

**CHILD INJURY AND VIOLENCE PREVENTION AMONG CAREGIVERS IN OVIA
NORTH-EAST LOCAL GOVERNMENT AREA, EDO STATE, NIGERIA**

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**BEING A ONE-YEAR PROJECT SUBMITTED TO THE DEPARTMENT OF PUBLIC
HEALTH AND COMMUNITY MEDICINE, SCHOOL OF MEDICINE, COLLEGE OF
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**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE
BACHELOR OF MEDICINE, BACHELOR OF SURGERY (MBBS) DEGREE**

DEDICATION

This work is humbly dedicated to God Almighty, the source of wisdom, strength, and inspiration, whose grace made the successful completion of this project possible.

We extend this dedication to our supervisor, Prof. V.Y. Adam, for his guidance and support throughout this project and also to the caregivers who participated in the study, without whom this research would not have been possible.

We also dedicate this work to our parents, whose unwavering support, sacrifices, encouragement and prayers have been the foundation of our achievements. Their guidance and belief in us continue to inspire us to strive for excellence.

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EDOMWONYI OSAHENRHUMWEN DANIEL

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I also appreciate my colleagues and friends for their encouragement, advice, and assistance during the course of this work. Your support, in different ways, helped me remain focused and motivated until the completion of this project.

AREMU SULIAH FISAYO

DECLARATION

I hereby declare that this research project titled “**Child Injury and Violence Prevention among caregivers in Ovia North-East Local Government Area, Edo State**” was carried out by AREMU SULIAH FISAYO and EDOMWONYI OSAHENRHUMWEN DANIEL with matriculation numbers MED1807370 and MED1807389 under the supervision of Professor V.Y Adam and has not been submitted anywhere else in part or in full for the award of a degree or certificate.

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CERTIFICATION

This is to certify that this research study titled “**Child injury and violence prevention among caregivers in Ovia North-East Local Government Area, Edo State**” was conducted by **AREMU FISAYO** and **EDOMWONYI DANIEL** with matriculation numbers **MED1807370** and **MED1807389** under the supervision of **Professor V.Y Adam** in the Department of Public Health and Community Medicine, College of Medical Sciences, University of Benin as part of the requirements for the award of Bachelor of Medicine, Bachelor of Surgery (MBBS) degree.

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LIST OF ABBREVIATIONS

CAPTA	Child Abuse Prevention and Treatment Act
CDC	Centre for Disease Control and Prevention

CPS	Child Protective Services
FGM	Female Genital Mutilation
HREC	Health Research Ethics Committee
LGA	Local Government Area
NBS	National Bureau of Statistics
NGO	Non-Governmental Organisation
PHC	Primary Health Care
SDGs	Sustainable Development Goals
SES	Socio-Economic Status
SPSS	Statistical Package for the Social Sciences
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children's Fund
VAC	Violence Against Children
WHO	World Health Organisation

OPERATIONAL DEFINITION OF TERMS.

Caregiver: An individual, community or institution (including the State) with clear responsibility (by custom or by law) for the well-being of the child.

Child: any individual below the age of 18 years.

Child injury: physical harm to a child, typically defined as someone between 1 and 18 years of age.

Child neglect: a form of maltreatment where caregivers fail to provide for a child's basic needs, including physical, educational, emotional, or medical needs, which are essential for healthy development.

Child violence: Acts of physical, sexual, or emotional abuse, neglect, or exploitation directed towards children by adults, peers, or institutions, within or outside the home environment.

Female Genital Mutilation: all procedures involving partial or total removal of external female genitalia or other injury to the female genital organs for non-medical reasons.

Injury: physical harm or damage to a person's body caused by an accident or attack.

Sexual abuse: Engaging in sexual activity with a child under an age specified by law.

Prevention: the action of stopping something from happening or arising.

Violence: a behaviour involving physical force intended to hurt, damage, or kill someone or something.

ABSTRACT

BACKGROUND

Child injury and violence remain major public health problems, especially in low- and middle-income countries where children are often exposed to unsafe environments, poor supervision, and harmful disciplinary practices, and caregivers play a central role in preventing these occurrences.

OBJECTIVE

To assess child injury and violence prevention practices in Ovia North-East Local Government Area, Edo State, to provide evidence that will improve child injury and violence prevention practices and reduce the health burden caused by these injuries.

MATERIALS AND METHODS

A descriptive cross-sectional study was carried out among 572 primary caregivers of children aged 0–17 years in Ovia North-East Local Government Area, Edo State. A multistage sampling technique was used to select respondents. Data were collected using a pretested, interviewer-administered structured questionnaire. Data analysis was done using IBM SPSS version 27. Descriptive statistics were presented as frequencies and percentages, while chi-square test and multivariate logistic regression were used to determine associations and predictors. Statistical significance was set at $p < 0.05$.

RESULTS

The majority of respondents were female (84.4%), married (81.3%), and aged 30–39 years (42.1%). All respondents were aware of child injury and violence. Overall, 64.9% had good knowledge, while 62.9% had a good attitude towards child injury and violence prevention. Falls, burns, and cuts were the most commonly identified forms of child injury, while physical abuse was the most commonly identified form of violence. Falls were also the most frequently reported injuries experienced by children under the caregivers' care. A very high proportion of respondents reported witnessing violence against children, with physical abuse being the most common form observed. Overall, 71.7% of

respondents had good preventive practices, although unsafe practices such as allowing unsupervised play and keeping medicines or hazardous substances within children's reach were still noted. Factors significantly associated with child injury and violence prevention included age, education, marital setting, income, household size, and occupation. On multivariate analysis, age, education, and marriage type were significant predictors of knowledge, marriage type significantly predicted attitude, while occupation was a significant predictor for practice.

CONCLUSION

The study found that caregivers in Ovia North-East LGA generally had good knowledge, attitude, and practices regarding child injury and violence prevention. However, important gaps remain in specific areas of home safety and violence prevention. There is a need for sustained community-based health education, targeted caregiver support, and practical interventions aimed at improving child safety and reducing violence against children in the community.

KEYWORDS: Child injury, child violence, Prevention, Caregivers, Knowledge, Attitude, Practices, Ovia North-East

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF STUDY

Child injury and violence remain critical global public health challenges, contributing significantly to both morbidity and mortality in children, particularly in low- and middle-income countries where preventive infrastructure and protective systems are often weak or under-resourced. Recent studies highlight that injuries and violence account for a substantial proportion of child deaths worldwide, with unintentional injuries such as road traffic accidents, drowning, and falls being the leading causes. These injuries contribute significantly to long-term disability, disfigurement, and psychological trauma, often requiring prolonged medical care and rehabilitation ¹. Violence against children, including physical, emotional, and sexual abuse, continues to affect millions of children annually, leaving long-lasting physical and psychological scars, with some ending in mortality. ²

In sub-Saharan Africa, the burden of child injuries and violence is quite high due to disparities in Socio-economic Status (SES), limited healthcare access, and weak enforcement of child protection laws. A 2023 study emphasised the rising rates of road traffic injuries and falls among children and their impact on child health in the region, including physical abuse, sexual exploitation, and neglect, often rooted in socio-economic hardship, cultural norms, and weak legal enforcement. Prevention strategies have begun to emerge, focusing on community education, school-based awareness programs, and strengthening child protection laws; however, implementation remains uneven. Additionally, factors like gender inequality and a culture of silence often perpetuate violence against children, complicating prevention efforts. ^{3,4}

In Nigeria, data from 2022 revealed that about 60% of children experience some form of violence before the age of 18, with physical violence being the most prevalent, followed by emotional and sexual violence. With a deeply rooted culture of corporal punishment and the normalisation of violent discipline among parents, some of the statistics might not be a true reflection of the degree of child violence going on ⁵. Despite these alarming statistics of child injury and child violence, awareness and implementation of preventive measures remain inadequate, underscoring the need for targeted interventions, beginning from the communities down to the family setting. ⁵.

The prevention of child injuries and violence is of paramount public health significance. Beyond the immediate physical harm, these issues have long-term consequences, including increased risks of mental health disorders like Post Traumatic Stress Disorder, Personality disorders, chronic diseases, which would lead to an increased health care burden, and intergenerational cycles of violence. Addressing these challenges requires a multi-sectoral approach involving government and healthcare workers, as well as community leaders in education, healthcare, and community engagement, to create safer environments for children and ensure their well-being. ^{1,3}

1.2 STATEMENT OF THE PROBLEM

Unintentional injury is one of the leading causes of mortality and morbidity among children, such as road traffic crashes, drowning, falls, burns and scalds, and poisonings, which account for almost 90% of the global child death rate, and it is the leading cause of death for children and adolescents worldwide ⁶. Globally, more than 1,600 children and adolescents below the age of 19 years die every day from preventable injuries. In low- and middle-income countries, children are disproportionately affected, with over 95% of all child injury deaths occurring in these regions. According to the WHO, drowning alone kills more than 236,000 people annually, many of whom are children living in rural or peri-urban settings with limited caregiver oversight.

Across sub-Saharan Africa, the burden of childhood injuries is even more pronounced. A 2023 multicenter study covering 23 trauma centres in Malawi and Tanzania found that fall injuries were among the top causes of trauma, particularly affecting children and young adults. Most of these injuries occurred at home, and a lack of supervision was a key contributing factor ³. In rural Uganda, a 2023 qualitative study involving interviews with 56 caregivers reported 86 unintentional injury events; mainly cuts, burns, and falls, most of which occurred while children were unsupervised, often during activities like playing or accompanying parents to farms. While many caregivers attributed the injuries to children's behaviour, they also acknowledged their own lapses in supervision and the presence of environmental hazards ⁸. Intentional injuries are also a notable concern. A large-scale study in Malawi analysing 24,365 pediatric trauma cases found that 8.1% of injuries were intentional, resulting from abuse or assault. These incidents were more prevalent among older boys and often occurred at night ⁹.

In Nigeria, the burden of childhood injuries is both widespread and underreported. Falls, burns, and road traffic accidents remain the leading causes of injury among children, particularly those under the age of five. A 2023 study conducted at the National Orthopaedic Hospital in Lagos reported that 57.8% of pediatric injuries were caused by falls, with 47.8% occurring at home. This indicates a strong link between the home environment, caregiver supervision, and injury occurrence.¹⁰ Another 2023 study from Port Harcourt highlighted cases of traumatic brain injuries in children resulting from unsupervised play and unsafe home environments, emphasising the consequences of caregiver negligence. The report further identified caregiver distraction or absence as the leading contributor to these incidents.¹¹

A study done in Egor LGA, Edo State, Nigeria, indicated that while a majority (85%) of mothers had good knowledge of child injury and violence prevention, there remained a significant portion lacking adequate understanding, underscoring the need for continuous education. A study done in 2016 found

that 55.8% of respondents reported their child had suffered an injury or violence in the previous year, with falls (43.3%) and cuts (32.1%) being the most common, 67.1% of mothers displayed poor practices in child injury and violence prevention and control, despite having good knowledge, indicating a significant gap between knowledge and practice¹²

1.3 JUSTIFICATION OF STUDY

Childhood injury and violence remain major public health challenges in developing countries, where caregivers' attitudes toward prevention play a crucial role in determining child safety; positive attitudes promote proactive supervision, risk assessment, and preventive behaviour, while indifferent or misguided attitudes increase the likelihood of preventable injuries and violent incidents at home and in the community.¹³ In regions like Ovia North-East LGA, where traditional practices and knowledge gaps may influence behaviour, understanding caregivers' attitudes is fundamental to crafting effective health promotion strategies and interventions. Current studies in Nigeria have emphasised that preventive health behaviour begins with caregivers' perceptions and attitudes, and addressing these early can have a far-reaching impact on child safety and well-being.¹⁴

It is also necessary to identify the types and frequency of child injuries and violence, which is important for effective local policy and intervention, as caregivers' firsthand reports provide valuable insight into common risks, such as falls, burns, road accidents, abuse, and neglect. An accurate account of injury patterns enables authorities to allocate resources wisely and prioritise interventions and address often underreported forms of harm like emotional neglect and non-accidental trauma.¹⁵ Establishing a baseline for these experiences in Ovia North-East LGA will not only highlight the prevalence of the issue but also strengthen the local child protection policies.

Examining the specific injury prevention practices that caregivers employ is also important, as prevention practices, like supervision habits, safe storage of hazardous substances, use of child restraints, and household modifications like window guards or fire alarms, are proven interventions for lowering injury risk. Despite growing awareness, the consistent practice of prevention measures remains limited by socioeconomic constraints, cultural beliefs, and insufficient technical knowledge.¹⁶ Evaluating these practices within Ovia North-East LGA will reveal whether caregivers are equipped to act upon their knowledge and beliefs and whether their homes and communities support child-safe environments. Understanding these gaps will help tailor injury prevention programs to the local context, ensuring they are not only informative but also feasible and culturally appropriate.

Finally, uncovering the factors that shape caregivers' ability to prevent child injury and violence will enable more strategic interventions. Variables such as caregiver education, household income, community support systems, and access to healthcare services have been consistently linked to child safety outcomes.¹⁷ In many Nigerian communities, socioeconomic hardship and limited access to child protection services have been identified as critical barriers to the implementation of injury prevention measures. Addressing these factors thoroughly, through policy, education, and empowerment, could lead to sustainable improvements in child well-being. By identifying these associations in Ovia North-East LGA, this study will provide actionable insights for local governments, NGOs, and healthcare providers to implement solutions that directly address the root causes of childhood injury and violence in the region.

1.4 RESEARCH QUESTIONS

1. What is the level of knowledge among caregivers in Ovia North-East LGA regarding child injury and violence prevention methods?
2. What are the sources of information for caregivers on child injury and violence prevention?
3. How does caregivers' knowledge influence their approach to preventing child injuries and violence?
4. What are caregivers' perceptions of child injury and violence prevention in Ovia North-East LGA?
5. What are the most common types of child injuries observed by caregivers in Ovia North-East LGA?
6. How frequently do caregivers witness acts of violence against children?
7. What preventive measures do caregivers implement to reduce child injuries and violence?
8. What are the socioeconomic factors influencing childhood injury and violence prevention among caregivers in Ovia North-East LGA?
9. How does education level affect caregivers' ability to prevent child injuries and violence?

1.5 AIM AND OBJECTIVES

General Objective

To assess the knowledge, attitude, and practices of child injury and violence prevention methods amongst caregivers in Ovia North-East LGA.

Specific objectives

1. To assess the knowledge of child injury and violence prevention methods among caregivers in Ovia North-East LGA.
2. To ascertain the attitude of caregivers towards child injury and violence prevention practices in Ovia North-East LGA
3. To identify the types and frequency of child injury and violence witnessed by caregivers in Ovia North-East LGA.
4. To assess the practices of childhood injury and violence prevention, including control methods among caregivers in Ovia North-East LGA.
5. To identify the factors associated with childhood injury and violence prevention among caregivers in Ovia North-East LGA.

