meaning was left uncaptured and also to address the issues of biases and

misquoting responses. The themes that emerged from the coding 'digital technology effects on OCSEA', 'parental involvement and OCSEA', 'challenges in OCSEA', and 'recommendations for improvement'. The NVIVO software to analyse the qualitative data thematically by reading through the data set to identify patterns which can analysed qualitatively. The thematic analysis helped the researcher to identify coded responses that appeared to most and closely answer this study's research questions to inform this research's findings section. The applied thematic analysis was pivotal in enabling the authors to understand the varied respondents' responses, including highlighting the themes dis/similarities in relation to this research's research questions (Braun & Clarke, 2006). Thematic analysis was also essential in the development of a concise dataset and code sheet to highlight the emergent coding and data report (King, 2004). The investigator anticipates to utilize the qualitative data derived from the study for triangulation purposes and/or to complement the data and information obtained from quantitative data. The obtained final data was used to write this research's findings section.

The SPSS was adopted for quantitative statistical analyses to compute descriptive statistics and inferential statistics. The researcher performed measures of central tendency (mean and mode) as well as measures of dispersion (standard deviation and variance) for analysis of non-parametric data to explore the study objectives. Further, rank analysis based on mean was performed to help the researcher come up with the order of precedence among aspects of OCSEA.

3.10 Model Specification

The study explains the connection between the dependent and independent variables in this study. The dependent variable is shown by the likelihood or proneness to OCSEA. Independent variables include awareness of parents to OCSEA, parental or caregiver involvement, and availability of digital technology in the household. Other variables included in the model include the age and gender of the respondent, marital status of the respondent, highest education level of the respondent, and the position of the respondent in the family. These act as control variables in the model. Normality tests were conducted before the regression analysis to determine the statistical significance of the variables in the model.

The specified model is thus as follows:

$$\boldsymbol{Y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5 + a_6X_6 + a_7X_7 + a_8X_8 + a_9X_9 + \mu} \quad \textbf{(1)}$$

Where:

Y = dependent variable which represents proneness to OCSEA

$\boldsymbol{X_1}$**=** Parents' awareness of OCSEA

$\boldsymbol{X_2}$**=** Availability of digital technology in the household

$\boldsymbol{X_3}$**=** Parental Involvement

$\boldsymbol{X_4}$**=** Household size

$\boldsymbol{X_5}$**=** Age of the respondent

$\boldsymbol{X_6}$ **=** Gender of the respondent

$\boldsymbol{X_7}$ **=** Marital status of the respondent

$\boldsymbol{X_8}$ **=** Highest educational level of the respondent

$\boldsymbol{X_9}$ **=** Position of the respondent in the family

$\boldsymbol{\mu}$ **=** error term

The study conducted the regression analysis on the control group which includes parents who did not take part in 'The Watch 24/7' Project; and on the treatment group, which includes parents who participated in the project. The two datasets were used together, and randomly arranged.

3.11 Definition and Measurement of Variables

The variables used in the model are described in this section. Furthermore, the study explains the significance of the variables in the study and how each independent variable is expected to relate to the individual's proneness to OCSEA, which is the dependent variable. Table 3.5 states and describes each variable used in the model.

Table 3. 5: Operationalization of the Variables

Objectives	**Independent Variables**	**Indicators**	**Measurement Scales**	**Data Analysis Method**	**Tools of Analysis**
To examine the influence of awareness levels on OCSEA among children in Kibera Slums.	Awareness levels	-Number of new campaigns. -Number of successful behaviour changes attributed to campaigns. -Number of community engagements to raise awareness.	Ordinal Ordinal Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis
To examine the influence of digital technologies on OCSEA's occurrence among children in Kibera Slums.	Digital technology	-Number of new/existing digital technology platforms -Number of reported or noted misuse of digital technology by parents. -The type of digital technology platforms. -Number of digital platforms accessible to learners	Ordinal Ordinal Nominal Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis
To examine the influence of parental involvement on OCSEA's occurrence among children in Kibera Slums.	Parental involvement	-Number of documented parental involvement practices. -Methods/approaches of parental involvement. -Category or level of parental involvement. -Number of parents satisfied by their level of involvement	Ordinal Nominal Ordinal Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis
Control Variables	Age	Age of the respondent	Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis
	Gender	Gender of the respondent	Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis
	Marital status	Marital status of the respondent	Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis
	Highest Education Level	The highest education level of the respondent	Nominal	Descriptive	Mean, Median, standard deviation, regression analysis
	Position in the family	The respondent's position in the family	Nominal	Descriptive	Mean, Median, standard deviation, regression analysis
	Dependent Variable				
To understand the factors that influence children's vulnerability to online child sexual exploitation and abuse (OCSEA) in Kibera slums, Nairobi County.	Online child sexual exploitation and abuse (OCSEA)	-Number of completed OCSEA interventions. -Number of interventions supported by the government etc; -Number of reported/recorded incidences of unmonitored access to technology. -Recorded/reported Number/incidence of children's loneliness	Ordinal Ordinal Ordinal Ordinal	Descriptive	Mean, Median, standard deviation, regression analysis

3.12 Ethical Issues

The researcher obtained an introduction letter from the university giving her authorization to conduct the study. The university letter was used to seek a research permit from the National Commission for Science, Technology and Innovation (NACOSTI).

The research assistants were trained on how to introduce themselves to the respondents before commencing the interviews. Before the administration of the data collection tools to the targeted respondents, they were issued with a prior explanation of the research's objectives and targeted information needs.

Once a respondent is identified and research information is provided, the respondents' participation is voluntary. The voluntariness of participation was such that the respondents were free to decline to participate at any level before and during the interview process without fear that any repercussion may befall them. This can happen when a respondent declines to participate but fears that a researcher may report him/her to their supervisor for refusing. They [respondents] were guaranteed that such reporting would not be done but respectfully, the researcher may encourage those who decline to participate. Informed consent was administered to all the respondents as a measure to preclude any adverse study effects on the respondents. The researcher outlined all the necessary details of the study including voluntary participation, his/her rights in participation, statement of remuneration (as may be expected by some), and the aspect of their data or information not being shared with anybody besides the researcher. The researcher prioritized respect for the respondents and made every effort to abide by the requirements of the respondents, including their preferred time of the interviews. A non-disclosure agreement was signed by both the researcher and her Research Assistants to guarantee that no information from the respondents would be shared with any outsider. This addressed fears relating to victimization for providing certain information perceived to be sensitive by their employing institution. Also, considering that aspects pertaining to naivety and trauma to victims of OCSEA may further expose victims' vulnerability and lead to further traumatic experiences, the researcher only interviewed parents and not victims of OCSEA (children and/or youth) to protect their mental or psychological wellbeing.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter highlights the key findings and interpretation of the synthesized data from the study respondents. The adduced findings are categorized into different themes and sub-themes, including but not limited to demographic characteristics of respondents, and related results around the study topic as relates to the respondents. Frequency tables and figures have been used to illustrate the findings of the study, guided by both the study objectives and research questions. The researcher collected data from 54 respondents [treatment group] and a small group of 14 respondents [control group]. The results highlighted in the following sections suffice.

4.2 Response Rate

The researcher obtained a response rate of 96.4%, having collected data from 54 quantitative respondents out of the 56 respondents who were targeted. For qualitative data, a response rate of 83% was achieved having collected data from 5 out of 6 targeted respondents. As for the control group, the researcher obtained a 100% response rate since all 14 respondents returned their duly filled questionnaires. Table 4.1 gives a summary of quantitative response rates.

