THE OCCURRENCE, SOCIO-DEMOGRAPHIC CHARACTERISTICS, CIRCUMSTANCES, AND FORENSIC EVALUATION OUTCOMES OF CHILD SEXUAL ASSAULT IN A SELECTED PROVINCE, IN MOZAMBIQUE

by

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for the degree of

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at the
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SUPERVISOR: Professor Shahnaaz Suffla

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DEDICATION

To all child victims of sexual abuse suffering in silence, my deep respect.

Student number: 10258787

DECLARATION

I declare that **THE OCCURRENCE, SOCIO-DEMOGRAPHIC CHARACTERISTICS, CIRCUMSTANCES, AND FORENSIC EVALUATION OUTCOMES OF CHILD SEXUAL ASSAULT IN A SELECTED PROVINCE, IN MOZAMBIQUE** is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

15 June 2023

_____ _____

Stela Saulina Carlota Ocuane Matsinhe **Date**

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ABSTRACT

This study aimed to describe the occurrence, socio-demographic characteristics, circumstances, and forensic evaluation outcomes of child sexual assault in Maputo City and Province, Mozambique. A quantitative, descriptive design was adopted. Data were drawn from medico-legal records of suspected victims who presented at Hospital Central de Maputo Forensic Service between 2015 and 2020. The data was analysed using the Statistical Package for the Social Sciences. Of the 2588 cases analysed, the majority were girls in the 12–17-year age group. Assaults occurred predominantly in public spaces during weekdays in the afternoon and evening, perpetrated by one individual known to the child and without condom use. More than half of the victims reported accompanying physical violence, with very few victims presenting with physical or genital injuries. Most of the victims presented within 72 hours for medical assistance and medico-legal evaluation. The current study contributes to knowledge on CSA in Mozambique, as well as Sub-Sahara more generally.

KEY CONCEPTS

Children; sexual assault; occurrence; socio-demographics; circumstances; forensic evaluation; Maputo Province; Maputo City; Mozambique

TABLE OF CONTENTS

CHAPTER 1 ORIENTATION TO THE STUDY 1

1.1 INTRODUCTION 1

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM 2

1.2.1 The source of the research problem 2

1.2.2 Background to the research problem 3

1.3 AIM OF THE STUDY 4

1.3.1 Research aim 4

1.3.2 Research objectives 4

1.3.3 Research questions 4

1.4 SIGNIFICANCE OF THE STUDY 5

1.5 DEFINITIONS OF KEY TERMS 5

1.5.1 Child 5

1.5.2 Forensic evaluation for victims of CSA 5

1.5.3 Child sexual assault 6

1.5.4 Rape 6

1.5.5 Child marriage 6

1.6 OPERATIONAL DEFINITION 6

1.6.1 Child Sexual Assault 6

1.7 THEORETICAL FOUNDATIONS OF THE STUDY 7

1.7.1 Research paradigm 7

1.7.2 Theoretical framework 8

1.7.2.1 Ecological model 8

1.8 RESEARCH METHODOLOGY AND RESEARCH DESIGN 11

1.8.1 Research design 11

1.8.2 Research methodology 11

1.8.3 Study setting 11
1.8.4 Study population 12
1.8.5 Validity 12
1.8.6 Reliability 12
1.8.7 Ethical considerations 12

1.9 SCOPE OF THE STUDY 12

1.10 STRUCTURE OF THE DISSERTATION 13

1.11 SUMMARY 13

CHAPTER 2 LITERATURE REVIEW 14

2.1 INTRODUCTION 14

2.2 DEFINITION OF CHILD SEXUAL ASSAULT 14

2.3 CLASSIFICATIONS OF CHILD SEXUAL ASSAULT 15

2.4 PREVALENCE OF CHILD SEXUAL ASSAULT 16

2.5 CHILD SEXUAL ASSAULT RISK FACTORS 17
2.5.1 Individual risk factors 17
2.5.2 Relationship risk factors 18
2.5.3 Community risk factors 19
2.5.4 Societal risk factors 20

2.6 CIRCUMSTANCES OF CHILD SEXUAL ASSAULT 20

2.7 DISCLOSURE OF CHILD SEXUAL ABUSE 21

2.8 MANAGEMENT OF CHILD SEXUAL ASSAULT 22

2.9 CONSEQUENCES OF CHILD SEXUAL ASSAULT 23

2.10 PREVENTION 24

2.11 SUMMARY 28

CHAPTER 3 RESEARCH DESIGN AND METHOD 29

3.1 INTRODUCTION 29

3.2 RESEARCH DESIGN 29

3.3 RESEARCH METHOD 29

3.3.1 Research setting 29
3.3.1.1 Hospital Central de Maputo 31
3.3.1.2 Forensic Service 31
3.3.2 Study population, sampling and sample size 32
3.3.3 Data source 33
3.3.4 Data collection approach and method 33
3.3.5 Description of variables 34
3.3.5.1 Objective one: Occurrence of CSA 34
3.3.5.2 Objective two: Sociodemographic characteristics 34
3.3.5.3 Objective three: Circumstances of CSA 35
3.3.5.4 Objective four: Forensic evaluation outcomes 36
3.3.6 Data analysis 37

3.4 ETHICAL CONSIDERATIONS 38

3.5 RIGOUR OF THE STUDY: VALIDITY AND RELIABILITY 39

3.6 SUMMARY 39

CHAPTER 4 ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS 40

4.1 INTRODUCTION 40

4.2 OCCURRENCE OF CSA 40

4.2.1 Occurrence of CSA 40
4.2.2 Distribution of cases by type of penetration 41

4.3 SOCIODEMOGRAPHIC CHARACTERISTICS OF CSA VICTIMS 42
4.3.1 Sociodemographic characteristics of CSA by sex 46
4.4 CIRCUMSTANCES OF OCCURRENCE OF CSA 46
4.4.1 Date of occurrence 47
4.4.1.1 Day of occurrence.....47
4.4.1.2 Month of occurrence 47
4.4.2 Time of occurrence 48
4.4.3 Place of occurrence 49
4.4.4 Number of perpetrators.....50
4.4.5 Number of episodes of CSA 51
4.4.6 Perpetrator's identity.....52
4.4.7 Aggravating factors.....53
4.4.8 Use of condom 54
4.4.9 Circumstances of occurrence by sex 55
4.5 FORENSIC EVALUATION OUTCOMES.....57
4.5.1 Time elapsed between assault to medical evaluation.....57
4.5.2 Time elapsed between assault and forensic evaluation.....57
4.5.3 Type of penetration.....58
4.5.4 Hymenal lacerations 59
4.5.5 Vestibular injuries 60
4.5.6 Anal injuries 61
4.5.7 Extragenital injuries 61
4.5.8 HIV test result 62
4.5.9 Forensic evaluation outcomes by sex.....63
4.6 SUMMARY 64
CHAPTER 5 DISCUSSION OF THE RESEARCH FINDINGS 66
5.1 INTRODUCTION.....66
5.2 DESCRIBING THE OCCURRENCE OF CSA 66

5.3 SOCIODEMOGRAPHIC CHARACTERISTICS OF CSA 67

5.4 THE CIRCUMSTANCES OF OCCURRENCE OF CSA 67

5.5 FORENSIC EVALUATION OUTCOMES 69

5.6 SUMMARY 71

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS 72

6.1 RESEARCH DESIGN AND METHOD 72

6.2 SUMMARY AND INTERPRETATION OF THE RESEARCH FINDINGS 72

6.3 CONCLUSIONS 73

6.4 RECOMMENDATIONS 73

6.4.1 For practice 73

6.4.2 For future research 73

6.4.3 For prevention 74

6.4.4. For policies 74

6.5 CONTRIBUTIONS OF THE STUDY 74

6.6 LIMITATIONS OF THE STUDY 74

6.7 CONCLUDING REMARKS 75

LIST OF REFERENCES 76

LIST OF TABLES

Table 4.1 Frequency and percentage of CSA occurrence by sex, 2015-2020 (n = 2588).

Table 4.2 Occurrence of CSA by type of penetration, 2015-2020 (n = 1911)

Table 4.3 Frequency and percentage of sociodemographic characteristics of CSA victims, 2015-2020 (n = 2588)

Table 4.4 Frequency of CSA occurrence by sociodemographic characteristics, 2015-2020 (n = 2588)

Table 4.5 Sociodemographic characteristics by sex, 2015-2020 (n = 2588)

Table 4 6 Circumstances of CSA occurrence by sex, 2015-2020 (n = 2588)

Table 4.7 Forensic evaluation outcomes by sex, 2015-2020 (n = 2588)

LIST OF FIGURES

Figure 1.1 The Centers for Disease Control and Prevention Ecological Model (2021) adapted from Bronfenbrenner and Ceci (1994) to understand CSA victimisation

Figure 3.1 Geographical location of Mozambique and Maputo (City and Province) (Adapted from http://bit.ly/3YVhpvV, https://bit.ly/3SkoR1j & https://bit.ly/3XUxjp2)

Figure 3.2 Main entrance of the Forensic Service of Hospital Central de Maputo

Figure 3.4 Flow chart of study population selection

ANNEXES

Annexe A	Data extraction form
Annexe B	Ethics approval from UNISA Health Studies Department's Ethics Committee
Annexe C	Ethics approval from Comité Institucional de Bioética da Faculdade de Medicina e Hospital Central de Maputo
Annexe D	Approval letter for data collection at the Forensic Service from the Scientific and Pedagogical Department of Hospital Central de Maputo

CHAPTER 1
ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Worldwide, Violence Against Children (VAC) is a significant public health problem, with local and global health implications for children and societies (Assabu et al 2019; Botchey et al 2017; Irish, Kobayashi & Delahanty 2010; Javanaud 2016). It is estimated that up to one billion children aged 2 to 17 years are the victims of violence every year (Hillis et al 2016). Sexual violence, the topic of this study, is the third most prevalent form of violence after physical and psychological violence (Cebola et al 2019; World Health Organization (WHO) 2020).

The WHO describes child sexual abuse as the "involvement of a child or an adolescent in sexual activity that he or she does not fully comprehend and is unable to give informed consent, or for which the child or adolescent is not developmentally prepared or violates the laws or social taboos" (2003:75). Among researchers, the terms child sexual abuse and child sexual assault (hereafter CSA) are often used interchangeably (Shehu et al 2019). However, according to the WHO (2003) and the National Maternal Child Women's Health and Nutrition Cluster (2003), and for the purpose of this study, sexual assault is considered in instances where CSA involves successful or attempted sexual penetration of the anus, vagina or mouth (República de Moçambique 2019b).

Global meta-analyses on CSA have shown prevalence of approximately 18%-20% for girls and 8% for boys (Pereda et al 2009; Stoltenborgh et al 2015). Research shows that in the United States of America up to 26.6% of 17-year-old girls and 5.1% of 17-year-old boys experienced sexual violence. This incidence is found to be higher among LGBTQ (lesbian, gay, bisexual, transgender, and queer) adolescents, with prevalence ranging between 23% and 62% in this population (Banvard-Fox et al 2020). Within the sub-Saharan region, studies conducted in Africa have shown the prevalence of child sexual abuse to range from 13% to 76% (Dills, Fowler & Payne 2016; Meinck et al 2015). South Africa, Uganda, Kenya and Tanzania are some of the countries that reported a higher prevalence of CSA and accordingly produce more published pieces of information on the topic as compared to other sub-Saharan nations (Artz et al 2016; Botchey et al 2017; Mgalla, Schapink & Boerma 1998;

Wandera et al 2017). In Mozambique, the setting of this study, the prevalence is comparable to the global trend of CSA. This finding is based on the results of the first nationally representative household survey conducted in 2019, which demonstrated that 14% of girls and 8% of boys have experienced CSA (Instituto Nacional de Saúde (INS) et al 2020).

The promotion of social justice in a given society is a critical goal, implicating the organisation and reliability of public systems of health and justice, as well as the role human rights organisations (International Rescue Committee & United Nations International Children's Emergency Fund (UNICEF) 2012). For the context of this study specifically, an accurate record, definition and classification of CSA, as well as the promotion of children's physical and psychological safety and well-being, the forensic evaluation of victims, or suspected victims, therefore, becomes critically important. Forensic evaluations are also directed at the collection of evidence, including personal and medical history, medical findings, and collection of forensic samples, commonly used for medico-legal purposes. Moreover, the expert in the field is typically asked to testify to the evidence in a court of law (Herrmann et al 2014; National Maternal Child Women's Health and Nutrition Cluster 2003; Niec 2002).

Therefore, this study seeks to describe the occurrence, socio-demographic characteristics, circumstances, and forensic evaluation outcomes of CSA, as documented in the medical records of children treated as victims of sexual assault at the Forensic Service of Hospital Central de Maputo between 2015 to 2020.

1.2 BACKGROUND INFORMATION ABOUT THE RESEARCH PROBLEM

1.2.1 The source of the research problem

CSA is a source of great concern worldwide with social, health and economic impacts (Irish et al 2010; Javanaud 2016; Letourneau et al 2018). In the United States alone, the total lifetime cost of CSA in 2015 was estimated to be USD 9.3 billion (Centers for Disease Control and Prevention (CDC) 2022). From a social perspective, CSA is correlated with children's school dropout, child marriage and gender-based violence (Gage et al [s.a.]; Qamar, Harris & Tustin 2022; Tenkorang 2019). Sexual assault is described as a primary form of child abuse, one of the most prevalent of such forms, and a crime and human rights violation (Fontes, Conceição & Machado 2017; Lenane 2007). Despite being common, CSA often remains an unreported crime, affecting not only the child as an individual but also their

environments, such as their family, community, and society (Abo-Seria et al 2019; Kaur, Kaur & Varshney 2019; Martinello 2020; Shehu et al 2019).

1.2.2 Background to the research problem

Sexual violence against children, together with its health consequences, has been comprehensively investigated in some parts of the world and seemingly to a lesser extent in some parts of the African continent (Abo-Seria et al 2019; Assabu et al 2019; 14. Averdijk, Mueller-Johnson & Eisner 2012; Machisa et al 2018). The literature shows a scarcity of peer reviewed studies in Sub-Saharan Africa, and until 2004 these could primarily be found in South Africa(Lalor 2004). Since then, academics in countries such as Malawi, Tanzania, Uganda, Kenya, and Ghana have published some scientific papers (Ministry of Gender, Children, Disability and Social Welfare of the Republic of Malawi et al 2014; Ministry of Health 2014; Parkes et al 2013; Wandera et al 2017). Nonetheless, given its adverse health and mental outcomes, both in the short- and long-term, CSA has received increasing attention within health studies and health practice over the last several decades (Afandi et al 2018; National Maternal Child Women's Health and Nutrition Cluster 2003; Welch & Mason 2007).

In Mozambique, the first nationally representative study on violence against children was conducted in 2019, based on household surveys (INS et al 2020). Following this, the first hospital-based study was conducted in 2021 describing injuries related to physical and sexual violence against children under 14 years registered over a one-year-period in the forensic service and paediatric emergency room of Hospital Central de Maputo (Nhassengo et al 2021). Therefore, in Mozambique, there remains a paucity of data on the incidence, characteristics, and consequences of CSA, where children are defined as all individuals under 18 years of age (The African Child Policy Forum 2013). Within this context, the analysis of data from the forensic examination of CSA victims remains lacking. Yet, data on CSA, especially hospital-based reports, is crucial to design appropriate policies and interventions. This research is thus an attempt to address the indicated knowledge, practice and policy.

In line with the CDC (2022) research recommendations for prevention of CSA in communities, this study intends to increase knowledge on context-specific risk and protective factors associated to CSA victimisation. This information is useful to reinforce pre-existing

interventions and policies, as well as for the development and promotion of new contextually-located and evidence-based policies, programmes and practices for the primary prevention of child sexual abuse in Mozambique and other similar contexts.

1.3 AIM OF THE STUDY

1.3.1 Research aim

The overarching aim of this quantitative study is to investigate the occurrence, socio-demographic characteristics, circumstances, and forensic evaluation outcomes of CSA in victims assisted at the Forensic Service of the Hospital Central de Maputo, Mozambique from 2015 to 2020.

1.3.2 Research objectives

The study addressed the following specific objectives:

1. To describe the occurrence of sexual assault among children treated as victims of sexual assault at Hospital Central de Maputo, Mozambique between 2015 to 2020
2. To describe the socio-demographic characteristics of children treated as victims of CSA at Hospital Central de Maputo, Mozambique between 2015 to 2020
3. To describe the circumstances of children treated as victims of sexual assault at Hospital Central de Maputo, Mozambique between 2015 to 2020
4. To describe the forensic evaluation outcomes of children treated as victims of sexual assault at Hospital Central de Maputo, Mozambique between 2015 to 2020

1.3.3 Research questions

1. What is the occurrence of CSA, as presenting at Hospital Central de Maputo for the period 2015 to 2020?
2. What are the socio-demographic characteristics of children treated as victims of sexual at Hospital Central de Maputo, Mozambique between 2015 to 2020?
3. What are the circumstances of children treated as victims of sexual assault at Hospital Central de Maputo, Mozambique between 2015 to 2020?
4. What are the forensic evaluation outcomes of children treated as victims of sexual assault at Hospital Central de Maputo, Mozambique between 2015 to 2020?

1.4 SIGNIFICANCE OF THE STUDY

There are few studies reported on CSA health consequences and forensic evaluation outcomes in Africa, and Mozambique particularly. Data on CSA, especially hospital-based, is crucial to design appropriate policies and interventions to mitigate its multiple consequences and prevent its occurrence in the first place. The current study thus has the potential to contribute to knowledge on CSA in the context of Mozambique and to information on CSA in the Sub-Saharan region more generally, thus allowing for comparisons and contextualisation of the phenomena across countries.

Study findings can also be useful to perform monitoring and quality improvement for Mozambican gender-based violence programmes. Additionally, the study outcomes are important sources of areas to focus on during the teaching-learning process at health educational institutions. Moreover, the study highlights the need for standardised collection and data storage for better management of routinely collected data for the implementation and monitoring of interventions at the facility level, the training of the health care providers and medico-legal personnel, resource allocation, and further studies on the topic.

1.5 DEFINITIONS OF KEY TERMS

Definition of terms used in the present study are described as follows:

1.5.1 Child

For the purposes of the current study, a child refers to any individual under 18 years old (United Nations International Children's Emergency Fund (UNICEF) 2020). In Mozambique, the age of majority is 21 years old for most of the decisions; however, for marriage and the right to vote, any individual of 18 years or above is considered capable (Mozambican Civil Code 2019).

1.5.2 Forensic evaluation for victims of CSA

Forensic evaluation in the case of victims of CSA refers to the observation of victims that were allegedly sexually abused, with the purpose of describing acute injuries, referring for appropriate treatment, and collection of forensic evidence to assist the justice system (Adams 2018). The protocols of the Mozambican Ministry of Health define that children or any suspect of sexual abuse must first report to police in order to receive forensic assistance.

Clinical assistance or intervention, on the other hand, is provided regardless of the victim's report (MISAU 2015).

1.5.3 Child sexual assault

Chis sexual assault refers to completed or attempted penetration at the site of children's genital or oral areas using any body part, object or penis (Dills et al 2016). Is important to note that, depending on the age of children and based on the anatomical immaturity, it is seldom possible for an adult achieve penetration without severe injuries; the majority of sexual acts with children are thus directed to the external area of the affected organ (WHO 2003).

1.5.4 Rape

Rape is the penetration of the mouth, vagina or anus of an individual without their consent (República de Moçambique 2019b). This definition refers to any individual without the ability to consent, for reasons such as age, mental illness, impaired cognitive skills due to substance use, and the like.

1.5.5 Child marriage

Child marriage is defined as marriage of any individual under 18 years of age (Kidman 2016). Studies show that children married before the legal age are prone to domestic violence of any type, including of a sexual nature (Ahinkorah 2022).

1.6 OPERATIONAL DEFINITION

1.6.1 Child Sexual Assault

For the objective of this study, the definition of CSA was considered as "attempted or completed rape" (Dills et al 2016:3) on any individual under 18 years old (CDC 2022). The definition of rape is based on Mozambican penal code as follows: "vaginal, anal, or oral intercourse with body parts or objects to any person of any sex, against their will, through physical violence, intimidation or privation" (República de Moçambique 2019b:5722). Within the context of the forensic science literature, this legal definition serves as a guide for the identification of the anatomical locations where forensic evidence must be gathered. Additionally, for medico-legal purposes, this definition also includes penetration attempts

since the literature describes physiologically under-developed children are rarely penetrated (WHO, 2018).

1.7 THEORETICAL FOUNDATIONS OF THE STUDY

Theories are defined as a “set of analytical principles or statements designed to structure our observation, understanding and explanation of the world” (Nilsen 2015:[2]). Theories are how researchers investigate a problem and the meaning added to data (Imenda 2014). Therefore, the current study draws on the ecological model to address the indicated study focus. The ecological model corresponds with studies which have shown that CSA is related to complex childhood experiences and interactions between the family, peer group, school, neighbourhood, community, and society more broadly (Fanflik 2014; Kidman & Palermo 2016; Lalor 2004).

1.7.1 Research paradigm

Research paradigms are lenses through which researchers approach an investigation (Basoeky 2019; Majeed 2019). The main goal of using paradigms is increasing reliability and generalisability of studies (Kankam 2019; Pham 2018). Pragmatism, interpretivism, positivism, and post-positivism are the main four paradigms used to explore phenomena being investigated (Kankam 2019).

In line with the stated research objectives, this study is situated within a positivist paradigm, which places emphasis on the idea of ‘truth’ as objective and measurable (Park, Konge & Artino 2020). This paradigm was described in the nineteenth century by August Comte in terms of knowledge that is gained through observation and classification of phenomena using scientific methods to understand societies and changes (Park et al 2020). Within the positivistic research paradigm, scientific method is considered as central to the way in which knowledge is created (Kankam 2019). For instance, positivism can be applied to gather data, observe regularities, or extract laws (Basoeky 2019; Kankam 2019). For the purpose of the current study, positivism is employed towards producing objective and scientific results through quantitative data that can be replicated (Alharahsheh & Pius 2020; Park et al 2020).

Notwithstanding, positivism has been criticised for not being sufficiently responsive to the complexity of social phenomena, and the subjective and individual aspects of social

phenomena (Ben-Haim 2018). Corry, Porter and McKenna (2019:[12]) have argued that positivism “was an inappropriate way to find out about people because it treated thinking and feeling human beings as objects” and that knowledge cannot be generalised adopting an objective perspective. While sensitive to such critique and also noting the value of multiple knowledge-making paradigms, the current study considers the positivist paradigm as an appropriate approach to examining hospital-based data towards increasing knowledge on CSA, as well as for the purposes of establishing baseline information for further and more in-depth research.

1.7.2 Theoretical framework

As described previously, theories offer guiding and systematic analytical principles to organise our comprehension and accounts of lived reality (Nilsen 2015). Birken et al (2017) reference the importance of theories to having a frame or a model to conduct a study, in the sense of synthesising information, informing phases of the research through its conceptualisation, and implementing and evaluating research. Harrington (2005:5) concluded that “theory is impossible without *empirical observation, and equally that empirical observation is impossible without theory”. Therefore, this study draws on the ecological model to inform the understanding and explanation of CSA victimisation. The ecological model focuses on individual, context and developmental outcomes as these processes change and affect people differently, corresponding with studies that have shown that CSA is related to complex childhood experiences within the interaction with family, peer group, school, neighbourhood or community, and society more broadly (Fanflik 2014; Kidman & Palermo 2016; Lalor 2004).

1.7.2.1 Ecological model

The ecological model points to the interrelating coordinates of human development, considering broader contextual, cultural and historical factors (Darling 2007). The model was first developed by Urie Bronfenbrenner as ecological systems theory to interpret human development as a set of interactions between an individual and its frequent experiences in their environment across time (Wendel et al 2015). The ecological system theory understands human development as and through interactions of the different systems, namely microsystem, mesosystem, macrosystem, exosystem and chronosystem (Guy-Evans 2020; Martinello 2020).

The first, microsystem, is the most centred and meaningful level of the ecological systems theory. This is the most immediate environmental setting containing the developing child and refers to the people who interact directly with children, such as peers, parents or other relatives, and teachers (Guy-Evans 2020). The stronger and more cohesive these relationships are, the more positive is the child's development likely to be, whereas detached and uncaring relatives have the opposite effect (Wendel & Mcleroy 2012). Moreover, it is important to note that influences between children and the surrounding environment can be bidirectional, in the sense that the child is equally capable of influencing those around them (Fanflik 2014).

The second, mesosystem, reflects the interaction between the different constituents of the microsystem. It is expected that the group of people described in the microsystem relate to each other in harmony to provide a positive and influential environment to children. For example, good communication between the parents and teachers may create a cohesive education and values towards children (Guy-Evans 2020).

The third, exosystem, refers to the indirect influences to which children are subjected, as related to neighbours, parents' work environments and friends, and the mass media, for example (Bronfenbrenner & Ceci 1994). For example, the ill-temper of a parent working in a stressful work environment could ultimately produce stress for the child through transmission of the parent's frustration, which in some cases may manifest in violence towards the child. In such an instance, parents may have a negative influence on a child's development (Darling 2007; Wendel & Mcleroy 2012).

Fourth, the macrosystem refers to laws and cultural norms of societies that influence children's development, such as poverty, ethnicity, socioeconomic status and wealth (Darling 2007). Societies and cultures in which children develop clearly influence their perceptions, attitudes and life experiences.

Lastly, the chronosystem addresses the changes across time, such as starting new educational activities, parents divorcing or moving home locations, which may affect children's lives (Guy-Evans 2020).

This theoretical perspective is translated by the CDC (2021) into the levels of the individual, relationship, community and societal. Accounting for the convergence of the theoretical strands described above, the theoretical framework of this study will be sensitive to the individual, relationship, community and societal levels, with a specific focus on the first two levels of the model (See Figure 1.1).

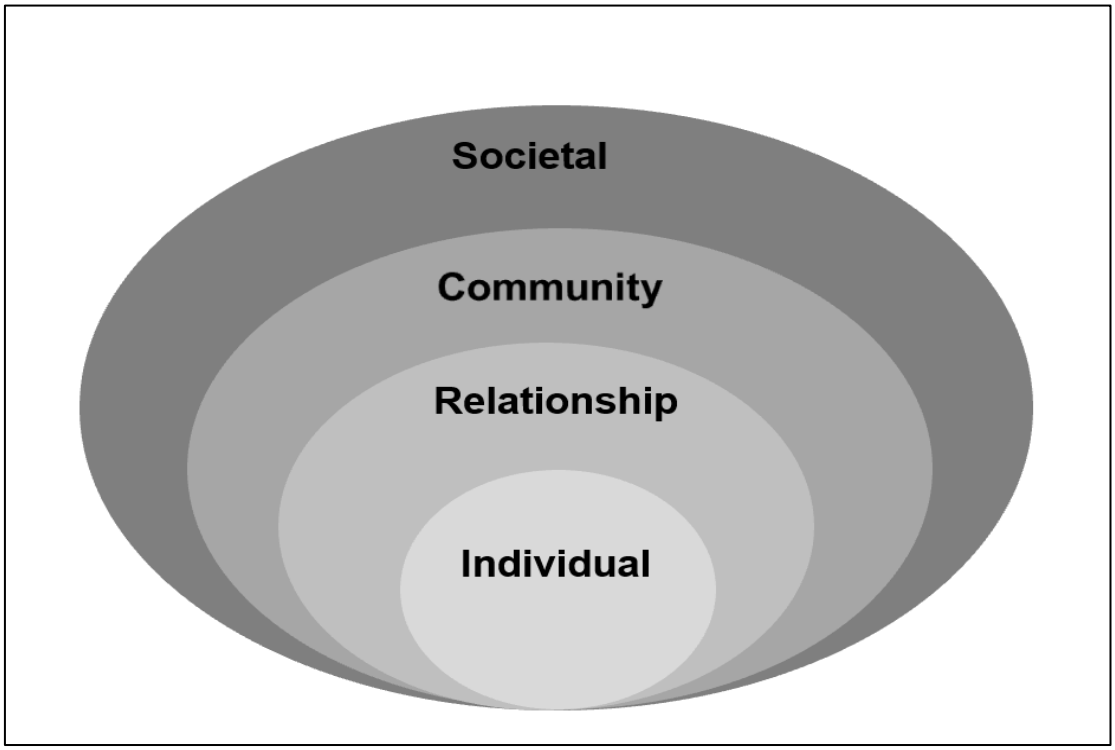


Figure 1. 1: The Centers for Disease Control and Prevention Ecological Model (2021) adapted from Bronfenbrenner and Ceci (1994) to understand CSA victimisation

The strength of the ecological model is that it grants attention to multiple ecosystemic levels to understand and respond to CSA, including consideration of the victims themselves, perpetrators, caretakers, community, and society. On the other hand, a limitation of the model is that it does not allow for the attribution of CSA to direct causes, but only provides for empirical observations to be made (Guy Evans 2020). Furthermore, this theory does not predict how biological development is implicated in the outcomes of CSA, given that the nature of injuries is also dependent on the victim's age (Adams 2018). For this reason, this research supplements the use of the socio-ecological model with the WHO model to describe the nature of the physical, sexual, and reproductive consequences of CSA captured in the

records of presenting children at Hospital Central de Maputo. The WHO addresses the consequences of CSA at four different levels: physical, sexual, reproductive, and psychological and behavioural (Krug et al 2002).