CHAPTER TWO

LITERATURE REVIEW

2.0 CONCEPTUAL FRAMEWORK

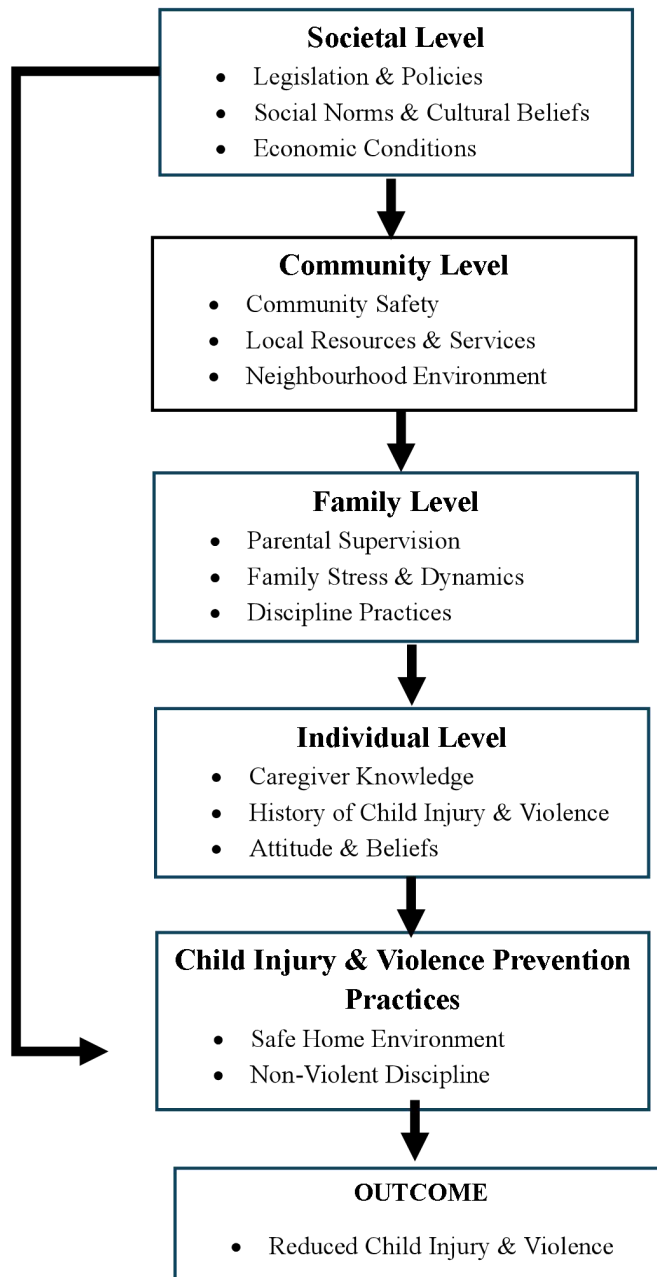


Fig 1: Conceptual framework for Child Injury and Violence Prevention among caregivers (adapted from the Social-Economic Model).⁴¹

2.1 THEORETICAL FRAMEWORK

This study is based on the **Social Ecological Model (SEM)**, which is a theory used in health education and public health used to understand how people's behaviors and health outcomes are shaped by the world around them. This framework illustrates how factors at multiple levels of society interact to influence child safety. Rather than looking solely at individual behaviour, the SEM approach demonstrates a cascading effect where broader societal conditions trickle down to impact community, family, and individual realities, ultimately shaping prevention practices and outcomes. It has 4 components;

- 1. Societal Level:** This is the broadest ring of influence, encompassing the macro-level factors that set the stage for how a society protects its children.
 - **Legislation & Policies:** The presence and enforcement of child protection laws, welfare policies, and safety regulations.
 - **Social Norms & Cultural Beliefs:** Broad cultural attitudes toward child-rearing, violence, and what is considered acceptable discipline.
 - **Economic Conditions:** The overall financial health of a society, which affects poverty rates, inequality, and the funding available for social safety nets.
- 2. Community Level:** The societal factors directly influence the local contexts in which families live and interact.
 - **Community Safety:** The prevalence of crime or violence in a neighborhood, which dictates how safe the external environment is for a child.
 - **Local Resources & Services:** The availability of support systems such as healthcare, childcare, community centers, and social services.

- Neighbourhood Environment: The physical infrastructure, such as safe playgrounds, secure housing, and street lighting.

3. Family Level: The community environment then impacts the immediate household and family dynamics.

- Parental Supervision: The degree to which caregivers can monitor and protect their children, which can be affected by factors like work hours or neighborhood safety.
- Family Stress & Dynamics: The emotional and psychological climate of the home is heavily influenced by community resources and societal economic conditions. High stress can increase the risk of violence or neglect.
- Discipline Practices: The specific methods parents use to correct child behaviour, often learned from cultural norms and family stress levels.

4. Individual Level: This level focuses on the personal characteristics and experiences of the caregiver or individual responsible for the child.

- Caregiver Knowledge: The caregiver's understanding of child development, safety hazards, and effective parenting techniques.
- History of Child Injury & Violence: The caregiver's own past experiences, which can influence their current behaviour and risk perception.
- Attitude & Beliefs: Personal convictions regarding child-rearing, deeply informed by the family and societal levels above it.

5. Child Injury & Violence Prevention Practices: When positive factors align across the individual, family, community, and societal levels, it leads to the implementation of key prevention practices:

- Maintaining a Safe Home Environment.

- Utilising Non-Violent Discipline.

6. Outcome: The direct result of these practices is the ultimate goal of the framework: Reduced Child Injury & Violence.

2.2. EMPIRICAL REVIEW

2.2.1. KNOWLEDGE OF CHILD INJURY AND VIOLENCE PREVENTION METHODS AMONG CAREGIVERS

Childhood injuries and violence remain a major public health concern, particularly among children under five years of age. Despite being largely preventable, these incidents contribute significantly to morbidity and mortality, especially in low- and middle-income countries. Caregivers play a central role in preventing such injuries through knowledge, supervision, and the adoption of safe practices. Understanding caregivers' awareness, attitudes, and behaviours is therefore critical for designing effective interventions ⁴².

A scoping review done in 2025 showed evidence on interventions aimed at preventing unintentional childhood injuries. The review included 21 individual studies that evaluated interventions for preventing unintentional injuries among children. It highlighted that educational interventions targeting caregivers significantly improved injury prevention knowledge, especially when culturally tailored. However, the review noted limited integration of violence prevention education within caregiver-focused programs. This gap highlights the need for studies assessing caregiver knowledge across both injury and violence prevention domains to inform more comprehensive intervention strategies ²¹. In 2023, a cross-sectional study was performed to examine caregiver water safety knowledge and

perceptions of toddler water competency in the USA. Data were collected from 640 caregivers of toddlers through structured questionnaires administered to caregivers. The study revealed overestimation of children's abilities and insufficient caregiver knowledge regarding drowning prevention. While the findings are relevant to injury prevention, the narrow focus on water safety limits their applicability to broader knowledge on child injury and violence prevention. Expanding the scope to include multiple injury types would improve relevance for comprehensive injury prevention assessments ²⁰.

In 2025, a descriptive cross-sectional study was conducted in India among caregivers of preschool children to assess knowledge, attitudes, and practices related to the prevention of unintentional childhood injury. The study utilised convenience sampling and structured questionnaires to collect data. Findings revealed substantial gaps in caregivers' knowledge of injury prevention, despite a generally positive attitude toward child safety. Out of 192 caregivers, 46.9% demonstrated high overall KAP (knowledge, attitude, and practice) scores, while 41.1% had moderate scores and 12.0% had low scores. Awareness of injury causes was 80.7%, but only 74% considered helmet use essential. The reported prevalence of childhood injuries was 82.8%. While the study offers valuable insight into caregiver knowledge deficits, the use of non-probability sampling and reliance on self-reported data limit the generality of the findings. The use of probability sampling and observational methods would improve the thoroughness of future research ¹⁹. Similarly, A cross-sectional study conducted in 2023 in Lebanon assessed mothers' knowledge, attitudes, and practices regarding child injury prevention. The study recruited caregivers of under-five children using systematic sampling, and data were collected using questionnaires. Among 264 mothers surveyed, 57.4% demonstrated fair knowledge, while 35.7% had poor knowledge. Despite effectively highlighting the role of caregiver knowledge in injury risk, the study's restriction to unintentional injuries without incorporating child violence prevention reduces its

applicability to injury prevention efforts. Future studies could incorporate violence prevention components to provide a more holistic assessment of caregiver knowledge ⁶.

This cross-sectional descriptive study conducted in Mansoura, Egypt, aimed to assess mothers' knowledge and subjective practices regarding the most common domestic injuries among under-five children. A convenience sample of 100 mothers of under-five children from both urban and rural areas was enrolled during home visits. Data were collected using a structured questionnaire evaluating knowledge and subjective practice about injuries such as poisoning, burns, and falls. Results indicated that mothers' subjective practices were largely improper, with mean practice scores indicating low adherence to safety measures, and none of the mothers demonstrated proper safety practice scores above 75% in any injury category. The study also found that the unsafe home environment was implicated in approximately 75% of reported domestic injuries, and only a minority of children experienced low-risk injuries manageable at home. These findings reveal poor maternal knowledge and unsafe practices regarding common domestic injuries, underscoring the need for continuous health education and targeted first-aid training for caregivers ²². In Uganda, a 2023 qualitative and quantitative study published in the Journal of Safety Research explored caregiver accounts of unintentional childhood injuries using 56 Ugandan Caregivers recruited via qualitative interviews. The study identified poor caregiver awareness of environmental hazards and inadequate supervision as key contributors to injury occurrence. Although the study provides contextual understanding of caregiver perceptions, the absence of standardized knowledge assessment tools limits its usefulness for objectively measuring caregiver knowledge levels. Future studies would benefit from combining qualitative insights with validated quantitative knowledge scales ⁸.

In a 2025 descriptive cross-sectional study conducted in Oyo State, Nigeria, maternal knowledge and attitudes toward unintentional childhood injuries among caregivers of under-five children were

assessed. The study involved 200 mothers recruited using multistage sampling, with data collected through structured interviewer-administered questionnaires. Knowledge assessment revealed poor awareness, with only 2.5% recognising that unintentional injuries are preventable, 1.0% identifying common injury types, and 7.0% acknowledging that medicines should be kept out of children's reach; notably, 80% did not consider this necessary. Additionally, 45% were unaware that injuries can be prevented, and 70% did not recognise their potential fatality. Attitudinal findings showed strong fatalistic beliefs, as 59.5% believed only God can protect children and 69.5% felt supervision cannot prevent injuries. While the study provides relevant local evidence on caregiver knowledge, its focus on mothers alone and exclusion of violence-related injuries limit its applicability to broader caregiver populations. Inclusion of other caregivers and assessment of violence prevention knowledge would have strengthened its relevance to comprehensive child injury prevention ¹⁸

2.2.2. ATTITUDE OF CAREGIVERS TOWARDS CHILD INJURY AND VIOLENCE PREVENTION PRACTICES

In Shanghai, China, in 2023, a descriptive cross-sectional study was conducted using a cluster random sampling method and assessed the awareness and attitudes of 1,825 parents towards home injury prevention among preschool children. The study revealed that while 74% of respondents recognised falls as the most common injury, only 58% consistently took safety precautions at home. Parental education level significantly influenced attitudes, with more highly educated parents demonstrating more proactive prevention behaviours. This study had several strengths, including data collection from kindergartens rather than hospital emergency departments, enhanced representativeness, and a relatively large sample size covering nearly the entire urban area of Shanghai. However, this study had certain limitations. First, the sample selection did not strictly adhere to random sampling, and this could have affected the results. Also, preschool children with intellectual disabilities and other

abnormalities were excluded, resulting in a sample that may not be highly representative. Some recommendations for this study would be to ensure strict adherence to the random sampling to avoid bias.²³

In Baltimore, United States, 2020, a randomised control trial was carried out using a random sampling method and examined the impact of a mobile health (mHealth) intervention on the attitude and injury prevention practices among 800 caregivers in Baltimore. This study showed that those who received tailored injury prevention messages reported a 22% increase in safe storage of medications and hazardous substances compared to controls, and an 85% increased awareness of injury risks among the intervention group when compared to the control group. A good number (72%) of caregivers found the mHealth messages helpful in changing their behaviour, and 68% expressed a preference for receiving health information via mobile devices. The study highlighted the potential of technology-based education in changing caregiver behaviour. Some of the strengths of this study were its use of a randomised control trial design, which eliminated bias, and its large sample size, which gave a better picture of the demography. There was a high participant engagement and satisfaction as the intervention achieved high rates of engagement, satisfaction, and willingness to recommend, indicating strong acceptability among the caregivers. Some weaknesses include short follow-up time, reliance on self-reported data, and the study did not measure actual injury incidence post-intervention, making it difficult to tell if the intervention had any effect in reducing the injuries. Some recommendations would include extending the follow-up period and including post-intervention results.²⁴

In the Eastern Cape Province of South Africa, in 2018, a randomised controlled trial was conducted to evaluate the "Parenting for Lifelong Health" program involving 552 families with adolescents aged 10–18 years across 40 clusters. The study found that the intervention significantly reduced caregiver-reported abuse (39%) and corporal punishment (34%) while improving positive parenting (29%) and

involved parenting (31%). There were also increased levels of the caregiver's awareness of the harm associated with corporal punishment (70%), and more caregivers increasingly favoured positive reinforcement and communication over physical discipline. Some strengths of the study include: a large sample size of 552 families across 40 clusters, giving a better representation of the demography, and a community-based recruitment, which enhanced cultural relevance and trust. Some demerits include: total reliance on caregiver-reported data only, as the caregivers may give socially acceptable responses, which might not be a representation of what is going on in the home; the study did not directly assess household safety or accident prevention. Some recommendations for this study would be to carry out a long-term follow-up for these families to measure the long-term effects of the injury prevention practices, and also include reports from the children themselves, especially the adolescents, to give a more balanced account.²⁵

In Cape Town, South Africa, in 2020, a randomised controlled trial enrolled 296 caregivers of children aged 2–9 years, recruited from community programs and randomised to a parenting intervention or control arm; participants were allocated using randomisation after baseline assessment. The study found a 28% reduction in harsh parenting and a 31% improvement in positive parenting among intervention caregivers compared with controls, while also reporting a 12% moderate decline in caregivers' ratings of positive child behaviour, indicating complex or mixed effects on child outcomes. Strengths of the trial include its randomised design, cultural adaptation of the intervention, use of standardised outcome measures, and adequate sample size for detecting moderate effects. Weaknesses include reliance primarily on caregiver-reported outcomes (risking social desirability and reporting bias), limited generalizability beyond the study communities, and short-term follow-up that limits assessment of sustained effects or delayed harms. To strengthen future research, investigators should incorporate longer follow-up periods, include child-reported and independent observational measures

of parent–child interaction, broaden recruitment to more diverse settings to improve external validity, and add process evaluation to clarify mechanisms behind the unexpected decline in perceived child behaviour.²⁶

In Enugu, Nigeria, in 2015, a cross-sectional study surveyed 420 caregivers of children and adolescents using multi-stage cluster sampling to assess perceptions of unintentional injuries and care-seeking behaviour. The study found that 62% of caregivers demonstrated limited awareness of effective injury-prevention strategies, 48% reported delaying formal medical attention after a child sustained an unintentional injury, and 35% relied primarily on traditional healers as the first line of care; an additional 27% reported using home remedies before seeking professional help. Strengths of the study include its community-based design, reasonably large sample for a single urban area, and use of a structured questionnaire that captured both knowledge and reported behaviours. Weaknesses include the cross-sectional design that prevents causal inference, reliance on caregiver self-report, subject to recall and social-desirability bias, and limited generalizability beyond the sampled communities in Enugu. To improve future research, the study could expand to a larger, more representative sample across urban and rural LGAs, incorporate health-facility record linkage to validate care-seeking timelines, add qualitative interviews to explore reasons for reliance on traditional healers, and adopt a longitudinal or case-control design to better assess determinants and outcomes of delayed care and prevention knowledge.¹³

In Edo State, Nigeria, in 2023, a descriptive cross-sectional assessment surveyed approximately 800 caregivers across urban and rural wards using stratified multistage cluster sampling to evaluate knowledge and practice of child health and safety. The assessment found that 48.7% of caregivers demonstrated good to excellent knowledge about child health and safety, yet this knowledge did not consistently translate into preventive practice: only 34% reported routinely implementing

recommended injury-prevention measures (safe storage, supervision, use of safety devices). Caregivers most commonly cited time constraints (reported by 58%) and lack of resources or materials (reported by 52%) as primary barriers to putting knowledge into practice, and 21% indicated competing caregiving or income-generating responsibilities that limited their ability to adopt safety behaviours. Strengths of the assessment include its statewide coverage, stratified sampling that improved representativeness across urban–rural strata, and the use of a standardised questionnaire that captured both knowledge and self-reported practices. Weaknesses include reliance on self-reported behaviours (subject to social-desirability and recall bias), a cross-sectional design that prevents causal inference about why knowledge fails to convert to practice, and limited observational verification of reported safety measures. To strengthen future work, researchers should incorporate direct household observations or spot checks to validate self-reports, use mixed-methods (in-depth interviews or focus groups) to explore contextual barriers in greater depth, pilot low-cost resource interventions (e.g., subsidized safety equipment) with randomized or quasi-experimental designs to test whether removing resource constraints increases uptake, and include longitudinal follow-up to assess whether behaviour change is sustained over time.²⁷

A descriptive cross-sectional study conducted in 2016 in Okhoro, Egor LGA, Benin City, assessed 240 mothers of children under 18 years. The study found that while 85% of mothers had good knowledge of child injury and violence prevention, 67.1% exhibited poor preventive practices. The most frequently reported injuries were falls (43.3%) and cuts (32.1%), underscoring a knowledge-practice gap. Its strengths lay in its community-based design, focus on mothers as primary caregivers, structured questionnaire, and clear identification of common injuries, while weaknesses included reliance on self-reported data, limited sample size, lack of observational verification, and the cross-sectional design that prevented causal inference, and future studies could be improved by

expanding the sample across multiple LGAs, incorporating direct household observations, adding qualitative interviews to explore barriers, piloting low-cost safety interventions, and using longitudinal designs to track sustained behaviour change.¹²

The attitudes of caregivers toward injury and violence prevention have profound public health implications. Positive caregiver attitudes can reduce the incidence and severity of childhood injuries, thus lowering healthcare burdens and enhancing child development outcomes. Conversely, negative attitudes or lack of awareness can perpetuate cycles of harm, poor health, and social disadvantage. Thus, community-based education and support programs are vital for promoting safer caregiving environments, especially in regions like Ovia North-East LGA. The safety of children within the home is largely determined by caregiver behaviour and environmental awareness.