Table 4. 1: Response rate

	Total	**Responded**	**Percentage**
Treatment group	56	54	96.4%
Control group	14	14	100%
Key informants	6	5	83%

4.3 Demographic Characteristics of Respondents

The following were the demographic features explored in this study:

4.3.1. Age

The researcher targeted respondents from all categories/age groups, provided that they met the inclusion criteria as being residents of the study. Results show that the majority of the respondents were those aged between 40-44 years (27), 35-39 years (11), and those above 44 years (13), respectively. This variation suggests that households with older parents have a

higher risk of OCSEA compared to those with younger parents. Table 4.2 highlights this age distribution.

Table 4. 2: Variation of population by age

Age	Frequency	Percentage
20-24	2	2.9
25-29	7	10.3
30-34	8	11.8
35-39	11	16.2
40-44	27	39.7
44+	13	19.1
Total	68	100

Source: Fieldwork 2022

4.3.2. Gender

There were more male respondents (51.5%) than female respondents (48.5%). Table 4.4 highlights the gender of respondents.

Table 4. 3: Gender of Respondents

Gender	Frequency	Percentage
Female	33	48.5
Male	35	51.5
Total	68	100

Source: Fieldwork 2022

4.3.3. Education Levels

As pertains to the respondents' levels of education, the majority of the respondents drawn from the study population had attained post-secondary certificate (45.6%), followed by those who had attained the Kenya Certificate of Secondary Education (KCSE) level (22.1%).

Table 4. 4: Educational Attainment

Educational attainment	Frequency	Percentage
Kenya Certificate of Secondary Education	15	22.1
Post-Secondary Certificate	31	45.6
Post-Secondary Diploma	13	19.1
Undergraduate Degree	9	13.2
Total	68	100.0

Source: Fieldwork 2022

4.3.4. Marital status of respondents

The majority of the respondents in both the treatment and control group were married (66.2%) those who were separated and single came in second (13.2%), followed lastly by the respondents who were widowed at 7.4%. This finding implies that the occurrences of OCSEA are mostly reported among married couples. Table 4.5 highlights these statistics.

Table 4. 5: Respondents' Marital Status

Marital status	Frequency	Percentage
Single	9	13.2
Married	45	66.2
Widowed	5	7.4
Separated	9	13.2
Total	68	100

Source: Fieldwork 2022

4.3.5. Employment Type

In terms of employment type, results show that most of the respondents were in self-employment and casual labourers. The majority of the respondents were in self-employment (42.6%), followed by those in casual employment (32.4%), and formal employment (22.1%), respectively. Employment types are captured in Table 4.6.

Table 4. 6: Employment type

Marital status	Frequency	Percentage
None/Unemployed	2	2.9
Casual Employment	22	32.4
Self-Employment	29	42.6
Formal Employment	15	22.1
Total	68	100.0

Source: Fieldwork 2022

4.3.6. Respondents' Position within the families

Either the child (this referred to the position of the respondent within the household but had attained 18 years) or the nuclear family members were the respondents in this study and were thus responding concerning themselves or one or more of their family members who are/are active or potential victim of OCSEA. Mothers were the highest respondents (38.2%), followed by fathers (25.0%), and siblings (20.6%), respectively. The selection of these participants was based on the project's (Watch 24/7) criteria for inclusion, which was independent of this

study's selection criteria as the researcher had to do an independent sample selection. Table 4.7 highlights the above statistics.

Table 4. 7: Respondents' positions within families

Position	Frequency	Per cent
Child	2	2.9
Sibling	14	20.6
Father	17	25.0
Mother	26	38.2
Aunt	3	4.4
Uncle	1	1.5
Grandparent	5	7.4
Total	68	100.0

Source: Fieldwork 2022

4.4. Awareness Level and OCSEA's Occurrence

In this study, we explored the degree to which study participants were in dis/agreement with the highlighted declarations on awareness levels and its effects on OCSEA's occurrence in the study Kibera. The below statements were offered to the target respondents to determine their extent of agreement or disagreement with questions relating to their awareness level of OCSEA occurrence in their community. Table 4.14 summarizes the derived results.

Table 4. 8: Awareness Level and OCSEA's Occurrence

Statement	Mean	Std Dev.
Monthly educative sessions on OCSEA targeting children were conducted during the project period	1.59	0.60
The community sensitization forums on OCSEA targeting parents were organized during the project period.	1.62	0.59
Children are empowered to report potential cases among their peers	1.53	0.72
Children Know what OCSEA in Kibera is	1.89	0.93
Parents know what OCSEA in Kibera is	2.23	1.05
Parents and children know where to report incidences of OCSEA	1.67	0.99
There were observable positive behaviour changes among children attributed to the educative sessions conducted in the Kibera community	2.56	1.07

The results highlighted in Table 4.8, reveal that respondents agreed with the statements with means ranging from 1.53 to 2.56. The standard deviation however revealed that there was no uniformity in respondents' agreements with the statements. The deviation in the standard deviation is an indication that the respondents' responses were either not from the same area

or had different experiences regarding OCSEA occurrences. The respondents agreed that monthly educative sessions on OCSEA that targeted children were administered during the project in question's period, community sensitization forums on OCSEA were organized and implemented, and children empowered to report likely cases of OCSEA among peers with means of 1.59, 1.62, and 1.52, respectively. The standard deviation from the mean was smallest at 0.603, 0.593, and 0.717 respectively. On the questions of, knowing what OCSEA in Kibera is, and there being observable positive behaviour changes among children attributed to the educative sessions conducted in the Kibera community, the respondents moderately agreed with means of 2.23, and 2.56, respectively, having a corresponding standard deviation of 1.053, and 1.071.

In addition, when participants were questioned on their degree of acceptance of whether awareness levels influence the occurrence of OCSEA, a significant number of respondents (66.6%) affirmed this statement. This includes those who strongly agreed (37%) and those who agreed (29.6%). Table 4.9 highlights the above statistics.

Table 4. 9: Awareness Levels and Occurrence of OCSEA

	Frequency	**Per cent**
Strongly Disagree	4	7.4
Disagree	7	13.0
Neutral	7	13.0
Agree	16	29.6
Strongly Agree	20	37.0
Total	54	100.0

Source: Fieldwork 2022

The above finding is echoed by responses provided by key informants who opined that involvement in OCSEA is a function of ignorance and lack of awareness of active and potential victims of OCSEA, especially among children and the youth. The responses below suffice:

> 'I think incidences of OCSEA among children and the youth are largely caused by their lack of awareness or ignorance on the dangers of OCSEA both and their families in the current and future time. Some of the victims never know that they are engaging in OCSEA and some cannot tell where they are being lured into it…there is still a lot that can be done by stakeholders to curb OCSEA' **[KII-GOV-KEI-150922]**

> 'The occurrence of OCSEA is because the community is not conversant with whether they are involved in OCSEA or not…more information and capacity building is needed in this topic to raise awareness among this community [Kibera], especially among parents and guardians to help them check on what their children are doing online and who they interact with' [**KII-Local-Community Rep-KIB-200922**]

4.5. Digital Technology and Occurrence of OCSEA

This study also sought to understand the influence of digital technology on OCSEA's occurrence. The participants were requested to indicate the level to which they dis/agreed with the declarations that were in line with digital technology and OCSEA occurrence. The rating scale for this component was: Strongly Agree (5); Agree (4); Neutral (3); Disagree (2); and Strongly Disagree (1). The result of their rating is captured in Table 4.10.