Since the research data has been gathered from medico-legal records, focus will be granted mainly to the physical, sexual and reproductive consequences of CSA, such as injuries, pregnancy and infections. In conclusion, CSA can be addressed from different lenses as informed by the research questions guiding the analysis. In the current research, it is suggested that the chosen theoretical elements will enhance the descriptions and understandings of CSA and its consequences in the Mozambique context, and thereby contribute to recommendations for its prevention and management.

1.8 RESEARCH METHODOLOGY AND RESEARCH DESIGN

This section provides a brief overview of the research methodology and research design of the current study, with more detailed explanations noted in Chapter Three.

1.8.1 Research design

Research design is a crucial and initial step of research, where the parameters of the research process are planned and organised once a research necessity or hypothesis is clearly identified (Toledo-Pereyra 2012). In the case of the current study, the identified focus is on CSA in context of Mozambique.

1.8.2 Research methodology

The research methodology is a crucial part of the dissertation that explains and argue the procedures used to gather the data and methods used for its analysis (McCombes & Georges 2022). This study is driven by a quantitative approach, defined as a process that formally, objectively, and systematically describes, tests or analyses variables or associations between them (Bloomfield & Fisher 2019).

1.8.3 Study setting

A description of the physical or virtual environment in which the research is conducted offers important information in terms of the applicability, interpretation and inference of the study results (SPIRIT 2023). The setting of the current study is Mozambique; specifically, data was

gathered from the Hospital Central de Maputo Forensic Service, the first Mozambican forensic service in the country.

1.8.4 Study population

According to Arias-Gómez (2016:201), a study population is defined as “a set of cases, determined, limited, and accessible, that will constitute the subjects for the selection of the sample, and must fulfill several characteristics and distinct criteria.” This study investigates all victims of suspected sexual assault, under 18 years of age, who presented at the Hospital Central de Maputo Forensic Service during the period 2015 to 2020.

1.8.5 Validity

According to Patino and Ferreira (2018:1), study validity of a research “refers to how well the results among the study participants represent true findings among similar individuals outside the study” Chapter Three provides a description of the steps followed by the researcher to enhance the validity of the study.

1.8.6 Reliability

Reliability of a study is related to the extent researchers attain similar results analysing data in different moments over time (Sürücü & Maslakçı 2020). Differences are expected to occur when an instrument is used in the same population over time in the belief that changes may have occurred; however, when applied to secondary data differences are to be expected less. In Chapter Three, the reliability assessment of the current study is presented.

1.8.7 Ethical considerations

Research conducted using secondary data represents low risk from an ethical perspective. However, procedures are necessary to protect the data and maintenance of confidentiality and anonymity of the information of the human being under analysis (Tripathy 2013). Therefore, the steps followed by the researcher to guarantee anonymity and confidentiality of the results are discussed on Chapter Three.

1.9 SCOPE OF THE STUDY

The study was conducted at Hospital Central de Maputo Forensic Service using records containing CSA data. Data of children under 18 years of age was extracted for analysis.

Specifically, a descriptive, cross-sectional, hospital-based study was conducted, using secondary data on CSA occurrence, associated socio-demographic factors and circumstances, and forensic observation outcomes for children treated as victims of sexual assault.

In a cross-sectional study, the researcher measures the outcome and the exposure of participants in the study. With this study design and approach, the researcher is able to estimate the occurrence of CSA within the given population and explore the association between variables.

1.10 STRUCTURE OF THE DISSERTATION

Chapter One provides an introductory overview of child sexual assault as a research problem, focusing on the background to the research problem as well as the research aim and objectives, significance of the study, definition of key terms, theoretical foundations of the study, and a brief synopsis of the research methodology and design. Chapter Two discusses the relevant literature on the topic, with a focus on definitions, classification, risk factors, diagnosis, consequences, and legislation of CSA. The third chapter describes the methodology used to address the specified research questions and explains the overall research method and research design used for the study. This chapter also includes a description of the study setting, and considerations related to the rigour and ethics of the study. Chapter Four presents and discusses the results of the study. The final chapter, Chapter Five, summarises the research findings, offers recommendations based on the research findings, and considers the study's contributions and limitations.

1.11 SUMMARY

This first chapter of the dissertation provides a general overview of the study, including a broad introduction to CSA, the topic under investigation in the current study, as well as the key elements of the study. The next chapter reviews relevant literature on the CSA.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

Guided by the focus of the study, this chapter is grounded in the existing body of knowledge on CSA. This literature review will consider the definitions and classifications, prevalence, risk factors, circumstances, disclosure considerations, management, consequences and prevention of sexual assault in children. Lastly, the explanation of ecological model, the theoretical framework of this study will be discussed.

2.2 DEFINITION OF CHILD SEXUAL ASSAULT

CSA is a complex and diverse topic, and authors across countries and studies have used several terms, definitions and explanations to explain and explore CSA (Banvard-Fox et al 2020; Eouani et al 2020; Murray, Nguyen & Cohen 2014; Shako & Kalsi 2019). This complexity has in some part resulted in challenges for investigation, policy, regulation, prevention, and the determination of norms of societies(Mathews & Collin-Vézina 2019).

Out of a need to create a robust and theoretically sound conceptualisation of CSA, Mathews and Collin-Vézina (2019) created a model that aims to explore preconditions to define a case as CSA. They examined four key aspects that are required to be met simultaneously for CSA to be confirmed: first is the victim's age, mainly the legal age of each country; secondly the capacity of the child to give consent; thirdly the nature of the act (if it is a sexual act); and lastly if it constitutes abuse in instances where the perpetrators are in a position of power, which is typically the case (Mathews & Collin-Vézina 2019). These four conditions are mainly linked to the legal and cultural systems in which children are situated. For instance, the Mozambican legal age of maturity is 21 years old; however, the marriage age is set at 18 years old and therefore by law CSA is considered when the victim is younger than 18 years old (República de Moçambique 2019a).

As indicated in the previous chapter, child sexual abuse is defined by the WHO (2020) as the exposure of a child or an adolescent to sexual activity that is coercive or in violation of social norms and laws. Likewise, the CDC (2022:para. 1), defines child sexual abuse as "the involvement of a child (person less than 18 years old) in sexual activity that violates the laws

or social taboos of society and that he/she: does not fully comprehend", "does not consent to or is unable to give informed consent to, or is not developmentally prepared for".

Similarly, Dills and colleagues (2016:12) define sexual assault as "when the perpetrators physically force victims or threaten them with physical force, to engage in sexual activity, with or without penetration". This definition of sexual assault includes rape, defined in Mozambican penal code as vaginal, anal, or oral intercourse with body parts or objects to any person of any sex, against their will, through physical violence, intimidation or privation (República de Moçambique 2019b; National Maternal Child Women's Health and Nutrition Cluster 2003).

Based on the aforementioned, it is important to clarify that for this study objective, I employ the definition of CSA as the *attempted or completed rape of any individual under 18 years old* (CDC 2022; Dills et al 2016; República de Moçambique 2019b). The next section describes how clarity in definitions are related to types of sexual violence.

2.3 CLASSIFICATIONS OF CHILD SEXUAL ASSAULT

Several classifications are used in the literature to classify sexual acts committed against any individual. For example, Chiang et al (2016) classified sexual acts as: 1) unwanted sexual touching; 2) attempted forced sex; 3) pressured or coerced sex; and 4) physically forced sex. This classification conveys a general overview of acts that are not exclusively against children. From children's perspective, the manifestations of CSA vary from touching and kissing, sexual harassment and up to anogenital penetration (Amin, MacMillan & Garcia-Moreno 2018; WHO 2020).

Additionally, according to the WHO (2018), child sexual abuse is grouped in three main categories. First, as non-contact sexual abuse, which includes "threats of sexual abuse, verbal sexual harassment, sexual solicitation, indecent exposure, and exposing the child to pornography" (WHO, 2018:7). Second, CSA classification accounts for abuse involving sexual intercourse, such as sexual assault and rape, which is the focus of this study. Third, CSA is classified as sexual contact excluding sexual intercourse but inclusive of (physical) acts such as fondling, kissing and inappropriate touching (Amin et al 2018). It is crucial to

note that these classification systems can vary among countries depending on the legal definition of the classification features (WHO 2020).

From a legal perspective, the WHO guidelines are ultimately designed to be contextualised within the local legal systems with the intent of creating social and culturally sensitive justice systems (WHO 2018). According to the Mozambican legal system, acts of violence against children include rape; sexual acts with children under 16 years old, with sexual violence against children under 12 years of age considered as most severe; and use of children in pornography, sexual harassment, sexual exploitation, and prostitution of minors (República de Moçambique 2019b).

2.4 PREVALENCE OF CHILD SEXUAL ASSAULT

CSA is a public health problem. As indicated previously, the global prevalence of CSA is around 18-20% for girls and 8 % for boys (Finkelhor et al 2014; WHO and United Nations Office on Drugs and Crime (UNODC) 2015). In the United States, according to the CDC, 1 out of 4 girls and 1 out of 13 boys experience child sexual abuse (CDC 2022). In Sub-Saharan Africa, studies have shown higher rates of CSA (Amin et al 2018). For example, in Swaziland, estimates indicate that approximately 37% of females aged 13 to 24 years had experienced some form of sexual violence as a child (Amin et al 2018). In Tanzania, reports suggest that in child sexual assault cases 27.9% of victims are females and 13.4% are males (Kiruki et al 2017). The Global Status Report on Preventing Violence Against Children reported prevalence among individuals under 18 years old, with girls and boys respectively at 35% and 17% in Uganda, 25% and 11% in Nigeria, 22% and 15% in Malawi, 32% and 18% in Kenya, and 9% and 1% Zimbabwe (World Health Organization 2020). Other Kenyan findings report that three out of ten females and approximately two out of ten males aged 18 to 24 years reported to have had at least one experience of sexual violence before the age of 18 (Kiruki et al 2017).

Studies have shown differences in prevalence explained by sample characteristics and the settings in which studies were conducted. For instance, in South Africa, Artz et al (2016) found that 35.4% of the youth interviewed in school contexts reported to have been sexually abused during their lives. In comparison, 26.3% of those interviewed in their homes indicated that they had experienced sexual abuse at some point in their lives (Artz et al 2016).

Similarly, this pattern is described in Mozambique, the site of this study, where based on a household survey the prevalence of CSA was reported to be 18% for girls and 8% for boys (INS et al 2020). In a 2019 study that used a hospital-based sample only, from the 321 children who disclosed or were suspected of being victims of violence, 60% of the children experienced sexual violence, of which 86,4% were girls and 66,1% boys (Nhassengo et al 2021).

2.5 CHILD SEXUAL ASSAULT RISK FACTORS

Over the years, research has concluded that specific characteristics related to socio-demographic factors, cultural and societal beliefs, and environment are associated with CSA (Davies & Jones 2013; Feng, Hao & Deng 2021; Meinck et al 2015). Researchers have consistently found that victims of CSA have a history of adverse childhood experiences in their respective contexts. The ecological system theory developed by psychologist Urie Bronfenbrenner (1979; 1994) has been used widely by social theorists to explain how different systems (mesosystem, microsystem, microsystem, exosystem and chronosystem) influence the behaviour and experiences of the victims and the perpetrators of CSA (Dangerfield, Ildeniz & Ciardha 2020; Finkelhor et al 2014; Seto 2019). Therefore, from the ecological perspective, this study advances a multi-level consideration of CSA that acknowledges interconnecting risk factors operating at different levels of influence, namely the individual, relationship, community, and societal levels (Darling 2007; Fanflik 2014; Martinello 2020; Salter 2018).

2.5.1 Individual risk factors

At the individual level, children are considered easy targets for CSA because they often lack the maturity to understand the act of violence and may be easily lured by perpetrators (Ministry of Health and Family Welfare Government of India 2013). Some socio-demographic factors, such as those that promote gender disparity, places girls at greater risk than boys, in proportions that vary across countries (Badoe 2017; Machisa et al 2018). Studies have reported that younger children are more vulnerable to becoming victims, especially those under twelve years of age (Cox et al 2007; Shehu et al 2019). Additionally, physical or mental disability, history of past abuse, and a lack of emotional support has been found to increase the likelihood of children being sexually assaulted (Amin et al 2018). Given this, it can be assumed that educational level and the cognitive skills of children are important determinants

of the manner in which they react to sexual violence. For instance, in a study conducted in India, the researchers found that female children who were lacking education and career opportunities were more exposed to sexual violence (Li 2019). According to the Violence Against Children Survey (VACS) undertaken in 2019 in Mozambique among children between 13 and 17 years of age who were exposed to any kind of violence, 20% of boys and 35% of girls were not enrolled in any educational activity (INS 2019).

Moreover, special attention has been given to the rates of child marriage as a devastating and important source of violence against children. Kidman (2017) reported the global prevalence of children married under 15 years of age to be 9% (Kidman 2017). UNICEF reported that in in 2017 in sub-Saharan Africa, about 40% of girls were married before turning 18 years old (UNICEF 2020). Some authors in African countries, such as Malawi, Zambia, Nigeria and Ghana, have argued that child marriage in itself constitutes intimate partner violence, including sexual violence(Gage et al [s.a.]; Tenkorang 2019).

2.5.2 Relationship risk factors

Relationship risk factors are identified in relation to children and their families or other caretakers, peers, professionals, and perpetrators (Martinello 2020). The relationship between victims and their caregivers, as contextualised against the backdrop of single-parent homes, homes wherein there is domestic violence, parents with mental illness, or alcohol or drug dependency, for example, tends to expose children to sexual violence (Hu et al 2018; Meinck et al 2015; WHO 2020). These settings may predispose the children to abuse by caregivers and draw them into existing cycles of violence (National Maternal Child Women's Health and Nutrition Cluster 2003; WHO 2020). Likewise, a study based on secondary data revealed that parents willing to gain knowledge about children and their behaviour, known as, "parental monitoring", are more likely to have limited child misbehaviour and foster positive childhood development that protects children from becoming victims of CSA (Bronfenbrenner & Ceci 1994).

At the relationship level, perpetrator status is an important factor. The perpetrator could be any adult, another child or adolescent, usually known by the victim and rarely a stranger (Amin et al 2018). Assabu et al (2019) found that neighbours (28.8%), followed by family members (23.6%) were the most common perpetrators, and that the perpetrator's identity

was linked to the victim's age, where neighbours tended to perpetrate sexual violence against children of younger ages and family members against older children s (Assabu et al 2019). Contradicting findings emerged in research conducted in Egypt by Abo-Seria et al (2019) who demonstrated that strangers were the main group of perpetrators (34.4%), followed by boyfriends (28.1%), neighbours (22.6%), and relatives who represented only 10.9%.

2.5.3 Community risk factors

The risk factors at the community level vary depending on the habits and norms of each society, as well as levels of development and education of the population (Al Rammah et al 2018; Mustaine et al 2014; Parkes et al 2013). The CDC described some of the characteristics of communities reporting a high incidence of CSA, namely high crime rates, poverty, lack of education, high unemployment rates, easy access to drugs and alcohol, families facing food insecurity, and neighbourhood social disorder (CDC 2022). For instance, a study conducted in Florida in the United States of America, that aimed to explore the effect of community social disorganisation on the occurrence of CSA, revealed that economic disadvantage, high housing density, and the presence of registered sex offenders is positively interconnected to the occurrence of CSA (Mustaine et al 2014). Some of these factors have also been described by other authors, showing that an increased number of CSA cases is seen in communities where family members have low education levels, domestic violence is often present and common, where there are high levels of gender inequality, and there is cultural acceptance of harmful practices (Global Child Protection Area of Responsibility 2019; Meinck et al 2015; Ministério da Saúde 2012).

The majority of community risk factors are related to cultural beliefs and practices, such as having sex with children will heal adults' diseases (Lalor 2004), which increase the probability of children being victims of sexual violence (Kidman & Palermo 2016; Meinck et al 2015; Teles 2019). Additional examples described in the context of some rural communities in Mozambique include the acceptance that immature girls, or girls capable of doing household work, and those who abandoned school can engage in a sexualised relationship in order to be prepared for marriage (van Deijk 2007). Moreover, in other regions of Africa, for example, community leaders, who act as intermediaries in cases of CSA, allow the children's families

to negotiate payment from the perpetrator to the victim's family rather than reporting to the case to the local authorities or police (Teles 2019).

2.5.4 Societal risk factors

At the societal level, children from countries withstanding socio-economic problems due to factors such as conflicts or natural disasters, and whose legal and cultural norms encourage violence and gender inequality, are reported to be more at risk of being victims of CSA (Hillis et al 2016; International Rescue Committee & UNICEF 2012; Lenane 2007; Meinck et al 2015; WHO 2003; Zafarzai & Amiri 2021). From a cultural perspective, in Mozambican customary law, children's families may accept financial compensation after their child has been sexually assaulted, with increased numbers of pregnancy occurring as a result; in this case, the offender can be obliged to marry the victim to preserve the family's honour (van Deijk 2007).

The socio-economic challenges present in Mozambique are a reason of great concern, UNICEF (2020) reported that children's vulnerability to sexual violence was raised due to increasing poverty as a result of the global COVID-19 pandemic, especially in the centre and northern areas of the country (UNICEF 2020). These same areas were similarly affected by tropical cyclones and armed conflict which, in combination, increased the risk of CSA considering that both lead in immigrant concentration that is negatively related to both preteen and teen sexual assault (UNICEF 2020).

2.6 CIRCUMSTANCES OF CHILD SEXUAL ASSAULT

According to the WHO guidelines (2018), the occurrence of CSA often takes place in an environment that is familiar to children (Singh, Koushal & Bharti 2022; WHO 2018), and where perpetrators tend to approach the child in a gradual and progressive manner. Use of physical force is not necessarily exercised to victimise children; usually the pattern is that CSA occurs in repeated episodes, increasing in severity across time, defined as "grooming" (Amin et al 2018). However, some authors have presented discordant findings; for example, Abo-Seria et al (2019) described the most frequently used method used by perpetrators to be physical violence (27.7%), followed by armed threat (21.9%), and the use of drugs (3.5%).

Growing evidence in different settings indicates that children are at elevated risk of sexual abuse within and surrounding their home settings, within their family context, at school, and in their community (Banvard-Fox et al 2020; Bugaje, Ogunrinde & Faruk 2012; Nhassengo et al 2021). Nhassengo et al (2021), in their study conducted in Hospital Central de Maputo demonstrated that more than 70% of the victims suffered the assault at their own or the offenders' house. This was also found by INS et al (2020), where the frequency of occurrence is higher at victims', perpetrators', or someone's else house, followed by school and lastly in outdoor spaces (INS et al 2022).

The perpetrators of CSA are generally people well known to the victims, and even a family member (WHO 2020). This pattern was also found by Bugaje et al (2012) where 55% of the offenders were neighbours or family members, as well as in a hospital-based sample from Cape Town, South Africa where 79% of the assailants were known by the victims(Cox et al 2007). The number of CSA episodes can also vary depending on the perpetrator identity; the tendency is for strangers to abuse children in a single episode, while known offenders may apply grooming and sexually assault children more frequently (Amin et al 2018; WHO 2018). Commonly, the victims are abused repeatedly by one single perpetrator (Bugaje et al 2012).

Related to temporal circumstances, studies from sub-Saharan African have indicated that CSA occurs more often on weekdays and during the day (Badejoko et al 2014; Cox et al 2007). For example, research findings reported by Nhassengo et al (2021) indicated that among 191 victims observed, 64% were abused during weekdays and 29.1% in weekends.

2.7 DISCLOSURE OF CHILD SEXUAL ABUSE

The disclosure of CSA is critical for appropriate clinical management (Ministry of Health 2014; Seshadri & Ramaswamy 2019). Based on studies conducted in Kenya, Tanzania and Zimbabwe, the WHO reported that the percentage of children who revealed their experiences of sexual violence to someone ranged from 46% to 52% for girls and 31% to 45% for boys. Of these, 4-22% of girls and 2-12% of boys sought medical assistance; among these, only violence 3-13% of girls and less than 4% of boys received services for sexual violence (WHO 2018). As one explanation of non-disclosure, the WHO (2003) references "child sexual abuse accommodation syndrome", described as a situation in which a child coerced to engage in a

sexual activity remains silent, feeling unprotected, helpless and fearful; when there is disclosure but no responsive intervention that follows, children may then avoid sharing further information about their sexual violation, and take up so-called “accommodative behaviours” (WHO 2003).

The procedures for disclosure of CSA are interlinked with the legal system of different contexts. For Mozambique, it is a legal requirement for CSA victims to access forensic evaluation services (Direcção Nacional de Assistência Médica 2019). The WHO clinical guidelines on responding to children and adolescents who have been sexually assaulted encourages health practitioners to report to the legal authorities, except where the victims are adolescents who are not willing to share their victimisation experiences with their parents or where there is consensual sexual activity between two adolescents (WHO 2018).

2.8 MANAGEMENT OF CHILD SEXUAL ASSAULT

Approaching CSA victims is a delicate process given that for children the investigation is more complex and requires time, training, and commitment (Herrmann et al 2014). Singh et al (2022), conducted a study in a health facility in India, that revealed that although 81% of the physicians had awareness about CSA, of these 70% knew of the sites where survivors could be assisted, and only 34% of the respondents understood the importance of reporting (Singh et al 2022). A similar study was conducted at Mavalane General Hospital in Maputo City in Mozambique by Pinto et al (2018), who found low levels of knowledge and diagnostic skills among health practitioners; only 32.6% felt confident to diagnose CSA, among whom 69.9% were aware of the referral department for the victims.

To address any type of violence against children, the intersectoral mechanism created in Mozambique stipulates that all victims should benefit from hospital treatment regardless of reporting to the police. However, since CSA is a public crime, it can be reported by anyone, including the physician; this approach is in line with international and WHO guidelines (Amin et al 2018; Chiang et al 2016; WHO 2018; Ministry of Health 2014; WHO 2020).

Overall, children usually seek medical health assistance either through illness, or specifically due to suspicion from a caregiver or official institution that deals with sexual abuse and may be accompanied by their caregivers or unaccompanied (Adams, Farst & Kellogg 2018). To

approach CSA victims, an extremely important consideration is the time elapsed between the alleged sexual event and the presentation at a health facility (Herrmann et al 2014; Ministry of Health 2014; Young et al 2006). CSA cases disclosed within less than 72 hours benefit from the indicated urgent approach, which involves the gathering of medical and circumstance-related information, medical treatment of injuries, evidence collection, and reporting the event to the authorities (Adams et al 2018; Amin et al 2018; Dills et al 2016; Pinto et al 2018).

The process of diagnosing CSA remains a challenge among health care services. The WHO (2018) suggests that the diagnosis must be based on direct observation of victims but conceded that “in practice, clear physical findings of sexual abuse are seldom seen in children because child sexual abuse rarely involves physical harm” (WHO 2003:78). However, physical signs, such as unexplained genital injury, pain on urination, urinary tract infection, anal pain and bleeding, and vaginal or penial discharge can be related to the event; however, there are obviously instances when CSA occurs in the absence of such injuries (Jaiswani et al 2021; Kaur et al 2019). A positive diagnosis is given by the presence of sexual transmitted infections, pregnancy and or the presence of sperm, evident hymenal injury caused by blunt trauma, or images such as video-recordings or photographs of the abuse or eyewitness of abuse (WHO 2003).

2.9 CONSEQUENCES OF CHILD SEXUAL ASSAULT

Overall, CSA consequences encompass several short-term and long-term health complications (WHO 2018). Four main domains are particularly pertinent here: physical, mental, behavioural, and sexual and reproductive health (Amin et al 2018). Physical consequences of CSA include genital and extragenital injuries, chronic pain and gastrointestinal disorders. Psychological changes are reported to include sudden changes in the child’s emotional well-being, fear for unknown reason, isolation, sadness and crying, nightmares, irritability and suicides attempts (WHO 2018). Behavioural changes, such as regression in school performance, inappropriate sexualised behaviours, drug and alcohol use, poor hygiene, lack of self-confidence, misbehaviour, lack of self-esteem, and digestive disorders, among others, have been identified as suggestive of CSA (Seshadri & Ramaswamy 2019; Zafarzai & Amiri 2021). In the domain of sexual and reproductive health, some known complications are menstrual disorders, sexually transmitted illnesses, including

HIV/AIDS, bleeding and vaginal fibrosis, dyspareunia, chronic inflammatory disease, urinary infections, and unwanted pregnancy or unsafe abortion (Direcção Nacional de Assistência Médica 2019). These complications have also been described by Kidman (2017) among children who were married before the age of 18 years. Among the group studied, 25% were married between the ages of 15 and 17 years of age, many of whom suffered HIV and high risk pregnancy complications, as well as intimate partner violence (Kidman 2017).

An additional and important domain that has been described in the literature refers to the social consequences for CSA victims (Direcção Nacional de Assistência Médica 2019). Children exposed to sexual violence tend to be prone to isolating themselves or become irritable demotivated in the context of daily activities such as playing or studying (Direcção Nacional de Assistência Médica 2019). These complications may be aggravated in those cases where the perpetrator lives in the same environment as the child, or where there is a higher frequency of assault episodes (Ministry of Health and Family Welfare Government of India 2013).

2.10 PREVENTION

The public health approach is documented as providing a useful framework for the prevention of CSA at the primary, secondary and tertiary levels of interventions (Krug et al 2002). Strategies designed at the primary prevention level are typically those that address CSA before it occurs and are directed at groups identified to be particularly at risk (Knack et al 2019; Krug et al 2002). At the secondary level, the objective is to enhance services for CSA victims and their families (Knack et al 2019; Krug et al 2002). Tertiary prevention interventions focus on the management of CSA consequences and the prevention of revictimisation (Knack et al 2019; Krug et al 2002). These prevention strategies may then be applied to each of the four levels of risk factors formulated by the ecological model, which serves as the theoretical lens of the study.

Globally, prevention at multisectoral levels is argued to be crucial for the integration of therapeutic and legal interventions that are child-centred, accessible, and affordable (CDC 2022; Chiang et al 2016; Salter 2018). To this end, the WHO (2020:100) developed the so-called INSPIRE strategy, an acronym in which each letter represents a specific strategy:

> “I, for the implementation and enforcement of laws”;

“N, for norms and values”;

“S, for safe environments”;

“P, for parent and caregiver support”;

“I, for income and economic strengthening”;

“R, for response and support services”; and

“E, for education and life skills”.

In the African region, according to African Union (2021), a myriad of strategies and interventions are currently being implemented. A recent example is the “The African Union Campaign on Ending Violence Against Women and Girls”, which places emphasis on the “16 Days of Activism” towards the prevention of violence against girls and women. The campaign is in line with Agenda 2063, Africa’s development plan to attain inclusive and sustainable socio-economic development over a 50-year period, and Agenda 2030 on Sustainable Development Goals, and is established on three principles namely: prevention, advocacy, and resource mobilisation (African Union 2021).