2.2.3. TYPES AND FREQUENCY OF CHILD INJURY AND VIOLENCE WITNESSED BY CAREGIVERS

In Geneva, Switzerland, in 2020, a cross-sectional global status report by WHO and UNICEF analysed data from 155 countries using surveys of over 1,000 policy decision-makers and household datasets. The study revealed that 74% of children aged 2–4 years experienced violent discipline at home, while 50% of children globally experienced some form of violence annually. It also noted that 32% of caregivers admitted to using physical punishment regularly, highlighting the widespread nature of violence against children. Strengths include its global scope and large sample size, but weaknesses lie in reliance on caregiver self-report and policy data rather than direct household observation. Future studies should integrate longitudinal household surveys and child self-reports to improve accuracy and contextual understanding.²⁸ In New York, USA, in 2021, UNICEF conducted a cross-sectional household survey using nationally representative samples across multiple countries. The study found that three in four children aged 2–14 years were subjected to physical punishment or psychological

aggression by caregivers, and 41% of caregivers believed violent discipline was necessary for proper upbringing. The survey also reported that 29% of households had children injured due to unsafe environments. Strengths include comparability across nations and large sample coverage, but weaknesses include underreporting due to stigma and cultural differences in defining violence. Incorporating child self-reports and qualitative interviews would improve validity.²⁹

In sub-Saharan Africa, in 2021, a retrospective cross-sectional study was conducted using pooled Demographic and Health Survey data from 28 countries, covering a sample size of 101,604 caregivers selected through multi-stage stratified cluster sampling. The study found that 61% of caregivers reported using psychological or physical violent discipline against their children in the preceding month. Strengths include a massive, highly representative multi-country sample and standardised data collection, but weaknesses include the inability to infer causality due to the cross-sectional design, a reliance on caregiver self-reporting that risks social desirability bias, and a lack of specific data on the actual physical injuries sustained by the children. Incorporating objective clinical injury records to overcome self-reporting bias and track actual physical outcomes over time would improve the validity.²⁷ In the rural Amakom sub-district of Ghana (2021), a retrospective cross-sectional study was conducted to investigate unintentional child falls, utilising a cluster-randomised, population-based sampling technique to survey 357 caregivers reporting on 1,016 children under the age of 18. The study found a 16% prevalence of household falls over a six-month period, the majority being ground-level, and revealed that a caregiver's engagement in non-salary work significantly increased the odds of a child falling, while being female reduced the odds. Strengths of the study include its robust cluster-randomised sampling, which provides strong community representativeness, and its unique focus on how caregiver employment dynamics impact child safety. However, weaknesses include its reliance on a six-month retrospective recall, which introduces recall bias, and the inherent inability of a cross-

sectional design to definitively prove cause and effect. To improve upon this in my own study, A prospective cohort design to eliminate recall bias and incorporate objective physical assessments of home safety hazards, rather than relying solely on caregiver perceptions of the environment, would improve the validity.³⁰

In Nigeria (2025), a systematic review synthesised 31 studies published between 2020 and 2025. It found that 50% of children experienced physical, emotional, or sexual abuse, while 78.8% of women reported violence exposure. The review also highlighted that 35% of households reported child injuries due to unsafe environments, including poisoning and burns. Strengths include comprehensive synthesis and national scope, but weaknesses include heterogeneity of study designs and lack of standardised measures. Standardised national surveys would improve comparability.³¹ In Nigeria (2022), UNICEF conducted a situation analysis using mixed methods (household surveys and stakeholder interviews). It reported that 47% of caregivers admitted to using corporal punishment, and 36% of households reported child injury from unsafe environments, including falls and burns. The study also found that 22% of caregivers believed violence was unavoidable in child upbringing. Strengths include triangulation of data and national coverage, but weaknesses include limited regional disaggregation. More localised studies are needed to capture community-specific dynamics.³²

A descriptive cross-sectional study was conducted in Okhoro community in 2019. The study involved a sample size of 240 mothers of children under 18 years, selected using a multi-stage sampling technique. Findings revealed that caregivers frequently witnessed child injuries such as falls (38.3%), cuts/lacerations (22.5%), burns (18.8%), and poisoning/chemical ingestion (10.4%), while other injuries, including bruises and fractures, accounted for about 10.0% collectively. In addition to these injuries, caregivers also reported witnessing forms of violence such as physical abuse and neglect. The strength of the study lies in its ability to quantify the types and frequency of injuries and violence

within households, providing a clear statistical picture of the problem. However, weaknesses include reliance on self-reported data, which may understate or overstate the true frequency of incidents, and a focus on one urban community, which limits generalizability to rural areas. Suggestions for improvement include expanding the study to multiple communities across Ovia North-East LGA and incorporating observational or hospital-based data to validate caregiver reports.¹²

2.2.4. PRACTICES OF CHILDHOOD INJURY AND VIOLENCE PREVENTION, INCLUDING CONTROL METHODS AMONG CAREGIVERS

Research has consistently shown that caregivers in Nigeria often have limited knowledge and suboptimal practices regarding childhood injury prevention. For instance, a descriptive cross-sectional study was conducted to assess the knowledge and perception of accidental childhood poisoning among caregivers of children under five in four hospitals in Edo and Delta States, South-South Nigeria. Using a structured questionnaire, 632 caregivers attending well-baby clinics were sampled, it was found that about 25% of caregivers demonstrated high knowledge while 38.8% demonstrated low knowledge, with many holding incorrect beliefs about first aid, such as 90.2% wrongly using palm oil as an antidote following ingestion of poisonous agents. The hospital-based, convenience sampling limits generalizability to community settings, and the focus on poisoning alone restricts insights into broader injury prevention. Future research should use community-based random sampling and a comprehensive approach to unintentional injury prevention to better inform caregiver education programs.³³

A research done in 2021 used a quasi-experimental design to evaluate how parenting-style-based health education influenced home safety practices among mothers of young children. The study was carried out in selected communities in Nigeria and targeted mothers with children as the study population. Participants were recruited using a non-probability sampling technique. Structured

questionnaires and observational checklists were used to assess mothers' home safety practices relating to accident and injury prevention. Findings indicated that health education based on parenting styles was effective in improving maternal adherence to safety practices: authoritative parenting participants showed the highest improvement in safety behaviour scores, while permissive and neglectful styles showed lesser gains, suggesting that parenting style moderates the effectiveness of education on preventive practices. However, because the study design was quasi-experimental without randomisation and the sampling technique lacked probability-based selection, causal inferences and generalisability are limited, and the absence of a clearly defined control group restricts interpretation of the intervention effect. Future research could improve by employing randomised controlled designs, clearly defined community sampling, and standardised validated tools to measure injury-prevention practices, ensuring both reliable detection of practice change and greater external validity for caregiver populations ³⁴.

A 2023 descriptive cross-sectional study conducted at Bowen University Teaching Hospital and LAUTECH Teaching Hospital, Ogbomoso, Oyo State, assessed unintentional childhood injuries among children under five by examining maternal knowledge, attitudes, and associated socio-demographic factors. The study recruited 200 mothers attending infant welfare clinics, outpatient departments, and emergency units using purposive and convenience sampling, and collected data with interviewer-administered, validated questionnaires. Falls resulting in fractures and trauma were the most common injuries (55%), followed by burns, scalds, soft tissue injuries and poisoning, with most incidents occurring within the home. Maternal knowledge and attitudes toward injury prevention were generally poor, as many mothers did not recognise that childhood injuries are preventable or potentially fatal, and fatalistic beliefs were common. Significant associations were found between maternal knowledge and age, religion, and level of education ($p \leq 0.05$). Although the study highlights

the role of caregivers in childhood injury occurrence, its focus on knowledge and attitudes rather than actual preventive practices, exclusion of child violence prevention, hospital-based design, and restriction to mothers limit its relevance to assessing caregiver practices of child injury and violence prevention in community settings.¹⁸

Preventive measures such as childproofing the home, proper supervision, storage of dangerous substances, and awareness of household hazards are often inadequately practised in rural Nigerian settings. In 2020, a descriptive cross-sectional survey was conducted to assess the awareness and practices of parental supervision and childproofing among parents of preschool children in Port Harcourt. The study involved 600 parents selected using non-proportional stratified random sampling across six towns in the area. Data were collected through structured questionnaires assessing knowledge and practical measures related to injury prevention, including supervision, hazard identification, and home safety adjustments. Findings indicated strong awareness among parents, with most recognising the importance of supervising children and implementing environmental safety measures to prevent accidents at home and in play areas. While this study highlights a high level of preventive knowledge and active safety practices, it is limited by reliance on self-reported data, which may overestimate actual behaviour, and the absence of verification of home safety practices. Future research could enhance validity by combining observational assessments with self-reports, extending the study to community and rural settings, and evaluating the effectiveness of specific childproofing interventions in reducing actual injury incidence.³⁵ The study further highlighted that although many mothers demonstrated a moderate to high attitude towards the importance of accident prevention, their knowledge and practical application of preventive measures were generally poor. Structured educational interventions were noted to hold promise in addressing these gaps. A strength of this study lies in its relatively large sample size, which improves the reliability of its findings. Moreover, the

inclusion of both urban and rural participants provides insight into disparities that exist between different settings. To strengthen the study, a mixed-methods approach incorporating both quantitative surveys and qualitative interviews would have provided a deeper understanding of the barriers to effective childproofing. Furthermore, more detailed stratification of data such as parental education level, household income, and urban versus rural differences would have allowed for more targeted recommendations³⁵. Such interventions highlight the potential of strategies to change behaviours in order to shift caregiver practices from passive awareness to active injury prevention. However, the lack of routine training and awareness programs for caregivers remains a gap in many local communities³⁵.

In 2018, a descriptive cross-sectional study was conducted to determine the prevalence and pattern of unintentional domestic accidents and trauma among children attending public hospitals in Kano and to assess caregivers' knowledge, attitude, and prevention practices. The study was carried out in three major public hospitals which serve as primary referral centres in Kano State. A systematic sampling technique was used to select 325 caregivers presenting at the emergency paediatric units, of whom 92.0% completed the interviewer-administered structured questionnaire assessing Socio-demographic characteristics, knowledge of domestic accident prevention, attitudes, and past experiences of child injuries, as well as risk factors and preventive practices. The mean age of caregivers was 29.6 ± 9.7 years, with 81.3% female respondents and 64.6% having formal education, of which 27.8% had tertiary education. The overall prevalence of domestic accidents reported in the hospitals was 13.7%. Caregiver knowledge of domestic accident prevention was generally poor, with only 7.7% of respondents scoring in the good knowledge category, while 79.3% had fair to good overall knowledge and 20.7% had poor knowledge. Regarding prevention practices, approximately 30% of caregivers demonstrated good practice toward domestic accident prevention, largely motivated by perceived danger (41.5%) and self-motivation (9.7%). Knowledge and prevention practices were significantly

associated with caregiver educational status, but 55% of caregivers had a negative attitude toward domestic accident prevention. This study highlights substantial gaps in caregiver knowledge and preventive practices regarding unintentional childhood injuries, particularly given the low proportion with good overall knowledge (7.7%) and prevention practices (30%). However, because it is hospital-based, the findings may underestimate the true community prevalence and practices among caregivers who do not present to referral hospitals. Future studies could strengthen external validity by incorporating community-wide sampling, using standardised tools to measure specific injury prevention knowledge and behaviour, and including observational assessments of home safety practices to better guide interventions aimed at increasing capacity for injury prevention among caregivers in settings ³⁶.

The role of cultural beliefs and norms cannot be ignored. In many Nigerian communities, injuries are perceived as part of growing up or “normal childhood experiences”. Such perceptions contribute to fatalism, where caregivers do not take proactive steps to prevent falls, burns, or other injuries. In 2019, a cross-sectional descriptive study was conducted to explore caregivers’ perceptions of unintentional childhood injuries in Enugu. The study involved 728 caregivers of children under 12 years, selected using a stratified random sampling technique, with data collected through structured interviewer-administered questionnaires. Findings revealed that 33.4% of caregivers believed most child injuries were inevitable or a normal part of growing up, reflecting a pervasive cultural perception that childhood injuries cannot always be prevented. This belief significantly influenced attitudes toward injury prevention, with many caregivers prioritising supervision inconsistently or relying on fate rather than proactive safety measures. While the study highlights important cultural barriers to effective injury prevention, it is limited by its urban hospital-based sample, which may not fully represent rural or other community contexts. Future research should examine community-wide caregiver beliefs and

practices, integrating cultural considerations into targeted education programs to improve awareness and adoption of preventive measures in settings like Ovia North East LGA ¹³.

This highlights a major behavioural challenge in preventive health communication, especially in settings where traditional beliefs outweigh evidence-based safety messaging. Moreover, the issue of child violence, which includes corporal punishment, emotional neglect, and even physical abuse, often goes unrecognised or accepted as disciplinary norms. Few studies have addressed this directly in Nigeria, but international literature consistently links violent child-rearing practices to caregiver stress, lack of education, and inadequate support systems. Many cultures and religions consider severe physical punishment as necessary for maintaining discipline, transmitting educational, cultural, moral, and religious ideas ³⁷.

2.2.5. FACTORS ASSOCIATED WITH CHILDHOOD INJURY AND VIOLENCE PREVENTION

Multiple Socio-demographic and behavioural factors have been found to influence how caregivers engage with injury and violence prevention. Educational status is a major determinant; studies consistently show that caregivers with formal education are more likely to adopt safety measures such as keeping harmful substances out of reach, using protective barriers, or applying basic first-aid in emergencies.³³

In 2023, a population-based cross-sectional study was conducted to examine the perception and prevalence of physical discipline as a childhood experience in Singapore. The study aimed to assess how culturally accepted disciplinary practices may constitute forms of violence exposure during childhood. The study population included young adults aged 18–21 years, recruited through stratified sampling, with a total sample size of 2,369 participants. Data were collected using standardised self-

administered questionnaires assessing childhood exposure to physical discipline, frequency, perceived normality, and associated psychosocial outcomes. Findings revealed that over 80% of respondents reported experiencing at least one form of physical discipline in childhood, and approximately 50% reported repeated exposure. Notably, a substantial proportion perceived such discipline as “normal” within their cultural context. Higher exposure to physical discipline was associated with increased psychological distress, depressive symptoms, and behavioural problems, even when considered normative. The study highlights that cultural acceptance of physical discipline does not eliminate its adverse impact, emphasising the role of societal norms as a key factor associated with childhood violence. Although conducted in Singapore and relying on retrospective self-reporting, the findings are relevant in illustrating how normalised disciplinary practices can mask violence risks. The study shows the need for caregiver education and culturally sensitive interventions to shift norms toward non-violent child-rearing practices, particularly in settings where physical punishment is widely accepted. Cultural normalisation may influence how children's behavioural problems relate to harsh parenting. In contexts where harsh discipline is culturally accepted, caregivers may be more inclined to respond to misbehaviour with physical punishment, believing it to be an appropriate means of preventing future externalising behaviours ⁴⁰.