Table 4. 10: Digital Technology and OCSEA's Occurrence

Statements	Mean	Std Dev.
The number of digital technologies /platforms accessed by children has significantly increased in the recent past	2.01	0.86
Parents have been able to identify and report child sexual abuse cases propagated through digital technologies	1.91	0.73
Uncontrolled digital access by children increases their chances of being victims of OCSEA.	2.09	0.91
Digital technologies contributed to an increase in OCSEA	2.31	1.08
Digital technologies do not affect the occurrence of OCSEA	0.28	0.10
Children are highly engaged with digital technologies to access content other than educational/learning materials	2.04	1.14
There is high access to digital technologies among children and youth in Kibera	2.53	1.21

The responses obtained from the respondents with respect to this part of the questionnaire reveal that; the questions on whether 'the number of digital technologies accessed by children in the recent past increased tremendously in the recent past', whether 'parents have been able to identify and report child abuse cases engineered and fueled by digital technologies, uncontrolled digital access by children enhances their likelihood of being victims of OCSEA, and that digital technology contributes to increased OCSEA's occurrence with means of 2.01, 1.91, 2.09, and 2.31, respectively. The corresponding standard deviation was 0.857, 0.733, 0.911, and 1.084, respectively. However, there was low or insignificant agreement by respondents on the statement that 'digital technology has no effect on the occurrence of OCSEA' with a mean of 0.281 and an agreeing standard deviation of 0.102, indicating that digital technology indeed contributes to the occurrence of OCSEA. The results further revealed that children accessing digital technologies use them to access contents other than learning resources and that there is high access to digital technologies among children and youth in Kibera, with means of 2.04, and 2.53, and corresponding standard deviation of 1.137, and 1.211, respectively.

Table 4.11 and Figure 4.1 offers a tabular and visual response ranking from the respondents' responses on the question of whether digital technology influences the occurrence of OCSEA in Kibera. The captured responses indicate respondents were not convinced that digital technologies contributed to the occurrence of OCSEA as 53.7% disagreed (40.7% agreed that digital technologies contributed to a lesser extent, and 13% agreed that digital technologies contributed to no extent). However, 35.2% (20.4% (Great Extent), and 14.8% (Very Great Extent) of the respondents concurred that digital technology influence and/or enhance the occurrence of OCSEA in Kibera.

These results, however, deviate from the information obtained from qualitative data from key informant interviewees. Two key informant interviewees (one from the National Government and another from the NGO) concurred that indeed increased proliferation of digital technologies, and the ease of access to such technologies among children and youth have contributed to increased incidence of OCSEA's occurrence, further affirming the response given by the 35.2% of the respondents in the quantitative part. The excerpts below were obtained from key informant interviewees' responses:

> *'…indeed, technology like smartphones, social media, internet, laptops, computers and tablets have made it easy for our children and youth to be targets of OCSEA you are talking about…and some of them are in it without knowing it…digital technology has had its advantages, but it also has numerous shortcomings like promoting immorality among children and youth online…' [**KII-GOV-KEII-160922**]*

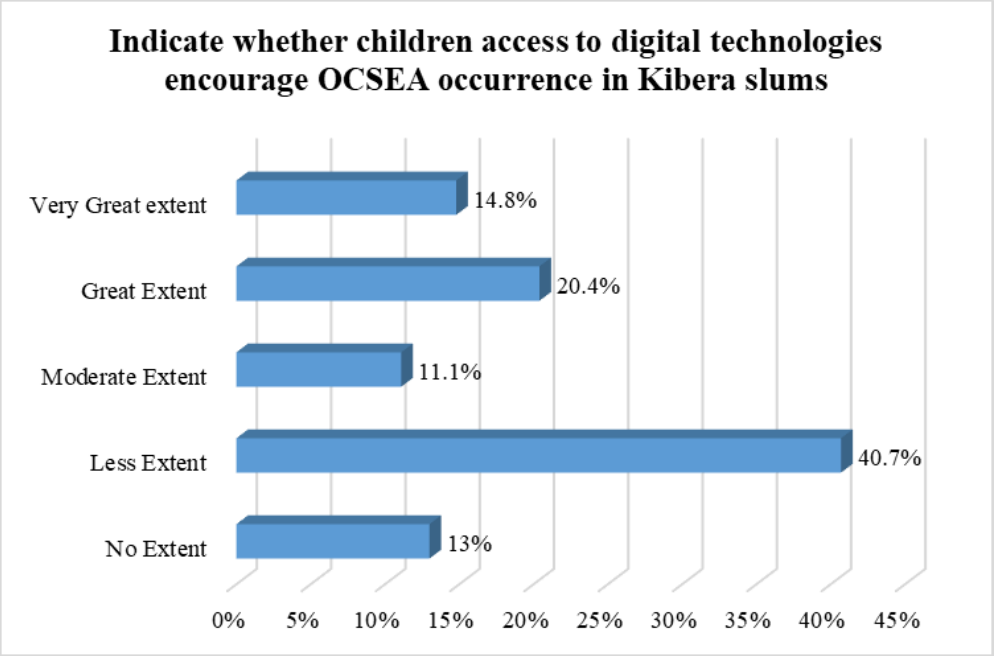
> *'…yes, you are right. I confirm that the increased access to digital technology has made more children and youth vulnerable to OCSEA because they get easily recruited into these activities by their peers and people who use these technologies for such kinds of vices. It is very easy to share and reshare online content via digital technology without many restrictions so, yeah, it promotes the occurrence of OCSEA…' [**KII-NGO-Rep-Nairobi-180922**]*

Table 4. 11: Digital Technologies and OCSEA's Occurrence

	Frequency	**Per cent**
Strongly Disagree	9	13.0
Disagree	27	40.7
Neutral	7	11.1
Agree	13	20.4
Strongly Agree	10	14.8
Total	68	100.0

Source: Fieldwork 2022

Figure 4. 1: Digital Technologies and OCSEA's Occurrence



Source: Fieldwork 2022

4.6. Parental Involvement and OCSEA's Occurrence

The respondents were also asked to indicate their level of agreement with statements that synonymize parental involvement and its influence on OCSEA's occurrence in Kibera. Table 4.12 records the findings obtained from the respondents.

The respondents agreed that; parents are well knowledgeable on OCSEA and that it is a type of child sexual abuse, parents who discuss online safety with their children enhance the protection of their children from OCSEA, and parents who are sensitized on OCSEA were able to support their children deal with psycho-social challenges brought by OCSEA, and that parents are aware that OCSEA is a crime that is punishable by law, with means of 2.58, 2.95, 2.55, and 2.12, respectively, and a corresponding standard deviation of 1.083, 1.090, 1.101, and 1.009, respectively. Hence, the degrees of agreement with the declarations were spread away from the documented means. However, the respondents' level of agreement was low for statements on parents encouraging their children to report cases of OCSEA; parents/caregivers regulating and monitoring online platforms visited by their children; parents/caregivers being aware and confirming online sites that their children are active on; and that parents volunteer and allocate time to guide their children on safe online involvement, with means of 0.93, 0.31, 0.88, and 0.41, respectively, and a corresponding standard deviation of 0.023, 0.008, 0.002, and 0.012, respectively.

Table 4. 12: Parental Involvement and OCSEA

Statement	Mean	Std Dev.
Parents are well conversant with OCSEA as a form of child sexual Abuse	2.58	1.083
Parents who discuss online safety with children increasingly protect children from OCSEA	2.95	1.090
Parents who are sensitized to OCSEA were able to offer psycho-social support to their children's survivors' of OCSEA	2.55	1.101
Parents are aware that OCSEA is a criminal offence punishable by law	2.12	1.009
Parents in the study site encourage their children to report to them any cases of OCSEA on them	0.93	0.023
Parents/Caregivers monitor and regulate which online platforms children visit	0.31	0.008
Parents/caregivers are aware of and confirm/check online platforms their children are active on	0.88	0.002
Parents volunteer and allocate time to guide their children on safe online engagement/participation	0.41	0.012

Other respondents were in agreement with the above statements. For instance, some of them were of the view that parents are less concerned with their children's online engagements or their use of digital technologies. They further argued that such a lack of involvement was a breeding ground for widespread OCSEA practice. Children and youth could therefore be involved in OCSEA either voluntarily, involuntarily or both because of the gap in home systems for checks and balances. The following statements put this statement into perspective:

> *'…to me…from my view, I feel that parents are less involved in their children's online activities, and this has made children access and be involved in unspeakable online activities. The famous online activity is TikTok almost every child is registered in…parents are less involved in what their teenagers are up to in social media [**KII-NGO-Rep-NAIROBI**]*

> *'Mmh…today's parents are so preoccupied that they pay less attention to what their children are doing on computers, tablets and most importantly on their smartphones. Some of the children engage in OCSEA just at the comfort of their smartphones…and parents have no control of what they [children] do or hide in those smartphones…because parents just don't care or are busy' [**KII-GOV-KEIII**]*

The parents and caregivers have a greater role to play in as far as the spread of OCSEA is concerned. Their familiarity or experience with the digital technologies can determine the online safety discussions they have with their children. It is therefore crucial for their knowledge on online safety to be enhanced for them to support their children effectively

. The study further sought to explore whether a caregiver in the community would report an OCSEA occurrence involving a child in their community or household. The majority of the

respondents (40.7%) indicated that this was unlikely, followed by those who felt that it was a likely outcome (22.2%). Table 4.13 provides a glimpse of the statistics.