Mozambique, specifically, has adopted the first five of the INSPIRE strategies to address the incidence of violence against children (INS et al 2022), as well as the 16 Days of Activism campaign. These strategies are designed to occur simultaneously with multisectoral action and coordination and highlight the importance of monitoring and evaluation of CSA management and prevention interventions (WHO 2020).

Moreover, according to Mozambican good practice guidelines on medico-legal care and justice for child victims of violence (adapted from the United Nations Guidelines on Justice in Matters involving child victims and witnesses of crime online training), the prevention of sexual violence against children is addressed at the level of two main domains (Programa Nacional de Medicina Legal 2020). The first level involves more than ten public governmental and non-governmental institutions linked to child protection; included in this group are the Ministry of Health, including forensic assistance, and the Ministries of Education, Justice and Labour, and the municipalities (Programa Nacional de Medicina Legal 2020). The second level includes community and traditional leaders, children's legal representatives, and witnesses of violence (Programa Nacional de Medicina Legal 2020). These guidelines also clarify that the second level is only applicable to in cases that necessitate the protection of

the child from harm but that do not constitute a crime according to the law, and can be solved among families, for example with financial compensation.

From the legal perspective, in the last two decades Mozambique has made improvements in the development and implementation of frameworks for the assistance and protection of child victims of violence. Examples of legal frameworks in force in the country include: a law on the promotion and protection of the rights of the child; a law on the prevention and combating of human trafficking; a law on the protection of minors; a law on the prevention and combating of “premature unions”; and a law on family rights (MISAU/DNAM 2016; Lei da Familia 2019; Lei de prevenção e combate a uniões prematuras 2019).

At the community level, due to low levels of literacy, communication on violence prevention is delivered orally, especially for girls and via radio broadcasts in local languages and face-to-face communication (UNICEF Mozambique 2017). In Mozambique specifically, an online platform known as the SMS BIZ/U-Report (see www.smsbiz.co.mz) is used as a means of providing adolescents with counselling from skilled peers, sharing responses to surveys, and reporting on issues related to sexual and reproductive health, HIV, sexual violence and abuse, and early marriage (UNICEF Mozambique 2017). Furthermore, school campaigns are driven by the Ministry of Education, where multisectoral institutions are enrolled and children can receive support by accessing the Child Helpline, and complaint and reporting mechanisms (Basile 2016; República de Moçambique, Ministério da Educação e Desenvolvimento Humano 2020). Finally, at the societal level, emphasis is placed on the legislative revisions mentioned previously. In total, almost 20 national laws, policies, programmes and child protection plans are implemented in the country, an example being the UNESCO strategy to promote the culture of peace and non-violence among young people (UNESCO MOZAMBIQUE 2017).

Interconnecting the existing prevention methods with the ecological model underlying this study, the literature highlights particular following implementation measures. At the individual level, the emphasis appears to be on the promotion of educational awareness of manners, principles, and behaviours directed at the prevention of violence, including such interventions as conflict management and life skills training, social-emotional learning, and safe and healthy relationship building skills development (CDC 2022). At the relationship level,

prevention strategies are focused on families and peers in order to strengthen adult-child interactions (CDC 2022). In the Mozambican context, the “Multisectoral Mechanism for Prevention, Reporting, Referring and Responding to Violence against Children in Schools, Including Victim Assistance” intervention is implemented at both the individual and relationship levels (Ministério da Educação e Desenvolvimento Humano 2021). This mechanism is a guidance tool where different actors in child protection roles, such as state, civil society, religious and community institutions, work together in a coordinated manner against all forms of violence in schools based on the lessons learned from current initiatives for child protection (Ministério da Educação e Desenvolvimento Humano 2021). At the community and societal levels, the technical package to prevent sexual violence, developed by the CDC, places the focus on the implementation of policies, use of social media, and community environmental modification interventions (Basile 2016). At the community level in Mozambique, due to low levels of literacy, communication on violence prevention is delivered orally, especially for girls, and via radio broadcasts in local languages and face-to-face communication (UNICEF Mozambique 2017). An online platform known as the SMS BIZ/U-Report (see www.smsbiz.co.mz) is used as a means of providing adolescents with counselling from skilled peers, sharing responses to surveys, and reporting on issues related to sexual and reproductive health, HIV, sexual violence and abuse, and early marriage (UNICEF Mozambique 2017). Furthermore, school campaigns are driven by the Ministry of Education, where multisectoral institutions are enrolled and children can receive support by accessing the Child Helpline, and complaint and reporting mechanisms (República de Moçambique, Ministério da Educação e Desenvolvimento Humano 2020). Finally, at the societal level, emphasis is placed on the legislative revisions mentioned previously. In total, almost 20 national laws, policies, programmes and child protection plans are implemented in the country, an example being the UNESCO strategy to promote the culture of peace and non-violence among young people (UNESCO MOZAMBIQUE 2017).

In essence, the therapeutic and legal strategies indicated above are in line with the principles of the ecological model, where individuals and families are enabled of control, relationship and problem-solving capacities, and communities are supported in the fostering of positive environments (MISAU/DNAM 2017).

2.11 SUMMARY

The preceding literature review has highlighted that the definitions and classification of CSA can vary, depending on local legislation. The literature underscores the importance of appropriate and accurate classification and diagnosis to determine the clinical approach adopted to treat victims in order to attenuate the physical and psychological consequences for children. The literature also points to the multiplicity of CSA risk factors that operate at the different levels of the ecological system. The importance of the health care system to aid and support victims and their families is thus apparent in the research reviewed above, which point more broadly to the range of prevention mechanisms that are crucial to address CSA.

CHAPTER 3
RESEARCH DESIGN AND METHOD

3.1 INTRODUCTION

The previous chapter outlined the relevant literature on the topic. This chapter describes the research design and methodology used to address the aim of this study namely, to investigate the occurrence, socio-demographic characteristics, circumstances, and forensic evaluation outcomes of CSA in victims assisted at the Forensic Service of the Hospital Central de Maputo, Mozambique from 2015 to 2020. In sequence, the chapter provides an in-depth description of the research design, research method and rigour of the study.

3.2 RESEARCH DESIGN

A cross-sectional, quantitative study was conducted using secondary data spanning six years (2015 to 2020) that were extracted from the medico-legal reports of the Forensic Service of Hospital Central de Maputo in Mozambique.

3.3 RESEARCH METHOD

Research methods are the strategies, processes or techniques utilised in the collection of data or evidence for analysis to uncover new information or create better understanding of a topic (Toledo-Pereyra 2012). (“Research Methods - Health and Social Care - University of Essex”) The current study employs a descriptive quantitative approach. Quantitative studies seek to measure and interpret variables in a sample in a systematic manner (Bloomfield & Fisher 2019).

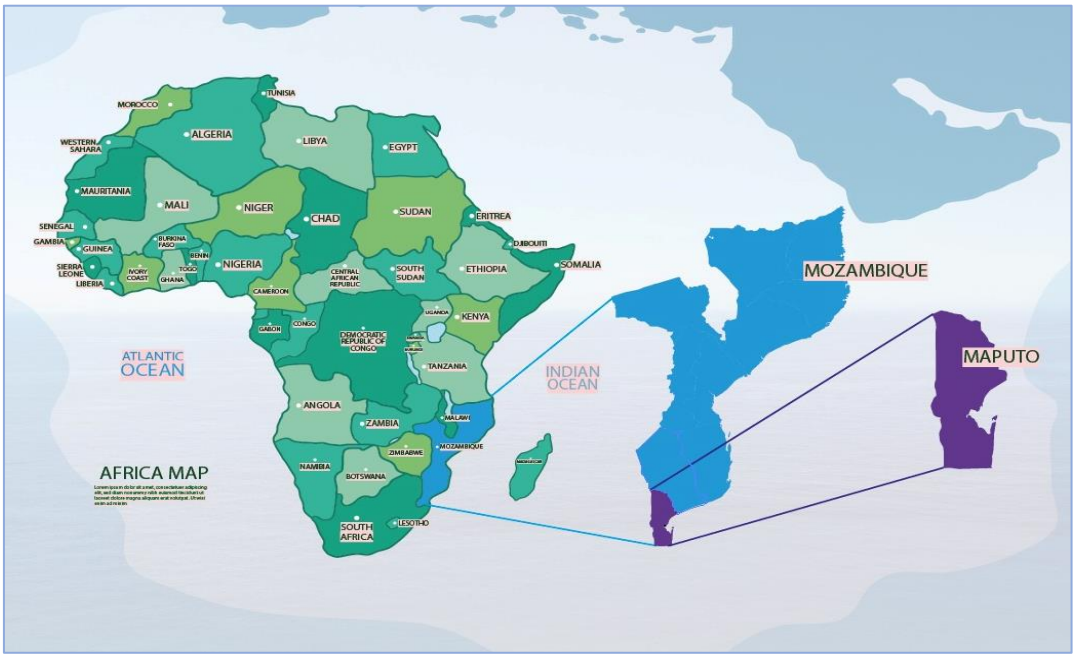
Specifically, the sections below describe the research setting; study population, sampling and sample size; data source; data collection approach and method; data analysis; and ethical considerations relevant to the current research.

3.3.1 Research setting

Mozambique is a low-income country located in sub-Saharan Africa. The country is divided into 11 Provinces: the Northern provinces of the country are Niassa, Cabo Delgado and Nampula; the central provinces of Mozambique are Zambézia, Tete, Manica and Sofala; and the Southern provinces include Inhambane, Gaza, Maputo Province and Maputo City

(GOVERNO 2019). According to the 2017 national population census[1], Mozambique has a total population of approximately 32 million, among which 53% represents children under 18 years old (Instituto Nacional de Estatistica (INE) 2019). The vast majority of the population resides in rural areas of the country (65.54%), while the remainder (34.46%) live in urban areas (INE 2022). The level of illiteracy is 45% for the adult population and 25% for children under 15 years of age (UNESCO 2021).

Maputo City and Province, the geographical area pertaining to the study (see Figure 3.1), are two distinct provinces in the south of Mozambique. According to the National Institute of Statistics, Maputo Province has a total population of approximately two million, equivalent to a population density of about 76 inhabitants per km^2 (GOVERNO 2019). The Province is constituted of eight districts, namely: Boane, Magude, Manhiça, Marracuene, Matola, Matutuíne, Moamba and Namaacha. These are organised into four municipalities: Matola (city), Boane (village), Manhiça (village) and Namaacha (village). Maputo City has a total population of approximately 1 128 000 inhabitants and covers a land area of 3529 per km^2. Maputo City is organised into 7 districts: KaMpfumu, Nlhamankulu, KaMaxaqueni, KaMavota, KaMubukwana, KaTembe and KaNyaka (INE 2021).



[1] The 2017 national population census is the most recent.

Figure 3.1: Geographical location of Mozambique and Maputo (City and Province) (Adapted from http://bit.ly/3YVhpvV, https://bit.ly/3gSkoR1j & https://bit.ly/3XUxjp2)

3.3.1.1 Hospital Central de Maputo

This study is referenced in the context of the main hospital of Maputo, the Hospital Central de Maputo, which is a quaternary level public hospital that receives referrals from across the country. It has an integrated network of support services, namely: Clinical Analysis Laboratory, Pathological Anatomy, Radiology, Blood Bank, Forensic Medicine, Pharmacy, Adult Emergency, Operating Room, ICU, Anaesthesia and Pain Service, Sterilisation, Clinical Archive, and Administration (Hospital Central de Maputo 2016).

3.3.1.2 Forensic Service

The Forensic Service of the Hospital Central de Maputo (see Figure 3.2) is the first national forensic service established in the country, in 1974 (Zacarias 2004). At the current time, there are eight forensic doctors employed at the hospital's Forensic Service, including seven nationals and one foreigner (Hospital Central de Maputo 2016). The Forensic Service has its own mandates, including overseeing thanatological forensic examinations on corpses; victims of violent deaths; and suspected victims of crime, such as the sudden death of foreigners, citizens and individuals in psychiatric hospitals or in police custody. In addition, the forensic team performs examinations on living victims of different types of crimes related physical, sexual, and psychological assaults (Serviço de Medicina Legal 2021) Other live consultations are undertaken to determine the victims' age, mental capacity for civil and penal purposes, and paternity. The aforementioned services are provided in response to requests made by police and legal authorities.

The Forensic Service was chosen because it is the main referral source for both Maputo City and Maputo Province, with forensic doctors employed to render services to all victims of violence, including sexual violence, who are referred from the surrounding districts. As such, this facility is a rich and reliable source of data of CSA incidence in Mozambique.

Figure 3.2: Main entrance of the Forensic Service of Hospital Central de Maputo (Source: Forensic Service files)

3.3.2 Study population, sampling and sample size

The study data were drawn from the hospital records of children under 18 years of age suspected of being victims of CSA, who were treated at the Forensic Service of Hospital Central de Maputo. To enhance the reliability of the data, all records of CSA victims under 18 years were included, spanning the period January 2015 to December 2020.

Accordingly, the inclusion criteria for the study sample included all records of individuals under of 18 years of age suspected of being a victim of CSA, as captured for the duration of the indicated study period. The exclusion criteria included records of all other types of violence, illegible records, and records with omitted information on the sociodemographic characteristics and circumstances of occurrence. Following these criteria, a total of 3482 cases of sexual violence were extracted. Subsequently, the cases were filtered by age, yielding 2610 cases that represented children under 18 years of age. However, from these, some children presented as victims of other types of violence and were thus excluded, resulting in a total of 2588 cases meeting the inclusion criteria for the study (see Figure 3.3).

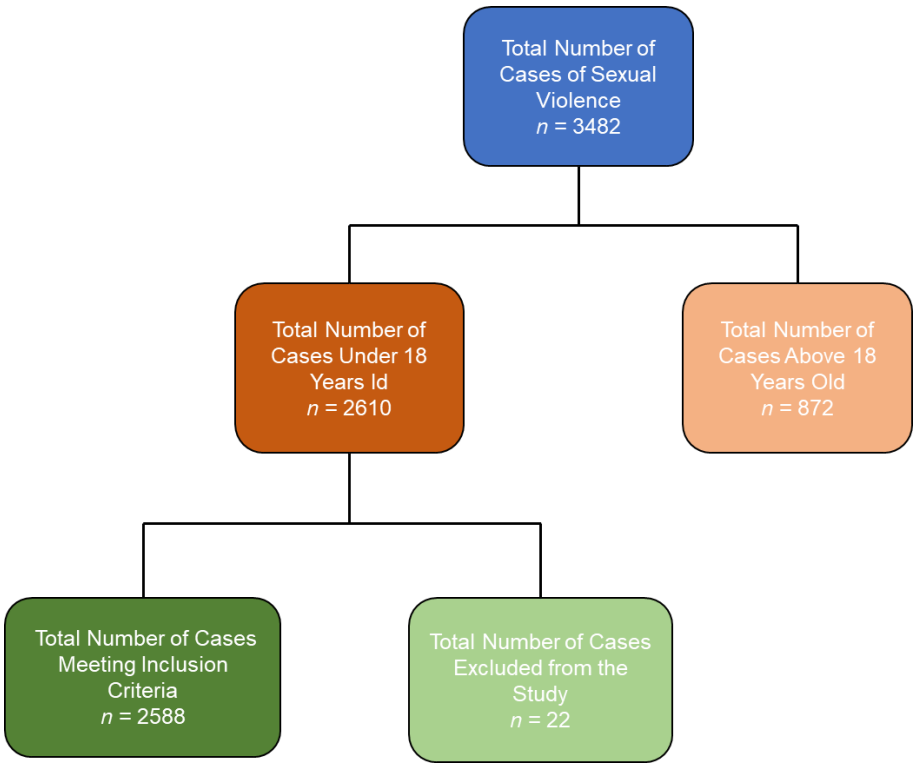


Figure 3.3. Flow chart of study population selection

3.3.3 Data source

The data source for the current study was the forensic records on sexual violence of the Forensic Service of HCM. Since the data is confidential and protected, access was requested as explained in section 3.4 below.

3.3.4 Data collection approach and method

As already indicated, the current study drew on secondary data, spanning a six-year period (2015-2020), gathered from the forensic service database of Hospital Central de Maputo. The forensic records containing the secondary data utilised for the study were originally compiled based on police referral letters and related documentation; data that was collected by the medical practitioners from the children and/or their caregivers; and the findings of medical and forensic examinations.

The secondary data was extracted by the researcher from the hospital's forensic records through the use of a data extraction form aligned with the data requirements of the research questions indicated in Chapter One (see Annexe A). Identifying information was removed to

preserve the anonymity and privacy of the victim and the remaining information was captured in a Microsoft Excel sheet. The data was then coded and exported to SPSS (Statistical Package for the Social Sciences) V.28 for analysis. The SPSS is a standard statistical software package used for the analysis of statistical data.

3.3.5 Description of variables

This section describes the study variables as they apply to each of the study objectives. The categories that were developed are consistent with similar analyses undertaken in previous research (see Artz et al 2016; Cox et al 2007; Karagianni 2021; Shako & Kalsi 2019).

3.3.5.1 Objective one: Occurrence of CSA

To explore the first objective of the study, the variables that were analysed included year of occurrence (2015 – 2020); type of penetration (vaginal penetration, anal penetration or oral penetration); and sex of the victim.

3.3.5.2 Objective two: Sociodemographic characteristics

To address the second objective of the study, the following variables were explored: age, sex, education, residence, and police district.

For age, a frequency analysis was firstly undertaken for each group, that is from 0 years of age to 17 years of age to disaggregate occurrence more finely by age. Subsequently, age was categorised as 0-5, 6-11 and 12-17 years. This categorisation is consistent with children's psychological and physical development, where the first category represents children that are less capable of sharing their experiences of sexual assault, the second group refers to pre-menarch/pubertal children, and the third includes children in puberty (Babakr et al 2019; Hassan 2020). This categorisation also aligns with the Mozambican penal code, where the severity of the penalty is higher when the victims aged under twelve years of age (República de Moçambique 2019b). These categories have also been used in previous studies on the continent (Abd El Rahman, Azab, & Ramadan 2017; Abo-Seria et al 2019; Assabu et al 2019; Kenyan SOP 2017). For sex of victim, the variable was categorised into two groups, female and male, as per Mozambican law. The variable for level of education was grouped into four categories: not applicable (for children under the age of 6, which is the age of onset of schooling); no schooling (for those of school-going age but have never

attended any formal classes); primary education and secondary education. The victim's area of residence was described as a dichotomous variable, either rural or urban. The referral from the police was described as police district and categorised into the following two groups: SERNIC Province and SERNIC City. This categorisation of police districts is based on the police request provenience captured in the forensic record, where the area in which the police station is situated was registered as such and also in terms of its location either in SERNIC Province and SERNIC City.

3.3.5.3 Objective three: Circumstances of CSA

To analyse the circumstances of CSA, the following eight variables were recorded: date of occurrence; time of occurrence; place of occurrence; perpetrator characteristics; number of CSA episodes; and aggravation factors. These are described below.

For the date of occurrence, the variable was captured into two subcategories: the first was the day of occurrence divided in weekday, representing occurrence between Monday to Thursday, and weekend to denote the days from Friday to Sunday. The date of occurrence was also indicated by month of occurrence, that is 12 categories representing the twelve months of the year.

The time of occurrence was categorised in five groups: night for assaults that occurred from midnight to 05h59; morning, from 06h00 to 11h59; afternoon, from 12h00 to 17h59; and evening, from 18h00 to 23h59. These variables provided information that referred to the time period that the incident is reported or suspected to have occurred.

The variable for place of occurrence was created to describe the geo-spatial location where the incident occurred. From the various existent sites in the database, the variable was narrowed down into eight: victim's home; perpetrator's home; outdoor places, representing any open site; school; work place; leisure place, referring to bars, hotels, pub or any spaces built as a place of leisure; unknown for situations that victims were not able to identify or describe; and missing, where there was no information pertaining to the place of occurrence. These categories were created based on similar descriptions of the common places of occurrence reported in similar studies on CSA (Abd El Rahman 2017; Bugaje 2012).

There are three characteristics related to the perpetrators that the current study explores. The first characteristic is perpetrator identity, which is presented in five main categories: father, including both biological and step fathers ; mother, including both biological and step mothers; other relatives, describing all other relatives other than the father and mother; acquaintance, to include people known to the victim that are not family members, such as neighbours, caretakers and peers; and unknown person, to refer to perpetrators who were strangers to the victim. The second characteristic is the number of perpetrators who assaulted the victim. This was measured as a raw value indicating the actual number of perpetrators of the particular instance of CSA. The final characteristic related to condom use by the perpetrator; responses were reflected as yes; no; and don't know.

The number of CSA episodes was captured in three categories: one; two or more; and missing.

Finally, aggravation factors denoted the means that perpetrators used to carry out the sexual assault on the victim. From the emerging data, six groups were created: none, physical force, threat, substance use, victim mental illness, and grooming. These categories are consistent with the means described in the literature and are also noted in the Mozambican penal code (República de Moçambique 2019b; WHO 2003).

3.3.5.4 Objective four: Forensic evaluation outcomes

The fourth objective of the study seeks to describe the outcomes of the forensic evaluation at hospital level. The variables are divided into three groups: time elapsed between CSA and the victim seeking hospital assistance; type of penetration; and physical, sexual and reproductive consequences.

Firstly, time elapsed between CSA and the victim seeking hospital assistance was described in reference to two categories. The first refers to time elapsed between CSA assault and medical evaluation, which is described as either <72h or >72h. These categories were created according to WHO guidelines, where only victims seeking medical assistance within 72-hours of the incident are able to effectively use prophylaxis against sexual transmitted infections and avoid pregnancy (WHO 2018). The second category refers to the time elapsed between CSA and forensic evaluation for medico-legal purposes, described as <72h; 3-

7days; and >7 days. These categories are linked to the healing time of genital injuries, where the majority of injuries are visible before 72 hours, are typically invisible after 7 days, and between both period injuries may be evident depending on injury severity (Adams et al 2018).

The second variable describes the anatomical area of attempted or completed penetration, categorised as vaginal; anal; and oral.

The third group of variables is closely related to the previous, describing the physical signs of the sexual contact. Hymenal lacerations were categorised as absent; recent, referring to tears with redness and inflammation; old, for those without signs of inflammation; and not applicable, for boys and cases only with oral penetration. Anal injuries were described as: absent; recent, describing tears with redness; and chronic, demonstrated by a relaxed anal sphincter, without the natural folds. Vestibular injuries, the area that precedes the hymen, were described as absent; abrasion; bruises; and oedema. Finally, HIV tests results were categorised as negative; positive; and undetermined.

Overall, it is important to note that the injuries outlined above were described according to the TEARS classification developed by Slaughter and colleagues (1997). This classification is largely in response to the wide range of terms used among physicians to describe CSA injuries (Adams 2008; Slaughter et al 1997; Sommers et al 2012), where *T* refers to tears; *E* represents ecchymosis; *A* signifies abrasions; *R* indicates redness; and *S* corresponds to swelling. Although the TEARS classification allowed for the standardisation of injuries, extragenital injuries, as argued by some researchers, also includes a range of other injuries, such as fractures and burns (Adams et al 2018). Following this, for extragenital injuries, bruises, abrasions, wounds, fractures and oedema were added to address the indicated TEARS classification gap. Where the absence of extragenital injuries was shown, these cases were analysed for pregnancy, as a reproductive consequence of CSA.

3.3.6 Data analysis

Data for this study was collected from the forensic records of the Hospital Central de Maputo, captured in a Microsoft Excel database, and subsequently cleaned and categorised before it was exported to the SPSS by the researcher. Missing values were identified and are

reported in Chapter Four. Cases with missing values were excluded from the respective analyses that were undertaken, as described below.

To meet the analytic requirements of the first study objective, frequency was calculated to examine the occurrence over the study period, given by the count of cases by year. The occurrence was also calculated separately for girls and boys, and for the different types of penetration, namely vaginal, anal and oral. For the second, third and fourth study objectives, frequency counts and percentages were used to describe the selected demographic characteristics of CSA victims (age; sex; education; residence; and police district), circumstances of occurrence (date; time and place of occurrence; perpetrator characteristics; number of sexual assault episodes; and assault aggravation factors), and the forensic evaluation outcomes (time elapsed between CSA and hospital assistance; type of penetration reported by victims; and physical, sexual and reproductive consequences) respectively.

Differences in CSA characteristics between male and female victims were assessed using Pearson chi-square as the comparison variables were categorical; this included the variables in relation to socio-demographic characteristics, circumstances of occurrence, and forensic evaluation outcomes. A chi-square (χ^2) is a test that measures the difference between the observed and expected frequencies of the outcomes of a set of events or variables (McHugh 2013). According to the assumptions for this, the variables should be categorical at nominal level, and frequency counts less than 5 may not exceed 20% of the variables under analysis (Hayes 2022). For categories with frequency under 5, the Fisher exact test was applied (Mehta & Patel 2010:18). The degrees of freedom within the chi-square analyses varied between 1 and 11, indicating the range of sub-categories present; for example, month of occurrence is presented in 12 sub-categories, resulting in 11 degrees of freedom while day of the week only has 2 sub-categories, corresponding with one degree of freedom (see Bayer 2008). For each of the variables, cross-tabulation was performed between girls and boys. A p-value smaller than or equal to 0.05 was considered significant (Greenland et al 2016).

3.4 ETHICAL CONSIDERATIONS

The secondary data utilised for the current study data were fully anonymised (excluded all identifying information, such as names or identity numbers) to assure confidentiality and

anonymity of the victim's information. The information was saved on the researcher´s password-protected computer. The anonymised data was shared only with the supervisor and research intern who provided statistical advice. Ethics approval was obtained from the UNISA Health Studies Department's Ethics Committee, with reference number 10258787_CREC_CHS_2021 (see Annexe B), and the Hospital Central de Maputo and Universidade Eduardo Mondlane Ethics Committee, designated as Comité Institucional de Bioética da Faculdade de Medicina e Hospital Central de Maputo (CIBS FM&HCM), with reference number CIBS FM&HCM/014/22 (see Annexe C). An approval letter for data collection at the Forensic Service was provided by the Pedagogical and Scientific Department of Hospital Central de Maputo under reference number Ref. n 9 DCP/HCM/21 (see Annexe D).

3.5 RIGOUR OF THE STUDY: VALIDITY AND RELIABILITY

Scientific rigour in quantitative research points to the importance of the strict and exact application of the scientific method to ensure that the research design is robust; data analysis and interpretation appropriately address the stated objectives of the research; the study findings are accurate; and that the research can be reproduced. These considerations are closely linked to the quality of the study (Claidon 2015). To ensure rigour in this study, the analysed data were reviewed by the supervisor. Additionally, the following procedures were undertaken to assure validity and reliability. First, the researcher adhered closely to the research design, methodology and processes, proposed timelines, and relevant ethical prerequisites for the study. Secondly, all the work was subject to supervisory oversight and the researcher consulted with a statistician to ensure that the statistical procedures were carried out accurately. Finally, for the reliability of the study, the database was saved and will be stored for five years to allow other researchers to reproduce and validate the results independently.

3.6 SUMMARY

This chapter outlined the quantitative research design and method used in the current study. The chapter provided a description of the study context; relevant information on the nature, collection, management and analysis of the data; key ethical considerations; and elements of the rigour of the study. The next chapter will present and discuss the study findings.

CHAPTER 4

ANALYSIS, PRESENTATION AND DESCRIPTION OF THE RESEARCH FINDINGS

4.1 INTRODUCTION

This chapter presents and describes the research results in accordance with the study objectives outlined in Chapter One.

The first section of the chapter considers the occurrence of sexual assault among children treated as victims at Hospital Central de Maputo between 2015 to 2020. In the second section, the sociodemographic characteristics of the indicated children are presented, which are then disaggregated by sex. The third and fourth sections of the chapter focus respectively on the circumstances of CSA, disaggregated by sex; and the forensic evaluation outcomes of the children treated as victims of sexual assault, disaggregated by sex.