Age and experience of caregivers have also been linked to prevention practices. A study conducted in Kano State found that younger caregivers (<30 years) displayed lower levels of injury prevention knowledge and negative attitudes towards accident prevention compared to older caregivers.³⁸ In 2025, a descriptive cross-sectional study was conducted to examine the pattern and factors associated with unintentional injuries in children attending a tertiary hospital in Nigeria. The study included 412 children aged 0–12 years and their caregivers, selected through consecutive sampling at the paediatric emergency and outpatient departments. Data were collected using structured interviewer-administered

questionnaires, covering Socio-demographic characteristics, injury type, circumstances, supervision at the time of injury, and environmental factors. The study found that falls (36.4%), burns (21.1%), and road traffic-related injuries (15.8%) were the most common types of unintentional injuries. Factors significantly associated with higher injury risk included low caregiver education, inadequate supervision, large household size, and unsafe home environments, while children of caregivers with higher education and active supervision experienced fewer injuries. Male children were also disproportionately affected (63%), and most injuries occurred at home (58%). The authors noted that caregiver behaviour, environmental hazards, and Socio-demographic characteristics interact to influence childhood injury occurrence. Limitations included hospital-based sampling, which may not capture injuries managed at home or in community settings. The study emphasises the need for targeted caregiver education, home safety interventions, and community-level prevention programs to reduce unintentional childhood injuries ³⁹. A study done in North-Central Nigeria on Childhood Injuries found that of the individuals who held the belief that injuries can't be prevented, leading to a lack of proactive measures, these groups become important focus points for health education programs in order to improve their knowledge, attitudes and practices³⁶.

Parenting style plays a key role in injury and violence prevention. A descriptive cross-sectional survey was conducted to assess the influence of parenting styles on childhood injury prevention among nursing mothers attending primary health care centres in the Niger Delta, Nigeria. The study involved 450 mothers selected using stratified random sampling, with data collected through structured questionnaires and interviews assessing demographic factors, parenting style, and home safety practices. Findings showed that children of mothers practising authoritative parenting had significantly fewer reported injury incidents, while permissive and neglectful parenting styles were associated with higher rates of unintentional injuries. Other factors significantly associated with childhood injury

included maternal education level, household size, socioeconomic status, and maternal supervision practices, with lower education and larger households correlating with higher injury occurrence. The study highlights that both caregiver behaviour and Socio-demographic factors play crucial roles in determining injury risk among children. The study emphasises the importance of integrating parenting skills training into health education initiatives to promote better child safety outcomes. Limitations of this study include reliance on self-reported injury events, which may underreport minor injuries, and the study's focus on primary health care attendees, which may not represent the broader community. Future research should integrate observational assessments and explore environmental risk factors in addition to caregiver-related factors to comprehensively address childhood injury prevention in settings ³⁸.

Access to healthcare information and resources also affects caregiver practices. In areas like Ovia North-East, where exposure to health education campaigns may be limited, these factors are likely to be even more pronounced.

CHAPTER THREE

METHODOLOGY

3.1 STUDY AREA

This study was conducted in Ovia North-East Local Government Area (LGA), Edo State, Nigeria. Edo State is one of Nigeria's 36 states. It is located in the South-South geopolitical zone and has a population of over 4 million people, with the Edo (Benin) ethnic group being predominant³². The state was established in 1991, emerging from the Northern segment of the former Bendel State. It encompasses an area of 19,743 square kilometres and is positioned between latitudes 6°23'55"N to 6°27'39"N and longitudes 5°36'18"E to 5°44'18"E. The state shares its borders with Ondo State to the west, Anambra State to the east, Kogi State to the northeast, and Delta State to the southeast. It comprises 18 Local Government Areas (LGAs) and has a population of 5,250,000 people. The state is home to a rich mix of ethnic groups, including the Benin, Esan, Afemai, and Owan, among others. The state features a mix of urban and semi-urban settlements, with Benin City as its capital and main commercial hub.

Ovia North-East Local Government Area (LGA) has its administrative headquarters in the town of Okada. The LGA lies at approximately covers a land area of about 2,303.1 square kilometres. According to the 2006 National Population Commission (NPC) census, the population was 153,849. Recent projections estimate the population has grown significantly, with 2025 target population estimate of 255,230,814. The median age in the area is about 22 years, indicative of a youthful population. The LGA includes numerous towns and communities such as Okada, Uhen, Utese, Okokhuo, Uhiere, Isiuwa, Oluku, Iguoshodin, Utoka, and Oghede, representing a mix of rural and semi-urban settlements. Major economic activities in the region include agriculture and saw-milling, and it hosts educational institutions like Igbinedion University, Okada. Positioned within Edo State, Ovia North-East plays an important administrative, cultural, and socio-economic role in the region.

3.2 STUDY DESIGN

A descriptive cross-sectional study design was used for this study.

3.3 STUDY POPULATION

The study was carried out among primary caregivers of children aged 0 -17 years residing in Ovia North-East Local Government Area, Benin City, Edo State.

3.4 STUDY DURATION

This study was carried out between March 2025 and March 2026

3.5 SELECTION CRITERIA

Inclusion Criteria

- I. Primary caregivers of children aged 0–17 years.
- II. Caregivers residing in Ovia North-East LGA for at least 6 months.

Exclusion Criteria

I. Institutional caregivers such as those in orphanages, foster homes.

II. Primary caregivers who are less than 18 years old.

3.6 SAMPLE SIZE DETERMINATION

The minimum sample size (n) for this study was calculated using Cochran's formula for estimating a proportion in a population⁴³

$$n = \frac{z^2 pq}{d^2}$$

where:

n = Minimum sample size.

Z = Standard normal deviate set at 1.96 (for 95% confidence level),

p = Proportion in the target population estimated to have a particular characteristic

A Prevalence of 32.9% (0.329) was used. This is the prevalence of caregivers with good child injury and violence prevention practices in a study done in 2019¹²

$$q = 1 - p = 0.671$$

d = 0.05 (The level of precision or acceptable margin of error being estimated at 5% was used

Substituting these values:

$$n_0 = \frac{1.96^2 \times 0.329 \times 0.671}{0.05^2} \approx 339$$

$$n \approx 339$$

A design effect of 1.5 was applied to account for the use of a multistage sampling technique.

$$n = 339 \times 1.5 \approx 509$$

To account for non-response, a 10% non-response rate was added to the minimum sample size, using the formula for non-response.

$$nf = \frac{n}{1-nr}$$

$$n = \text{Minimum sample size} = 509$$

$$nr = \text{Non-response rate} = 10\% = 0.10$$

$$nf = \text{Minimum sample size}$$

$$1 - 0.10 = 0.90$$

$$nf = 509 / 0.90 \approx 566$$

However, a final sample size of 572 was used for this study.

3.7 SAMPLING TECHNIQUE

A multi-stage sampling technique was used in selecting respondents, and a total of 572 respondents were selected, with the questionnaires being administered to Caregivers residing in Ovia North-East Local Government Area. Respondents who met the inclusion criteria were selected until the sample size is reached.

Stage 1: Selection of Local Government Area

There are five LGAs in Benin City: Egor, Ikpoba-Okha, Ovia North-East, and Oredo and Umunwonde. One LGA were chosen by a simple random sampling technique by balloting (Ovia North-East LGA).

Stage 2: Selection of Wards

A list of all the wards in Ovia North East LGA will serve as the sampling frame. From this sampling frame, of the 13 wards in the LGA, 5 wards were selected using simple random sampling by balloting to capture a diverse range of experiences across the local government.

Stage 3: Selection of communities

From the selected wards, 1 community per ward was selected using a simple random sampling method by balloting.

Stage 4: Selection of Households

Households from each community were selected via a simple random sampling method.

Stage 5: Selection of Respondent

The respondents from the selected community were chosen by a simple random sampling technique. This was done by selecting a street on which everybody who meets the inclusion criteria was chosen.

3.8 DATA MANAGEMENT.

METHOD OF DATA COLLECTION

The pre-tested structured questionnaires were interviewer-administered to caregivers in Ovia North East Local Government Area. The respondents were allowed to answer the questionnaires in or around their homes, where they felt safe. Informed consent will be obtained from the respondents, and they were assured of confidentiality.

TOOLS FOR DATA COLLECTION

Data was obtained with the aid of a structured, interviewer-administered questionnaire adapted from United Nations Children Fund (UNICEF) facts for life handbook⁴⁷ and made to suit the study objectives. It included mostly closed-ended questions (yes/no, Likert scales, and multiple choice), with a few open-ended items to allow quantitative analysis while capturing qualitative insights.

The questions were divided into 5 sections corresponding to the specific objectives as follows:

Section A - Socio-demographic characteristics: which obtained information on the respondents such as age, sex, religion, marital status, number of children under their care, monthly income and household size.

Section B - Knowledge of child injury and violence prevention methods: This section assessed the caregiver's awareness and understanding of common child injury and violence prevention. Questions focused on Knowledge of common child injuries at home, common acts of child violence, source of information and locations where child injury can occur.

Section C- Attitude of caregivers towards child injury and violence prevention: This section assessed the perception, beliefs and opinions of respondents concerning child injury and violence

prevention. Likert-scale questions (Strongly Agree to Strongly Disagree) were used to quantify attitudes, including perception of child injury and willingness to report child injury and violence when it occurs.

Section D - Types and frequency of child injury and violence witnessed by caregivers: This section looked at the common types of child injury and violence actually witnessed by the caregivers. Questions included frequency of child injuries witnessed in the past year and types of injuries and violence commonly witnessed by the caregivers.

Section E - Practices of Caregivers in relation to childhood injury and violence prevention: This section assessed common child injury and violence control methods carried out by the caregivers. Questions included children's access to various harmful substances and condition that could lead to injury and violence.

DATA ANALYSIS

Data gathered were collated and screened for missing values, inconsistencies, and outliers, after which they were serially entered into IBM SPSS version 27.0 software for analysis before scoring. Descriptive statistics were computed to provide a summary of the variables. Categorical variables (e.g., sex, level of education, ethnicity) were presented using frequencies and percentages, while numerical variables (e.g., age) were summarised using mean and standard deviation. Bivariate analysis was conducted to examine associations between socio-demographic characteristics and knowledge, Attitude and Practice of child injury and violence prevention. The chi-square test was used to assess associations between categorical variables, while Fisher's exact test was applied when more than 20% of expected cell counts were less than 5 to ensure statistical validity. Multivariate analysis was subsequently performed to identify independent predictors of outcome variables.

SCORING SYSTEM

Socio-demographics

Caregivers' ages were grouped into several intervals based on the distribution obtained from the questionnaire. Other variables such as sex, ethnic group, occupation, religion and marital status were properly grouped as well.

Socio-economic status.

The socio-economic status of the respondents was assessed using a revised scoring system for socio-economic classification, and adapted to a six-point scale.⁴⁵

Two components (Occupation and Education of both Caregiver and spouse) were used to assess the socio-economic status and interpreted as follows;

Low Socio-economic Status: Score of 5 - 6

Middle Socio-economic Status: Score of 3 - 4

High Socio-economic Status: Score of 1 - 2

Knowledge of Child injury and violence Prevention

A total of 8 Questions were used to assess knowledge. A composite scoring system was developed and adapted from a similar study conducted among mothers in Edo State.¹² Each question was scored '1' for correct responses, '0' for incorrect responses.

Points were given as follows:

- Received training on child injury and violence prevention (1 point)

- Source of training (6 points): 1 point for picking a verifiable source of training and 1 point for not picking an unverifiable source of training.
- Causes of child injury (6 points): 1 point for each source of injury chosen, e.g. cuts, burns.
- Forms of child violence (6 points): 1 point for each form of violence chosen, e.g. Physical abuse and Emotional abuse.
- Location of child injuries (6 points): 1 point for each location of child injury, e.g. at home, school or playground.
- Identifying possible causes of fire and burns (5 points): 1 point for each correct cause of fire, e.g. an electric iron that is on, playing with matches and lighters.
- Identifying dangerous road practices (5 points): 1 point for each correct response, e.g. crossing the road without a grown-up, not looking before crossing the road.
- Effects of child injury and violence on children (5 points): 1 point for each response identified, e.g., social withdrawal, Depression.

A total maximum score of 40 was obtained, and based on the total score, respondents were categorised as;

Good knowledge: Score of 28 to 40 ($\geq 70\%$)

Poor knowledge: Score of 0 to 27 ($< 70\%$)

Attitude towards Child Injury and Violence Prevention

Attitude towards Child Injury and Violence Prevention was assessed using eleven questions in Section C of the questionnaire. A composite scoring system was developed and adapted from a similar study conducted among mothers in Edo State¹².

Attitude was measured using a 5-point Likert scale: Agree (A), Neutral (N), and Disagree (D). To get an accurate score, "Positive" statements and "Negative" statements were scored differently.

1. For Positive Statements:

Question 34: Child injury and violence can be prevented

Question 36: Children should always use seatbelts in cars

Question 37: Watching violent films influences children negatively

Question 39: Teaching children about safe road behaviour is very important

Question 40: Caregivers should seek medical care immediately after a serious injury

Question 42: Reporting child abuse or violence is important, even if the child is not mine

Question 43: The government should make policies against parents who encourage their children to hawk goods

The Positive statements were scored

Strongly Agree = 4

Agree = 3

Neutral = 2

Disagree = 1

Strongly Disagree = 0

2. For Negative statements

Question 33: Allowing children to get injured is part of their learning process

Question 35: Children must be handled with “strong hands”

Question 38: Female Genital mutilation is right

Question 41: Children should be starved if they misbehave

The Negative statements were scored

Strongly Agree = 0

Agree = 1

Neutral = 2

Disagree = 3

Strongly Disagree = 4

The total attitude score for each respondent was calculated by summing the scores of all attitude questions, giving a total score of 44. Based on the total score, respondents were categorised as having;

Positive attitude: A total score of 31 to 44 points ($\geq 70\%$)

Negative attitude: A total score of 0 to 30 points ($< 70\%$)

Practice and Control Methods

A total of 8 questions were used to assess practice. Each question on practice was scored ‘1’ for correct responses and ‘0’ for incorrect responses, with a maximum obtainable score of 8, and respondents were categorised as.

Good Practice: A total score of 6 to 8 points ($\geq 70\%$)

Poor Practice: A total score of 0 to 5 points ($< 70\%$)

3.9 TRAINING OF RESEARCH ASSISTANTS

Two research assistants (undergraduates in the University of Benin studying Medicine) were recruited for the purpose of this study with proper training on questionnaire administration. Adequate supervision was also provided during the exercise to ensure uniform data collection.

3.10 PRETESTING

The questionnaire was pretested in Uselu, Edo State, Nigeria, as it has a similar study population. Ten percent of the sample size (57 questionnaires) was used for pretesting. The aim was to test the questionnaire for correctness and adequate understanding by the respondents to aid in the collection of data. Appropriate corrections were made where applicable to the questionnaire before commencement of the final survey.

3.11 ETHICAL CONSIDERATION

Ethical approval was obtained from the Health Research and Ethics Committee of UBTH before the commencement of the study, with protocol number **ADM/E 22/A/VOL.VII/14865491272129**. Informed consent was obtained from the respondents before administering questionnaires. The research ensured that information provided by respondents was treated with utmost confidentiality; hence, no names or addresses were requested in the questionnaire. Respondents were informed of their right to voluntarily decide whether to participate in the study or not, without the risk of incurring any penalty or prejudicial treatment. They were given the right to decide at any point during the study

to withdraw their participation or refuse to provide any information on any point that is not clear to them.