Table 4. 13: Community Reporting OCSEA's Occurrence.

	Frequency	**Per cent**
Unlikely	28	40.7
Somewhat Likely	12	18.5
Likely	15	22.2
Highly Likely	12	18.5
Total	68	100.0

Source: Fieldwork 2022

The results on community reporting occurrence of OCSEA were consistent with the information obtained from a key informant who is well versed in OCSEA occurrence and reporting practice among the study community. According to the respondents, it is unlikely that a caregiver would report the incidence of OCSEA occurrence in the study community. The excerpt below suffices:

> *'I doubt if the caregivers are keen on reporting these incidences because they often occur but they are not in our records or reported. Some of these cases are settled at the household-to-household level and never reach authorities. This makes it difficult to prosecute especially when the victim is not reporting…it is sad for minors when caregivers settle OCSEA issues out-of-court because their[minors] voices are unheard, and their plight remain unsolved.' [**KII-GOV-KEIII-051022**].*

4.7. Correlation Analysis

Table 4. 14: Correlation Analysis

	Awareness levels of respondent	**Digital Technology**	**Parental Involvement**	**OCSEA Occurrence in the Study Site**
Awareness levels of respondent	1	0.541**	-0.679*	0.061
Digital Technology	0.541**	1	-0.429	0.178*
Parental Involvement	-0.679*	-0.429	1	0.418*
Occurrence of OCSEA in Kibera	0.061	0.178*	0.418	1

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

From the Pearson product correlation analysis in Table 4.14 awareness level and digital technology were to be moderately positively correlated, and statistically significant (r=.541, <.01). This shows that an increase in level of awareness has a corresponding increase in digital technology use or uptake. The awareness level of respondents and parental involvement were

found to be moderately negatively correlated but statistically significant (r=-.679, <.05). This shows that when parental involvement increases, awareness of OCSEA occurrences also goes up. Likewise, awareness level and occurrence of OCSEA in the study site (Kibera), are negligibly positively correlated but statistically significant (r=.061, <.05). It therefore implies that an increase in parental involvement has a corresponding decrease in OCSEA's occurrence.

4.8. Regression Analysis

The main objective of this study was to identify factors influencing children's vulnerability to online child sexual exploitation and abuse (OCSEA) in urban poor settings with a particular focus on Kibera slums in Nairobi County. The dependent variable was the proneness to OCSEA measured by the degree of agreement of respondents to the declarations regarding the proneness of the participant to OCSEA. Independent variables included awareness of parents to OCSEA, parental or caregiver involvement, and availability of digital technology in the household, the age and gender of the respondent, marital status of the respondent, highest education level of the respondent, and the position of the respondent in the family. Normality tests showed the statistical significance of all variables. Therefore, OLS was not a suitable methodology to use in this model. Instead, ordinal logistic model estimation was used to estimate the regression, because of the ordinal nature of the dataset. The results found are explained in Table 4.15 below.

The model was statistically significant (Chi-square p-value = 0.000). According to the Cox and Shell R2 tests, 68.2% of the variation in the independent variables explained variation in proneness to OCSEA (r2=0.682). Therefore, 31.8% of the variation in proneness to OCSEA was unexplained. This implies that the variables in the model were significant, and a relatively small proportion is left in the error term. The goodness of fit test was done on the model and from this, Pearson's chi-square test revealed that the model was suitable for the data (p-value=0.0257).

As shown in Table 4.15, for every unit increase in parent's awareness of OCSEA, there was a predicted decrease of 0.232 in the log odds of being prone to OCSEA. This means that when parents are more aware the respondents are less prone to OCSEA. This relationship was statistically significant (p-value of Wald statistic = 0.000). Parental involvement had a significant negative effect on proneness to OCSEA. A unit's increase in parental involvement in the treatment group reduced the log odds of proneness to OCSEA by 0.746. On the other

hand, the age of the respondent positively affected proneness to OCSEA, such that for a higher age group by one unit, there was a predicted increase in the log odds of being prone to OCSEA by 0.071. This meant that older members of the family were not able to detect and reduce the risk of occurrence of OCSEA. The relationship was statistically significant. The respondents' marital status affected proneness to OCSEA negatively. This means that single respondents had a higher likelihood of their children being prone to OCSEA compared to the children of parents who were married, divorced or separated. This may be caused by little involvement of parents in their children's lives because they need to work to provide for the family. Similarly, respondents' gender had a negative effect on proneness to OCSEA, showing that for every male respondent, the log odds of their children being prone to OCSEA was 0.043 less than for every female. The respondent's highest education level had a negative effect on the log odds of their children being prone to OCSEA. This meant that for every respondent with a KCSE certificate or lower, the likelihood of their children's proneness to OCSEA was higher compared to having a post-secondary certificate, post-secondary diploma or a university degree. The availability of digital technology and the respondent's position in the family were positively related to proneness to OCSEA, but both relationships were not statistically significant.

Table 4. 15: Ordinal Regression Results

Dependent variable:	**Proneness to OCSEA**		
Independent Variables	**Estimate**	**Wald statistic**	**p-value of Wald statistic**
Constant	1.479	0.662	0.001
Parents' awareness of OCSEA	-0.232	0.471	0.0000
Availability of Digital Technology	0.264	0.730	0.246
Parental involvement	-0.746	1.490	0.00032
Respondent's age	0.071	1.019	0.0000
Respondent's marital status	-0.026	0.031	0.0001
Respondent's gender	-0.025	1.112	0.0000
Respondent's highest education level	0.017	2.750	0.0001
Respondent's position in the family	-0.065	0.143	0.689
Chi-square p-value = 0.000 R2=0.682 Pearson's goodness of fit test p-value=0.0257			

4.9. Hypotheses Testing

The hypotheses were tested based on the probability value of the t-statistic. If the probability was less than 0.05 (prob< 0.05) then the null hypothesis was rejected. According to the results, the hypotheses were concluded as follows:

Hypothesis 1: The results showed that awareness levels had a significant negative impact on OCSEA among children in Kibera Slums. Therefore, the null hypothesis was rejected.

Hypothesis 2: This null hypothesis was also rejected. The results showed that parental involvement had a statistically significant negative effect on OCSEA among children in Kibera Slums.

Hypothesis 3: The third hypothesis was on digital technology, the probability value of the t-score was greater than 0.05. Therefore, there was a failure to reject the null hypothesis and the conclusion made was that digital technology had no significant effect on OCSEA among children in Kibera Slums.

CHAPTER 5

SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter highlights the summary of findings, discussions around the study topic, conclusion and recommendations for this study. The information contained in this section is guided by this study's key objectives, hence the contents of this section will be in response to the study objectives and/or the research questions that directed this study.