4.2 OCCURRENCE OF CSA

The first objective of this study was to describe the occurrence of CSA, given by frequency of cases per year followed by its description by sex and type of penetration. A description of differences by sex allows comparisons to be made with previous studies that reported differences among female and male CSA victims (Badejoko et al 2014; Karagianni 2021; Shako & Kalsi 2019), and additionally by type of penetration in line with the possible sites of penetration categorised by the Mozambican penal code, namely vaginal, anal and oral (República de Moçambique 2019b).

4.2.1 Occurrence of CSA

The results for the frequency of cases of suspected sexual abuse during the six-year period are presented in Table 4.1. The first year of the study period, 2015, presented the highest number of reported cases, representing 22.7% of cases (*n* = 589), and 2020 had the lowest number of reported cases (*n* = 317, 12.2%).

Table 4.1: FREQUENCY AND PERCENTAGE OF CSA OCCURRENCE BY SEX, 2015-2020 (n = 2588)				
YEAR	**n**	**%**	**SEX OF VICTIM**	
			Female	**Male**
2015	587	22.7	561	26
2016	503	19.4	477	26
2017	428	16.5	394	34
2018	360	13.9	337	23
2019	393	15.2	363	30
2020	317	12.2	293	24
Total	2588	100.0	2425	163

The profile of the cases that presented at the Forensic Service during the six-year period was shown to have a downward trend. This relative decrease, observed from 2018 onwards, is related to the opening of two forensic services in Maputo Province and City respectively in 2017. A new peak is observed in 2019 that decreased slightly in 2020.

Of the 2588 cases valid for the examination of occurrence across sex, girls had a higher frequency count than boys, 2425 against 163. The highest frequency of cases for girls was observed in 2015 (561 cases) and for boys in 2017 (34 cases).

4.2.2 Distribution of cases by type of penetration

Results from the frequency analyses, as presented in Table 4.2, indicate the breakdown of type of penetration as follows: vaginal (*n* = 1649, 86%), anal (*n* = 215, 11%) and oral (*n* = 47, 2%). The category of vaginal penetration points to a decreasing frequency of cases, while the oral and vaginal types of penetration remained relatively stable, as demonstrated in Table 4.2.

Table 4.2: OCCURRENCE OF CSA BY TYPE OF PENETRATION, 2015-2020 (n = 1911)			
YEAR	**TYPE OF PENETRATION**		
	VAGINAL	**ANAL**	**ORAL**
2015	467	47	8
2016	299	40	5
2017	247	35	8
2018	211	31	6
2019	223	31	13
2020	202	31	7
Total	1649	215	47

The cases of vaginal penetration among girls who presented at the forensic unit were 1649, 215 victims presented with anal penetration, and 47 cases pertained to oral penetration. The

case of victims with more than one type of penetration is an important consideration; for instance, 47 females presented with both vaginal and anal penetration types, and 2 with all 3 types of penetration, while 7 male victims presented with anal and oral type of assault.

4.3 SOCIODEMOGRAPHIC CHARACTERISTICS OF CSA VICTIMS

In accordance with the second objective of this study, the current section presents the sociodemographic profile of children suspected of being sexually assaulted who presented at Maputo Forensic Service. Table 4.3 below shows the distribution of cases by sex, age, educational status, area of residence and the area of police request.

The frequencies for sex showed a huge disparity between girls and boys, where girls were in the majority, represented by 2425 (93.7%) cases against 163 cases for boys (6.3%) for the 2588 total of cases under investigation in the current study. For the sex category, no missing cases were found. Overall, almost half of all child victims of reported incidents were aged 12-17 years (*n* = 1256, 48.6%), followed by victims between 6-11 years old (*n* = 718, 27.7%) and, lastly, victims aged 0-5 years (*n* = 614, 23.7%). However, for prevention and diagnosis purposes, it is important to note that in the Mozambican healthcare system the victims are assisted in different admission rooms depending on their age. Here, children under 14 years old are assisted in the paediatric department and those older than 14 years old are received at the gynaecological department.

Table 4.3: FREQUENCY AND PERCENTAGE OF SOCIODEMOGRAPHIC CHARACTERISTICS OF CSA VICTIMS, 2015-2020 (n = 2588)		
SOCIODEMOGRAPHIC CHARACTERISTIC	***n***	**%**
Sex		
Female	2425	93.7
Male	163	6.3
Age Categories		
0-5	614	23.7
6-11	718	27.7
12-17	1256	48.6
Education		
Not applicable	614	26.1
No schooling	42	1.8
Primary	1117	47.5
Secondary	581	24.6
Area of Residence		
Rural	116	4.5
Urban	2471	95.5
Police Request		
SERNIC Province	866	33.4
SERNIC City	1722	66.6

Moreover, as described in Figure 4.1 below, the lowest and highest frequencies of CSA for each of the three indicated age categories (0-5, 6-11 and 12-17) were for children under 1 year and 4 years respectively for the first age category, 10 and 8 years respectively for the second age category, and 17 and 14 years respectively for the third age category.

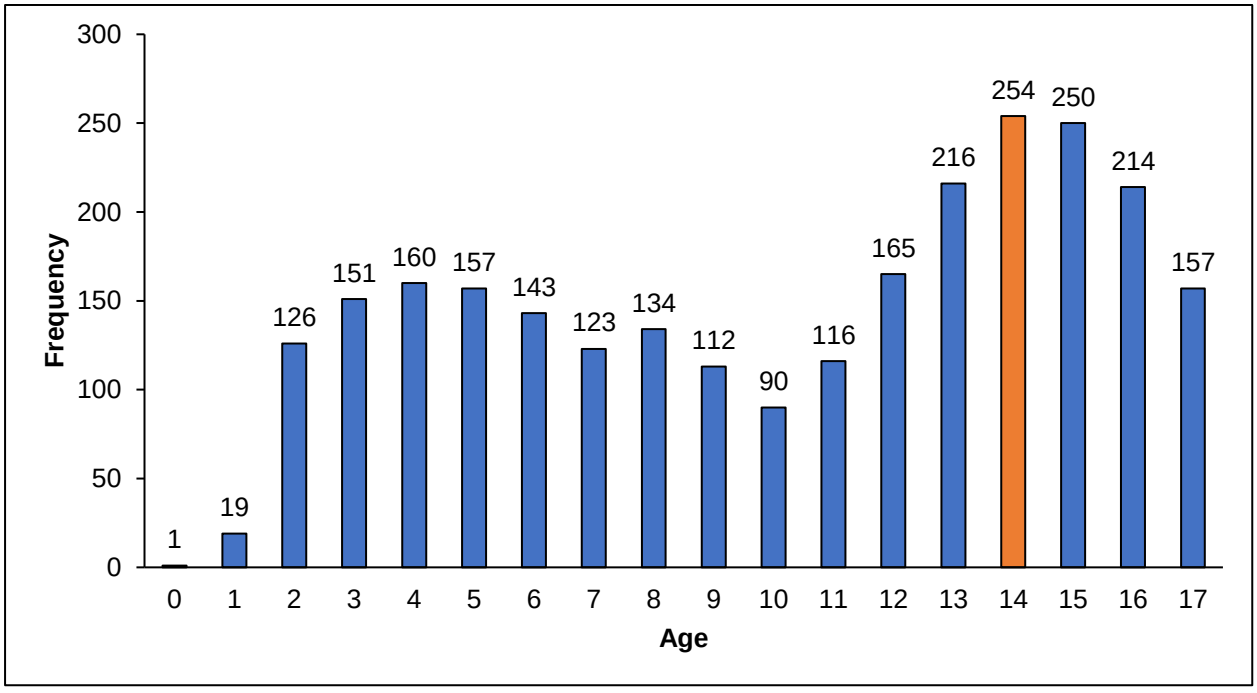


Figure 4. 1: Distribution of CSA cases by age (n=2588)

Among the 2365 cases analysed for educational status, the largest group was of children in primary school, with 1117 cases (47.5%), followed by those under the school age (*n* = 615, 26.1%), then secondary school (*n* = 580, 24.6%), with the least for those who never went to school (*n* = 42, 1.8%). For this variable, 234 cases presented missing information.

Among the 2588 cases, the area of residence of the victims who presented at the hospital was shown to be 2471 (95.5%) for rural locations and 116 (4.5%) for urban settings, showing the higher location of the cases from the urban side of Maputo. As a precondition for the children to be assisted at the forensic unit, they must present with a police request document. Therefore, Table 4.3 shows that the higher count of victims (1722 cases) was from the Maputo City Police offices (SERNIC city) and less (866 cases) from the Maputo Province site (SERNIC province).

Table 4.4: FREQUENCY OF CSA OCCURRENCE BY SOCIODEMOGRAPHIC CHARACTERISTICS, 2015-2020 (n = 2588)

SOCIODEMOGRAPHIC CHARACTERISTIC	*n*	YEAR					
		2015	**2016**	**2017**	**2018**	**2019**	**2020**
Sex							
Female	2425	562	477	394	337	363	292
Male	163	26	26	34	23	30	24
Age Categories							
0-5	614	133	124	91	93	105	68
6-11	718	181	146	117	100	101	73
12-17	1256	274	233	220	167	187	175
Education Status							
Not applicable	614	133	124	91	93	105	68
No schooling	42	16	7	8	4	5	2
Primary	1118	261	222	179	165	171	120
Secondary	580	73	89	118	89	95	116
Area of Residence							
Rural	116	22	30	21	13	21	9
Urban	2471	566	473	407	346	372	307
Police Request							
SERNIC Province	866	191	186	180	134	113	62
SERNIC City	1722	397	317	248	226	280	254

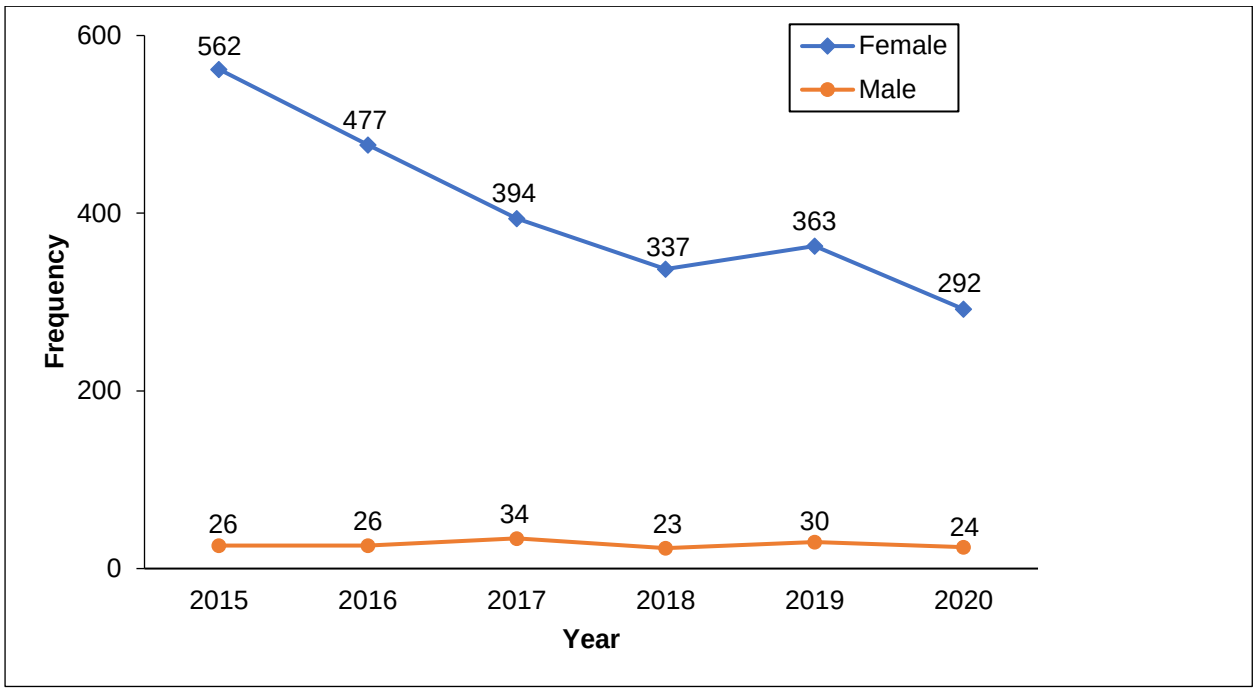


Figure 4.2: Occurrence of CSA by sex (n=2588)

Table 4.4 indicates that for the overall period of the study, the number of cases decreased. This finding is highlighted in Figure 4.4, which shows that the trend of occurrence of CSA by sex decreased among girls and remained stable for boys over the study period.

In respect of the age groups specifically, although all presented a decreasing trend with a slight peak in 2019, the frequency of cases remained the highest for the age category 12-17 years. In sequence, the trend for education levels for the categories of “No schooling”, “Not applicable” and “Primary” education is reflected in a decreasing curve whereas there was an increasing trend for the “Secondary” education category.

Additionally, Table 4.4. shows a balanced number of rural area cases while the urban area residents had a reducing number of victims along the 6 years of the study period, Lastly, the police request from Maputo Province decreased continuously since 2017, while from Maputo City it only decreased in 2017 and 2018 and increased slightly again in 2019 and 2020.

4.3.1 Sociodemographic characteristics of CSA by sex

This part of the analysis compares the sociodemographic characteristics of the male and female CSA victims that were assisted. The results of the multiple degrees of freedom chi-squared analyses to determine significant sex differences are reported.

The chi square was statistically significant for age categories, χ^2 (2) = 47.270, $p < 0.01$, and education χ^2 (3) = 35.871, $p < 0.01$ when compared by sex. Therefore, there is a significant difference between males and females for these variables. Based on frequencies, females had a higher count than boys for age groups, education status, residence area and police district (see Table 4.5). For area of residence and police request, the differences between girls and boys were not statistically significant.

Table 4.5: SOCIODEMOGRAPHIC CHARACTERISTICS BY SEX, 2015-2020 (n = 2588)

SOCIODEMOGRAPHIC CHARACTERISTIC	FEMALE	MALE	*p*
	***n* (%)**	***n* (%)**	
Age Categories			
0-5	573 (23.6)	41 (25.2)	<.001*
6-11	638 (26.3)	80 (49.1)	
12-17	1214 (50.1)	42 (25.8)	
Education			
No schooling	39 (1.8)	3 (2.0)	<.001*
Primary	1022 (46.3)	96 (65.3)	
Secondary	574 (26.0)	7 (4.8)	
Area of Residence			
Rural	111 (4.6)	5 (3.1)	.367
Urban	2314 (95.4)	158 (96.9)	
Police Request			
SERNIC Province	824 (34.0)	42 (25.8)	.32
SERNIC City	1602 (66.0)	121 (74.2)	

*$p < 0.05$.

4.4 CIRCUMSTANCES OF OCCURRENCE OF CSA

This section describes the circumstances in which the CSA occurred, namely day, time and place of occurrence; perpetrator profile; number of CSA episodes; aggravating elements' the use of condoms; and circumstances of occurrence by sex.

4.4.1 Date of occurrence

Two sub variables were created from the initial variable “Date of occurrence” to place the moment that the event occurred, namely the day and month of occurrence.

4.4.1.1 Day of occurrence

For day of occurrence, among the 2017 cases that contained the relevant information, Figure 4.3 shows the higher frequency of cases during the weekdays (*n* = 1435, 71.1%). The 571 cases with missing information were excluded from the analysis.

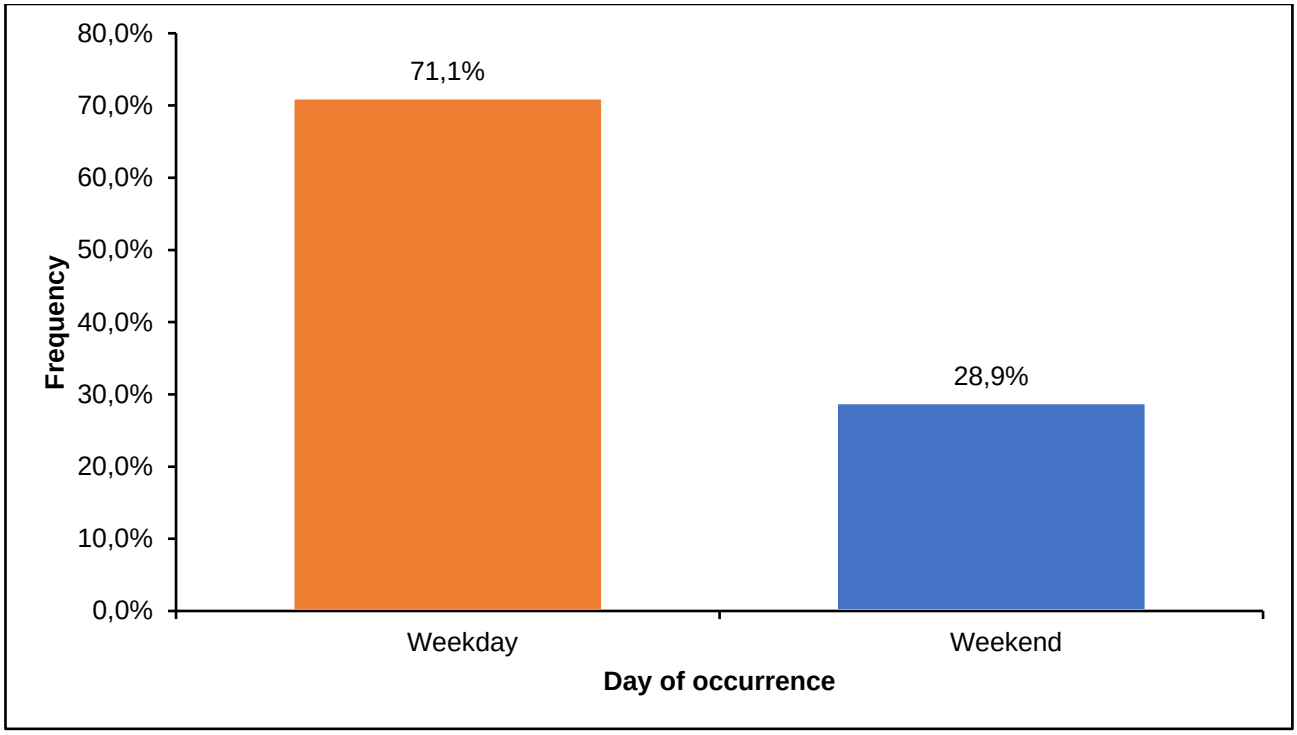


Figure 4.3*:* Day of occurrence of CSA (n=2017)

4.4.1.2 Month of occurrence

The data indicated the month of occurrence for 2334 cases among which more than half (54.5%) were registered during the first and fourth trimesters of the year, in Maputo City and Province. These months are correlated with peak of summer season and the longest holidays of public schools. Figure 4.4 also illustrates November as the month with the highest count of cases.

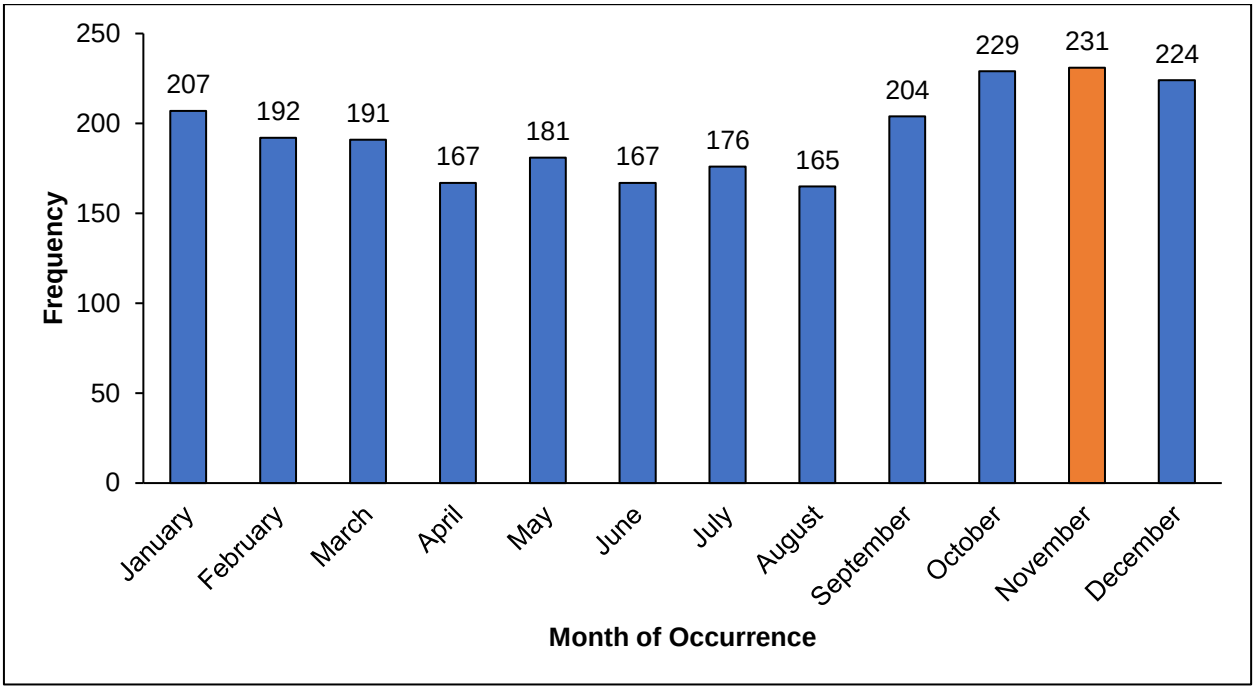


Figure 4.4: Month of occurrence of CSA (n=2334)

4.4.2 Time of occurrence

Figure 4.5 illustrates that for the 1747 cases with the registered time of occurrence of assault, 41.9% were during the evening, representing the larger group with 733 cases, followed by 637 cases registered during the afternoon (36.5%). When analysed by age, the results showed that for the victim age group 12-17 years, more girls were assaulted during the evening and for the younger age groups, and especially for boys, sexual assault occurrence was higher during the afternoon period. On the basis of missing information, 841 cases were excluded from the analysis.

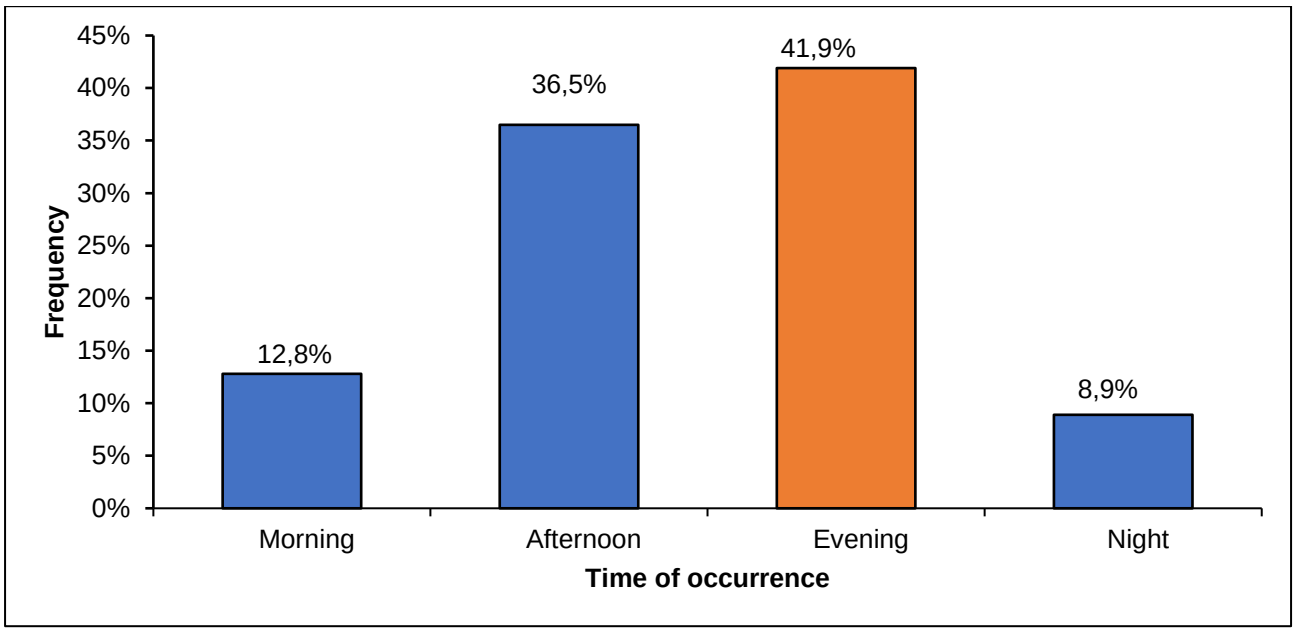


Figure 4.5: Time of occurrence of CSA (n=1747)

4.4.3 Place of occurrence

For the 2143 cases that were analysed for place of sexual event occurrence (see Table 4.6), 34.1% were at perpetrator's home (883 cases), 25.3% in outdoor places (656 cases), and 20.7% at the victim's home (536 cases). The 446 cases with missing information were excluded from the analysis. When analysing these cases by age categories, it is noted that for ages 0-5 years the assaults occurred at the home of both the victim and perpetrator, and for ages 6-11 and 12-17 years the incidents took place at the home of the perpetrator and in outdoor places. When considered by sex, for girls CSA occurred sequentially at the perpetrator's home, in outdoor places and then the victim's home, while boys were abused at the perpetrator's home, followed by the victim's home and then in outdoor places.

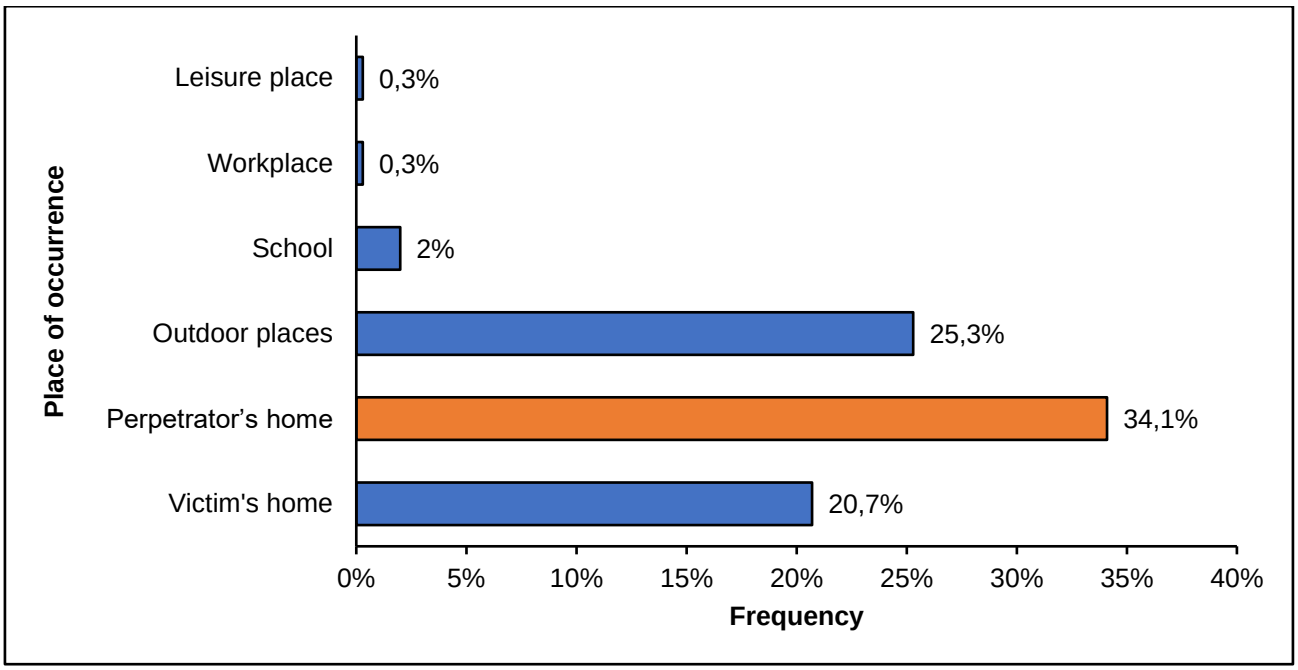


Figure 4.6: Place of occurrence of CSA (n=2143)

4.4.4 Number of perpetrators

Regarding the number of perpetrators, of the 2207 cases were analysed, in 88.7 % of cases the victim was assaulted by a single individual (1957 cases). For the 250 cases assaulted by more than one perpetrator, as represented in Figure 4.7, in 156 cases there were two perpetrators, in 25 cases there were three, and in 14 cases four perpetrators were reported. Fewer cases registered a higher number of perpetrators; for instance, in nine cases six perpetrators abused one child and in three cases there were seven offenders. The 382 missing cases for this variable were excluded from the analysis.