3.12 LIMITATIONS OF THE STUDY

1. The study relied on self-reported data from caregivers, which was subject to recall bias; however, shorter timelines were given to help ease recall.
2. Additionally, factors such as cultural differences and social desirability bias could have influenced responses, particularly regarding child violence, but questions were structured to reduce these factors, and respondents were assured of confidentiality.
3. The study was conducted in Ovia North East LGA, Benin City, and the findings may not have been generalizable to other regions with different socio-cultural, religious, or economic contexts.

CHAPTER FOUR

RESULTS

A total of 572 respondents were used for this study, with a response rate of 100%

The results were presented in sections as follows:

Section A: Socio-demographics of respondents

Section B: Knowledge of Child Injury and Violence Prevention among caregivers

Section C: Attitudes of caregivers towards Child Injury and Violence Prevention

Section D: Types and Frequency of Child Injury and Violence witnessed by the caregivers

Section E: Child Injury and Violence Prevention Practices of the caregivers.

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF CAREGIVERS

Table 1a: Socio-demographic Characteristics of Caregivers in Ovia North-East LGA

Variable	Frequency(n=572)	Percent
Age in years of Caregiver		
20-29	99	17.3
30-39	241	42.1
40-49	185	32.3
50-59	40	7.0
60-69	7	1.2
Mean $\pm$ SD = 37.5 $\pm$ 8.3		
Sex		
Female	483	84.4
Male	89	15.6
Marital status of caregiver		
Married	465	81.3
Single	37	6.5
Widowed	32	5.6
Divorced	21	3.7
Separated	17	3.0
Caregiver's Level of Education		

No Formal Education	21	3.7
Primary	40	7.0
Secondary	195	34.1
Tertiary	316	55.2
Spouse Level of Education (n=465)		
No Formal Education	4	0.9
Primary	32	6.9
Secondary	141	30.3
Tertiary	288	61.9
Caregiver Occupation		
Skill level 2	79	13.8
Skill level 3	149	26.0
Skill level 4	168	29.4
Skill level 5	165	28.8
Skill level 6	11	1.9
Spouse occupation (n=465)		
Skill level 2	130	28.0
Skill level 3	50	10.8
Skill level 4	212	45.6
Skill level 5	67	14.4
Skill level 6	6	1.2

Table 1b: Socio-demographic Characteristics of Caregivers in Ovia North-East LGA

Variable	Frequency(n=572)	Percent
Monthly income of Caregiver (₦)		
<70000	64	11.2
70000-139999	303	53.0
>140000	205	35.8
Monthly income of Spouse (₦) (n=465)		
<70000	36	7.7
70000-139999	198	42.6
>140000	231	49.7
Number of children		
≤3	466	81.5
>3	106	18.5
Age of the youngest child		
<2	106	18.5
2-5	264	46.2

6-10	106	18.5
11-15	71	12.4
16-17	25	4.4
Mean $\pm$ SD = 5.5 $\pm$ 4.7		
Relation to the child		
Mother	466	81.5
Father	86	15.0
Aunt	7	1.2
Grandmother	6	1.0
Uncle	4	0.7
Sister	3	0.5
Household size		
≤ 5	471	82.3
> 5	101	17.7
Mean $\pm$ SD = 4.4 $\pm$ 1.3		
Socio-economic status		
Low	38	6.6
Middle	314	54.9
High	220	38.5

Table 1c: Socio-demographic Characteristics of Caregivers in Ovia North-East LGA

Variable	Frequency(n=572)	Percent
Ethnicity of caregiver		
Benin	271	47.4
Esan	89	15.6
Ibo	56	9.8
Yoruba	42	7.3
Afemai	29	5.1
Hausa	24	4.2
Urhobo	21	3.7
Etsako	10	1.7
Isoko	10	1.7
Igbanke	8	1.4
Ibibio	6	1.1
Others*	6	1.0
Ethnicity of Spouse(n=465)		

Benin	202	43.4
Esan	80	17.2
Igbo	66	14.2
Yoruba	46	9.9
Afemai	33	7.1
Urhobo	15	3.2
Hausa	12	2.6
Others**	11	2.4
Religion		
Christainity	539	94.2
Islam	25	4.4
African Traditional Religion	7	1.2
Atheism	1	0.2
Marriage type		
Monogamous	431	92.7
Polygamous	35	7.3
Family type		
Nuclear	522	91.3
Extended	50	8.7

*Others – Ika 4(0.7), Anang 1(0.2), Owan 1(0.2)

** Others – Isoko 5(1.1), Akwa ibom 3(0.6), Igbanke 2(0.4), Idoma 1(0.2)

The largest proportion of caregivers belonged to the 30–39 age group 241 (42.1%), while the smallest proportion was in the 60–69 age group 7 (1.2%) the mean age was 37.5 ± 8.3 years. The majority of the caregivers were female 483 (84.4%). Most caregivers were married 465 (81.3%), with separated individuals constituting the smallest group 17 (3.0%). In terms of education, 316 (55.2%) of the caregivers had a tertiary education, while the lowest percentage had no formal education 21 (3.7%). In terms of Occupation, skill level 4 was the most frequent 168 (29.4%), and skill level 6 was the least frequent 11 (1.9%). The Benin ethnicity was the most represented 271 (47.4%), while Others was 6 (1.0%).

Among spouses, the majority had a tertiary education 288 (61.9%), and the most fell within skill level 4 212 (45.6%). Most families were nuclear 522 (91.3%) and of those who were married 431 (92.7%) were married in a monogamous setting. Christianity was the most popular religion 539 (94.2%), while Atheism was the least common 1 (0.2%). Caregivers' monthly income was most frequently between ₦70,000–139,999 303 (53.0%) and least frequently <₦70,000 64 (11.2%). Most caregivers had <3 children 466 (81.5%) and lived in households with <5 members 471 (82.3%) and the mean household size was 4.4 ± 1.3 persons. Most of the families were in the Middle Socio-economic class 314 (54.9), and 38 (6.6%) had Low Socio-economic status.

SECTION B: KNOWLEDGE OF CHILD INJURY AND VIOLENCE PREVENTION AMONG CAREGIVERS

Table 2a: Knowledge of Child Injury and Violence

Variable	Frequency (n=572)	Percent
Awareness of Child Injury	572	100.0
Source of information*		
Common sense	375	65.6
Parents and friends	294	51.4
Social media	225	39.3
Doctors and healthcare workers	110	19.2
Reading books	70	12.2
Definition of child injury		
Correct	541	94.6
Incorrect	31	5.4
Age of adulthood by law		
Correct	532	93.0

Incorrect	40	7.0
Awareness of child violence	572	100.0
Definition of child violence		
Correct	497	86.9
Incorrect	75	13.1
Received training on violence prevention	430	75.2
Source of training* (n=430)		
Health worker	290	67.4
Family and Friends	160	37.2
Social media	157	36.5
Radio/TV	63	14.7
Community leaders	24	5.6
Religious leaders	18	4.2
Common injuries at home*		
Burns	491	85.8
Falls	461	80.6
Cuts	381	66.6
Choking	299	52.3
Poisoning	233	40.7
Drowning	122	21.3
Common forms of violence*		
Physical abuse	555	97.0
Emotional abuse	364	63.6
Sexual abuse	298	52.1
Neglect	275	48.1
Female Genital Mutilation	265	46.3
Kidnapping	251	43.9

*Multiple Response Question

Table 2b: Knowledge of Child Injury and Violence

Variable	Frequency(n=572)	Percent
Location of child injuries*		
Home	563	98.4
Playgrounds	401	70.1
School	386	67.5
When hawking	333	58.2
At the place of worship	282	49.3
During visitation	261	45.6
Causes of Fire at home*		
Matches and a lighter	548	95.8
Candle left burning near a curtain	446	78.0
Kerosene lamp on the floor	384	67.1

Electric Iron	312	54.5
Bucket of water	120	21.0
Possible causes of Road Traffic Accidents*		
Crossing without an adult	531	92.8
Not looking before crossing the road	441	77.1
Playing football on the road	409	71.5
Wearing dark clothes at night	336	58.7
Sitting in front of a motorcycle	321	56.1
Effect of Child Injury and violence*		
Death	464	81.1
Illness	434	75.9
Disability	414	72.4
Social withdrawal	329	57.5
Depression	281	49.1

*Multiple response Question

All the caregivers 572 (100.0%) reported awareness of both child injury and child violence. The most common source of information was common sense 375 (65.6%), while reading books was the least common 70 (12.2%). For definition of Child injury, 541 (94.6%) caregivers correctly defined child injury and 532 (93.0%) defined child violence. Regarding training, 430 (75.2%) had received violence prevention training and of those that received training, the highest frequency received training from health workers 290 (67.4%) while 18 (4.2%) received training from religious leaders.

The most recognised injuries at home were burns 491 (85.8%), while drowning was the least recognised 122 (21.3%). Physical abuse was the most commonly recognised form of violence by 555 (97.0%) of the respondents, whereas kidnapping was the least recognised 251 (43.9%). The home was identified as the most common location for injuries 563 (98.4%), and visitations were the least identified 261 (45.6%). Matches and lighters were the most cited causes of fire 548 (95.8%), while 120 (21.0%) cited a bucket of water as a cause of fire. Crossing without an adult was the most recognised cause of road traffic accidents 531 (92.8%). 464 (81.1%) recognised death as an effect of injury, while depression was the least recognised with 281 (49.1%).

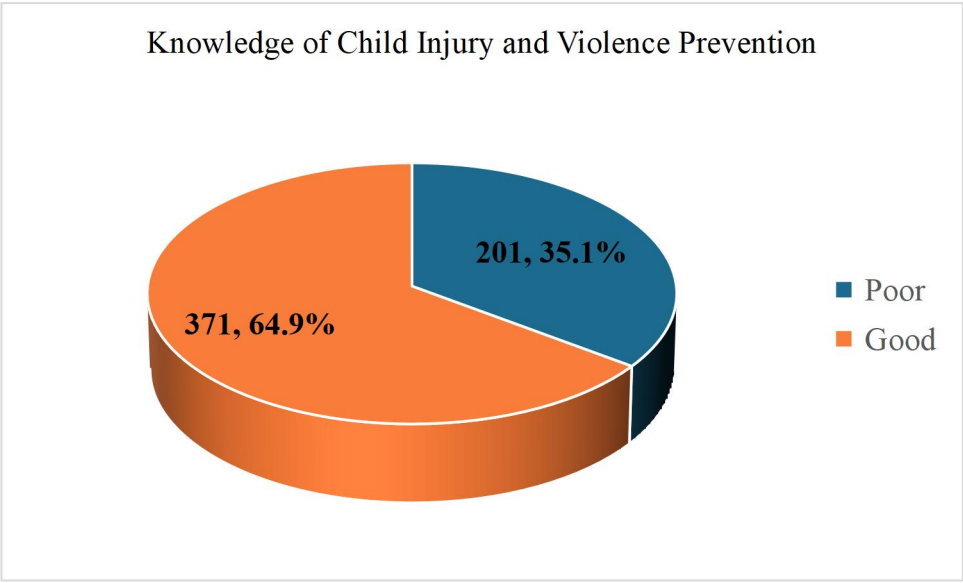


Fig 2: Knowledge of Child Injury and Violence Prevention

Overall, 371 (64.9%) of the caregivers had good knowledge of Child injury and violence prevention.

Table 3a: Socio-demographic characteristics and Knowledge of Child injury and violence prevention

Variable	Good (n=371) Freq	Poor (n=201) Freq	Test statistic χ^2	p-value
Age of caregiver			53.250	<0.001
20-29	81 (81.8)	18 (18.2)		
30-39	174 (72.2)	67 (27.8)		
40-49	102 (55.1)	83 (44.9)		
50-59	11 (27.5)	29 (72.5)		
60-69	3 (42.9)	4 (57.1)		
Sex			0.297	0.586
Female	311 (64.4)	172 (35.6)		
Male	60 (67.4)	29 (32.6)		
Marital status			15.155	0.004
Single	25 (67.6)	12 (32.4)		
Married	300 (64.5)	165 (35.5)		
Separated	5 (29.4)	12 (70.6)		
Divorced	18 (85.7)	3 (14.3)		
Widowed	23 (71.9)	9 (28.1)		
Level of Education			116.326	<0.001
Tertiary	255 (80.7)	61 (19.3)		

Secondary	113 (57.9)	82 (42.1)	22.771* <0.001
Primary	3 (7.5)	37 (92.5)	
No Formal Education	0 (0.0)	21 (100.0)	
Spouse Education			
Tertiary	205 (71.2)	83 (28.8)	89.480 <0.001
Secondary	81 (57.4)	60 (42.6)	
Primary	14 (43.8)	18 (56.3)	
No Formal Education	0 (0)	4 (100)	
Occupation			
Skill level 2	65 (82.3)	14 (17.7)	42.711 <0.001
Skill level 3	126 (84.6)	23 (15.4)	
Skill level 4	112 (66.7)	56 (33.3)	
Skill level 5	63 (38.2)	102 (61.8)	
Skill level 6	5 (45.5)	6 (54.5)	
Spouse Occupation			
Skill level 2	93 (71.5)	37 (28.5)	8.312 0.005
Skill level 3	41 (82.0)	9 (18.0)	
Skill level 4	142 (67.0)	70 (33.0)	
Skill level 5	23 (34.3)	44 (65.7)	
Skill level 6	1 (16.7)	5 (83.3)	
Ethnicity			
Non-Edo indigenes	89 (55.6)	71 (44.4)	
Edo indigenes	282 (68.4)	130 (31.6)	

*- Fisher's exact

Table 3b: Socio-demographic characteristics and Knowledge of Child injury and violence prevention

Variable	Good (n=371) Freq	Poor (n=201) Freq	Test statistic χ^2	p-value
Spouse's Ethnicity			0.010	>0.999
Non-Edo indigenes	95 (64.2)	53 (35.8)	20.284*	<0.001
Edo indigenes	205 (64.7)	112 (35.3)		
Religion				
Christianity	361 (67.0)	178 (33.0)	46.263	<0.001
Islam	6 (24.0)	19 (76.0)		
African Traditional Religion	3 (42.9)	4 (57.1)		
Atheism	1 (100.0)	0 (0.0)		
Marriage type				
Monogamous	296 (68.7)	135 (31.3)	46.931	<0.001
Polygamous	4 (11.4)	31 (88.6)		
Family type				
Nuclear	296 (68.8)	134 (31.2)	71.214	<0.001
Extended	4 (11.4)	31 (88.6)		
Monthly income (₦)				

<70,000	17 (26.6)	47 (73.4)		
70,000-139,999	183 (60.4)	120 (39.6)		
>140,000	171 (83.4)	34 (16.6)		
Spouse's monthly income (₦)			7.950	0.019
<70,000	19 (52.8)	17 (47.2)		
70,000–139,999	118 (59.6)	80 (40.4)		
>140,000	163 (70.6)	68 (29.4)		
Number of children			35.159	<0.001
≤3	329 (70.6)	137 (29.4)		
>3	42 (39.6)	64 (60.4)		
Age of youngest child			5.938	0.204
<2	73 (68.9)	33 (31.1)		
2–5	158 (59.8)	106 (40.2)		
6–10	71 (67.0)	35 (33.0)		
11–15	51 (71.8)	20 (28.2)		
16–17	18 (72.0)	7 (28.0)		
Household size			41.488	<0.001
≤5	334 (70.9)	137 (29.1)		
>5	37 (36.6)	64 (63.4)		
Socioeconomic status			62.247	<0.001
High	185 (84.1)	35 (15.9)		
Middle	178 (56.7)	136 (43.3)		
Low	8 (21.1)	30 (78.9)		

*- Fisher's exact

Statistically significant associations were found between knowledge of child injury and prevention and age ($p < 0.001$), marital status ($p = 0.004$), level of education ($p < 0.001$), spouse level of education ($p < 0.001$), occupation ($p < 0.001$), spouse occupation ($p < 0.001$), ethnicity ($p < 0.001$), religion ($p < 0.001$), marriage type ($p < 0.001$), family type ($p < 0.001$), monthly income ($p < 0.001$), spouse's monthly income ($p = 0.019$), number of children ($p < 0.001$), household size ($p < 0.001$), and socioeconomic status ($p < 0.001$).