5.2. Summary of Findings

Under this section, we offer the summary of findings following as per the set objectives of this study. This research study had three specific objectives namely;

i. To examine the influence of awareness levels on OCSEA among children in slums.
ii. To examine the influence of digital technology on OCSEA's occurrence among children in slums
iii. To examine the influence of parental involvement on OCSEA's occurrence among children in slums.

The populations residing in urban informal settlements contend with numerous challenges, including access to digital technologies to support their daily operations, including education (Islam et al., 2021). Communities living in urban poor settings, globally, including in Kenya (Njeru, 2010), India (Tripathi, 2019; Siddiqui, 2017), Brazil (Schmidt, 2014), Pakistan (Sattar & Zhang, 2017), and Indonesia (Cho, 2020), daily contend with financial constraints that hinder their acquisition of enabling digital technologies to support their children's learning needs. However, in the recent past, there has been increased access to digital technologies among children and youth, perhaps due to their increased utility in the education space. This has forced parents, guardians, and/or caregivers to provide their children with these technologies to enable them to keep up with teaching and learning (Islam et al., 2021).

In most cases, caregivers, parents and guardians, especially those in poor settings like Kibera have let children navigate digital technologies and gadgets on their own as they go about fending for their households (Miliza, 2018), this however, is not limited to urban and poor contexts but also among children from well-endowed households with access to digital technologies (Miliza, 2018). As a result, such children and youth have ended up accessing and

consuming adult content like those of OCSEA leading to their vulnerabilities and even involvement in OCSEA activities either voluntarily or involuntarily (Cho, 2020). This situation or finding is in line with the finding made in this study where children, due to their unsupervised nature of learning have potentially made them vulnerable to OCSEA.

This study determined that monthly educative sessions on OCSEA were undertaken in the study site (Kibera) to enhance the awareness of parents, guardians and other caregivers on OCSEA. This entailed community sensitization forums on OCSEA that were organized and implemented by a local organization that implemented OCSEA project in the study site. The observable positive behaviour changes among children were attributed to the educative sessions conducted in the Kibera community. They also concurred that engaging their children in online safety discussions played a key role in reducing their children's proneness to OCSEA.

Additionally, the parents who were sensitized to OCSEA were able to support their children to deal with psycho-social challenges brought about by OCSEA, which is a crime that is punishable by law. Both the parents and key informant interviews concurred that the parents were reluctant to report or encourage their children to report OCSEA occurrences involving a child in their community or household.

According to Morgan and Lambie, (2019); King et al., 2018, OCSEA is on the increase and this is could be due to the increase in access and use of digital and related information and communication technology (ICT) that has transcended even to the urban poor children and youth globally. The levels of awareness dictate the extent of participation in varied social activities. Similarly, involvement in OCSEA dissuading activities is pegged on an individual's knowledge of OCSEA itself and as well as its predictors. Situation(s) where individuals have requisite knowledge on a particular issue, yet dismally indulge in that particular issue could be a function of other more pressing and competing activities that an individual is involved in (Özçalık & Atakoğlu, 2021; APC, 2019). This situation was evident in our findings and could potentially be one of the reasons behind limited parental involvement in their children's online activities. From the results gathered in this section, it is evident that parents, guardians, caregivers, and the general community are somewhat aware of what OCSEA is alongside its components. Limited awareness levels are often due to limited data, statistics or information to inform public knowledge. However, evidence on OCSEA is largely limited, with data largely domiciled within communities and not with authorities, making interventions on OCSEA difficult (Martin, 2016). Results from this study indicate that caregivers would be hesitant to

share information on OCSEA's occurrence in their community thus echoing the statement of lacking information that propagates a limited awareness situation. The unwillingness of caregivers to share information about OCSEA occurrence in Kibera could be a function of complacency or cultural barriers that stifle such announcements, a position echoed by Bickart et al. (2019).

37% of the respondents affirmed that awareness levels influenced the occurrence of OCSEA compared to the 29.6% who did not. This was supported by the responses provided by key informants who opined that involvement in OCSEA is a function of ignorance and lack of awareness of active and potential victims of OCSEA. It was also discovered that monthly educative sessions on OCSEA were undertaken in the study site (Kibera) to enhance the awareness of parents, guardians and other caregivers on OCSEA.

The respondents from the treatment group confirmed the existence of OCSEA within Kibera and affirmed that it is a type of child sexual abuse. They also agreed that they acquired knowledge on OCSEA from the Watch 24/7 Project which enabled them to confidently discuss online safety with their children to prevent the occurrence of OCSEA. Parents also supported their children in dealing with psycho-social challenges brought by OCSEA. They, however, demonstrated reluctance to report the occurrence of OCSEA cases even when they knew that it was a crime.

This study's findings show that there exists a significant association between children's vulnerability and engagement in OCSEA activities, implying that children's vulnerability is a precursor to engagement in OCSEA. The subtle nature of OCSEA makes both children and parents not recognize when a child is at risk or being harmed. Levels of awareness on matters OCSEA by parents/caregivers are crucial as this defines their level and capacity to guide minors/children in the right behaviour.

Parental involvement reduces the children's proneness to OCSEA. Parents should make a deliberate effort to learn more about digital technologies to be able to support their children's online interaction. To protect children from OCSEA, parents should instil knowledge and concepts that can enable children to identify the perpetrator and encourage reporting of any potential cases of OCSEA targeting them or their peers within the community.

The Internet and ICT resources are in their infancy and are expected to be more embedded in our daily lives. We must guide minors on how to responsibly use them and raise any red flags

for action. Parents should also endeavor to create a safe online environment for their children at home to enhance their safety.

5.3. Recommendations

The following recommendations are made for this study: -

1. The private sector players in the world of technology should ensure their social media platforms are child-friendly and with favorable community guidelines stating how subscribers should conduct themselves on the social media platforms to create a safer online environment.
2. The government should amend legislation to impose legal obligations for Internet Service Providers to report suspected cases of OCSEA. Internet service companies can limit admittance to materials that promote child sex exploitation, and they can filter and block websites. In addition, the government should strengthen the technical capacity of its law enforcement officials to handle cybercrime cases. The gender desk police should be equipped with the knowledge of recording an OCSEA case on the charge sheet for the perpetrators to be charged appropriately.
3. The reported cases or concerns of online perpetrators should also be taken seriously by law enforcement. Children and parents should be sensitized on the channels of reporting online abuse such as the 116 National Child Helpline Service (toll free and operates 24 hours), Fichua Kwa DCI toll free hotline; 0800 722 203, the Kenya Computer Incidence Response Team (KE – CIRT), the Gender Desk Police, the Chief's Office and the Sub County Children Offices. The online perpetrators should be arrested and prosecuted for their offences; it is also important that they are rehabilitated to discourage further reoffending.
4. There is need for a deliberate effort to raise awareness of newly adopted laws and policies, in particular the Children Act (2022) and the National Plan of Action to Tackle Online Child Sexual Exploitation and Abuse (2022-2026), within the law enforcement and justice system, as well as CSOs and communities, through training sessions and/or the dissemination of information communication materials OCSE policies to all stakeholders including children.
5. The children should be at the core of the process to drive change to eliminate OCSEA. They should be empowered on safe internet use through mentorship programs, providing counselling sessions for the affected children educating children and training

them as peer educators who will then sensitize their peers on how to navigate the internet safely.

6. Finally, we recommend that children and the youth's interactions with digital technologies should be monitored by parents, caregivers or responsible adults to safeguard them from accessing harmful content online. From the results of this study, this monitoring and guidance is largely lacking among caregivers, parents, and guardians. It is also important for parents in the digital age to be tech-savvy and conversant with the current digital trends, this is the only way, they can effectively monitor their children's online interaction.