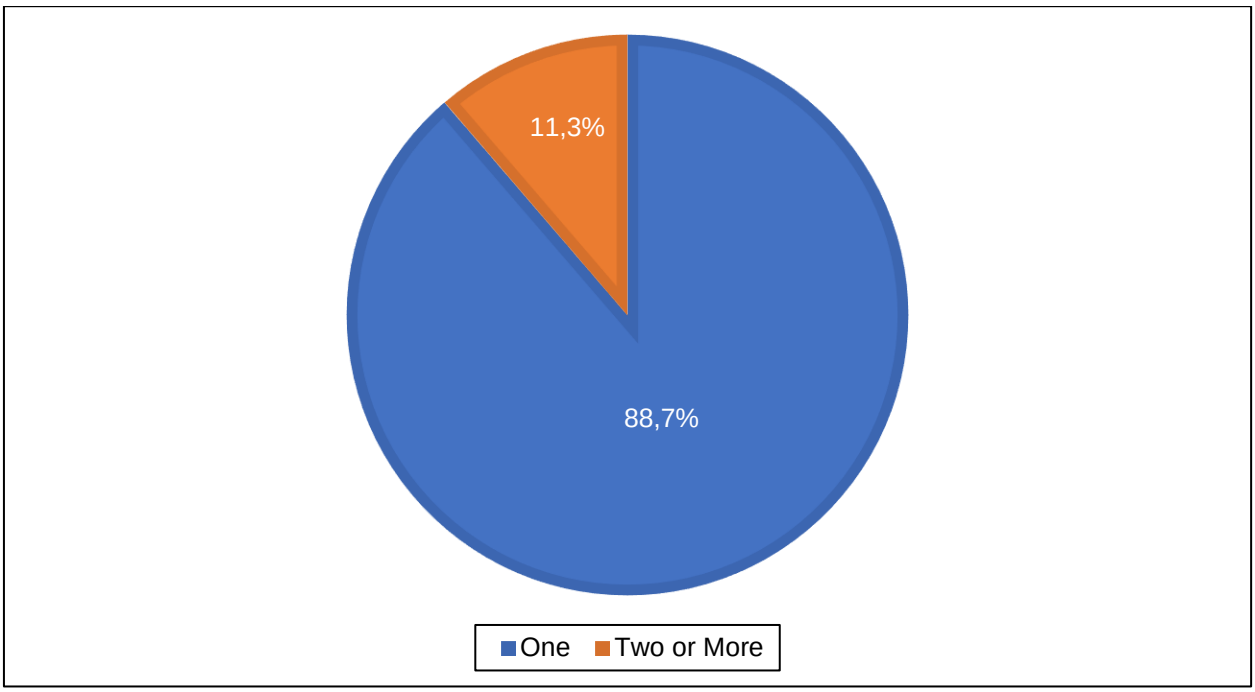


Figure 4.7: Number of perpetrators of CSA (n=2207)

4.4.5 Number of episodes of CSA

Among the 1822 cases analysed for the number of episodes of CSA, the majority were involved a single sexual assault, with a frequency count of 1279 (70.2%), and in 543 cases the sexual event occurred more than one time, as seen in Figure 4.8. For 766 cases, the information on the number of sexual assault episodes was missing and these cases were thus excluded from the analysis. This finding was consistent across sex and age group categories.

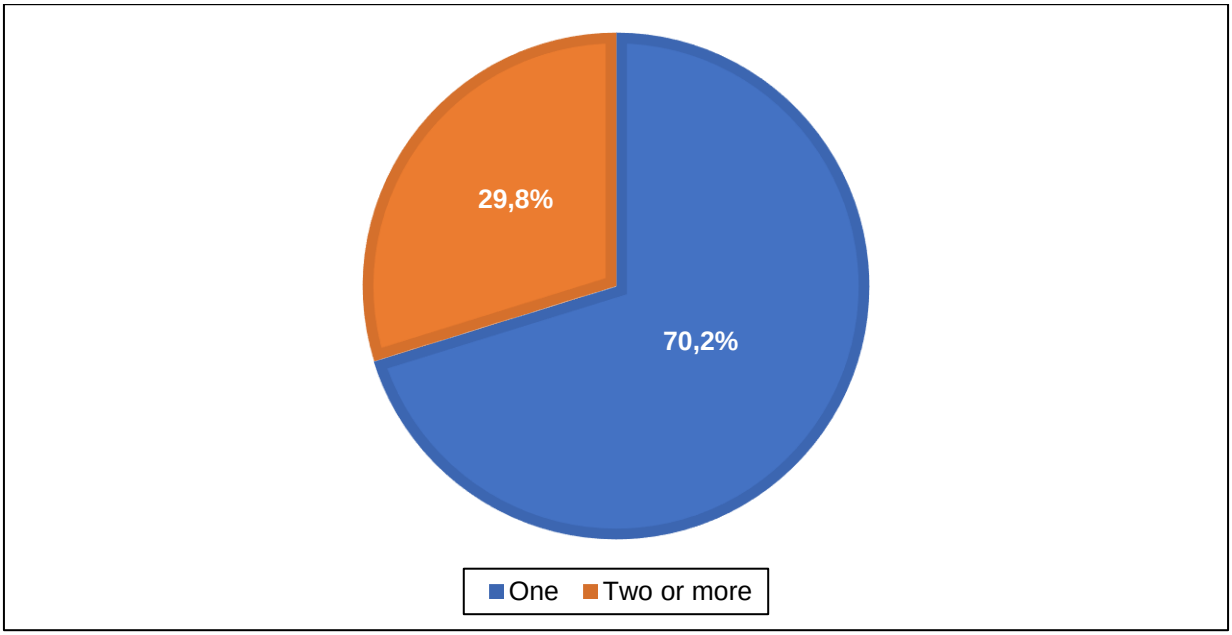


Figure 4.8: Number of episodes of CSA (n=1822)

4.4.6 Perpetrator's identity

Figure 4.9 shows that 56.1% of the reported perpetrators of the CSA cases were acquaintances (1265 cases), among whom almost a half (555) were neighbours. This was followed by strangers (*n* = 610, 27.1%), with family members reflecting the least percentage, divided between any relative (*n* = 254, 11.2%), and father and stepfather (74 and 51 cases respectively). In only one case was the perpetrator a stepmother. When described by age categories, overall the large majority of the victims across age categories (72.9%) were assaulted by a person that the victim knew out of their circle of relatives, whereas children between 12-17 years of age were abused more by a stranger (34.6%), while the younger ages were victimised more by their relatives, including the father (29.3%). An additional finding relates to the sex of the perpetrator; in 99.8% of cases the perpetrators were male and only 3 cases of CSA were perpetrated by a female. Regarding the perpetrator identity, 333 cases were excluded from the analysis due to the absence of relevant information in the forensic records.

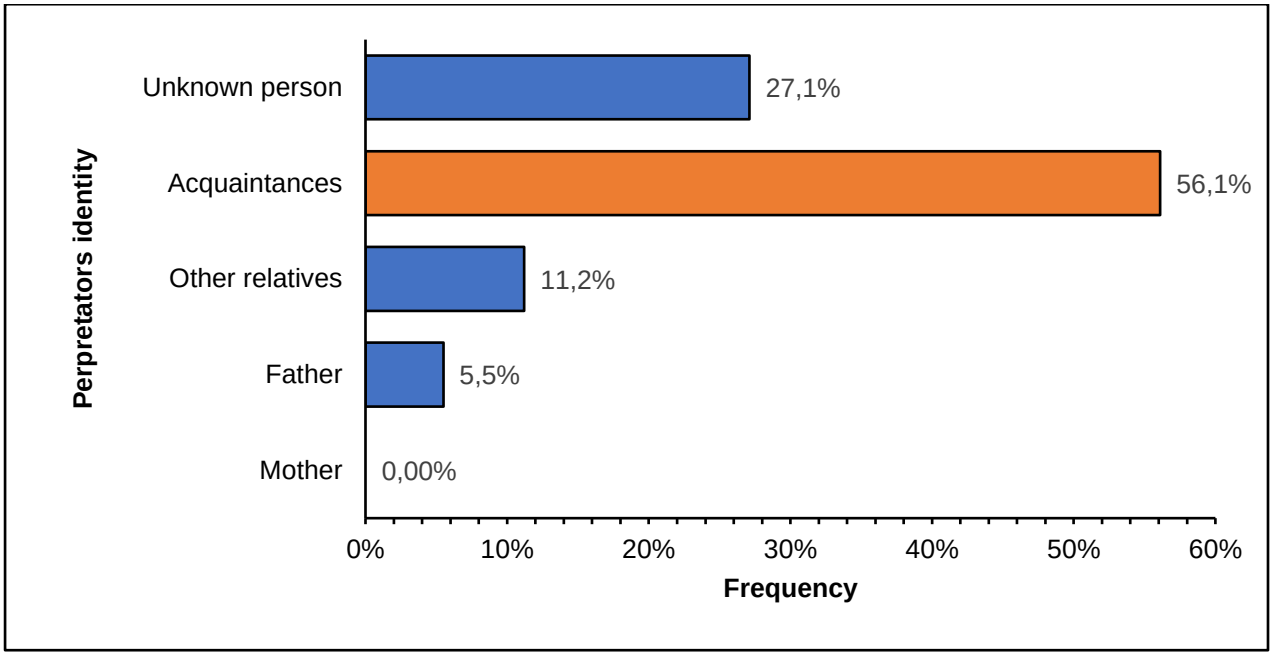


Figure 4.9: Perpetrator identity types (n=2255)

4.4.7 Aggravating factors

The aggravating factors implicated in the sexual assault of the children were described in 1704 cases. Figure 4.10 shows the high levels of physical violence in the perpetration of CSA, where 54.1 % of perpetrators used physical force to assault the victims. It is important to note that when analysed by sex, physical force was found to be main aggravating means in the assault of both girls and boys. Differences by age group were observed in that 64% of children between 0-5 years of age were assaulted in without any aggravating means and physical force was used in 25%. For those children between 6-11 years of age, the means used were physical force (54.1%), followed by threat (18.8%) and grooming (2.4%). This pattern was also observed among the 12-17 year old age group, with 59.7% of victims assaulted using physical force and 10.9% by threat.

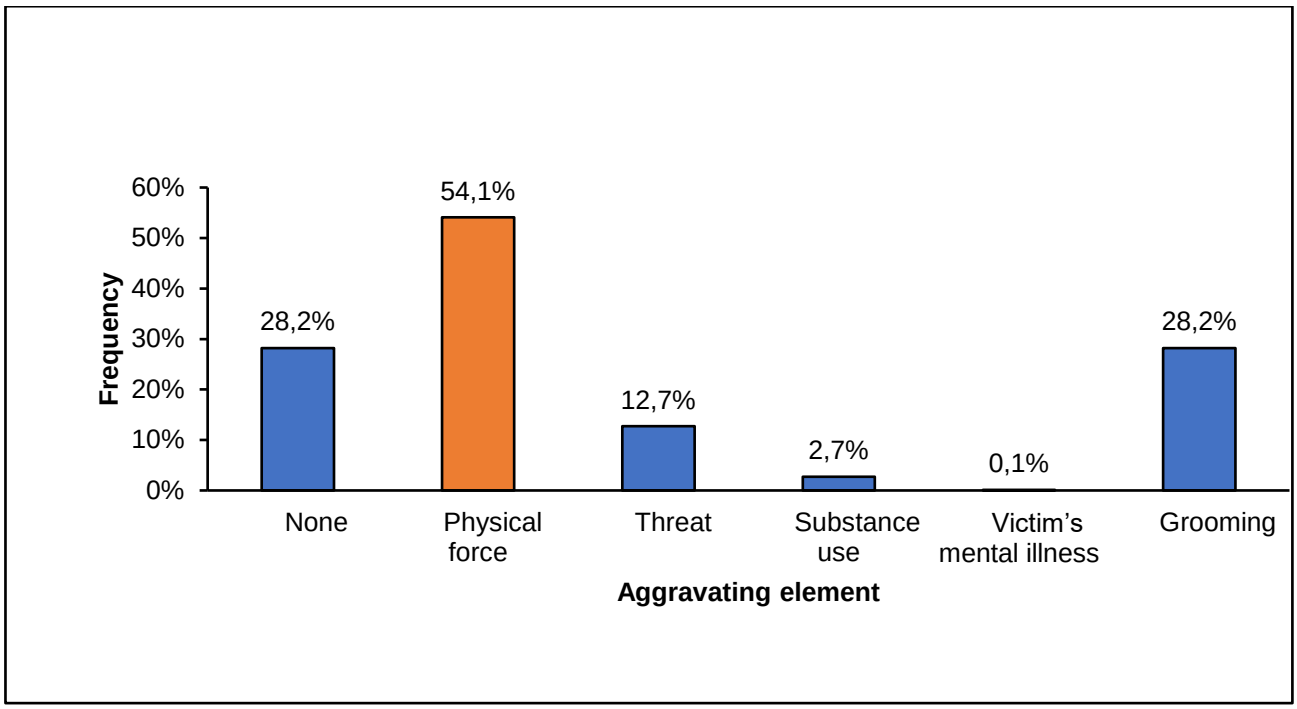


Figure 4.10: Aggravating elements in perpetration of CSA (n=1704)

4.4.8 Use of condom

The data analysed revealed a dearth of information pertaining to condom use in the CSA victimisation event (1217 cases were missing). For the 1371 cases where information on perpetrator condom use was available, only 116 (8,5%) were reported to have used a condom (see Figure 4.11), meaning that in the remainder of cases (91.5%) a condom was either not used or knowledge of its use was unknown, thus placing the CSA victims at risk of contracting sexual transmitted infections.

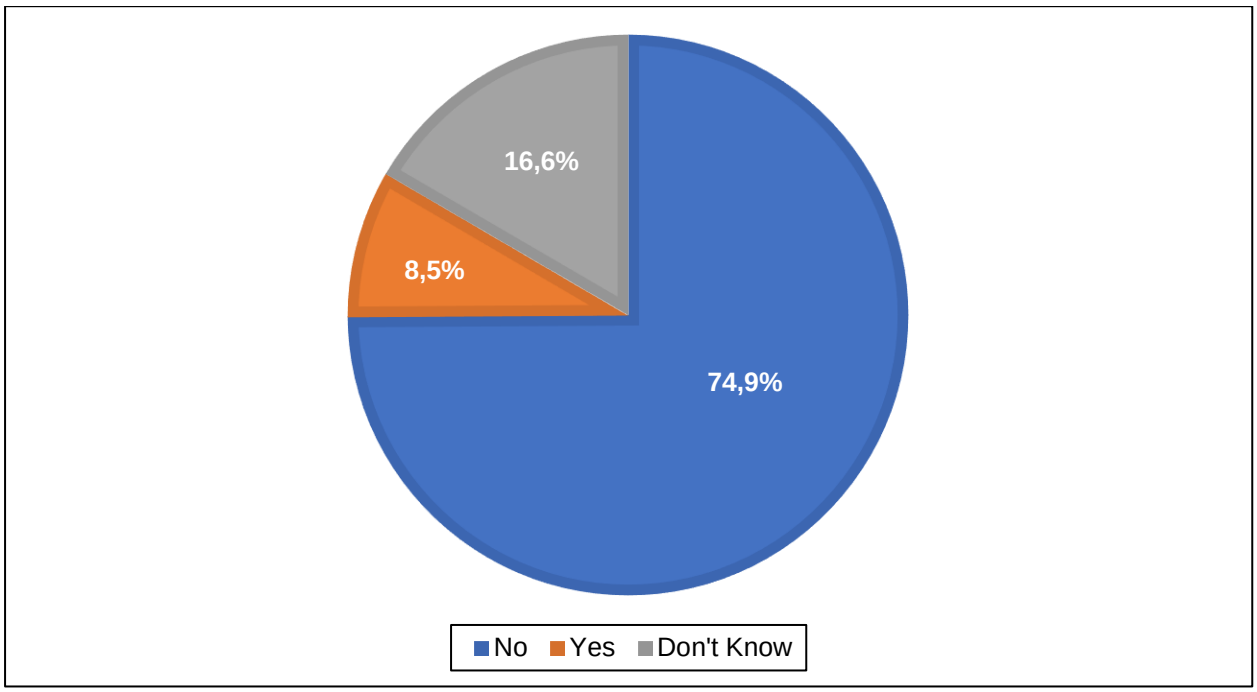


Figure 4.11: Use of condom by perpetrators (n=1371)

In summary, the above analyses of the circumstances of occurrence of CSA show a raise in cases during the summer, CSA committed by one single perpetrator at their house in the evenings of weekdays, and in most cases with the use of physical force accompanying the sexual assault. Below, in Table 4.6, the circumstances of occurrence are described through comparing the cases by sex.

4.4.9 Circumstances of occurrence by sex

Table 4.6 shows that there are significant statistical differences between boys and girls for number of episodes, χ^2 (1) = 12.382, $p < 0.01$, time of occurrence, χ^2 (3) = 14.855, $p = 0.02$, and perpetrator identity χ^2 (3) = 15.527, $p = 0.01$. For the remainder of the variables related to the circumstances of occurrence, no significant statistical differences were found.

Table 4 6: CIRCUMSTANCES OF CSA OCCURRENCE BY SEX, 2015-2020 (n = 2588)			
CIRCUMSTANCE	**FEMALE**	**MALE**	***p***
	***n* (%)**	***n* (%)**	
Day of Occurrence			
Weekday	1360 (71.2)	75 (70.1)	.805
Weekend	550 (28.8)	32 (29.9)	
Month of Occurrence			
January	197 (9.0)	10 (7.0)	.289
February	181 (8.3)	11 (7.7)	
March	174 (7.9)	17 (12.0)	

Table 4 6: CIRCUMSTANCES OF CSA OCCURRENCE BY SEX, 2015-2020 (n = 2588)			
CIRCUMSTANCE	**FEMALE**	**MALE**	***p***
	***n* (%)**	***n* (%)**	
April	152 (6.9)	15 (10.6)	
May	174 (7.9)	7 (4.9)	
June	154 (7.0)	13 (9.2)	
July	167 (7.6)	9 (6.3)	
August	151 (6.9)	13 (9.2)	
September	193 (8.8)	11 (7.7)	
October	219 (10.0)	10 (7.0)	
November	214 (9.8)	17 (12.0)	
December	215 (9.8)	9 (6.3)	
Time of Occurrence			
Morning	211 (12.7)	12 (12.9)	.002*
Afternoon	587 (35.5)	50 (53.8)	
Evening	704 (42.6)	28 (30.1)	
Night	152 (9.2)	3 (3.2)	
Day of Occurrence			
Weekday	1361 (71.2)	75 (70.1)	.802
Weekend	550 (28.8)	32 (29.9)	
Place of Occurrence			
Victim's home	504 (24.9)	32 (26.2)	.180
Perpetrators' home	824 (40.8)	59 (48.4)	
Outdoor places	629 (31.1)	26 (21.3)	
School	48 (2.4)	5 (4.1)	
Workplace	7 (0.3)	0 (0.0)	
Leisure place	8 (0.4)	0 (0.0)	
Number of Episodes			
One	1214 (71.2)	64 (55.7)	<.001*
Two or more	492 (28.8)	51 (44.3)	
Number of Perpetrators			.482
One	1832 (88.5)	124 (90.5)	
Two or more	237 (11.4)	13 (9.5)	
Perpetrator's Identity			
Father	69 (3.3)	5 (3.6)	.001*
Other relatives	289 (13.7)	17 (12.7)	
Acquaintance	1165 (55.2)	100 (70.5)	
Unknown person	591 (27.9)	19 (13.2)	
Aggravating Elements			
None	458 (28.4)	23 (25.6)	.006
Physical force	883 (54.7)	39 (43.3)	
Threat	198 (12.3)	18 (20.0)	
Substance use	42 (2.6)	4 (4.4)	
Victim mental illness	2 (0.1)	0 (0.0)	
Grooming	31 (1.9)	6 (6.7)	
Use of Condom			
No	975 (74.8)	52 (77.6)	.087
Yes	115 (8.8)	1 (1.5)	
Don´t know	214 (16.4)	14 (20.9)	

*$p < 0.05$.

4.5 FORENSIC EVALUATION OUTCOMES

In keeping with the fourth objective of the study, this section describes the frequency of the forensic evaluation outcomes in three main groups, namely timing of seeking hospital assistance for clinical and forensic assistance by the victims, type of penetration, and physical, sexual and reproductive consequences. Subsequently, a chi-square was calculated to analyse the variables by sex.

4.5.1 Time elapsed between assault to medical evaluation

For the 2044 cases containing a description of the time taken by victims to present themselves at hospital for medical assistance after occurrence of CSA, 73.3% presented within 72 hours, as shown in Figure 4.12. For the remainder of the 544 cases, the information was missing and thus excluded from the analysis.

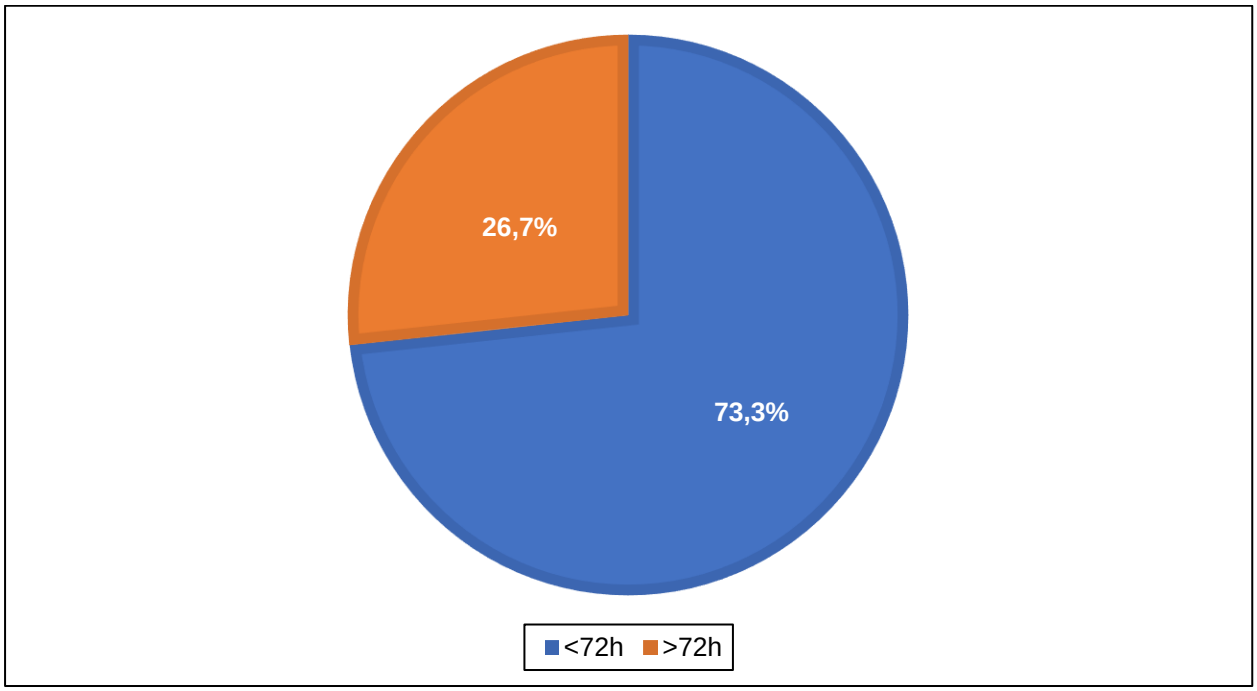


Figure 4.12: Time elapsed between the assault to medical evaluation (n=2044)

4.5.2 Time elapsed between assault and forensic evaluation

The findings showed of the 73.3% of victims that presented within 72 hours for medical evaluation, as shown above in Figure 4.12, 54.9 % of children presented at the forensic unit within three days after the assault seeking a forensic evaluation and medico-legal report (see Figure 4.13). The larger group of victims thus received medical and forensic assistance

within the optimal 72 hours, the importance of which is noted in Chapter Two. A total of 211 missing cases were excluded from the analysis.

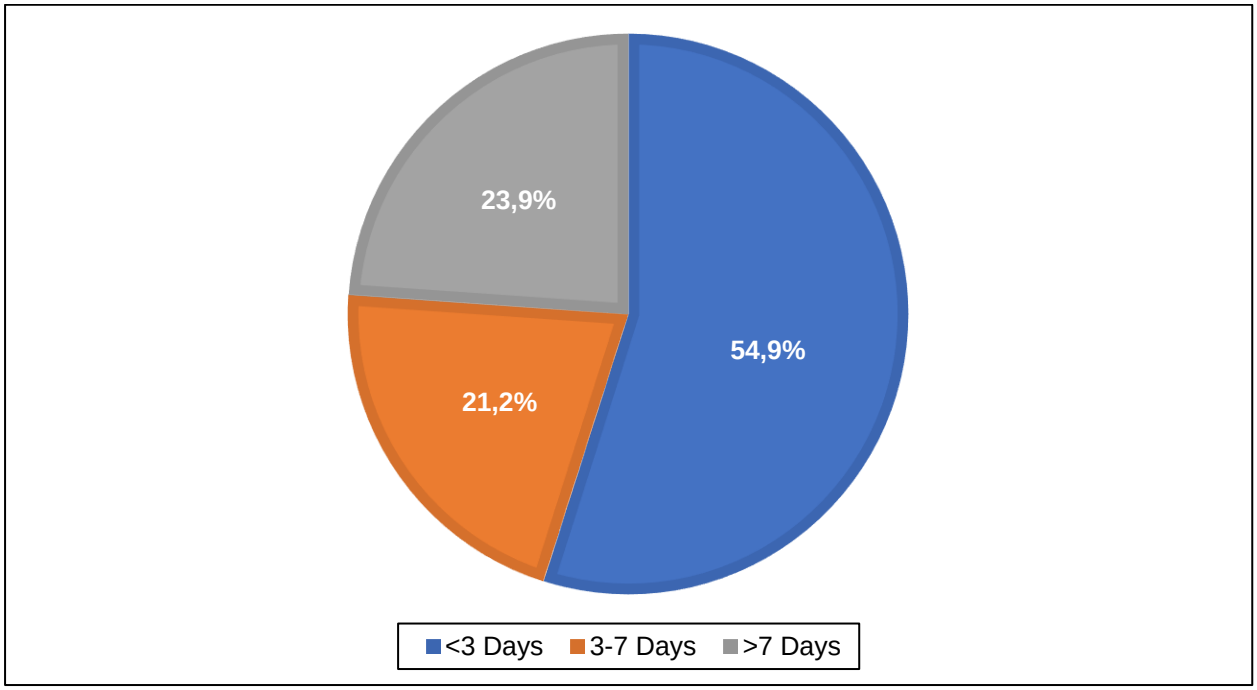


Figure 4.13: Time elapsed between assault to forensic evaluation (n=2377)

4.5.3 Type of penetration

Figure 4.14 shows that where there was a clear description of the type of penetration that occurred among victims, in 63.7% of cases vaginal penetration represented the main type of sexual assault reported by the victims (1650 cases); followed by anal penetration, with 216 cases (8.3%); and finally oral penetration, with 48 cases (1.9%).