A downward trend was observed with age: as caregivers got older, the percentage of those with good knowledge decreased from 81.8% among those aged 20–29 years to 27.5% among those aged 50–59 years. Also, a strong upward trend was evident with education; good knowledge increased from 0.0% in caregivers with no formal education to 80.7% in those with tertiary education. A similar trend was

seen for the spouse's education, where good knowledge rose from 0.0% when the spouse had no formal education to 71.2% when the spouse had a tertiary education. Occupational skill level also showed a positive relationship with knowledge: caregivers in skill levels 2 and 3 demonstrated the highest proportions of good knowledge (82.3% and 84.6%, respectively), while those in skill level 5 had a notably lower proportion (38.2%). Spouse occupation followed this pattern, with good knowledge declining from 82.0% at skill level 3 to 34.3% at skill level 5. Regarding marital status, separated caregivers had a lower proportion of good knowledge (29.4%) compared to married (64.5%), single (67.6%), widowed (71.9%), and divorced (85.7%) caregivers. Ethnicity also revealed a difference, with Edo indigenes showing a higher proportion of good knowledge (68.4%) compared to non-Edo indigenes 55.6%).

A strong upward trend was evident with monthly income: good knowledge increased from 26.6% among caregivers earning less than ₦70,000 to 83.4% among those earning more than ₦140,000. Spouse's monthly income followed a similar trend, with good knowledge rising from 52.8% in the lowest income category to 70.6% in the highest. Knowledge was notably higher among caregivers with three or fewer children (70.6%) than among those with more than three children (39.6%), and similarly among those living in smaller households of five or fewer members (70.9%) than in larger households (36.6%). Regarding socio-economic status, the highest proportion of good knowledge was observed in the High socio-economic status group 185 (84.1%), declining substantially in the middle 178 (56.7%) and low 8 (21.1%) groups. Regarding socio-economic status, the highest proportion of good knowledge was observed in the High socio-economic status group 185 (84.1%), declining substantially in the middle 178 (56.7%) and low 8 (21.1%) groups. With respect to religion, Christians demonstrated a considerably higher proportion of good knowledge (67.0%) relative to Muslims (24.0%) and adherents of African Traditional Religion (42.9%). Marriage type and family structure also revealed a

significant association, with monogamous marriages and nuclear families both showing substantially higher proportions of good knowledge (68.7% and 68.8%, respectively) compared to their polygamous and extended counterparts, where good knowledge was markedly low (11.4% in both cases).

Sex ($p = 0.586$, Spouse's ethnicity ($p = >0.999$), and age of youngest child ($p = 0.204$) did not show a statistically significant association with knowledge.

Table 4a: Predictors of Good Knowledge of Child injury and violence prevention

Predictors	β	Odds ratio	95% CI for OR Lower	95% CI for OR Upper	p-value
Age of caregiver	-0.057	0.945	0.909	0.982	0.004
Level of Education					
Tertiary	2.001	7.394	0.846	64.642	0.071
Secondary	2.570	13.064	1.547	110.286	0.018
Primary	1.560	4.757	0.573	39.477	0.149
No Formal Education*		1			
Occupation					
Skill level 2	1.419	4.133	0.525	32.567	0.178
Skill level 3	1.841	6.305	0.857	46.367	0.070
Skill level 4	0.571	1.771	0.270	11.601	0.551
Skill level 5	-0.098	0.906	0.136	6.042	0.919
Skill level 6*		1			
Spouse occupation					
Skill level 2	1.466	4.333	0.333	56.443	0.263
Skill level 3	2.843	17.165	1.267	232.536	0.033

Skill level 4	1.855	6.392	0.548	74.591	0.139
Skill level 5	0.925	2.521	0.202	31.377	0.472
Skill level 6*		1			
Ethnicity					
Non-Edo indigenes	-0.490	0.613	0.360	1.044	0.071
Edo indigenes*		1			
Religion					
Christianity	0.452	1.572	0.157	15.773	0.701
Islam	0.715	2.043	0.136	30.798	0.606
African Traditional Religion*		1			
Marriage type					
Monogamous	2.239	9.386	1.749	50.352	0.009
Polygamous*		1			
Monthly income (₦)					
<70,000	-1.364	0.256	0.083	0.788	0.018
70,000–139,999	0.074	1.077	0.593	1.957	0.808
>140,000*		1			
Spouse's monthly income (₦)					
<70,000	-0.177	0.838	0.278	2.522	0.753
70,000–139,999	0.251	1.285	0.690	2.395	0.429
>140,000*		1			

* Reference, CI – Confidence interval, OR – Odds ratio, $R^2 = 28.9 - 39.7\%$

Table 4b: Predictors of Good Knowledge of Child injury and violence prevention

Predictors	β	Odds ratio	95% CI for OR Lower	95% CI for OR Upper	p-value
Number of children					
≤ 3	-0.536	0.585	0.276	1.238	0.161
>3*		1			
Socioeconomic status					
High	-1.347	0.260	0.014	4.948	0.370
Middle	-2.168	0.114	0.007	1.746	0.119
Low*		1			

* Reference, CI – Confidence interval, OR – Odds ratio, $R^2 = 28.9 - 39.7\%$

Significant predictors of good knowledge of child injury and prevention in the multivariate analysis included age ($p = 0.004$), secondary education ($p = 0.018$), spouse's occupation at skill level 3 ($p = 0.033$), monogamous marriage type ($p = 0.009$), and monthly income below ₦70,000 ($p = 0.018$).

For every one-year increase in the age of the caregiver, there was a 5.5% decrease in the odds of having good knowledge (OR = 0.945, 95% CI: 0.909–0.982, $p = 0.004$), and this was statistically significant. Caregivers with secondary education were 13.1 times more likely to have good knowledge compared to those with no formal education (OR = 13.064, 95% CI: 1.547–110.286, $p = 0.018$); this was statistically significant. Additionally, caregivers whose spouses held skill level 3 occupations had 17.2 times higher odds of good knowledge relative to those with spouses in skill level 6 occupations (OR = 17.165, 95% CI: 1.267–232.536, $p = 0.033$). Marital status also emerged as a strong predictor: caregivers in monogamous marriages were 9.4 times more likely to possess good knowledge than those in polygamous marriages (OR = 9.386, 95% CI: 1.749–50.352, $p = 0.009$). Also, earning a monthly income of less than ₦70,000 was associated with a 74.4% reduction in the odds of having good knowledge compared to those earning over ₦140,000 (OR = 0.256, 95% CI: 0.083–0.788, $p = 0.018$).

Other variables, including tertiary education, occupation, ethnicity, religion, spouse's monthly income, number of children, and socio-economic status, did not reach statistical significance in the adjusted multivariate model. The model explained between 28.9% and 39.7% of the variance in knowledge outcomes ($R^2 = 28.9\text{--}39.7\%$).

SECTION C: ATTITUDE TOWARDS CHILD INJURY AND VIOLENCE PREVENTION

Table 5: Attitude of caregivers to Child Injury and Violence Prevention

Variable	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Injury is part of learning	91 (15.9)	91 (15.9)	61 (10.7)	146 (25.5)	183 (32.0)
Injury is preventable	183 (32.0)	216 (37.8)	53 (9.3)	64 (11.2)	56 (9.8)
Children must be handled strongly	107 (18.7)	124 (21.7)	53 (9.3)	172 (30.1)	116 (20.3)
Seatbelts are important	201 (35.1)	261 (45.6)	51 (8.9)	31 (5.4)	28 (4.9)
Violent films influence	202 (35.3)	273 (47.7)	52 (9.1)	27 (4.7)	18 (3.1)

children negatively

FGM is normal*	26 (4.5)	51 (8.9)	71 (12.4)	243 (42.5)	181 (31.6)
Children should be taught road safety	198 (34.6)	288 (50.3)	62 (10.8)	15 (2.6)	9 (1.6)
Seek medical care immediately after injury	222 (38.8)	262 (45.8)	59 (10.3)	15 (2.6)	14 (2.4)
It is normal to starve children as punishment	66 (11.5)	57 (10.0)	56 (9.8)	211 (36.9)	182 (31.8)
Report abuse	173 (30.2)	222 (38.8)	73 (12.8)	55 (9.6)	49 (8.6)
Government should make policies against child labour	199 (34.8)	242 (42.3)	51 (8.9)	46 (8.0)	34 (5.9)

*FGM – Female Genital Mutilation.

The majority of the caregivers disagreed that Injury is part of the child's learning 183 (32.0%), strongly disagree, 216 (37.8%) agreed that Injury is preventable, while 53 (9.3%) were neutral. 172 (30.1%) disagreed that children must be handled with strong hands, and 53 (9.3%) were neutral, 261 (45.6%) strongly agreed that seatbelts are important, and 31 (5.4%) disagreed, 273 (47.7%) believed that violent films influence children negatively, while 18 (3.1%) strongly disagreed. 243 (42.5%) disagreed that Female Genital Mutilation is normal, while 26 (4.5%) strongly agreed, 288 (50.3%) agreed that children should be taught about road safety, while 15 (2.6%) disagreed, 262 (45.8%) agreed that it is important to seek medical care immediately after injuries, and 14 (2.4%) strongly disagreed. 211 (36.9%) of the caregivers disagreed that children should be starved as punishment, and 56 (9.8%) were neutral. 222 (38.8%) of caregivers agreed that it is important to report child abuse, while 49 (8.6%) strongly disagreed. 242 (42.3%) of caregivers agreed that the government should make policies against child labour, while 34 (5.9%) strongly disagreed.

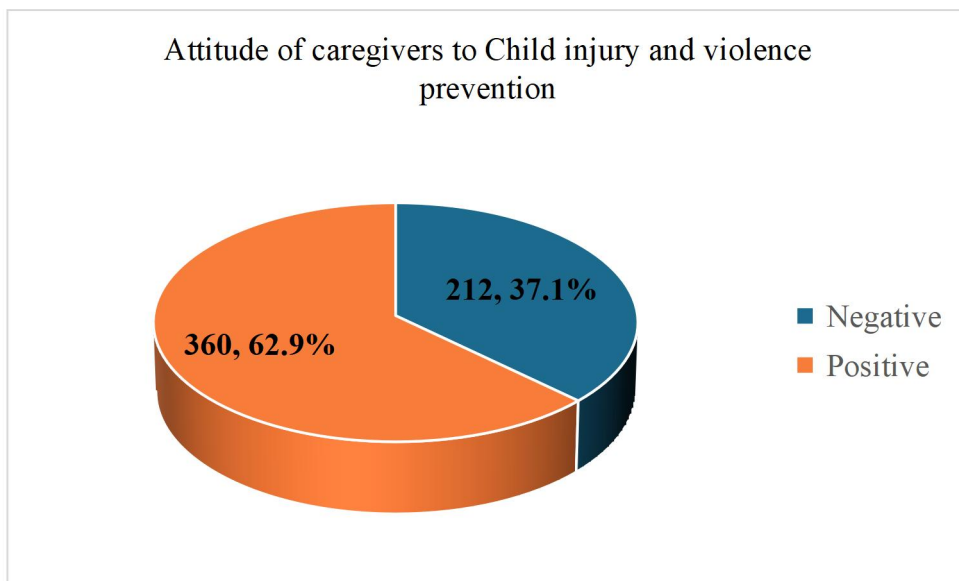


Fig 3: Attitude of caregivers to Child injury and violence prevention

Overall, 360 (62.9%) of the caregivers had positive attitude towards Child injury and violence prevention

Table 6a: Socio-demographic characteristics and Attitude of caregivers to Child injury and violence prevention

Variable	Positive (n=360) Freq	Negative (n=212) Freq	Test statistic χ^2	p-value
Age of caregiver			32.228	<0.001
20-29	71 (71.7)	28 (28.3)		
30-39	174 (72.2)	67 (27.8)		
40-49	88 (47.6)	97 (52.4)		
50-59	24 (60.0)	16 (40.0)		
60-69	3 (42.9)	4 (57.1)		
Sex			1.418	0.234
Female	299 (61.9)	184 (38.1)		
Male	61 (68.5)	28 (31.5)		
Marital status			0.731	0.947

Single	22 (59.5)	15 (40.5)		
Married	292 (62.8)	173 (37.2)		
Separated	12 (70.6)	5 (29.4)		
Divorced	13 (61.9)	8 (38.1)		
Widowed	21 (65.6)	11 (34.4)		
Level of Education			92.742	<0.001
Tertiary	240 (75.9)	76 (24.1)		
Secondary	112 (57.4)	83 (42.6)		
Primary	8 (20.0)	32 (80.0)		
No Formal Education	0 (0.0)	21 (100.0)		
Spouse's Level of Education			83.017*	<0.001
Tertiary	219 (76.0)	69 (24.0)		
Secondary	71 (50.4)	70 (49.6)		
Primary	2 (6.3)	30 (93.8)		
No Formal Education	0 (0.0)	4 (100.0)		
Occupation			62.818	<0.001
Skill level 2	59 (74.7)	20 (25.3)		
Skill level 3	116 (77.9)	33 (22.1)		
Skill level 4	112 (66.7)	56 (33.3)		
Skill level 5	64 (38.8)	101 (61.2)		
Skill level 6	9 (81.8)	2 (18.2)		

Table 6b: Socio-demographic characteristics and Attitude of caregivers to Child injury and violence prevention

Variable	Positive (n=360) Freq	Negative (n=212) Freq	Test statistic χ^2	p-value
Religion			11.672	0.009
Christianity	347 (64.4)	192 (35.6)		
Islam	12 (48.0)	13 (52.0)		
ATR*	1 (14.3)	6 (85.7)		
Atheism	0 (0.0)	1 (100.0)		
Monthly income (₦)			57.210	<0.001
<70,000	17 (26.6)	47 (73.4)		
70,000-139,999	183 (60.4)	120 (39.6)		
>140,000	160 (78.0)	45 (22.0)		
Spouse's income (₦)				
<70,000	21 (58.3)	15 (41.7)	46.953	<0.001

70,000–139,999	91 (46.0)	107 (54.0)		
>140,000	180 (77.9)	51 (22.1)		
Spouse Occupation				
Skill level 2	59 (74.7)	20 (25.3)	62.818	<0.001
Skill level 3	116 (77.9)	33 (22.1)		
Skill level 4	112 (66.7)	56 (33.3)		
Skill level 5	64 (38.8)	101 (61.2)		
Skill level 6	9 (81.8)	2 (18.2)		
Ethnicity			0.509	0.500
Non-Edo indigenes	97 (60.6)	63 (39.4)		
Edo indigenes	263 (63.8)	149 (36.2)		
Spouse's Ethnicity			8.389	0.004
Non-Edo indigenes	107 (72.3)	41 (27.7)		
Edo indigenes	185 (58.4)	132 (41.6)		
Marriage type			29.803	<0.001
Monogamous	286 (66.4)	145 (33.6)		
Polygamous	7 (20.0)	28 (80.0)		
Family type			29.738	<0.001
Nuclear	285 (66.3)	145 (33.7)		
Extended	7 (20.0)	28 (80.0)		
Socio-economic status			76.895	< 0.001
High	35 (15.9)	185 (84.1)		
Middle	136 (43.3)	178 (56.7)		
Low	30 (78.9)	8 (21.1)		

Table 6c: Socio-demographic characteristics and Attitude of caregivers to Child injury and violence prevention

Variable	Positive (n=360) Freq	Negative (n=212) Freq	Test statistic χ^2	p-value
Number of children			56.424	<0.001
≤3	327 (70.2)	139 (29.8)		
>3	33 (31.1)	73 (68.9)		
Age of youngest child			12.974	0.011
<2 years	73 (68.9)	33 (31.1)		
2–5 years	151 (57.2)	113 (42.8)		
6–10 years	71 (67.0)	35 (33.0)		
11–15 years	43 (60.6)	28 (39.4)		
16–17 years	22 (88.0)	3 (12.0)		
Household size			65.206	<0.001
≤5	332 (70.5)	139 (29.5)		

>5	28 (27.7)	73 (72.3)		
Knowledge			56.643	<0.001
Good	275 (74.1)	96 (25.9)		
Poor	85 (42.3)	116 (57.7)		

There was a statistically significant association between caregiver attitude and age ($p < 0.001$), level of education ($p < 0.001$), occupation ($p < 0.001$), religion ($p = 0.009$), Spouse ethnicity ($p = 0.004$), monthly income ($p < 0.001$), Socio-economic status ($p < 0.001$), number of children ($p < 0.001$), household size ($p < 0.001$), and knowledge of child injury and violence prevention ($p < 0.001$).