5.4. Suggestions for Further Studies

Future studies could be carried out on this topic but on a larger scale, perhaps country-wide to enable generalization of findings therefrom. The limited nature of this study (limited to Kibera) means that the results of this research cannot be generalized. In addition, upcoming studies on this study topic could focus on the respective independent variables (awareness levels, digital technologies, and parental involvement in OCSEA's occurrence) of this study as standalone research.

REFERENCES

Abuya, B. A., Wekulo, P., & Muhia, N. (2018). Support to children's education in the urban slums of Nairobi: community and parents' perceptions with an expanded phase of an education intervention program. *Qualitative Research in Education*, 7(2), 118–143. https://doi.org/10.17583/qre.2018.3240.

Açar, K. V. (2020). Framework for a single global repository of child abuse materials. *Global Policy*, 11(1), 178–90.

Adler, P. A., & Adler, P. (2012). How many qualitative interviews are enough? In S. E. Baker & R. Edwards (Eds.), *How many qualitative interviews is enough? Expert voices and early career reflections on sampling and cases in qualitative research* (pp. 8–11). Southampton: ESRC National Centre for Research Methods, University of Southampton (January 16, 2019). Connecting the unconnected in Kenya's urban slums. *Rising Voices*. Retrieved from https://rising.globalvoices.org/blog/2019/01/16/connecting-the-unconnected-in-kenyas-urban-slums/

Akerlof, George A., 1976, "The Economics of Caste and the Rat Race and Other Woeful Tales", *Quarterly Journal of Economics*, 90(4): 599–617. doi:10.2307/1885324

Bell, D.C., & Cox, M. L. (2015). Social norms: do we love norms too much? *Journal of Family Theory & Review*, 7(1), 28–46.

Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches (2nd ed*.). Thousand Oaks, CA: Sage.

Bickart, W., McLaren, A. M., Grady, M. D., & Stoler, K. (2019). A Descriptive Study of Psychosocial Characteristics and Offense Patterns in Females with Online Child Pornography Offenses. *Psychiatry Psychol Law*, 26(1), 295–311.

Billingham, P., & Parr, T. (2020). Online Public Shaming: Virtues and Vices. *Journal of Social Philosophy*, 51(3), 371-390.

Boddy, C. R. (2005). Sample size for qualitative research. *Qualitative Market Research*, 19(1), 426–432. doi:10.1108/QMR06-2016-0053

Babbie, E. (1995). *The Practice of Social Research (7th edition)*. Mountain View: Wadsworth Publishing Company

Chung, A., & Rimal, R. N. (2016). Social norms: a review. *Rev Commune Res*. 4(1), 1–28.

Cislaghi, B., & Heise, L. (2018). Theory and practice of social norms interventions: eight common pitfalls. *Globalization and Health*, 14(83), 1-10. https://doi.org/10.1186/s12992-018-0398-x

Communications Authority of Kenya (2022). *Second Quarter Sector Statistics Report for the Financial Year 2021/2022 (1st OCTOBER – 31st DECEMBER 2021)*. Nairobi: Communications Authority of Kenya. Retrieved from https://www.ca.go.ke/wp-content/uploads/2022/03/Sector-Statistics-Report-Q2-2021-2022-.pdf

Communication Commission of Kenya & Kenya National Bureau of Statistics (2018). *National ICT Survey Report*. Nairobi: Communications Authority. Retrieved from https://www.ca.go.ke/wp-content/uploads/2018/02/National-ICT-Survey.pdf

Cortina, J. M. (1993). What is Coefficient Alpha? An Examination of Theory and Applications. *Journal of Applied Psychology*, 78 (1), 98-104.

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage

Creswell, J., & Poth, C. (2013). *Qualitative inquiry and research design: Choosing among five approaches (Fourth ed.)*. Los Angeles: SAGE Publications.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

Daytner, K. M. (2006). *Validity in qualitative research: Application of safeguards*. Western Illinois University. Retrieved from https://files.eric.ed.gov/fulltext/ED516416.pdf

Denzin, N. K., & Lincoln, Y. S. (2000). *Handbook of Qualitative Research (eds).* London: Sage Publications.

Denzin, N. K. (1989). *The research act: A theoretical introduction to sociological methods (3rd ed.).* Englewood Cliffs, NJ: Prentice-Hall.

De-Santisteban, P., Del-Hoyo, J., Alcázar-Córcoles, M. Á., & Gámez-Guadix, M. (2018). Progression, maintenance, and feedback of online child sexual grooming: A qualitative analysis of online predators. *Child Abuse Negligence*, 80(1), 203–15.

Donalek, J. G. (2004). Demystifying nursing research: Phenomenology as a qualitative research method. *Urologic Nursing*, 24(1), 516–517.

Durkheim, Émile, 1895 [1982], *Les Règles de la méthode sociologique*, Paris. Translated as *The Rules of Sociological Method*, W. D. Hall (trans.), Glencoe, IL: The Free Press.

Đurišić, M., & Bunijevac, M. (2017). Parental Involvement as an Important Factor for Successful Education. *CEPS Journal*, 7(3), 137-153.

ECPAT., INTERPOL., & UNICEF. (2021). *Disrupting Harm in Kenya: Evidence on online child sexual exploitation and abuse*. Global Partnership to End Violence against Children.

Ellickson, Robert C., 1991, *Order Without Law: How Neighbors Settle Disputes*, Cambridge, MA: Harvard University Press.

Emeagwali, S. (2009). Fostering parent-teacher collaboration in the classroom. *Techniques (Association for Career and Technical Education)*, 84(5), 8.

Finkelhor, D., Walsh, K., Jones, L., Mitchell, K., & Collier, A. (2020). Youth Internet Safety Education: Aligning Programs with the Evidence Base. *Trauma, Violence and Abuse. Trauma, Violence, & Abuse*, 20(10), 1-15

Geertz, Clifford, 1973, "Thick Description: Toward an Interpretive Theory of Culture", in *The Interpretation of Cultures: Selected Essays*, New York: Basic Books, pp. 3–30.

Government of Kenya (2018). National Broadband Strategy 2018-2023. Nairobi: Government of Kenya. Retrieved from https://www.ict.go.ke/wp-content/uploads/2019/05/National-Broadband-Strategy-2023-FINAL.pdf

Groupe Speciale Mobile Association (GSMA) (2021). *The State of Mobile Internet Connectivity 2021*. London: GSMA. Retrieved from https://www.gsma.com/r/wp-content/uploads/2021/09/The-State-of-Mobile-Internet-Connectivity-Report-2021.pdf

Hirschtritt, M.E., Tucker, D., & Binder, R. L. (2019). Risk assessment of online child sexual exploitation offenders. *J Am Acad Psychiatry Law*, 47(1), 155–64.

INTERPOL & ECPAT (2018). *Towards a global indicator on unidentified victims in child sexual exploitation material: Technical Report*. Bangkok: ECPAT International.

ITU (2018). *ICT and Development*. Geneva: ITU. Retrieved from https://www.wipo.int/edocs/mdocs/mdocs/en/wipo_ipda_ge_19/wipo_ipda_ge_19_t4b.pdf

Institute for Health and Work (2015). *Inspections with penalties linked to lower injuries: IWH review.* Institute for Health and Work. Retrieved from https://www.iwh.on.ca/sites/iwh/files/iwh/at-work/at_work_81.pdf

Ishak, N. M., & Bakar, A. Y. A. (2014). Developing Sampling Frame for Case Study: Challenges and Conditions. *World Journal of Education*, 4(3), 29-35.

Jacelon, C. S., & O'Dell, K. K. (2005). Case and grounded theory as qualitative research methods. *Urologic Nursing*, 25(1), 49–52.

Jonsson, L.S., Fredlund. C., Priebe, G., Wadsby, M., & Svedin, C.G. (2019). Online sexual abuse of adolescents by a perpetrator met online: a cross-sectional study. *Child Adolescence Psychiatry Mental Health*, 13(1), 32-50. doi: 10.1186/s13034-019-0292-1.