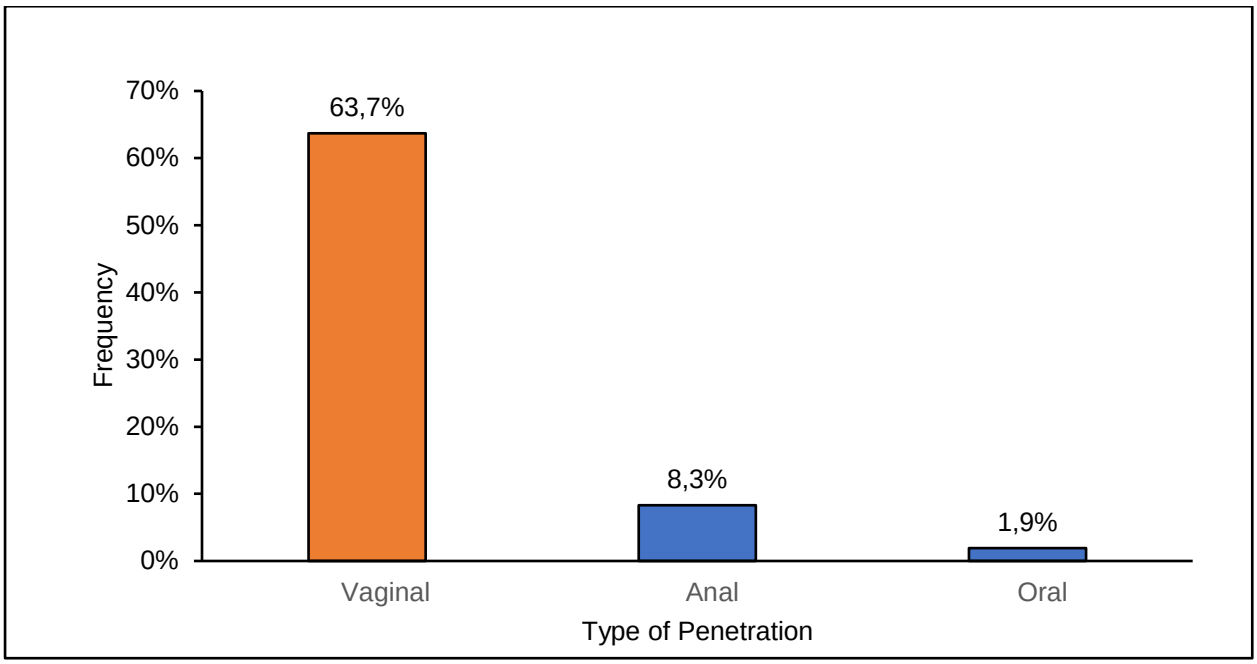


Figure 4.14: Type of penetration (n=1948)

4.5.4 Hymenal lacerations

For anatomical reasons, only cases of girls were analysed for hymenal lacerations, of whom 59.4% presented at the hospital without hymenal injuries (1537 cases). For those with tears, 138 were recent and 742 old (see Figure 4.15), remembering that according to the literature the presence of tears are closely related to confirmed penetration (WHO 2003).

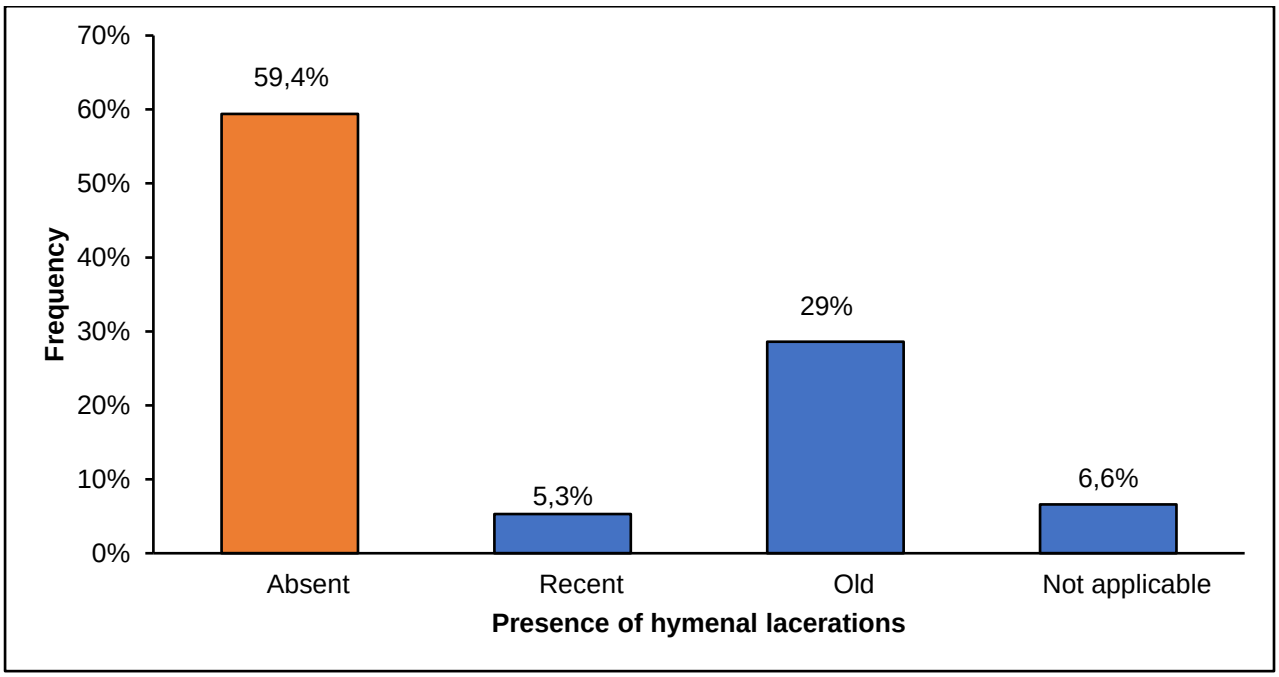


Figure 4.15 : Presence of hymenal lacerations (n=2588)

4.5.5 Vestibular injuries

Figure 4.16 represents injuries in the vestibular area, showing that these were absent for 81.5% of girls. However, 17.9% of the girls presented with acute injuries related with CSA.

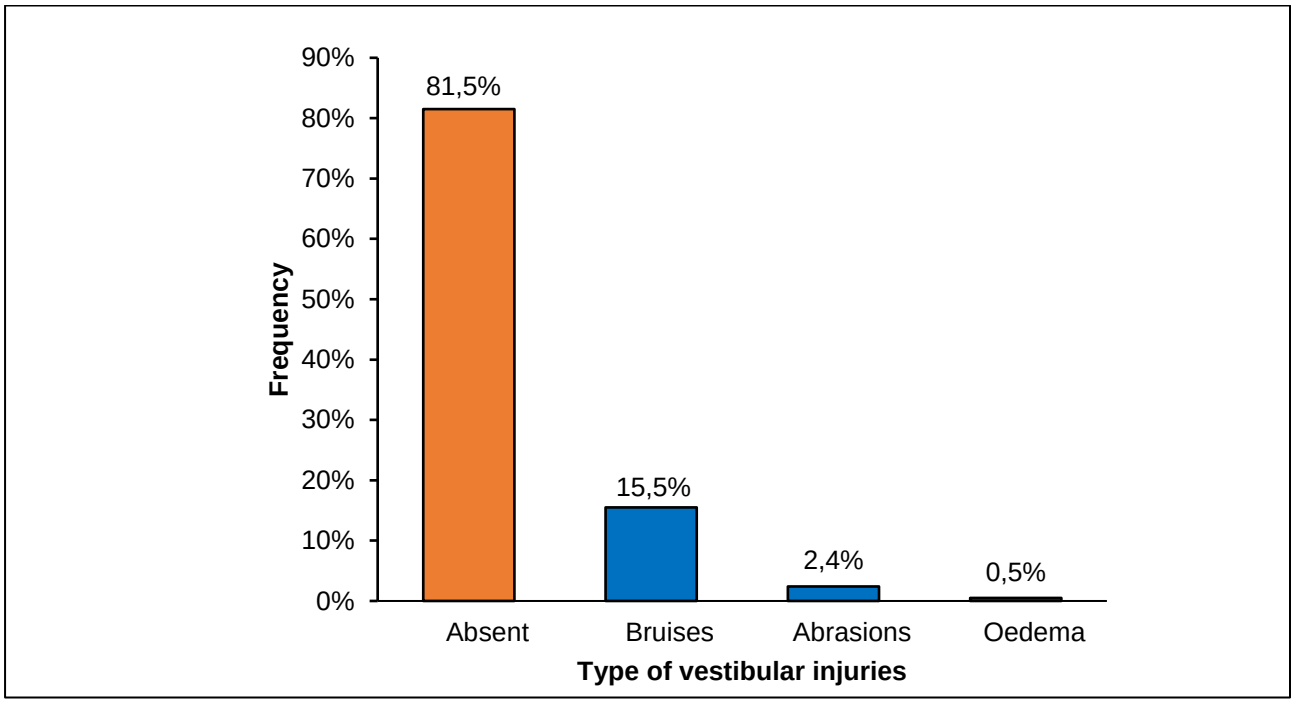


Figure 4.16: Type of vestibular injuries (n=2425)

4.5.6 Anal injuries

For the 2573 cases analysed for anal injuries, 6.9% presented with injuries. Among these, 171 children were found to have acute injuries, that is recent tears (96 girls and 75 boys), and 9 children with chronic injuries of anal contact (7 girls and 2 boys). As seen in Figure 4.17, in the majority of the cases (92.5%) anal injuries were absent.

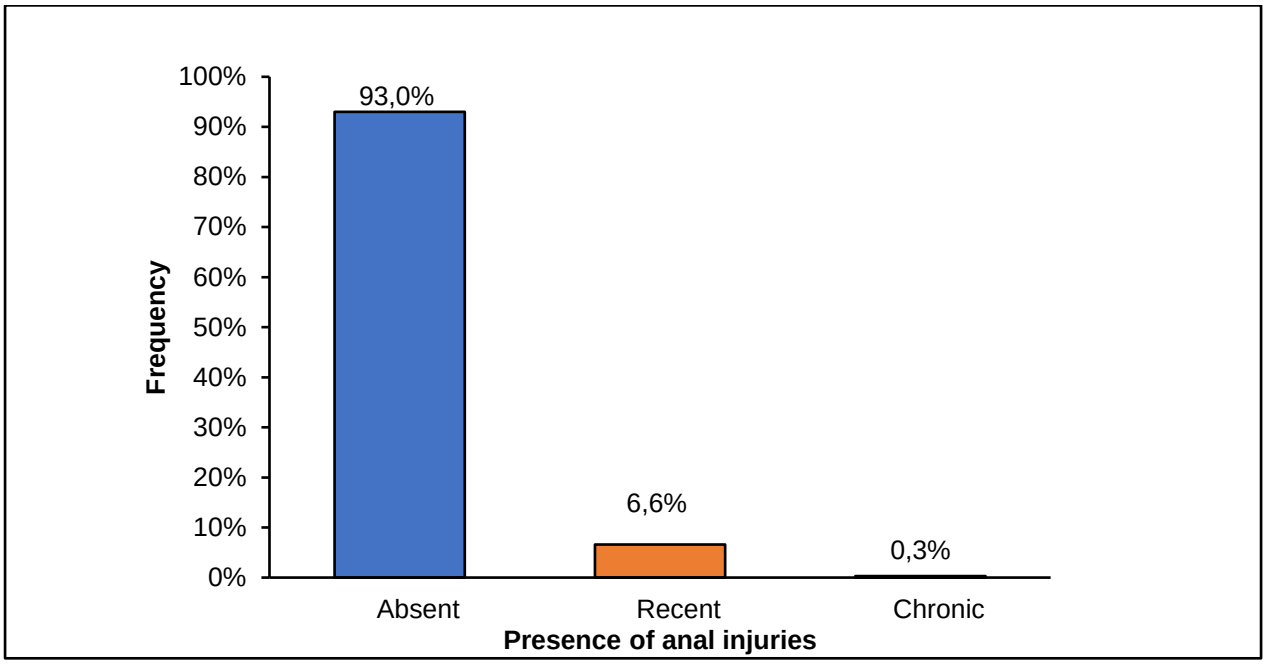


Figure 4.17: Anal injuries (n=2573)

4.5.7 Extragenital injuries

Extra genital injuries were rare among the victims, as seen in Figure 4.18. In 96,8 % of all patients (2505 cases), injuries were absent. Nonetheless, particular attention is given to the remainder 3.2% of victims who presented with injuries such as abrasions (52), bruises (14), fractures (6), wounds (6) and oedema (5), which are suggestive of increased severity of CSA.

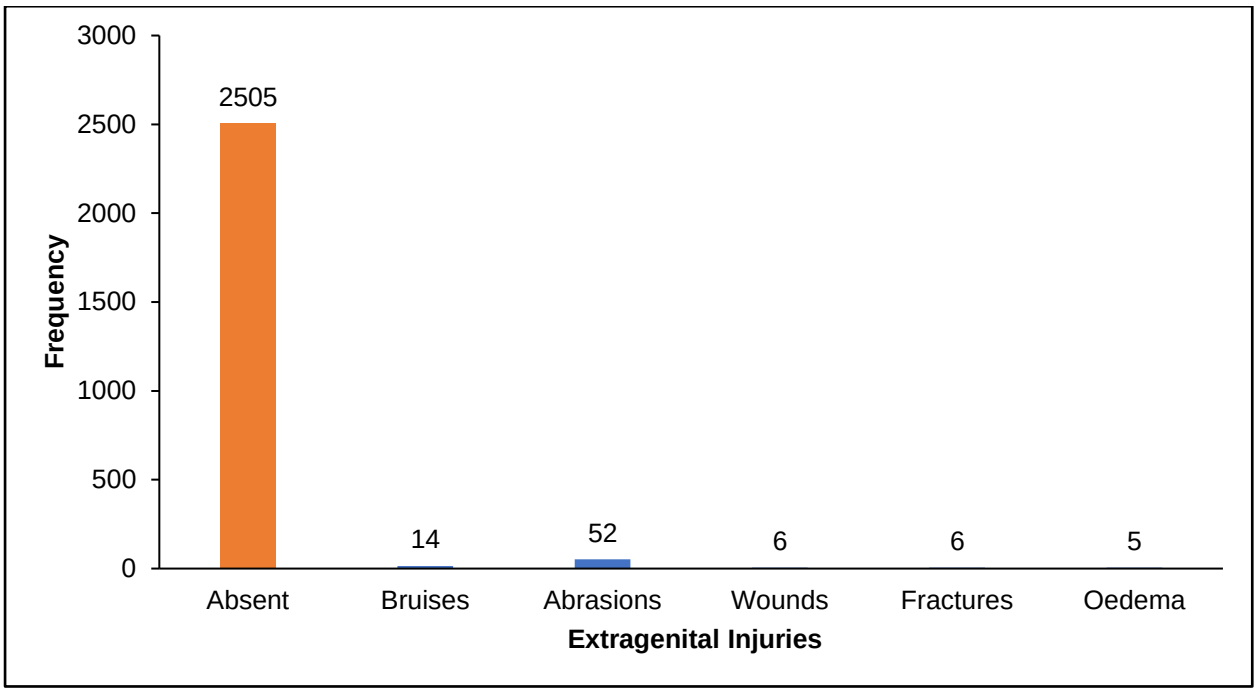


Figure 4.18: Type of extra-genital injury(n=2588)

Among the 2505 cases where extragenital injuries were not evident, it was found that 40 girls presented pregnant to the hospital, described as an undoubtable proof of sexual contact (Amin et al 2018).

4.5.8 HIV test result

Figure 4.19. represents the findings pertaining to HIV test results. Excluding the 437 cases where the results of a HIV test was missing, 2.8% of children presented with a positive result, 4 with undetermined results, and the large majority with a negative result (*n* = 2087).

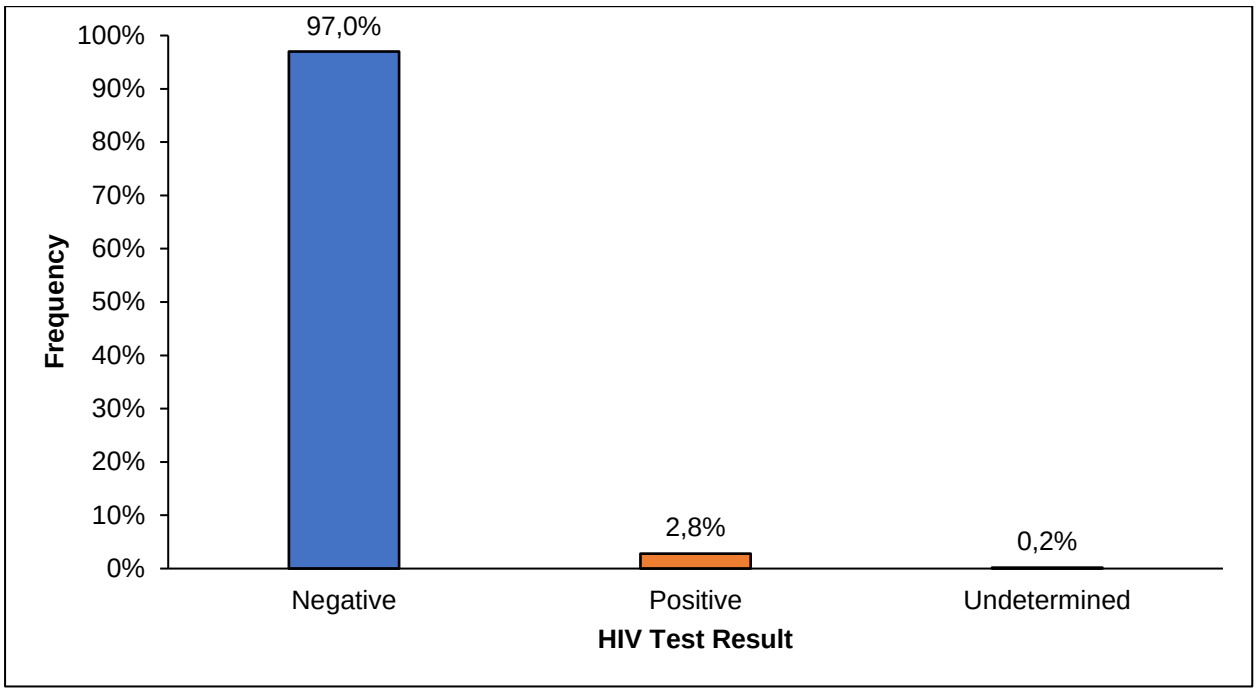


Figure 4.19: HIV test results of CSA victims (n=2151)

4.5.9 Forensic evaluation outcomes by sex

Table 4.7 shows comparisons of the forensic evaluation outcomes by sex among the cases that presented at the forensic services. When differentiated by sex, statistically significant differences were observed for anal penetration, χ^2 (1) = 950.759, $p < 0.01$, oral penetration, χ^2 (1) = 37.012, $p < 0.01$ and anal injuries, χ^2 (2) =439.925 $p < 0.01$.

Table 4.7: FORENSIC EVALUATION OUTCOMES BY SEX, 2015-2020 (N = 2588)			
OUTCOME	**FEMALE**	**MALE**	***p***
	***n* (%)**	***n* (%)**	
Anal Penetration			
No	2328 (96.0)	44 (27.0)	< .001*
Yes	97 (4.0)	119 (73.0)	
Oral Penetration			
No	2391 (98.6)	150 (92.0)	< .001*
Yes	34 (1.4)	13 (8.0)	
Anal Injuries			
Absent	2308 (95.7)	86 (52.8)	< .001*
Recent	96 (4.0)	75 (46.0)	
Chronic	7 (0.3)	2 (1.2)	
HIV Test Result			
Negative	1959 (96.9)	128 (98.5)	.101
Positive	59 (2.9)	1 (0.8)	
Undetermined	3 (0.1%)	1 (0.8)	
Extragenital Injuries			
Absent	2345 (96.7)	160 (98.2)	.613
Bruises	13 (0.5)	1 (0.6)	
Abrasions	51 (2.1)	1 (0.6)	
Wounds	6 (0.2)	0 (0.0)	
Fractures	5 (0.2)	1 (0.6)	
Oedema	5 (0.2)	0 (0.0)	
Time Elapsed to Medical Evaluation			
<72 h	1415 (73.4)	83 (71.6)	.661
>72h	513 (26.6)	33 (28.4)	
Time Elapsed to Medico-Legal Evaluation			
<3 days	1226 (54.9)	78 (54.2)	.861
3-7 days	476 (21.3)	29 (20.1)	
> 7days	531 (23.8)	37 (25.7)	
*$p < 0.05$.			

As described above, vaginal was the most prevalent type of penetration, for the majority of cases injuries at all levels were absent, and victims presented at the hospital seeking clinical and medico-legal assistance within 72 hours after the assault.

4.6 SUMMARY

The chapter outlined the results of the data analysis. A total of 2588 cases were observed from 2015 to 2020, showing a decreasing trend through the period of the study, with the highest frequency found to be in 2015 (22.7%) and the lowest in 2020 (12.2%).

The outcome of study objective two shows that girls presented with a higher frequency (93.7%) of CSA than boys (6.3%) and that adolescents (12-17 years) were the predominant

assaulted group (48.6%). Comparatively, the higher number of cases of CSA among boys was observed in the 6–11-year-old age group (49.1%) and for girls in the 12–17-year-old age category (50.1%). The children were mostly at the primary level of education (47.5%), living in urban area (66.6%). When considered by sex, secondary education attendance was higher in girls (26.8%) than it was for boys (4.8%). The majority of police requests were from the city police offices (SERNIC city) (95.5%).

The findings of objective three revealed that children were more likely to be assaulted during the summer (January to March and September to December), during the weekdays at victim's, perpetrator's or someone else's house (more than 80%), and in the afternoon (36.5%) or evening (41.9%). Perpetration of the assault was mainly by one individual (88.7%), known to the child, who offended in a single episode (70.2%). In 54.1% of cases the CSA was accompanied by physical violence. Statistically significant differences between boys and girls were found for the number of episodes, time of occurrence and perpetrator identity. Multiple episodes of CSA were more frequent in boys (44.3%) than girls (28.8%). The most frequent time of occurrence was higher during the evening for girls (53.8%) and in the afternoon for boys (42.6%) Compared by sex, girls presented with a higher percentage (27.9%) of sexual assaults perpetrated by strangers than boys (13.2%), while boys presented with higher cases (70.5%) of perpetration by individuals categorised as a non-family member but who was known to the victims than was the case for girls (55.2%).

Lastly, the fourth objective showed that the predominant type of sexual assault was via vaginal penetration, corresponding with the higher number of CSA cases of girls, as previously described. Overall, in 74.9% of cases the offenders did not use a condom. With respect to injuries. only 5.3% of girls presented with recent hymenal injuries and 6.6% with injuries in the anal area. Vestibular and extragenital injuries were absent in 81.5% and 96.8% of cases respectively. The majority of children tested negative for HIV; those that tested positive comprised 2.8% of the cases analysed. For arrival time at health facilities, most of the victims arrived within 72 hours to seek medical assistance (73.3%) and for medico-legal evaluation (54.9%).

CHAPTER 5
DISCUSSION OF THE RESEARCH FINDINGS

5.1 INTRODUCTION

This study aimed to investigate the occurrence, socio-demographic characteristics, circumstances, and forensic evaluation outcomes of CSA in victims assisted at the Forensic Service of the Maputo Central Hospital, Mozambique from 2015 to 2020. This chapter offers a discussion of the main research findings, presented in accordance with the stated study objectives.

As detailed in the previous chapter, the main findings of the study indicate that the following: firstly, all most of the CSA victims were girls aged across the indicated age range of 0-17 years. A rise of cases among girls was observed in the 12-17-year-old age group, with a peak at age 14 years. Secondly, for both girls and boys, the circumstances of the analyses CSA cases were found to be similar; the victim is usually assaulted at their home or at the perpetrator's home by a single perpetrator from their acquaintance or family member groups, typically during the weekdays. Finally, most victims seeking medical and forensic evaluation were found to have presented for assistance less than 72 hours after the assault, with the main penetration type being vaginal for the girls and anal for the boys, and where most perpetrators also used physical violence and were reported to have not used a condom. The resulting injuries were found to be superficial and observed in the minority of the CSA victims.

5.2 DESCRIBING THE OCCURRENCE OF CSA

The study examined the frequency of occurrence of CSA and found an overall declining frequency from 2015 to 2020. This finding was attributed partially to the opening of forensic services at Hospital Geral de Mavalane and Hospital Provincial de Matola in 2016 and 2017 respectively. The slight crescent peak in 2020 is probably associated with the effects of lockdown adopted in Mozambique in 2020 due to the COVID-19 pandemic; in this study, most of the victims were assaulted at home, which is likely linked to the instance of children staying more at home due to the lockdown. When analysed by sex, the frequency of occurrence in girls decreased while in boys remained stable. It is possible that these findings point to the commonly found under-reporting of CSA among boys (see WHO 2003).

5.3 SOCIODEMOGRAPHIC CHARACTERISTICS OF CSA

As reported, the study results showed that among the 2588 suspects of CSA assisted in Maputo Central Hospital during the study period, most of the CSA victims were girls. with the large number of cases (93,6%) evident in the 12–17-year-old age group (48.6%). In similar studies undertaken in Egypt (Abd El Rahman et al 2017; Abo-Seria et al 2019), over 50% of the CSA victims observed at health facilities were found to be girls. This pattern is likely due to the fact that girls tend to be more physically vulnerable to assault due to their physical constitution, as well as the described under-reporting of CSA among boys (Krug et al 2002). On other hand, children in the 12–17-year-old age group are more exposed to the different environments where CSA can occur, including workplaces in the case female child labour, and night school in cases where girls have to walk unaccompanied through unsafe neighborhoods. The higher number of CSA assaults in this age category may also be explained by the fear and lack of understanding in younger children to disclose the incident (WHO 2003). Nonetheless, dissimilar findings have been reported in the literature; for example, in the study by Abo-Seria and colleagues (2019), although girls were more frequently the victims of CSA, the higher number of CSA cases were observed in the 1-4-year-old age group (Abo-Seria et al 2019).

5.4 THE CIRCUMSTANCES OF OCCURRENCE OF CSA

CSA victims in the current study were commonly assaulted during weekdays (71.1%), similar to the study by Nhassengo et al (2021), focusing on injuries in children aged 0-14 years caused by physical and sexual violence and children presented at the pediatric emergency room and forensic service of Hospital Central de Maputo in 2019, which found that 86.4% of victims were assaulted during the weekday. In this study, the time of occurrence was mainly during the evening (41.9%) and afternoon (36.5%), whereas the study conducted by Nhassengo et al (2021), at the same forensic unit as referenced in the current study, revealed that 22.7% of the CSA occurred during the evening, and the remainder was distributed equally between morning and afternoon times. However, these time differences can be partially related to the slight difference in the age group considered across the two studies; Nhassengo and colleagues (2021) analysed a sample of children under 15 years old, who may be considered to be more at risk of CSA perpetrated at home during the day due to the absence of their caretakers' supervision (WHO 2018), while in the current study it could be argued that older girls are exposed to violence during the late hours. In the

Mozambican educational system, when girls become pregnant or schools and classes are oversubscribed during the day, the older children are referred to night classes. Additionally, according to Lalor (2007), when adolescents engage in consensual relationships earlier with an older partner, which is a crime by law, and are forbidden by caretakers, they return home late after classes. An additional finding related to time of occurrence pointed to November as the month with the highest frequency of CSA cases. This may be explained by the closing time of public schools when children often move to visit relatives, changing their environment and being exposed to different risks. In Mozambique, November is a summer month, a seasonal feature considered as significant in past research. In his study on the incidence of sexual assault in Manchester in relation to the local weather conditions, McLean (2007) concluded that the incidence of cases of CSA tended to increase with rising temperature. More than a decade later, in a ten-year retrospective study of CSA, Gruenberg et al (2019) also determined the same link between the incidence of CSA and high temperature months.