A trend was noted in which positive attitude generally decreased with age, dropping from 71.7% in the youngest group to 42.9% in the oldest group. Higher education levels and higher monthly income were associated with a higher percentage of positive attitudes. Caregivers with <3 children (70.2%) had more positive attitude than caregivers with >3 children, and smaller household sizes of <5 (70.5%) had more positive attitudes than those with larger families. Caregivers with good knowledge had a more positive attitude (74.1%) compared to caregivers with poor knowledge (42.3%). Sex ($p = 0.234$) and marital status ($p = 0.947$) were not significantly associated with attitude.

Table 7: Predictors of Positive Attitude of caregivers to Child injury and violence prevention

Predictors	β	Odds ratio	95% CI for OR Lower	95% CI for OR Upper	p-value
Age of caregiver	-0.049	0.952	0.915	0.991	0.013
Spouse Occupation					
Skill level 2	-1.179	0.308	0.034	2.780	0.294
Skill level 3	-0.609	0.544	0.069	4.310	0.591
Skill level 4	-1.324	0.266	0.035	2.010	0.216
Skill level 5	-3.016	0.049	0.006	0.400	0.007
Skill level 6*		1			
Marriage type					
Monogamous	0.046	1.047	0.185	5.930	0.958
Polygamous*		1			
Monthly income (₦)					
<70,000	-1.786	0.168	0.057	0.500	0.003

70,000–139,999	–0.608	0.544	0.295	1.000	0.050
≥140,000*		1			
Spouse's income (₦)					
<70,000	0.589	1.802	0.569	5.710	0.315
70,000–139,999	–0.550	0.577	0.312	1.070	0.076
≥140,000*		1			
Number of children					
≤3	1.246	3.478	1.73	7.000	<0.001
>3*		1			
Age of youngest child					
<2 years	–1.625	0.197	0.039	1.010	0.050
2–5 years	–1.321	0.267	0.057	1.250	0.093
6–10 years	–1.378	0.252	0.053	1.210	0.085
11–15 years	–1.268	0.282	0.058	1.370	0.126
16–17 years*		1			
Knowledge					
Poor	–1.210	0.298	0.182	0.490	<0.001
Good*		1			

* Reference, CI – Confidence interval, OR – Odds ratio, $R^2 = 33.4 - 45.6\%$

The multivariate logistic regression revealed that higher caregiver age was associated with slightly lower odds of a positive attitude (OR = 0.952, $p = 0.013$), while lower caregiver monthly income showed a strong, graded negative effect: those earning <70,000 naira had 83% less likely to have positive attitude compared to the highest earners (OR = 0.168, $p = 0.003$), with the middle-income group also trending toward significance (OR = 0.544, $p = 0.050$). Caregivers with three or fewer children had 3.5 times the odds of a positive attitude relative to those with larger families (OR = 3.478, $p < 0.001$), and having a spouse in the lowest-skill occupation category (Skill level 5) significantly reduced the odds by 95% compared to the highest-skill reference (OR = 0.049, $p = 0.007$). Those with poor knowledge of Child injury and violence prevention had 70.2% reduced odds of having positive attitude towards child injury and violence prevention and this was statistically significant (OR = 0.298, $p = <0.001$). Marriage type, spouse's monthly income, and the age of the youngest child were not independently associated with attitude after adjustment, although there was a borderline trend for

children under 2 years ($p = 0.050$). Overall, the model explained between 33.4% and 45.6% of the variance in caregiver attitudes.

SECTION D: TYPES AND FREQUENCY OF WITNESSED CHILD INJURY AND VIOLENCE

Table 8: Types and frequency of Child injury and violence observed by Caregivers

Variable	Frequency (n=572)	Percent
Child experienced injury	432	75.5
Type of injury experienced (n=432) *		
Falls	354	81.9
Cuts	166	38.4
Burns	83	19.2
Choking	15	3.5
RTA	9	2.1
Poisoning	7	1.6

Animal bite	5	1.2
Electric shock	3	0.7
Number of times the child was injured		
≤5	396	92.1
>5	36	7.9
Witnessed acts of violence against children	559	97.7
Frequency of child violence witnessed		
Occasionally	284	49.7
Rarely	204	35.7
Very frequently	71	12.4
Never	13	2.3
Type of violence witnessed (n=559) *		
Physical abuse	468	83.7
Emotional abuse	257	46.0
Neglect	162	29.0
Child labour	150	26.8
Bullying	125	22.4
Sexual abuse	50	8.9
Female genital mutilation	27	4.8
Most common Child violence witnessed (n=559)		
Physical abuse	341	61.0
Emotional abuse	186	33.3
Neglect	22	3.9
Bullying	8	1.4
Child labour	2	0.4

Among the injuries experienced by children, the reported types were falls 354 (82.3%), cuts 166 (38.6%), burns 83 (19.3%), choking 15 (3.5%), RTA 9 (2.1%), poisoning 7 (1.6%), animal bite 5 (1.2%), and electric shock 3 (0.7%). Regarding witnessed acts of violence, caregivers reported observing physical abuse 468 (83.7%), emotional abuse was 257 (46.0%), neglect 162 (29.0%), child labour 150 (26.8%), bullying 125 (22.4%), sexual abuse 50 (8.9%), and female genital mutilation 27 (4.8%). 432 (75.5%) of the parents reported that their children experienced an injury, and 559 (97.7%) Caregivers witnessed acts of violence. For the frequency of child violence observed, 284 (49.7%) of the caregivers occasionally witnessed violence, and 13 (2.3%) never witnessed child violence.

Table 9a: Socio-demographic characteristics and Child experienced Burns

Variable	Yes (n=83) Freq	No (n=349) Freq	Test statistic χ^2	p-value
Age of caregiver			33.08	<0.001
20-29	9 (14.8)	52 (85.2)		
30-39	16 (9.2)	158 (90.8)		
40-49	48 (30.2)	111 (69.8)		
50-59	6 (18.8)	26 (81.3)		
60-69	4 (66.7)	2 (33.3)		
Sex			1.561	0.239

Female	74 (20.2)	292 (79.8)		
Male	9 (13.6)	57 (86.4)		
Marital status			25.52	<0.001
Single	4 (23.5)	13 (76.5)		
Married	61 (17.1)	296 (82.9)		
Separated	2 (14.3)	12 (85.7)		
Divorced	0 (0.0)	13 (100.0)		
Widowed	16 (51.6)	15 (48.4)		
Level of Education			63.281	<0.001
Tertiary	30 (14.2)	182 (85.8)		
Secondary	19 (11.9)	141 (88.1)		
Primary	22 (56.4)	17 (43.6)		
No Formal Education	12 (57.1)	9 (42.9)		
Spouse Education			51.184	<0.001
Tertiary	26 (12.7)	179 (87.3)		
Secondary	14 (12.0)	103 (88.0)		
Primary	18 (58.1)	13 (41.9)		
No Formal Education	3 (75.0)	1 (25.0)		
Occupation			25.187	<0.001
Skill level 2	3 (6.1)	46 (93.9)		
Skill level 3	9 (9.4)	87 (90.6)		
Skill level 4	26 (18.7)	113 (81.3)		
Skill level 5	45 (31.0)	100 (69.0)		
Skill level 6	0 (0.0)	3 (100.0)		
Spouse Occupation			37.678	<0.001
Skill level 2	11 (12.2)	79 (87.8)		
Skill level 3	9 (25.7)	26 (74.3)		
Skill level 4	15 (9.1)	149 (90.9)		
Skill level 5	26 (41.3)	37 (58.7)		
Skill level 6	0 (0.0)	5 (100.0)		
Ethnicity			<0.001	>0.999
Non-Edo indigenes	42 (19.2)	177 (80.8)		
Edo indigenes	41 (19.2)	172 (80.8)		

Table 9b: Socio-demographic characteristics and Child experienced Burns

Variable	Yes (n=83) Freq	No (n=349) Freq	Test statistic χ^2	p-value
Partner's Ethnicity			3.105	0.084
Non-Edo indigenes	11 (11.3)	86 (88.7)		
Edo indigenes	50 (19.2)	210 (80.8)		
Religion			22.501	<0.001
Christianity	70 (17.2)	337 (82.8)		
Islam	12 (60.0)	8 (40.0)		

ATR	1 (20.0)	4 (80.0)		
Marriage type			64.971	<0.001
Monogamous	40 (12.2)	288 (87.8)		
Polygamous	21 (70.0)	9 (30.0)		
Family type			71.098	<0.001
Nuclear	57 (14.4)	339 (85.6)		
Extended	26 (72.2)	10 (27.8)		
Monthly income (₦)			77.884	<0.001
<70,000	35 (62.5)	21 (37.5)		
70,000-139,999	27 (12.0)	198 (88.0)		
≥140,000	21 (13.9)	130 (86.1)		
Spouse's income (₦)			18.703	<0.001
<70,000	12 (48.0)	13 (52.0)		
70,000-139,999	29 (16.2)	150 (83.8)		
≥140,000	20 (13.1)	133 (86.9)		
Number of children			23.71	<0.001
≤3	49 (14.4)	291 (85.6)		
>3	34 (37.0)	58 (63.0)		
Age of youngest child			22.518	<0.001
<2	4 (5.6)	67 (94.4)		
2-5	54 (27.6)	142 (72.4)		
6-10	14 (16.1)	73 (83.9)		
11-15	11 (19.0)	47 (81.0)		
16-17	0 (0.0)	20 (100.0)		
Relationship to child			22.555	0.001
Mother	68 (19.1)	288 (80.9)		
Father	9 (13.4)	58 (86.6)		
Others	6 (66.7)	3 (33.3)		
Household size			27.703	<0.001
≤5	49 (14.2)	296 (85.8)		
>5	34 (39.1)	53 (60.9)		
Socio-economic status			61.373	<0.001
High	18 (12.9)	121 (87.1)		
Middle	40 (15.6)	216 (84.4)		
Low	25 (67.6)	12 (32.4)		

The bivariate analysis identified several statistically significant factors associated with a child experiencing burns: age of caregiver ($p<0.001$), marital status ($p<0.001$), level of education ($p<0.001$), spouse's education ($p<0.001$), occupation ($p<0.001$), spouse's occupation ($p<0.001$), religion ($p<0.001$), marriage type ($p<0.001$), family type ($p<0.001$), monthly income ($p<0.001$), spouse's income ($p<0.001$), number of children ($p<0.001$), age of youngest child ($p<0.001$), relationship to child

($p=0.001$), household size ($p<0.001$), and socio-economic status ($p<0.001$). A distinct upward trend is observed with the age of the caregiver, as the prevalence of burns rises from 14.8% in the 20–29 age group to 66.7% in the 60–69 age group. Conversely, a downward trend is seen with monthly income; the incidence of burns decreases from 62.5% for those earning <70,000 to 13.9% for those earning $\geq 140,000$. Furthermore, larger households showed a higher prevalence of burns, increasing from 14.2% in households with ≤ 5 members to 39.1% in those with >5 members.

Table 10: Predictors of Burns

Predictors	β	Odds ratio	95% CI Lower	95% CI Upper	p-value
Age of caregiver	-0.016	0.985	0.928	1.045	0.609
Level of Education					
Tertiary	-0.547	0.579	0.060	5.614	0.637
Secondary	-1.992	0.136	0.015	1.227	0.076
Primary	-1.691	0.184	0.020	1.740	0.140
No Formal Education*		1			

Spouse's level of Education					
Tertiary	-0.476	0.621	0.016	23.560	0.798
Secondary	0.092	1.096	0.032	37.671	0.959
Primary	2.198	9.003	0.332	243.864	0.192
No Formal Education*		1			
Occupation					
Skill level 2	-1.835	0.160	0.031	0.833	0.030
Skill level 3	-1.635	0.195	0.055	0.692	0.011
Skill level 4	-0.195	0.823	0.290	2.338	0.715
Skill level 5*		1			
Religion					
Christianity	2.481	11.957	0.342	418.486	0.171
Islam	1.475	4.373	0.086	223.257	0.462
African Traditional Religion*		1			
Marriage type					
Monogamous	-1.190	0.304	0.057	1.611	0.162
Polygamous*		1			
Monthly income (₦)					
<70,000	1.317	3.732	0.813	17.131	0.090
70,000–139,999	0.006	1.006	0.410	2.470	0.989
≥140,000*		1			
Spouse's income (₦)					
<70,000	1.248	3.482	1.001	12.115	0.050
70,000–139,999	-0.674	0.510	0.196	1.325	0.167
≥140,000*		1			
Number of children					
≤3	-0.621	0.537	0.191	1.510	0.239
>3*		1			
Socio-economic status					
High	2.849	17.268	1.098	271.552	0.043
Middle	1.728	5.630	0.524	60.440	0.154
Low*		1			

*Reference category. CI – confidence interval. OR – Odds ratio, Nagelkerke R² = 41.0%

Based on the multivariate logistic regression predicting child burns, the significant predictors of burns are occupation, spouse's monthly income, and socio-economic status. Caregivers at occupation Skill level 2 have 84% lower odds of reporting child burns (OR=0.160, 95% CI: 0.031–0.833, p=0.030), and those at Skill level 3 have 80.5% lower odds (OR=0.195, 95% CI: 0.055–0.692, p=0.011) when compared to the reference group at Skill level 5. Having a spouse with a monthly income of <₦70,000

is associated with 3.48 times higher odds of child burns (OR=3.482, 95% CI: 1.001–12.115, p=0.050) relative to the reference group earning $\geq$ ₦140,000. Furthermore, high socio-economic status significantly increases the odds of burns by 17.27 times (OR=17.268, 95% CI: 1.098–271.552, p=0.043) compared to low socio-economic status. For every unit increase in the caregiver's age, there is a 1.5% decrease in the odds of a child experiencing burns (OR=0.985), but this is not statistically significant (95% CI: 0.928–1.045, p=0.609).