Kenya National Bureau of Statistics (2020). *2019 Population and Housing Census: Volume III Distribution of Population by Age, Sex and Administrative Units*. Nairobi: Kenya National Bureau of Statistics. Available from https://www.knbs.or.ke/?page_id=3142

Kelly S. (2010) Qualitative interviewing techniques and styles. In: Bourgeault I, Dingwall R, de Vries R. (eds) *The Sage Handbook of Qualitative Methods in Health Research*, Thousand Oaks: Sage Publications. [Google Scholar]

Kharono, B., Kaggiah, A., Mugo, C., Seeh, D., Guthrie, B. L., Moreno, M., John-Stewart, G., Inwani, I., & Ronen, K. (2022). Mobile technology access and use among youth in Nairobi, Kenya: implications for mobile health intervention design. *mHealth*, 8, 7. https://doi.org/10.21037/mhealth-21-23

King, D. L., Delfabbro, P. H., Doh, Y. Y., Wu, A. M., Kuss, D. J., Pallesen, S., Mentzoni, R., Carragher, N., & Sakuma, H. (2018). Policy and prevention approaches for disordered and hazardous gaming and internet use: An international perspective. *Prevention Science*, 19(2), 233–249. https://doi.org/10.1007/s11121-017- 0813-1

Kline, T. J. B. (2017). Sample Issues, Methodological Implications, and Best Practices. *Canadian Journal of Behavioural Science*, 49(2), 71-77.

KNBS (2022). *Economic Survey, 2021*. Nairobi: KNBS. Retrieved from https://www.knbs.or.ke/wp-content/uploads/2022/05/2022-Economic-Survey1.pdf

KNBS (2021). *Economic Survey, 2021*. Nairobi: KNBS. Retrieved from https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf

Kubai, E. (2019). *Reliability and Validity of Research Instruments*. UNICAF University.

Maingi, E. M. (2022). *A System for reporting online child abuse and offenders* (Doctoral dissertation, Strathmore University).

Mariano, C. (1990). Qualitative research: Instructional strategies and curricular considerations. *Nursing & Health Care*, 11, 354–359.

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research? A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, 54(1), 11– 22. doi:10.1080/08874417.2013.11645667

Martin, J. (2016). Child sexual abuse images online: implications for social work training and practice. *Br J Soc Work*, 46(1), 372– 88.

May-Chahal, C., Palmer, A., Doods, S., & Milan, S. (2018). *Rapid evidence assessment: Characteristics and vulnerabilities of victims of online-facilitated child sexual abuse and exploitation.* Lancaster University: Independent Inquiry into Child Sexual Abuse

Merdian, H. L., Moghaddam, N., Boer, D. P., Wilson, N., Thakker, J., Curtis, C., & Dawson, D. (2018). Fantasy-driven versus contact-driven users of child sexual exploitation material: Offender classification and implications for their risk assessment. *Sexual Abuse*, 30(3), 230–253. https://doi.org/10.1177/1079063216641109

Miliza, J. (2018). *Connecting the unconnected in Kenya's urban slums*. Tunapanda Institute. Retrieved from https://giswatch.org/en/country-report/infrastructure/kenya

Morgan, S., & Lambie, I. (2019). Understanding men who access sexualised images of children: exploratory interviews with offenders. *J Sex Aggress*, 25(1), 60–73.

Morse, J. M. (2000). Determining sample size. *Qualitative Health Research*, 10(1), 3–5. doi:10.1177/104973200129118183

Neuman, W.L. (2009). *Social research methods: Qualitative and quantitative approaches (7th ed.)*. Boston, MA: Pearson/Allyn & Bacon.

Newton, A. L. (2020). *An Evaluation of the Rise of Online Sexual Exploitation of Children and Technology: How the Past Three Decades Speak to the Future.* Wacos: Baylor University.

Koçtürk, N., & Yüksel, F. A. (2018). Modern danger for adolescents: From online flirtation to sexual abuse. *Dusunen Adam the Journal of Psychiatry and Neurological Sciences*, 31(1), 294–300.

Onwuegbuzie, A. J., & Leech, N. L. (2007). A call for qualitative power analyses. *Quality and Quantity*, 41(1), 105–121. doi:10.1007/s11135-005-1098-1

Özçalık, C. K., & Atakoğlu, R. (2021). Online child sexual abuse: Prevalence and characteristics of the victims and offenders. *J Psychiatric Nurs*, 12(1), 76-81. DOI: 10.14744/phd.2020.30643.

Palinkas LA, Horwitz SM, Green CA, et al. (2015) Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research* 42(5): 533–544. (PMC free article) (PubMed) (Google Scholar)

Parsons, Talcott, 1951, *The Social System*, New York: Routledge.

Patchin, J. W., & Hinduja, S. (2019). The nature and extent of sexting among a national sample of middle and high school students in the U.S. *Archives of Sexual Behavior*, 48(8), 2333–2343. https:// doi.org/10.1007/s10508-019-1449-y

Pennington, B. F. (2002). *The Development of psychology: Nature and nurture*. New York, NY: Guilford Press.

Perkins, H. W., & Berkowitz, A. (1986). Perceiving the community norms of alcohol use among students: some research implications for campus alcohol education programming. *Int J Addict*, 21 (9-10), 961–76

Posner, Eric A., 2000, *Law and Social Norms*, Cambridge, MA: Harvard University Press.

Ramiro, L. S., Martinez, A. B., Tan, J. R. D., Mariano, K., Miranda, G. M. J., & Bautista, G. (2019). Online child sexual exploitation and abuse: A community diagnosis using the social norms theory. *Child Abuse Neglect*, 96(1), 104080.

Singleton, A., Straits, B. C., & Straits, M. M. (1993). *Approaches to Social Research (2nd edition).* New York: Oxford University Press.

Streubert, H. J., & Carpenter, D. R. (2002). *Qualitative research in nursing: Advancing the humanistic imperative (3rd ed.)*. Philadelphia: Lippincott Williams & Wilkins.

Suizzo, M. (2007). Home-based parental involvement in young children's education: Examining the effects of maternal education across U.S. ethnic groups. *Educational Psychology*, 27(2), 1–24

UNESCO (2020). Assessing Internet development in Kenya: using UNESCO's Internet Universality ROAM-X indicators. UNESCO. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000374684

United Nations Children's Fund (2021). *Ending online child sexual exploitation and abuse: Lessons learned and promising practices in low- and middle-income countries*. New York: UNICEF.

United Nations Children's Fund (2020a). *Global Annual Results Report: Goal Area 3*. New York: UNICEF.

United Nations Children's Fund (2020b). *Action to end child sexual abuse and exploitation: A Review of Evidence*. New York: UNICEF.

United Nations Children's Fund (2019*). Guidelines to Strengthen the Social Service Workforce for Child Protection*. New York: UNICEF.

Ward, T., & Beech, A. (2006). An Integrated Theory of Sexual Offending. *Aggression and Violent Behaviour*, 11(1), 44-63.

We Protect (2016). *Preventing and Tackling Child Sexual Exploitation and Abuse (CSEA): A Model National Response*. We Protect. Retrieved from https://www.weprotect.org/wp-content/uploads/WePROTECT-Model-National-Response.pdf

Whittemore, R., Chase, S. K., & Mandle, C. L. (2001). Validity in qualitative research. *Qualitative Health Research, 11*, 522–537. doi:10.1177/104973201129119299

Whittle, H.C., Hamilton-Giachritsis, C. E., & Beech, A. R. (2015). A comparison of victim and offender perspectives of grooming and sexual abuse. *Deviant Behaviour*, 36(1), 539–564.