In the current study, the perpetrator's home was found to be the frequent site of CSA occurrence. Studies from Africa as well as other parts of the world show the place of occurrence in CSA to be often the home of either the victim, offender, or someone else (Cox et al 2007; Nhassengo et al 2021; WHO 2003). In Malawi, results from a nationally representative household survey demonstrated that among all victims of CSA, one out of four victims placed the event at the victim's or offender's house; however, for the 13–17-year-old group, the event occurred in public spaces such as in streets and at school (Government of Malawi 2014), similar to the findings of this study. The high incidence of occurrence in the streets is likely to result from strangers assaulting older children walking unaccompanied, in such instances as returning from school when it is dark.

Overall, the findings of this study demonstrated that the victims were assaulted by a single perpetrator (89%) known to the victim, supporting the evidence from previous studies which concluded that perpetrators are commonly known to the victims (Amin et al 2018; Nhassengo et al 2021; Shako & Kalsi 2019; Singh et al 2022). In their study, Shehu et al (2019) noted that almost all of the perpetrators of CSA were male and mostly neighbours. Similarly, when disaggregating the results of the current study, more than half of the perpetrators of CSA were acquaintances, of whom almost half were neighbours. The high frequency count of

neighbours described in this study (25%) is comparable with that recorded by Shehu (2019) and Assabu (2019), 44.7% and 28.1% respectively.

Physical force was the primary aggravating means that offenders used during the course of the sexual assault against the children (54.1%). The findings of this study appear to differ from previously cited evidence indicating that physical force is very seldom used to assault children sexually since they tend to be lured instead (WHO 2003). The high level of physical violence may be explained by the fact that the majority of children were in the age range of 12-17 years old, possibly with some capacity to resist the offender, leading to the use of violence by the perpetrator to overpower and subdue the child. This supposition may also explain the low proportion of grooming (2.4%) found in the current study. Nonetheless, based on language limitations and immaturity of the children in the younger age groups, it may not be possible to conclusively exclude the occurrence of grooming among those children who did not report any aggravating circumstances.

5.5 FORENSIC EVALUATION OUTCOMES

Forensic evaluation outcomes are closely related to the time interval between the sexual assault and presentation by the victim to the health facilities and condom usage by the perpetrator, over other criteria (Adams 2018). The study results showed that condom use was not verified in close to all of the cases analysed. These findings are consistent with the literature that describes the use of condoms by perpetrators of sexual violence as unusual; when used, perpetrators have reported using a condom to avoid sexually transmitted infections and to hide evidence (Hassan et al 2020; Mwakawanga et al 2021).

It is noted that many published cases studies on CSA do not differentiate forensic evaluation from clinical evaluation. Depending on the legal and health systems of the particular setting, children may be assisted by forensic nurses at rape care centers or medical physicians who collect the evidence for legal purposes (Hassan 2020). In this study, almost half of the victims sought forensic assistance, although only 72% who did so presented for clinical assistance within 72 hours of the assault. The implication of the delay between clinical and forensic assistance is the decreased probability of finding injuries and collecting the relevant evidence for medico-legal purposes (Adams 2018). The delay might be explained by the fact that in the Mozambican Health system children receive clinical assistance at health centers or at

pediatric or gynaecological emergency rooms and are then referred to forensic services. The presentation of victims for forensic evaluation has also been described by Hassan and colleagues (2020) in a study undertaken in the USA where 91% of the victims arrived for medical assistance within 72 hours of the alleged sexual assault. In South Africa, Cox et al (2007) also found that almost all of the victims under study presented at the hospital within 72 hours of the sexual assault. In contrast, research conducted in Egypt by Abo-Seria et al (2019) described the majority of victims as presenting after more than seven days of CSA (40.4% of cases), in all likelihood because the victims were mainly boys and, as described earlier, boys are less likely to report, or report early.

In respect of the consequences of CSA, specifically the site of attempted or completed penetration, the most frequent type of penetration documented in the current study was vaginal, which is similar to the findings of other studies on CSA. Eouani et al (2020) and Assabu et al (2019) found that 94.6% and 95.2% of their samples respectively were penetrated vaginally. These findings are consistent with the higher representation of girl victims over boy victims of CSA, associated with the low rate of reporting among boys described in literature (Amin et al 2018; Krug et al 2002). Contrary to the study findings, the study by Abo-Seria and colleagues (2019) found anal penetration to be the more frequent type of assault, explained by the fact that the sample was highly represented by boys when compared to other studies, likely due to the overall male population in Egypt being higher than female (Galal 2021).

Studies conducted in different parts of Africa as well across other continents have revealed that injuries are rarely found in CSA victims and that when there is injury, such as hymenal lacerations, these tend to be more visible in victims within the older age groups (Celbis 2019; Shehu 2019; Smith 2017). In this study, evidence showed that the minority of the children presented with anogenital injuries (ranging from 7% at the anal area to 34.3% at the vaginal area). These findings are consistent with the results of previous studies results, such as the research conducted by Smith and colleagues (2018) in Canada which found that only 4.5 % of the victims presented with anogenital injuries. Studies conducted in Egypt (Abd El Rahman et al 2017) and India (Jaiswani et al 2021) revealed the absence of injuries in 70.2% and 60.1% of the victims respectively (Abd El Rahman et al 2017; Abo-Seria et al 2019; Jaiswani et al 2021). However, it is important to note that the absence of genital injuries is not

indicative of a negative diagnosis of CSA. As emphasised by Adams (2018), the absence of injuries in girl victims of CSA should not be interpreted to negate their disclosure of sexual assaulted. Importantly, as argued by Jewkes and colleagues (2009), the presence of genital and non-genital injuries bear important legal implications in respect of the conviction of offenders. Additionally, they have raised the importance of the use of a standardised form to document and describe injuries.

In the current study, a small percentage of the girl victims were found to be pregnant, which can be read as a positive sign of CSA (see WHO 2018). The low incidence of pregnancy among girls who were sexually assaulted was also reported in studies in Canada by Smith (2017) and in Turkey by Koçtürk et al (2019), 0.2% and 3.3 % of girls respectively. A higher percentage was registered in the Egyptian study by Abd El Rahman et al (2017), with 10.2% of the girls testing positive for pregnancy. Although there appears to be consistency across different settings, the seemingly low pregnancy rate in the current study is likely to be a result of Mozambican cultural norms where community leaders and families negotiate this consequence of CSA through the implementation of financial compensation or child marriage, resulting in unreported cases of pregnancy (see Lalor 2007). Notwithstanding, the legal system protects these children, allowing them to request a safe abortion in cases where the pregnancy is under 16 weeks (República de Moçambique 2019b). Lastly, HIV results revealed that only a small proportion of victims (4%) presented with a positive result. In general, few documented studies on CSA have reported the results of HIV testing among CSA victims. Among those investigations that have, Shehu et al (2019) found all the victims in the study population to be HIV negative, while Smith (2017) registered only one case in a sample of 3359. According to WHO guidelines, follow-up tests are necessary to exclude false negatives due to early investigation. In Mozambique, the HIV rapid test is used to screen for a positive HIV diagnosis; the fact that this test detects HIV antibodies only between 8 and 12 weeks after exposure may be argued to be a reasonable explanation for the low HIV detection found in the current study (see Elliott et al 2019).

5.6 SUMMARY

A discussion of the relevant findings of the current study, as aligned with the study objectives, was offered in this section. The discussion was referenced against related research conducted globally and in Africa, including in Mozambique.

CHAPTER 6
CONCLUSIONS AND RECOMMENDATIONS

6.1 RESEARCH DESIGN AND METHOD

This study was driven by an ecological framework, that approaches sexual violence against children at four domains namely, individual, relationship, community and societal. The study analysed the consequences of CSA at different levels, including the physical, mental, behavioural, sexual and reproductive and social dimensions. The study adopted a quantitative cross-sectional approach, utilising secondary data extracted from the medico-legal reports of the Forensic Service of Hospital Central de Maputo in Mozambique for the period 2015 to 2020.

6.2 SUMMARY AND INTERPRETATION OF THE RESEARCH FINDINGS

This study demonstrated that the overall incidence of CSA at Maputo Province and City is higher among girls than boys. Within the different age groups specifically, the frequency of CSA was notable among pre-pubertal boys (6-11 years) and post-pubertal girls (12-17 years) were largely implicated.

The spatio-temporal profile of CSA in this study points to the perpetrator's home and public spaces, and weekdays in the afternoons and evenings as prominent circumstances of occurrence. Moreover, the study established that offenders are males who seldom use a condom in the sexual assault of victims, with the use of physical force over the children emerging as not an uncommon event.

Most victims were provided timeously (<72h) medical assistance intended to prevent sexually transmitted infections and pregnancy. However, some delayed receiving forensic observation, which led to compromised forensic assessment findings. Although physical injuries were uncommon in the current study, as described in previous studies and indicated earlier, it is important to note that the absence of injuries does not exclude the occurrence of CSA. Additionally, the physical, mental health, sexual and reproductive consequences of CSA require special attention both in assessment and intervention, such as pregnancy given the finding that most perpetrators did not use condoms.

6.3 CONCLUSIONS

CSA is a gender-based form of violence requiring special attention among children and communities. The patterns of CSA described in this study point to the necessity and urgency of intervention strategies to reduce sexual violence towards the children in Mozambique, and in Maputo in particular. The study results also suggest that these interventions need to pay special attention to the high rates of girls across all ages being sexually assaulted, as well as younger boys.

6.4 RECOMMENDATIONS

Based on the study findings, some recommendations are offered below for CSA intervention within the context in which the study is located.

6.4.1 For practice

This study highlighted a range of differences in the forensic record descriptions of CSA identification, circumstances and injuries, as recorded by the forensic specialists who assisted the victims. Thus, training physicians to identify and diagnose CSA is one crucial step, as well as creating a standardised tool to generate records that are more consistent and replicable. Additionally, victims were only tested for HIV, pointing to the need for further investigations to exclude other potential sexually transmitted infections, such as syphilis, the herpes virus, and other bacterial infections.

6.4.2 For future research

According to the results of the current study, there was a scarcity of information on perpetrator characteristics, such as data on age, physical and mental health conditions, and behavioural patterns. Accordingly, the capturing of more complete perpetrator related information appears to be critical to undertake future research that offers a more complete profile of on CSA.

Since the current study focused on a hospital facility, conducting studies in schools and the broader community is likely to be valuable to expand profile of CSA and deepen understanding of its occurrence, initially in Maputo (study area under investigation in the present study) as well as then expanding such inquiry across the country.

6.4.3 For prevention

The study findings underline the need for prevention campaigns in the community, addressing specially education for caretakers and children for early identification of CSA risks and for early and appropriate reporting of its occurrence to the authorities. Moreover, these campaigns must pay particular attention to boys at younger ages.

6.4.4. For policies

The high proportion of girls that presented in the current study as victims of CSA underscores the need for reinforcement of the existing laws that protect them, as well as the formulation and implementation of additional policies that consider specifically mechanisms and processes that enable and encourage the reporting of CSA by boy victims.

6.5 CONTRIBUTIONS OF THE STUDY

Data on CSA, especially hospital-based, is crucial to design appropriate policies and interventions to mitigate its multiple consequences and prevent its occurrence in the first place. The current study contributes to knowledge on CSA in the context of Mozambique and contributes to information on CSA in the Sub-Saharan region more generally, thus allowing for comparisons to be made and the contextualisation of the phenomenon across countries.

6.6 LIMITATIONS OF THE STUDY

Firstly, the data used for the study analysed secondary data gathered from record books, which were limited by the inconsistent quality and incompleteness of the data, such as missing data for the variables under study. This limitation suggests that the findings need to be considered against such data limitations, which have the potential to create bias in research results.

Secondly, the record books of Maputo Forensic service contained data focused on the victim. Details related to the sociodemographic characteristics of the perpetrator and other important perpetrator characteristics were missing. Research focused on the perpetrator is required to provide a deeper understanding about CSA perpetrators and CSA perpetration and consequently evidence-driven CSA prevention and child´s rights protection.

Another possible limitation is using chi-square to analyse sociodemographic, circumstances and forensic evaluation outcomes by sex. The interpretation of the statistical significance of the results does not sufficiently explain the extent of the differences presented.

An additional constraint of the current study is that it is not possible to conclusively attribute pregnancy and HIV infection to CSA. Such conclusions cannot be drawn due to the temporality of occurrence and the absence of molecular testing in the study context to assess the genetic link between the CSA victim and the offender.

Lastly, the current study was not able to capture the mental health complications of CSA since data was gathered specifically from forensic records. Data on the psychological care offered to, or accessed by the victims is not available in the study context since Hospital Central de Maputo, a quaternary hospital, refers the victims to health centres for further follow-up.

6.7 CONCLUDING REMARKS

CSA is a pervasive public health problem worldwide and a particular concern and priority in Mozambique. Data from locally contextualised settings and on situated experiences of CSA is crucial to develop contextually and culturally sensitive prevention and mitigation strategies. Consequently, further studies are required to better understand and address CSA across the regional settings of Mozambique (North, Centre, and South of the country), as well as across different parts of the African continent.

LIST OF REFERENCES

Abd El Rahman, AE, Azab, SMS & Ramadan, M. 2017. Study of cases of child sexual abuse referred for medico-legal examination in Cairo and Giza, Egypt, 2007–2011. *Journal of Child Sexual Abuse* 26(3):308-318. https://doi.org/10.1080/10538712.2017.1282574

Abo-Seria, M, AbdelRahman, A, Mostafa, H & Farag, H. 2019. Study of child sexually abused cases in Cairo Portal do Governorates in the period from 2012 to 2016. *Ain Shams Journal of Forensic Medicine and Clinical Toxicology* 32(1):31-39. https://doi.org/10.21608/ajfm.2019.23674

Adams, JA. 2008. Guidelines for medical care of children evaluated for suspected sexual abuse: An update for 2008. *Current Opinion in Obstetrics and Gynecology* 20(5):435-441. https://doi.org/10.1097/GCO.0b013e32830866f4

Adams, JA, Farst, KJ & Kellogg, ND. 2018. Review interpretation of medical findings in suspected child sexual abuse: An update for 2018. *Journal of Pediatric and Adolescent Gynecology* 31(3):225-231. https://doi.org/10.1016/j.jpag.2017.12.011

Adams, JA. 2018. Understanding medical findings in child sexual abuse: an update for 2018. *Academic Forensic Pathology* 8(4):924-937. https://doi:10.1177/1925362118821491

Afandi, D, Indrayana, MT, Fatriah, SH, Nugraha, I & Pangestu, MRF. 2018. Forensic examination findings among child victims in Pekanbaru, Indonesia (2010-2016). *Indian Journal of Forensic Medicine and Toxicology* 12(1):298-303. https://doi.org/10.5958/0973-9130.2018.00058.0

Ahinkorah, BO, Onayemi, OM, Seidu, AA, Awopegba, OE & Ajayi, AI. 2022. Association between girl-child marriage and intimate partner violence in Sub-Saharan Africa: insights from a multicountry analysis of demographic and health surveys. *Journal of Interpersonal Violence* 37(15-16):NP13560-NP13580. https://doi.org/10.1177/08862605211005139

Alharahsheh, HH & Pius, A. 2020. A review of key paradigms: Positivism vs interpretivism. *Global Academic Journal of Humanities and Social Science* 2(3):39-43. https://doi.org/10.36348/gajhss.2020.v02i03.001

AlRammah, AAA, Alqahtani, SM, Babiker, AGE, Al-Saleh, SS, Syed, W, Al-Mana, AAK & Al-shammarie, HH. 2018. Factors associated with perceptions of child sexual abuse and lack of parental knowledge: A community-based cross-sectional study from the Eastern Province of Saudi Arabia. *Annals of Saudi Medicine* 38(6):391-398. https://doi.org/10.5144/0256-4947.2018.391

Amin, A, MacMillan, H & Garcia-Moreno, C. 2018. Responding to children and adolescents who have been sexually abused: WHO recommendations. *Paediatrics and International Child Health* 38(2):85-86. https://doi.org/10.1080/20469047.2018.1427179

Arias-Gómez, J, Villasís-Keever, MÁ & Miranda-Novales, MG. 2016. The research protocol III. Study population. *Revista Alergia Mexico* 63(2):201-206. https://doi.org/10.29262/ram.v63i2.181

Artz, L, Burton, P, Ward, CL, Leoschut, L, Phyfer, J, Lloyd, S, Kassanjee, R & Le Mottee, C. 2016. *Optimus study South Africa: Technical report: Sexual victimisation of children in South Africa: Final report of the Optimus Foundation Study: South Africa*. Zurich, Switzerland: UBS Optimus Foundation. https://www.saferspaces.org.za/uploads/files/08_cjcp_report_2016_d.pdf

Assabu, G, Tefera, M, Abebe, A & Busse, H. 2019. The magnitude of sexual abuse and its physical effects among female children seen at Gandhi Memorial Hospital in Addis Ababa, Ethiopia. *Ethiopian Journal of Health Development* 33(3):174-181. https://www.ajol.info/index.php/ejhd/article/view/190127

Averdijk, M, Mueller-Johnson, K & Eisner, M. 2011. *Sexual victimization of children and adolescents in Switzerland: Final report for the UBS Optimus Foundation.* Zurich, Switzerland: UBS Optimus Foundation. 2nd edition.

Babakr, Z, Mohamedamin, P & Kakamad, K. 2019. Piaget's cognitive developmental theory: Critical review. *Education Quarterly Reviews* 2(3):517-524. https://files.eric.ed.gov/fulltext/EJ1274368.pdf

Badejoko, O, Anyabolu, H, Badejoko, B, Ijarotimi, A, Kuti, O & Adejuyigbe, E. 2014. Sexual assault in Ile-Ife, Nigeria. *Nigerian Medical Journal* 55(3):254-259. https://doi.org/10.4103/0300-1652.132065

Badoe, E. 2017. A critical review of child abuse and its management in Africa. *African Journal of Emergency Medicine* 7:S32-S35. https://doi.org/10.1016/j.afjem.2017.09.002

Banvard-Fox, C, Linger, M, Paulson, DJ, Cottrell, L & Davidov, DM. 2020. Sexual assault in adolescents. *Primary Care - Clinics in Office Practice* 47(2):331-349. https://doi.org/10.1016/j.pop.2020.02.010

Basile, KC, DeGue, S, Jones, K, Freire, K, Dills, J, Smith, SG, Raiford, JL. (2016). *STOP SV: A technical package to prevent sexual violence*. Atlanta, Georgia: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

Basoeky, U. 2019. Legal reconstruction: Ingsutan paradigmatic on the determination of the positivism paradigm and legal positivism in law enforcement in Indonesia. *International Journal of Science and Society* 1(4):154-175. https://doi.org/10.54783/ijsoc.v1i4.323

Ben-Haim, Y. 2018. Positivism and its limitations for strategic intelligence: A non-constructivist info-gap critique. *Intelligence and National Security* 33(6):904-917. https://doi.org/10.1080/02684527.2018.1471846

Bloomfield, J & Fisher, MJ. 2019. Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association* 22(2):27-30. https://doi.org/10.33235/jarna.22.2.27-30

Botchey, IM, Hung, YW, Bachani, AM, Paruk, F, Mehmood, A, Saidi, H & Hyder, AA. 2017. Epidemiology and outcomes of injuries in Kenya: A multisite surveillance study. *Surgery* 162(6):S45-S53. https://doi.org/10.1016/j.surg.2017.01.030

Bronfenbrenner, U. 1979. *The Ecology of Human Development: Experiments by Nature and Design*. Harvard University Press.

Bronfenbrenner, U & Ceci, SJ. 1994. Nature-nurture reconceptualized in developmental perspective: A bioecological model. *Psychological Review* 101(4):568-586. https://doi.org/10.1037/0033-295x.101.4.568

Bugaje, M, Ogunrinde, G & Faruk, J. 2012. Child sexual abuse in Zaria, Northwestern Nigeria. *Nigerian Journal of Paediatrics* 39(3):110-114. https://doi.org/10.4314/njp.v39i3.4
van Deijk R. 2007. Protecting children: Community attitudes to child sexual abuse in rural Mozambique. Maputo, Mozambique: Save the Children UK.

Cebola, BR, Menegazzo, F, Salmaso, L, Facchin, P, Isidoris, V, Figueredo, RL, Mazive, SA, Schiavone, M, Boscardin, C, Putoto, G & Pizzol, D. 2019. Pattern of domestic violence from 2011 to 2015 in Beira, Mozambique. *African Health Sciences* 19(1):1499-1506. https://doi.org/10.4314/ahs.v19i1.23

Celbis, O, Altın, İ, Ayaz, N, Börk, T & Karatoprak, S. 2019. Evaluation of incest cases: 4-years retrospective study. *Journal of child sexual abuse* 29(1):79-89. https://doi.org/10.1080/10538712.2019.1634664

Centers for Disease Control and Prevention (CDC). 2021. *The Social-Ecological Model: A framework for prevention*. https://www.cdc.gov/violenceprevention/about/social-ecologicalmodel.html

Centers for Disease Control and Prevention (CDC). 2022. *Fast facts: Preventing child sexual abuse page*. https://www.cdc.gov/violenceprevention/childsexualabuse/fastfact.html#:~:text=Child%20sexual%20abuse%20refers%20to,does%20not%20fully%20comprehend

Chiang, LF, Kress, H, Sumner, SA, Gleckel, J, Kawemama, P & Gordon, RN. 2016. Violence Against Children Surveys (VACS): Towards a global surveillance system. *Injury Prevention* 22(1):17-22. https://doi.org/10.1136/injuryprev-2015-041820

Claydon, LS. 2015. Rigour in quantitative research. *Nursing Standard (2014+)* 29(47):43. https://doi.org/10.7748/ns.29.47.43.e8820

Connelly, LM. 2016. 'Fisher's exact test'. *MedSurg Nursing* 25(1):58+. https://go.gale.com/ps/i.do?id=GALE%7CA444912943&sid=googleScholar&v=2.1&it=r&linkaccess=abs&issn=10920811&p=AONE&sw=w&userGroupName=anon%7E4a078726&aty=open+web+entry

Corry, M, Porter, S & McKenna, H. 2019. The redundancy of positivism as a paradigm for nursing research. *Nursing Philosophy* 20(1):[1-10]. https://doi.org/10.1111/nup.12230

Cox, S, Andrade, G, Lungelow, D, Schloetelburg, W & Rode, H. 2007. The child rape epidemic: Assessing the incidence at Red Cross Hospital, Cape Town, and establishing the need for a new national protocol. *South African Medical Journal* 97(10):950-955. https://doi.org/10.7196/SAMJ.576

Dangerfield, B, Ildeniz, G & Ó Ciardha, C. 2020. Theories that explain the sexual abuse of children, in *The Wiley handbook of what works with sexual offenders*: *Contemporary Perspectives in Theory, Assessment, Treatment, and Prevention*, edited by J Proulx, F Cortoni, LA Craig & EJ Letourneau. John Wiley & Sons Ltd: 23-37. https://doi.org/10.1002/9781119439325.ch2

Darling, N, 2007. Ecological Systems Theory: The person in the center of the circles. *Research in Human Development* 4(3-4):203-217. https://doi.org/10.1080/15427600701663023

Davies, EA & Jones, AC. 2013. Risk factors in child sexual abuse. *Journal of Forensic and Legal Medicine* 20(3):146-150. https://doi.org/10.1016/j.jflm.2012.06.005

Dills, J, Fowler, D & Payne, G. 2016. *Sexual violence on campus: Strategies for prevention*. Atlanta, Georgia: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. https://www.cdc.gov/violenceprevention/pdf/campussvprevention.pdf

Eisenhauer, JG. 2008. Degrees of freedom. *Teaching Statistics* 30(3), 75-78. https://doi.org/10.1111/j.1467-9639.2008.00324.x

Elliott, T, Sanders, EJ, Doherty, M, Ndung'u, T, Cohen, M, Patel, P, Cairns, G, Rutstein, SE, Ananworanich, J, Brown, C & Fidler, S. 2019. Challenges of HIV diagnosis and management in the context of pre-exposure prophylaxis (PrEP), post-exposure prophylaxis (PEP), test and start and acute HIV infection: A scoping review. *Journal of the International AIDS Society* 22(12):[1-6]. https://doi.org/10.1002/jia2.25419

Eouani, LME, Mokoko, JC, Itoua, C, Mpia, NSSP & Iloki, LH. 2020. Sexual assault: Epidemiological profile and clinical aspects at the Brazzaville University Hospital Center. *Open Journal of Obstetrics and Gynecology* 10(2):326-332. https://doi.org/10.4236/ojog.2020.1020029

Fanflik, PL. (2014). *Examining sexual victimization among women: Do ecological factors predict the severity of sexual assault?:* [Doctoral dissertation] Digital Repository at the University of Maryland, University of Maryland (College Park, Md.). http://hdl.handle.net/1903/15171

Feng, J, Hao, Y & Deng, Z. 2021. A Review of Child Sexual Abuse. *Proceedings of the 2021 2nd International Conference on Mental Health and Humanities Education (ICMHHE 2021)* 561: 231-235. Atlantis Press. https://doi.org/10.2991/assehr.k.210617.070

Finkelhor, D, Shattuck, A, Turner, HA & Hamby, SL. 2014. The lifetime prevalence of child sexual abuse and sexual assault assessed in late adolescence. *Journal of Adolescent Health*, 55(3):329-333. https://doi.org/10.1016/J.JADOHEALTH.2013.12.026

Fontes, L, Conceição, O & Machado, S. 2017. Childhood and adolescent sexual abuse, victim profile and its impacts on mental health [Violência sexual na adolescência, perfil da vítima e impactos sobre a saúde mental]. *Ciência & Saúde Coletiva* 22(9):2919-2928. https://doi.org/10.1590/1413-81232017229.11042017

Gage, AJ, Hotchkiss, D & Godha, D. [s.a.]. *Association between child marriage and intimate partner violence in four African countries*. https://iussp.org/sites/default/files/event_call_for_papers/Gage%20Child%20Marriage%20and%20Intimate%20Partner%20Violence%20%20Long%20Abstract%20Revised.pdf

Greenland, S, Senn, SJ, Rothman, KJ, Carlin, JB, Poole, C, Goodman, SN & Altman, DG. 2016. Statistical tests, P values, confidence intervals, and power: A guide to misinterpretations. *European Journal of Epidemiology* 31(4):337-350. https://doi.org/10.1007/s10654-016-0149-3

Gruenberg, BC, Brown, RD, Anderson, MP & Bogie, AL. 2019. The link between temperature and child abuse. *Trauma and Emergency Care* 4(2):1-5. https://doi.org/10.15761/tec.1000182

Guy-Evans, O. 2020. *Bronfenbrenner's Ecological Systems Theory*. Simply Psychology. https://www.simplypsychology.org/Bronfenbrenner.html

Hassan, MA, Gary, FA, Lewin, L, Killion, C & Totten, V. 2020. Age-related child sexual abuse experiences. *Western Journal of Nursing Research* 43(5):425-430. https://doi.org/10.1177/0193945920958723

Harrington A. (ed). 2005. Introduction. What is Social Theory?, in *Modern social theory: An introduction*. Oxford University Press:1-12.

Herrmann, B, Banaschak, S, Csorba, R, Navratil, F & Dettmeyer, R. 2014. Physical examination in child sexual abuse: Approaches and current evidence. *Deutsches Ärzteblatt International* 111(41):692-703. https://doi.org/10.3238%2Farztebl.2014.0692

Hillis, S, Mercy, J, Amobi, A & Kress, H. 2016. Global prevalence of past-year violence against children: A systematic review and minimum estimates. *Pediatrics* 137(3):[1-22]. https://doi.org/10.1542%2Fpeds.2015-4079

Hu, M-H, Huang, G-S, Huang, J-L, Wu, C-T, Chao, A-S, Lo, F-S & Wu, H-P. 2018. Clinical characteristic and risk factors of recurrent sexual abuse and delayed reported sexual abuse in childhood. *Medicine (Baltimore)* 97(14):[1-5]. https://doi.org/10.1097/MD.0000000000010236

Imenda, S. 2014. Is there a conceptual difference between theoretical and conceptual frameworks? *Journal of Social Sciences* 38(2):185-195. https://doi.org/10.1080/09718923.2014.11893249

Instituto Nacional de Estatistica (INE). 2019. *Resultados Definitivos Do Censo 2017: IV Recenseamento Geral Da População e Habitação*. Maputo, Mozambique: Instituto Nacional de Estatistica.

Instituto Nacional de Saúde (INS), Ministry of Health (MISAU), Ministry of Gender, Child and Social Action (MGCAS) & Instituto Nacional de Estatística (INE). 2020. *Violence Against Children and Youth, Mozambique*, 2019 (VACS 2019). Priority Indicator RePort. Maputo, Mozambique: Instituto Nacional de Saúde. https://files.mutualcdn.com/tfg/assets/files/Mozambique-VACS-Primary-Indicator-Report-EN-edited-2021.pdf

International Rescue Committee & United Nations Children's Fund (UNICEF). 2012. *Caring for child survivors of sexual abuse: Guidelines for health and psychosocial service providers in humanitarian settings*. New York: International Rescue Committee. https://www.unicef.org/media/73591/file/IRC-CSS-Guide-2012.pdf.pdf

Irish, L, Kobayashi, I & Delahanty, DL. 2010. Long-term physical health consequences of childhood sexual abuse: A meta-analytic review. *Journal of Pediatric Psychology* 35(5):450-461. https://doi.org/10.1093/jpepsy/jsp118

Jaiswani, AK, Kumar, NB, Jaiswani, K, Kukde, HG & Dere, RC. 2021. The pattern of genito-anal injuries in female sexual assault cases in Mumbai, India. *Forensic Science International: Reports* 3:[1-4]. https://doi.org/10.1016/j.fsir.2021.100216

Javanaud, K. 2016. The consequences of violence towards children. *Child Protection Hub*:1-3. https://childhub.org/en/child-protection-online-library/consequences-violence-towards-children-child-hub-review

Jewkes R, Christofides N, Vetten L, Jina R, Sigsworth R & Loots L. 2009. Medico-legal findings, legal case progression, and outcomes in South African rape cases: Retrospective review*. PLoS medicine* 6(10): [1-9] e1000164. https://doi.org/10.1371/journal.pmed.1000164

Kankam, PK. 2019. The use of paradigms in information research. *Library & Information Science Research* 41(2):85-92. https://doi.org/10.1016/J.LISR.2019.04.003

Karagianni, A. 2021. *Survivors of child sexual abuse in South Africa*: [Master's thesis]. University of Bedfordshire. http://hdl.handle.net/10547/625002

Kaur, S, Kaur, S & Varshney, K. 2019. Recent trends in child rape crisis in Delhi (India): A forensic overview. *Forensic Science International: Reports* 1:[1-6]. https://doi.org/10.1016/j.fsir.2019.100047

Kidman, R. 2017. Child marriage and intimate partner violence: A comparative study of 34 countries. *International Journal of Epidemiology* 46(2):662-675. https://doi.org/10.1093/ije/dyw225

Kidman, R & Palermo, T. 2016. The relationship between parental presence and child sexual violence: Evidence from thirteen countries in sub-Saharan Africa. *Child Abuse and Neglect* 51:172-180. https://doi.org/10.1016/j.chiabu.2015.10.018

Kim, HY. 2017. Statistical notes for clinical researchers: Chi-squared test and Fisher's exact test. *Restorative dentistry & endodontics* 42(2):152-155, [Open Lecture on Statistics]. https://doi.org/10.5395/rde.2017.42.2.152

Kiruki, M, Ajema, Undie C, Kyongo, J, Owuor, K, Mbugua, C, Kotut, R & Digolo, L. 2017, October. Study report: Enhancing Access to Comprehensive Post-Rape Care Services for Children in Kenya. Nairobi, Kenya: LVCT Health. https://www.svri.org/sites/default/files/attachments/2018-01-09/LVCT%20Health%20Child%20Abuse%20Management%20Study%20Report%20Final.pdf

Krug, EG, Mercy, JA, Dahlberg, LL & Zwi, AB. 2002. The world report on violence and health. *The Lancet 360*(9339):1083-1088. https://doi.org/10.1016/s0140-6736(02)11133-0
Lalor, K. 2004. Child sexual abuse in sub-Saharan Africa: A literature review. *Child Abuse & Neglect 28*(4):439-460. https://doi.org/10.1016/J.CHIABU.2003.07.005

Lenane, AM. 2007. Child physical abuse, in *Pediatric Clinical Advisor*, edited by LC Garfunkel, JM Kaczorowski & C Christy. 2nd edition. Elsevier Inc.: 109-110

Letourneau, EJ, Brown, DS, Fang, X, Hassan, A & Mercy, JA. 2018. The economic burden of child sexual abuse in the United States. *Child Abuse & Neglect* 79:413-422. https://doi.org/10.1016/J.CHIABU.2018.02.020

Li, N. 2019. Child marriage and family violence in Ethiopia. *International Journal of African Society, Cultures and Traditions* 8(1):21-37.

Machisa, M, Jina, R, Labuschagne, G, Vetten, L, Loots, L, Swemmer, S, Meyersfeld, B & Jewkes, R. 2018, October. *Medico-legal findings from examination of rape victims in South Africa*, [Research brief]. South African Medical Research Council.

Majeed, I. 2019. Understanding positivism in social research: A research paradigm of inductive logic of inquiry. *International Journal of Research in Social Sciences* 9(11):118-

125.
https://www.indianjournals.com/ijor.aspx?target=ijor:ijrss&volume=9&issue=11&article=013

Martinello, E. 2020. Applying the ecological systems theory to better understand and prevent child sexual abuse. *Sexuality and Culture* 24(1):326-344. https://doi.org/10.1007/s12119-019-09629-z

Mathews, B & Collin-Vézina, D. 2019. Child sexual abuse: Toward a conceptual model and definition. *Trauma, Violence, and Abuse* 20(2):131-148. https://doi.org/10.1177/1524838017738726

McCombes, S & George, T. 2022. *What Is a Research Methodology?* | *Steps & Tips.* Scribbr. https://www.scribbr.com/dissertation/methodology/

McHugh, ML. 2013. The Chi-square test of independence. *Biochemia Medica* 23(2), 143-152. https://doi.org/10.11613/BM.2013.018

McLean, I. 2007. Climatic effects on incidence of sexual assault. *Journal of Forensic and Legal Medicine* 14(1):16-19. https://doi.org/10.1016/j.jcfm.2005.12.001

Wendel, M. & Mcleroy, K. (2012). Ecological Approaches. Oxford Bibliographies. https://www.researchgate.net/publication/262372840_Ecological_Approaches

Meinck, F, Cluver, LD, Boyes, ME & Mhlongo, EL. 2015. Risk and protective factors for physical and sexual abuse of children and adolescents in Africa: A review and implications for practice. *Trauma, Violence, and Abuse* 16(1):81-107. https://doi.org/10.1177/1524838014523336

Ministry of Gender, Children, Disability and Social Welfare of the Republic of Malawi, United Nations Children's Fund, The Center for Social Research at the University of Malawi & the Centers for Disease Control and Prevention. 2014. *Violence against children and young women in Malawi: Findings from a national survey, 2013*. Lilongwe, Malawi:

Government of Malawi. https://reliefweb.int/report/malawi/violence-against-children-and-young-women-malawi-findings-national-survey-2013

Ministry of Health and Family Welfare Government of India. 2013. *Guidelines & protocols: Medical-legal care for survivors/victims of sexual violence*. https://main.mohfw.gov.in/reports/guidelines-and-protocols-medico-legal-care-survivors-victims-sexual-violence

Mgalla, Z, Schapink, D & Boerma, JT. 1998. Protecting school girls against sexual exploitation: A guardian programme in Mwanza, Tanzania. *Reproductive Health Matters* 6(12):19-30. https://doi.org/10.1016/S0968-8080(98)90004-0

Murray, LK, Nguyen, A & Cohen, JA. 2014. Child sexual abuse. *Child and Adolescent Psychiatric Clinics* 23(2):321-337. https://doi.org/10.1016/j.chc.2014.01.003

Mustaine, EE, Tewksbury, R, Huff-Corzine, L, Corzine, J & Marshall, H. 2014. Community characteristics and child sexual assault: Social disorganization and age. *Journal of Criminal Justice* 42(2):173-183. https://doi.org/10.1016/j.jcrimjus.2013.06.016

National Maternal Child Women's Health and Nutrition Cluster Technical Group. 2003. *National management guidelines for sexual assault*. http://www.cecinfo.org/custom-content/uploads/2012/12/SouthAfrica-Sexual-Assault-Guidelines-2003.pdf

Nhassengo, SK, Matsinhe, SO, Jethá, E & Laflamme, L. 2021. Circumstances and consequences of violence-related injuries presenting at hospital. A study at the pediatric emergency and forensic medicine units of Maputo Central Hospital, Mozambique. *International Journal of Environmental Research and Public Health* 18(22):[1-12]. https://doi.org/10.3390/ijerph182212125

Niec, A. 2002. Forensic issues in the assessment of sexually assaulted adolescents. *Paediatrics & Child Health* 7(3):153-159. https://doi.org/10.1093/pch/7.3.153

Nilsen, P. 2015. Making sense of implementation theories, models and frameworks. *Implementation Science* 10(53):[1-13]. https://doi.org/10.1186/s13012-015-0242-0

Patino, CM & Ferreira, JC. 2018. Internal and external validity: Can you apply research study results to your patients? *Jornal brasileiro de pneumologia* 44:183-183. https://doi.org/10.1590/S1806-37562018000000164

Park, YS, Konge, L & Artino, AR. 2020. The positivism paradigm of research. *Academic Medicine* 95(5):690-694. https://doi.org/10.1097/ACM.0000000000003093

Parkes, J, Heslop, J, Oando, S, Sabaa, S, Januario, F & Figue, A. 2013. Conceptualising gender and violence in research: Insights from studies in schools and communities in Kenya, Ghana and Mozambique. *International Journal of Educational Development* 33(6):546-556. https://doi.org/10.1016/J.IJEDUDEV.2013.01.001

Pereda, N, Guilera, G, Forns, M & Gómez-Benito, J. 2009. The prevalence of child sexual abuse in community and student samples: A meta-analysis. *Clinical Psychology Review* 29(4):328-338. https://doi.org/10.1016/j.cpr.2009.02.007

Pinto, L, Lein, A, Mahoque, R, Wright, DW, Sasser, SM & Staton, CA. 2018. A cross-sectional exploratory study of knowledge, attitudes, and practices of emergency health care providers in the assessment of child maltreatment in Maputo, Mozambique. *BMC Emergency Medicine* 18(1):[1-7]. https://doi.org/10.1186/s12873-018-0162-9

Qamar, M, Harris, MA & Tustin, JL. 2022. The association between child marriage and domestic violence in Afghanistan. *Journal of Interpersonal Violence* 37(5-6):2948-2961. https://doi.org/10.1177/0886260520951310

República de Moçambique. 2019a. Boletim da República, in *Lei de Prevenção e Combate as Uniões Prematuras em Moçambique*, vol 203; 2019.

República de Moçambique. 2019b. Boletim da República, in *Lei de Revisão do República de Moçambique*, vol. 248; 2019. https://reformar.co.mz/documentos-diversos/lei-24-2019-lei-de-revisao-do-codigo-penal.pdf/view

República de Moçambique, Ministério da Educação e Desenvolvimento Humano. 2020. *Mecanismo Multissectorial para a Prevenção, Denúncia, Encaminhamento e Resposta a Violência contra Crianças nas Escolas, Incluindo Assistência às Vítimas*. https://bettercarenetwork.org/sites/default/files/2021-04/MecPrevViolencia_screen.pdf

Ryan, G. 2018. Introduction to positivism, interpretivism and critical theory. *Nurse Researcher* 25(4):14-20. https://doi.org/10.7748/nr.2018.e1466

Salter, M. 2018. Child sexual abuse: Ethics and evidence. *Child Abuse Review* 27(3):165-170. https://doi.org/10.1002/car.2516

Seshadri, S & Ramaswamy, S. 2019. Clinical practice guidelines for child sexual abuse. *Indian Journal of Psychiatry* 61(2):317-332. https://doi.org/10.4103%2Fpsychiatry.IndianJPsychiatry_502_18

Seto, MC. 2019. The motivation-facilitation model of sexual offending. *Sexual Abuse* 31(1):3-24. https://doi.org/10.1177/1079063217720919

Shako, K & Kalsi, M. 2019. Forensic observations and recommendations on sexual and gender based violence in Kenya. *Forensic Science International: Synergy* 1:185-203. https://doi.org/10.1016/J.FSISYN.2019.06.001

Shehu, CE, Ekele, OI, Panti, AA, Ango, I, Ekele, BA & Umar, M. 2019. The incidence, pattern and management of sexual assault in a tertiary hospital in North-western Nigeria. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* 8(9):3715-3721. https://doi.org/10.18203/2320-1770.ijrcog20193804

Singh, R, Koushal, V & Bharti, B. 2022. A descriptive study on child sexual abuse act in India. *Journal of Family Medicine and Primary Care* 11(6):2923-2928. https://doi.org/10.4103/jfmpc.jfmpc_1071_21

Slaughter, L, Brown, CR, Crowley, S & Peck, R. 1997. Patterns of genital injury in female sexual assault victims. *American Journal of Obstetrics and Gynecology* 176(3):609-616. https://doi.org/10.1016/s0002-9378(97)70556-8

Smith, D. 1987. The limits of positivism in social work research. *The British Journal of Social Work* 17(4):401-416.

Smith, TD, Raman, SR, Madigan, S, Waldman, J & Shouldice, M. 2018. Anogenital findings in 3569 pediatric examinations for sexual abuse/assault. *Journal of pediatric and adolescent gynecology* 31(2):79-83. https://doi.org/10.1016/j.jpag.2017.10.006

Sommers, MS, Brown, KM, Buschur, C, Everett, JS, Fargo, JD, Fisher, BS, Hinkle, C & Zink, TM. 2012. Injuries from intimate partner and sexual violence: Significance and classification systems. *Journal of Forensic and Legal Medicine* 19(5):250-263. https://doi.org/10.1016/J.JFLM.2012.02.014

Stoltenborgh, M, Bakermans-Kranenburg, MJ, Alink, LRA & van IJzendoorn, MH. 2014. The prevalence of child maltreatment across the globe: Review of a series of meta-analyses. *Child Abuse Review* 24(1):37-50. https://doi.org/10.1002/car.2353

Sürücü, L & MASLAKÇI, A. 2020. Validity and reliability in quantitative research. *Business & Management Studies: An International Journal* 8(3):2694-2726. http://dx.doi.org/10.15295/bmij.v8i3.1540

Teles, N. 2019. The lack of social belonging: Reflections on violence against children in Mozambique. *Aggression and Violent Behavior* 46:197-200. https://doi.org/10.1016/j.avb.2019.02.010

Tenkorang, EY. 2019. Explaining the links between child marriage and intimate partner violence: Evidence from Ghana. *Child Abuse and Neglect* 89:48-57. https://doi.org/10.1016/j.chiabu.2019.01.004

Toledo-Pereyra, LH. 2012. Research design. *Journal of Investigative Surgery* 25(5):279-280. https://doi:10.3109/08941939.2012.723954

Tripathy, JP. 2013. Secondary data analysis: Ethical issues and challenges. *Iranian Journal of Public Health* 42(12):1478-1479.

United Nations International Children's Emergency Fund (UNICEF) Mozambique. 2017. *Adolescente e Normas Sociais*. https://www.unicef.org/mozambique/adolescente-e-normas-sociais

United Nations International Children's Emergency Fund (UNICEF). 2020. *Country office annual report 2020: Mozambique*. https://www.unicef.org/reports/country-regional-divisional-annual-reports-2020/Mozambique

Wandera, SO, Clarke, K, Knight, L, Allen, E, Walakira, E, Namy, S, Naker, D & Devries, K. 2017. Violence against children perpetrated by peers: A cross-sectional school-based survey in Uganda. *Child Abuse & Neglect* 68:65-73. https://doi.org/10.1016/J.CHIABU.2017.04.006

Welch, J & Mason, F. 2007. Rape and sexual assault. *BMJ* 334(7604):1154-1158. https://doi.org/10.1136%2Fbmj.39211.403970.BE

World Health Organization (WHO). 2003. *Guidelines for medico-legal care for victims of sexual violence*. Geneva, Switzerland. https://apps.who.int/iris/bitstream/handle/10665/42788/?sequence=1

World Health Organization (WHO). 2020. *Global status report on preventing violence against children 2020.* Geneva, Switzerland.

https://apps.who.int/iris/bitstream/handle/10665/332394/9789240004191-eng.pdf?isAllowed=y&sequence=1

Young, KL, Jones, JG, Worthington, T, Simpson, P & Casey, PH. 2006. Forensic laboratory evidence in sexually abused children and adolescents. *Archives of Pediatrics & Adolescent Medicine* 160(6):585-588. https://doi.org/10.1001/archpedi.160.6.585

Zacarias, AE. 2004. *Temas de medicina legal e seguros.* 1ª edição. Maputo. Mozambique: Escolar Editora.

Zafarzai, I, & Amiri, A. 2021. Clinical and psychological consequences of sexual assault. *International Journal of Academic Research in Business and Social Sciences* 11(1):433-440. https://doi.org/10.6007/ijarbss/v11-i1/8525

ANNEXES

Annexe A: Data extraction form

DATA COLLECTION FORM

Title: The Occurrence, Sociodemographic Characteristics, Circumstances, and Forensic Evaluation outcomes of Victims suspected of Child Sexual Violence in a Selected Province in Mozambique

I. SOCIODEMOGRAPHIC DETAILS

1. **Age___ years old**

2. **Schooling**

__Preschool
__Primary
__Secondary
__No schooling
__Missing

3. Residence

1. Maputo City

__Ka Hlamankulu
__KaMavota
__KaNyaka
__KaTembe
__KaMubukwana
__KaMpfumu
__KaMaxakene

2. Maputo Province

___Posto administrativo de Infulene

___Posto de Matola-Sede

___Posto de Machava

___Moamba

___Magude

___Matutuine

___Namaacha

___Missing

4. **Police District**

___SERNIC City

___SERNIC Province

___Missing

II. CIRCUMSTANCES OF OCCURRENCE

1. **Place of Occurrence**

__Victim's home

__Perpetrator's home

__Outdoor places

__School

__Workplace

__Leisure place

__Missing

2. **Time of Occurrence____h**

3. **Day of Occurrence**

__ Weekday (Monday-Thursday)

__Weekend (Friday evening-Sunday)

__Missing

4. **Number of Episodes____**

5. **Number of Perpetrators**____

6. **Perpetrator-Victim Relationship**

__ Family _____

__Acquaintance

__Unknown

__Missing

7. **Aggravating Elements**

__Substance use

__Threat

__Grooming

__Physical force

__Mental illness

__None

__Missing

III. FORENSIC EVALUATION FINDINGS

1. **Type of** P**enetration**

__Vaginal

__Anal

__Oral

__Other. Specify_____

2. **Condom Use**

___Yes

___No

___Unaware

__Missing

3. Time Elapsed Between the Event and Clinical Evaluation

__<72 Hours

__>72 hours

__Missing

4. Time Elapsed Between the Event and the Medical-Legal Evaluation

___<3 days

___3-7 days

___>7 days

___Sem information

5. Sexual and Reproductive Physical Consequences

1. Hymenal injuries

____Missing

____Recent

____Old

____Not applicable

2. Extragenital injuries

___Missing

___Abrasions

___Bruises

___Wounds

___Fractures

___Oedema

3. Genitourinary complications

___Vaginal discharge

___Pregnancy

___Infections

___Other. Specify_____

__Missing

4. Anal injuries

__Missing

__Recent

__Old

__Missing

Annexe B: Ethics approval from UNISA Health Studies Department's Ethics Committee

UNISA university of south africa

COLLEGE OF HUMAN SCIENCES RESEARCH ETHICS REVIEW COMMITTEE

29 November 2021

NHREC Registration # :
Rec-240816-052
CREC Reference # :
10258787_CREC_CHS_2021

Dear Dr Stela Saulina Carlota Ocuane Matsinhe,

Decision:
Ethics Approval from 29 November 2021 to 29 November 2024

Researcher(s): Name: Dr Stela Saulina Carlota Ocuane Matsinhe,
Contact details: 10258787@mylife.unisa.ac.za
Supervisor(s): Name: Prof Shahnaaz Suffla
Contact details: suffls@unisa.ac.za

Title: The Occurrence, Socio-Demographic Characteristics, Circumstances, and Forensic Evaluation Outcomes of Child Sexual Assault in a Selected Province, in Mozambique.

Degree Purpose: MA

Thank you for the application for research ethics clearance by the Unisa College of Human Science Ethics Committee. Ethics approval is granted for three years.

The *low risk application was reviewed by* College of Human Sciences Research Ethics Committee, in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the College Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the

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confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.

5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date **(29 November 2024).** Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:

*The reference number **10258787_CREC_CHS_2021** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature :

Prof. KB Khan
CHS Research Ethics Committee Chairperson
Email: khankb@unisa.ac.za
Tel: (012) 429 8210

Signature : PP

Prof K. Masemola
Exécutive Dean : CHS
E-mail: masemk@unisa.ac.za
Tel: (012) 429 2298

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa

Annexe C: Ethics approval from Comité Institucional de Bioética da Faculdade de Medicina e Hospital Central de Maputo

Translation

UNIVERSIDADE EDUARDO MONDLANE

Institutional Committee on Bioethics in Health of the Faculty of Medicine / Maputo Central Hospital

HCM

(CIBS FM & HCM)

Dr. Jacinta Silveira Langa , President of the Institutional Committee on Bioethics in Health of the Faculty of Medicine / Maputo Central Hospital (CIBS FM & HCM)

CERTIFIES

That this Committee has evaluated the proposal of the Principal Investigator (s):

Name (s): **Stela Saulina Carlota Ocuane Matsinhe**

Research protocol : **Version 2, September 2022**

Informed consent : **N/A**

Data collection instrument : **No version, and no date**

Interview script : **N/A**

From the study :

TITLE: "The Ocurrence, Socio - Demographic Characteristics, Circumstances, and Forensic Eval uation Outcomes of Child Sexual Assault in a Selected Province, in Mozambique."

It states that :

1st After reviewing the protocol by the committee members during the meeting held on 03 March 2022 and which will be included in the minutes 02/2022 , CIBS FM & HCM issues this report noting that there is no ethical inconvenience preventing the start of the study.
2nd That the review was carried out in accordance with the Regulations of the Institutional Committee of FM & HCM - amendment 2 of 28 July 2014 .
3rd That the protocol is registered with the number **CIBS FM & HCM / 014 / 2022.**
4th That the current composition of CIBS FM & HCM is available on the Committee's secretary.
5th No conflict of interest was declared by the members of CIBS FM & HCM.
6th CIBS FM & HCM notes that ethical approval does not replace scientific approval or administrative authorization.
7th The approval will be valid for 1 year, until September 26, 2023. One month before that date, the Investigator must submit a request for renewal if necessary.
8th Recommends researchers to keep CIBS informed of the course of the study at least once a year.
9th We ask the investigators to send a report of the results obtained at the end of the study

AND issue

RESULT: **APPROVED**

CIBS. Jacinta Silveira Langa

Signed in Maputo on 27 September 2022

UNIVERSIDADE EDUARDO MONDLANE

Comité Institucional de Bioética em Saúde da Faculdade de Medicina/Hospital Central de Maputo

H&M HOSPITAL CENTRAL MAPUTO

(CIBS FM&HCM)

Dra. Jacinta Silveira Langa, Presidente do Comité Institucional de Bioética em Saúde da Faculdade de Medicina/Hospital Central de Maputo (CIBS FM&HCM)

CERTIFICA

Que este Comité avaliou a proposta do (s) Investigador (es) Principal (is):
Nome (s): ***Stela Saulina Carlota Ocuane Matsinhe***
Protocolo de investigação: ***Versão 2, de Setembro de 2022***
Consentimentos informados: ***N/A***
Instrumento de recolha de dados: ***Sem versão, e sem data***
Guião de entrevista: ***N/A***

Do estudo:
TÍTULO: "The Ocurrence, Socio-Demographic Characteristics, Circumstances, and Forensic Evaluation Outcomes of Child Sexual Assault in a Selected Province, in Mozambique."

E faz constar que:
1º Após revisão do protocolo pelos membros do comité durante a reunião do dia 03 de Março de 2022 e que será incluída na acta 02/2022, o CIBS FM&HCM, emite este informe notando que não há nenhuma inconveniência de ordem ética que impeça o início do estudo.
2º Que a revisão realizou-se de acordo com o Regulamento do Comité Institucional da FM&HCM – emenda 2 de 28 de Julho de 2014.
3º Que o protocolo está registado com o número ***CIBS FM&HCM/014/2022****.*
4º Que a composição actual do CIBS FM&HCM está disponível na secretária do Comité.
5º Não foi declarado nenhum conflito de interesse pelos membros do CIBS FM&HCM.
6º O CIBS FM&HCM faz notar que a aprovação ética não substitui a aprovação científica nem a autorização administrativa.
7º A aprovação terá validade de 1 ano, até 26 de Setembro de 2023. Um mês antes dessa data o Investigador deve enviar um pedido de renovação se necessitar.
8º Recomenda aos investigadores que mantenha o CIBS informado do decurso do estudo no mínimo uma vez ao ano.
9º Solicitamos aos investigadores que enviem no final de estudo um relatório dos resultados obtidos

E emite
RESULTADO: ***APROVADO***

CIBS FM&HCM

Jacinta Silveira Langa

Assinado em Maputo aos 27 de Setembro de 2022

Annexe D: Approval letter for data collection at the Forensic Service from the Scientific and Pedagogical Department of Hospital Central de Maputo

HOSPITAL CENTRAL DE MAPUTO

DIRECÇÃO CIENTÍFICA E PEDAGÓGICA

Ao:
Comité Inter-Institucional de Bioética para a Saúde
Faculdade de Medicina/Hospital Central de Maputo

Refª. nº 662 /DCP/HCM/21 Maputo, aos 14 de Outubro de 2021

Assunto: Carta de Cobertura

Servimo-nos deste meio para informar que esta unidade hospitalar concede cobertura para a realização da pesquisa "**Violência doméstica contra crianças: ocorrência, factores sócio-demográficos, circunstâncias e achados médicos-legais em vítimas atendidas no Serviço de Medicina Legal do Hospital Central de Maputo de 2015 a 2020**", cuja Investigadora Principal é a Srª. Stela S. C. Ocuane Matsinhe, no Serviço de Medicina Legal.

Com os melhores cumprimentos.

A Directora Científica e Pedagógica

Profª. Doutora Cesaltina Lorenzoni

(Médica Patologista, MSc, MPH, PhD)

Hospital Central de Maputo. Av. Agostinho Neto 1164. Tel/Fax 21320287/8

HOSPITAL CENTRAL OF MAPUTO

SCIENTIFIC AND PEDAGOGICAL DEPARTMENT

To:

Inter-Institutional Committee on Bioethics for Health

Faculty of Medicine / Hospital Central Maputo

Ref. no 699 /DCP/HCM/21 Maputo, on 27th October 2021

Subject: Cover Letter

We use this means to inform you that this hospital unit provides coverage for the research "**Child Sexual Assault: occurrence, sociodemographic factors, circumstances and medico-legal findings in victims assisted at the Forensic Service of Maputo Central Hospital from 2015 to 2020**", whose Principal Investigator is Mrs. Stela S. C. Ocuane Matsinhe, in the Forensic Medicine Service.

Best regards.

The Scientific and Pedagogical Director

Illegible Signature

Prof. Doctor Cesaltina Lorenzoni

(Medical Pathologist, MSc, MPH, PhD)

Maputo Central Hospital. Av. Agostinho Neto 1164. Tel/Fax 21320287/8