Young, H.P. (2015). The evolution of social norms. *Ann Rev Econ.*, 7(1), 359–387

Younger, J. (1985). Practical approaches to clinical research: The case study. *Paediatric Nursing*, 11(1), 137.

APPENDICES

Appendix I: Research Clearance's Application Letter

P. O Box 43570-00100,

Nairobi, KENYA.

16th/08/2022.

To: The C. E. O,

National Council of Science, Technology and Innovations (NACOSTI),

Off Waiyaki Way, Upper Kabete,

P.O. BOX 30623, 00100 Nairobi, Kenya.

Dear Sir/Madam,

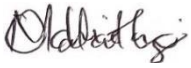
RE: APPLICATION FOR RESEARCH PERMIT

I, Malath Akinyi Ochieng', of Nairobi University, undertaking a **Master of Development Studies (MDEV), Department of Economics and Development Studies** (2020 -2022) applying for a research permit to allow me to undertake data collection for my Master's thesis.

The envisioned research ***'Factors Influencing Children's Vulnerability to Online Child Sexual Exploitation and Abuse (OCSEA) in Urban Poor Settings: A Case of Kibera Slums, Nairobi County.'***, seeks to understand factors that influence children's vulnerability to OCSEA in urban poor setting. I am applying for a permit to collect data between 22nd August 2022 and 10th October 2022.

I will be grateful for your support.

Yours sincerely,



Malath Ochieng'

T51/38410/2020

Appendix II: Respondents' Letter of Introduction

Malath Akinyi Ochieng'

P.O Box 43570-00100

Nairobi, KENYA.

22nd August 2022.

Dear Respondent,

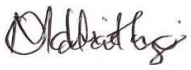
RE: DATA COLLECTION

My name is Malath Akinyi Ochieng', and I am a Master's student at Nairobi University. I am undertaking a research study titled **"*Factors Influencing Children's Vulnerability to Online Child Sexual Exploitation and Abuse (OCSEA) in Urban Poor Settings: A Case of Kibera Slums, Nairobi County.''*** I am kindly asking you to fill out the attached questionnaire.

Your responses will remain confidential.

I am grateful for your support.

Yours sincerely,



Malath Ochieng'

T51/38410/2020

Researcher/Student

Appendix III: Survey Questionnaire

Note: *This tool seeks to collect information on the factors that affect children's vulnerability to OCSEA in urban poor setting. It is specifically targeting parents within your community. THE GATHERED DATA IS WHOLLY FOR THIS STUDY AND WILL NOT BE REVEALED TO ANYBODY OR PARTY.*

Questionnaire

1. Questionnaire number_____
2. Interview date_____
3. Name of location_____

PART A: Respondents' demographics

1. Gender

Male ☐ Female ☐

2. Age

Below 24 years ☐ 25-29 Years ☐ 30-34 years ☐ 35-39 Years ☐

40-44 Years ☐ Over 44 Years ☐

3. Marital Status?

Married ☐ Single ☐ Separated ☐

Divorced ☐ Other _____

4. What is your education level (state the highest level)?

Certificate ☐ Diploma ☐ Undergraduate ☐

Postgraduate ☐ Other _____

5. Household Size?

Male Adults ☐ Female Adults ☐ Children ☐

6. What kind of work do you do to earn a living?

☐ ☐

Casual Formal Employment Self-employment ☐

None ☐

7. What is the position of the respondent in a family?

Father ☐ Mother ☐ Aunt ☐ Uncle ☐

Others (Specify)**;** _____

8. Are you a parent who sees himself/herself as one who has a child/ren prone to OCSEA?

Yes ☐ No ☐ Can't tell/Don't know ☐

PART B: Influence of awareness levels on OCSEA among children in Kibera Slums

9. Below are statements on the influence of awareness levels among children concerning OCSEA. Please indicate the degree to which you agree using the scale: Strongly Agree (5); Agree (4); Neutral (3); Disagree (2) and Strongly Disagree (1)

Statements	5	4	3	2	1
Monthly educative sessions on OCSEA targeting children were conducted during the project period					
The community sensitization forums on OCSEA targeting parents were organised during the project period.					
Children are empowered to report potential OCSEA cases among their peers					
Children know what is OCSEA in Kibera					
Parents know what is OCSEA in Kibera					
Parents and children know where to report incidences of OCSEA					
There were observable positive behaviour changes among children attributed to the educative sessions conducted in the Kibera community					

10. Indicate the degree to which you agree that level of awareness influences OCSEA occurrence among children in Kibera slums

☐ Very great extent ☐ Great extent ☐ Moderate extent

☐ Less extent ☐ No extent

PART C: Understanding the effect of digital technologies on OCSEA's occurrence among children in Kibera Slums

11. The following are statements highlighting the influence of digital technologies on OCSEA's occurrence. State your degree of agreement as follows: Strongly Agree (5); Agree (4); Neutral (3); Disagree (2) and Strongly Disagree (1)

Statements	**5**	**4**	**3**	**2**	**1**
The number of digital technologies/platforms accessed by children has significantly increased in the recent past					
Parents have been able to identify and report child sexual abuse cases propagated through digital technologies					
Uncontrolled digital access by children increases their chances of being victims of OCSEA					
Digital technologies contributed to increases in OCSEA					
Digital technologies have no effect on the occurrence of OCSEA					
Children are highly engaged with digital technologies to access content other than educational/learning materials					
There is high access to digital technologies among children and youth in Kibera					

12. Please indicate whether children's access to digital technologies encourages OCSEA occurrences in Kibera slums.

☐ Very great extent

☐ Great extent

☐ Moderate extent

☐ Little extent

☐ No extent

PART D: The effect of parental involvement on OCSEA's occurrence among children in Kibera Slums

13. The following are statements related to parental involvement in OCSEA's occurrence among children. Kindly indicate your level of agreement using the scale: Strongly Agree (5); Agree (4); Neutral (3); Disagree (2) and Strongly Disagree (1)

Statement	5	4	3	2	1
Parents are well conversant with OCSEA as a form of child sexual abuse					
Parents who discuss online safety with children increasingly protect children from OCSEA					
Parents who are sensitized to OCSEA were able to offer psycho-social support to their children's survivors' of OCSEA					
Parents are aware that OCSEA is a criminal offence, punishable by law					
Parents in the study site encourage their children to report to them any cases of OCSEA on them					
Parents/caregivers monitor and regulate which online platforms children visit					
Parents/caregivers are aware of and confirm/check online platforms their children are active on					
Parents volunteer and allocate time to guide their children on safe online engagements/participation					

14. In your opinion, what are the chances that a caregiver in your community would report an OCSEA occurrence affecting their child?

1. Highly likely
2. Likely
3. Somewhat likely
4. Unlikely
5. Don't Know/Can't tell

Appendix IV: Key Informant Interview Guide

[TO BE ADMINISTERED TO KEY WATCH 24/7 PROJECT STAKEHOLDERS]

1. What is OCSEA in your own opinion? What are the forms of OCSEA known to you?
2. What do you think is a key contributor to OCSEA in Kibera?
3. What is the push and pull factors of OCSEA?
4. Have you ever encountered an OCSEA case in your line of duty? Of what nature was it?
5. In your opinion which age group and gender of children is prone to OCSEA abuse more?
6. What reasons in your opinion contribute to high incidences of OCSEA among children in Kibera slums?
7. On a scale of 1 to 10, to what scale do you think such cases are reported? And why? Please explain
8. How does OCSEA affect children, families and the community? What action should be taken against an identified offender?
9. What steps is the Kibera community taking to prevent the escalation of OCSEA in your opinion?
10. Does collusion between OCSEA perpetrators and offenders affect your ability to deal with sexual offence cases?
11. In your opinion, what contributes to parental involvement or lack of in dealing with OCSEA?
12. What changes would you propose to eradicate OCSEA occurrences within Kibera Slums?