Table 11a: Socio-demographic characteristics and Child experienced Falls

Variable	Yes (n=354) Freq	No (n=78) Freq	Test statistic χ^2	p-value
Age of caregiver			14.692	0.008
20-29	50 (82.0)	11 (18.0)		
30-39	152 (87.4)	22 (12.6)		
40-49	128 (80.5)	31 (19.5)		
50-59	19 (59.4)	13 (40.6)		
60-69	5 (83.3)	1 (16.7)		

Sex			12.29	0.001
Female	310 (84.7)	56 (15.3)		
Male	44 (66.7)	22 (33.3)		
Marital status			2.853	0.507
Single	12 (70.6)	5 (29.4)		
Married	296 (82.9)	61 (17.1)		
Separated	10 (71.4)	4 (28.6)		
Divorced	11 (84.6)	2 (15.4)		
Widowed	25 (80.6)	6 (19.4)		
Level of Education			0.996	0.845
Tertiary	170 (80.2)	42 (19.8)		
Secondary	134 (83.8)	26 (16.3)		
Primary	32 (82.1)	7 (17.9)		
No Formal Education	18 (85.7)	3 (14.3)		
Spouse Education			1.757	0.700
Tertiary	169 (82.4)	36 (17.6)		
Secondary	99 (84.6)	18 (15.4)		
Primary	24 (77.4)	7 (22.6)		
No Formal Education	4 (100.0)	0 (0.0)		
Occupation			8.661	0.060
Skill level 2	43 (87.8)	6 (12.2)		
Skill level 3	70 (72.9)	26 (27.1)		
Skill level 4	114 (82.0)	25 (18.0)		
Skill level 5	125 (86.2)	20 (13.8)		
Skill level 6	2 (66.7)	1 (33.3)		
Spouse Occupation			3.966	0.475
Skill level 2	72 (80.0)	18 (20.0)		
Skill level 3	32 (91.4)	3 (8.6)		
Skill level 4	137 (83.5)	27 (16.5)		
Skill level 5	50 (79.4)	13 (20.6)		
Skill level 6	5 (100.0)	0 (0.0)		
Ethnicity			16.891	<0.001
Non-Edo indigenes	101 (95.3)	5 (4.7)		
Edo indigenes	253 (77.6)	73 (22.4)		

Table 11b: Socio-demographic characteristics and Child experienced Falls

Variable	Yes (n=354) Freq	No (n=78) Freq	Test statistic χ^2	p-value
Partner's Ethnicity			0.248	0.641
Non-Edo indigenes	82 (84.5)	15 (15.5)		
Edo indigenes	214 (82.3)	46 (17.7)		
Religion			3.969	0.136
Christianity	332 (81.6)	75 (18.4)		

Islam	19 (95.0)	1 (5.0)		
ATR	3 (60.0)	2 (40.0)		
Marriage type			0.203	0.616
Monogamous	273 (83.2)	55 (16.8)		
Polygamous	24 (80.0)	6 (20.0)		
Family type			0.051	>0.999
Nuclear	324 (81.8)	72 (18.2)		
Extended	30 (83.3)	6 (16.7)		
Monthly income (₦)			0.662	0.691
<70,000	44 (78.6)	12 (21.4)		
70,000-139,999	187 (83.1)	38 (16.9)		
≥140,000	123 (81.5)	28 (18.5)		
Spouse's income (₦)			3.483	0.179
<70,000	24 (96.0)	1 (4.0)		
70,000-139,999	145 (81.0)	34 (19.0)		
≥140,000	127 (83.0)	26 (17.0)		
Number of children			1.072	0.290
≤3	282 (82.9)	58 (17.1)		
>3	72 (78.3)	20 (21.7)		
Age of youngest child			37.005	<0.001
<2	54 (76.1)	17 (23.9)		
2-5	173 (88.3)	23 (11.7)		
6-10	73 (83.9)	14 (16.1)		
11-15	47 (81.0)	11 (19.0)		
16-17	7 (35.0)	13 (65.0)		
Relationship to child			13.177	0.013
Mother	300 (84.3)	56 (15.7)		
Father	45 (67.2)	22 (32.8)		
Others	9 (100.0)	0 (0.0)		
Household size			0.049	0.877
≤5	282 (81.7)	63 (18.3)		
>5	72 (82.8)	15 (17.2)		
Socio-economic status			9.695	0.007
High	104 (74.8)	35 (25.2)		
Middle	222 (86.7)	34 (13.3)		
Low	28 (75.7)	9 (24.3)		

Statistically significant variables associated with children experiencing falls include the age of the caregiver (p=0.008), sex (p=0.001), ethnicity (p=0.004), age of the youngest child (p<0.001), relationship to the child (p=0.013), and socio-economic status (p=0.007). A notable trend is found regarding the age of the youngest child, where the occurrence of falls is highest in the 2–5 year age

group (88.3%) and subsequently decreases to its lowest level of 35.0% among children aged 16–17 years. Female caregivers reported a higher frequency of falls (84.7%) compared to male caregivers (66.7%). Additionally, middle socio-economic status households reported the highest prevalence of falls at 86.7%.

Table 12: Predictors of Falls

Predictors	β	Odds ratio	95% CI Lower	95% CI Upper	p-value
Age of caregiver	−0.029	0.971	0.934	1.009	0.134
Ethnic group					
Non-Edo indigenes	0.737	2.089	1.171	3.725	0.013

Edo indigenes*		1			
Age of youngest child					
<2 years	1.416	4.122	1.208	14.060	0.024
2–5 years	2.468	11.796	3.728	37.320	<0.001
6–10 years	2.070	7.923	2.392	26.244	0.001
11–15 years	1.893	6.643	1.930	22.862	0.003
16–17 years*		1			
Socio-economic status					
High	0.835	2.304	0.854	6.219	0.099
Middle	1.167	3.212	1.241	8.315	0.016
Low*		1			

*Reference category. CI – confidence interval. OR – Odds ratio, Nagelkerke $R^2 = 20.2\%$

The multivariate logistic regression model predicting child falls identifies ethnic group, age of the youngest child, and socio-economic status as significant predictors. Non-Edo indigenes have 2.09 times higher odds of experiencing child falls (OR=2.089, 95% CI: 1.171–3.725, $p=0.013$) compared to Edo indigenes. The age of the youngest child is a robust predictor across all categories when compared to the 16–17 years reference group. Specifically, children aged <2 years (OR=4.122, $p=0.024$), 2–5 years (OR=11.796, $p<0.001$), 6–10 years (OR=7.923, $p=0.001$), and 11–15 years (OR=6.643, $p=0.003$) all show significantly higher odds of experiencing falls. Additionally, middle socio-economic status is associated with 3.21 times higher odds of falls (OR=3.212, 95% CI: 1.241–8.315, $p=0.016$) relative to low socio-economic status. For the numerical variable, for every unit increase in the caregiver's age, there is a 2.9% decrease in the odds of a fall (OR=0.971), which is not statistically significant (95% CI: 0.934–1.009, $p=0.134$).

Table 13a: Socio-demographic characteristics and Child experienced Cuts

Variable	Yes (n=166) Freq	No (n=266) Freq	Test statistic χ^2	p-value
Age of caregiver			5.966	0.220
20- 29	18 (29.5)	43 (70.5)		

30- 39	72 (41.4)	102 (58.6)		
40- 49	66 (41.5)	93 (58.5)		
50- 59	9 (28.1)	23 (71.9)		
60- 69	1 (16.7)	5 (83.3)		
Sex			0.031	0.891
Female	140 (38.3)	226 (61.7)		
Male	26 (39.4)	40 (60.6)		
Marital status			4.275	0.384
Single	4 (23.5)	13 (76.5)		
Married	144 (40.3)	213 (59.7)		
Separated	5 (35.7)	9 (64.3)		
Divorced	5 (38.5)	8 (61.5)		
Widowed	8 (25.8)	23 (74.2)		
Level of Education			23.902	<0.001
Tertiary	68 (32.1)	144 (67.9)		
Secondary	84 (52.5)	76 (47.5)		
Primary	11 (28.2)	28 (71.8)		
No Formal Education	3 (14.3)	18 (85.7)		
Spouse Education			4.499	0.230
Tertiary	78 (38.0)	127 (62.0)		
Secondary	51 (43.6)	66 (56.4)		
Primary	15 (48.4)	16 (51.6)		
No Formal Education	0 (0.0)	4 (100.0)		
Occupation			16.566	0.002
Skill level 2	10 (20.4)	39 (79.6)		
Skill level 3	34 (35.4)	62 (64.6)		
Skill level 4	69 (49.6)	70 (50.4)		
Skill level 5	53 (36.6)	92 (63.4)		
Skill level 6	0 (0.0)	3 (100.0)		
Spouse Occupation			10.846	0.023
Skill level 2	28 (31.1)	62 (68.9)		
Skill level 3	15 (42.9)	20 (57.1)		
Skill level 4	80 (48.8)	84 (51.2)		
Skill level 5	19 (30.2)	44 (69.8)		
Skill level 6	2 (40.0)	3 (60.0)		
Ethnicity			16.612	<0.001
Non-Edo indigenes	23 (21.7)	83 (78.3)		
Edo indigenes	143 (43.9)	183 (56.1)		

Table 13b: Socio-demographic characteristics and Child experienced Cuts

Variable	Yes (n=166) Freq	No (n=266) Freq	Test statistic χ^2	p-value
Partner's Ethnicity			9.021	0.004

Non-Edo indigenes	27 (27.8)	70 (72.2)		
Edo indigenes	118 (45.4)	142 (54.6)		
Religion			10.754	0.003
Christianity	162 (39.8)	245 (60.2)		
Islam	1 (5.0)	19 (95.0)		
ATR	3 (60.0)	2 (40.0)		
Marriage type			12.44	<0.001
Monogamous	141 (43.0)	187 (57.0)		
Polygamous	3 (10.0)	27 (90.0)		
Family type			12.384	<0.001
Nuclear	162 (40.9)	234 (59.1)		
Extended	4 (11.1)	32 (88.9)		
Monthly income (₦)			12.391	0.002
<70,000	12 (21.4)	44 (78.6)		
70,000-139,999	102 (45.3)	123 (54.7)		
≥140,000	52 (34.4)	99 (65.6)		
Spouse's income (₦)			4.559	0.106
<70,000	6 (24.0)	19 (76.0)		
70,000-139,999	80 (44.7)	99 (55.3)		
≥140,000	58 (37.9)	95 (62.1)		
Number of children			0.777	0.399
≤3	127 (37.4)	213 (62.6)		
>3	39 (42.4)	53 (57.6)		
Age of youngest child			17.93	0.001
<2	22 (31.0)	49 (69.0)		
2-5	65 (33.2)	131 (66.8)		
6-10	34 (39.1)	53 (60.9)		
11-15	31 (53.4)	27 (46.6)		
16-17	14 (70.0)	6 (30.0)		
Relationship to child			4.425	0.419
Mother	138 (38.8)	218 (61.2)		
Father	26 (38.8)	41 (61.2)		
Others	2 (22.2)	9 (77.8)		
Household size			0.02	0.902
≤5	132 (38.3)	213 (61.7)		
>5	34 (39.1)	53 (60.9)		
Socio-economic status			4.453	0.110
High	48 (34.5)	91 (65.5)		
Middle	108 (42.2)	148 (57.8)		
Low	10 (27.0)	27 (73.0)		

Factors showing a statistically significant association with children experiencing cuts were the level of education ($p<0.001$), occupation ($p=0.002$), spouse's occupation ($p=0.023$), ethnicity ($p=0.001$), religion ($p=0.003$), marriage type ($p<0.001$), family type ($p<0.001$), monthly income ($p=0.002$), and

the age of the youngest child ($p=0.001$). There is a clear upward trend relative to the age of the youngest child; the prevalence of cuts steadily increases from 31.0% in children under 2 years old to 70.0% in those aged 16–17 years. Edo indigenes (43.9%) had a higher reported frequency of cuts compared to non-Edo indigenes (21.7%). Additionally, caregivers in monogamous marriages (43.0%) reported more cuts than those in polygamous marriages (10.0%).

Table 14: Predictors of Cuts

Predictors	β	Odds ratio	95% CI Lower	95% CI Upper	p-value
Occupation					
Skill level 2	−0.502	0.605	0.198	1.850	0.378
Skill level 3	−0.031	0.969	0.412	2.277	0.942
Skill level 4	0.262	1.299	0.681	2.477	0.427
Skill level 5*		1			
Spouse's occupation					
Skill level 2	−0.255	0.775	0.089	6.747	0.818
Skill level 3	0.709	2.031	0.222	18.546	0.530
Skill level 4	0.229	1.257	0.147	10.734	0.834
Skill level 5	−0.603	0.547	0.059	5.109	0.597
Skill level 6*		1			
Ethnic group					
Non-Edo indigenes	−1.066	0.344	0.198	0.599	<0.001
Edo indigenes*		1			
Marriage type					
Monogamous	1.691	5.427	0.970	30.357	0.054
Polygamous*		1			
Monthly income (₦)					
<70,000	0.143	1.154	0.348	3.827	0.815
70,000–139,999	0.275	1.316	0.732	2.366	0.359
≥140,000*		1			
Age of youngest child					
<2 years	−2.065	0.127	0.033	0.489	0.003
2–5 years	−1.159	0.314	0.089	1.103	0.071
6–10 years	−1.696	0.183	0.050	0.667	0.010
11–15 years	−0.849	0.428	0.104	1.763	0.240
16–17 years*		1			

*Reference category. CI – confidence interval. OR – Odds ratio, Nagelkerke $R^2 = 32.1\%$

The significant predictors of child cuts are being from a non-Benin ethnic group ($p < 0.001$) and the age of the youngest child, specifically the <2 years ($p = 0.003$) and 6–10 years ($p = 0.010$) categories. When considering numerical data, the table focuses on categorical predictors rather than the caregiver's age for this specific outcome, highlighting that children under 2 years of age have 87.3% lower odds of experiencing cuts (OR=0.127, 95% CI: 0.033–0.489) compared to the reference group.

Table 15a: Socio-demographic characteristics and Witnessed Physical abuse

Variable	Yes (n=468)	No (n=88)	Test statistic	p-value
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	Freq	Freq	χ^2	
Age of caregiver			12.81	0.014
20-29	81 (83.5)	16 (16.5)		
30-39	196 (83.8)	38 (16.2)		
40-49	159 (89.3)	19 (10.7)		
50-59	27 (67.5)	13 (32.5)		
60-69	5 (71.4)	2 (28.6)		
Sex			0.05	0.871
Female	398 (84.3)	74 (15.7)		
Male	70 (83.3)	14 (16.7)		
Marital status			7.17	0.121
Single	33 (91.7)	3 (8.3)		
Married	373 (82.9)	77 (17.1)		
Separated	15 (88.2)	2 (11.8)		
Divorced	16 (76.2)	5 (23.8)		
Widowed	31 (96.9)	1 (3.1)		
Level of Education			19.44	<0.001
Tertiary	239 (78.9)	64 (21.1)		
Secondary	168 (87.5)	24 (12.5)		
Primary	40 (100.0)	0 (0.0)		
No Formal Education	21 (100.0)	0 (0.0)		
Spouse Education			17.05	0.002
Tertiary	214 (77.3)	63 (22.7)		
Secondary	124 (90.5)	13 (9.5)		
Primary	31 (96.9)	1 (3.1)		
No Formal Education	4 (100.0)	0 (0.0)		
Occupation			22.20	<0.001
Skill level 2	55 (73.3)	20 (26.7)		
Skill level 3	108 (76.1)	34 (23.9)		
Skill level 4	149 (89.8)	17 (10.2)		
Skill level 5	147 (90.2)	16 (9.8)		
Skill level 6	9 (90.0)	1 (10.0)		
Spouse Occupation			6.62	0.152
Skill level 2	100 (78.7)	27 (21.3)		
Skill level 3	37 (77.1)	11 (22.9)		
Skill level 4	172 (85.1)	30 (14.9)		
Skill level 5	60 (89.6)	7 (10.4)		
Skill level 6	4 (66.7)	2 (33.3)		
Ethnic group			9.782	0.002
Non-Edo indigenes	121 (76.6)	37 (23.4)		
Edo indigenes	350 (87.3)	51 (12.7)		

Table 15b: Socio-demographic characteristics and Witnessed Physical abuse

Variable	Yes (n=468) Freq	No (n=88) Freq	Test statistic χ^2	p-value
Spouse's Ethnicity			0.988	0.347
Non-Edo indigenes	115 (80.4)	28 (19.6)		
Edo indigenes	261 (84.2)	49 (15.8)		
Religion			0.99	0.649
Christianity	443 (84.2)	83 (15.8)		
Islam	20 (87.0)	3 (13.0)		
African Traditional Religion	5 (71.4)	2 (28.6)		
Marriage type			3.46	0.064
Monogamous	341 (82.0)	75 (18.0)		
Polygamous	33 (94.3)	2 (5.7)		
Family type			1.28	0.311
Nuclear	424 (83.6)	83 (16.4)		
Extended	44 (89.8)	5 (10.2)		
Monthly income (₦)			12.92	0.002
<70,000	60 (95.2)	3 (4.8)		
70,000-139,999	255 (86.1)	41 (13.9)		
≥140,000	153 (77.7)	44 (22.3)		
Spouse's income (₦)			25.79	<0.001
<70,000	28 (82.4)	6 (17.6)		
70,000-139,999	177 (93.2)	13 (6.8)		
≥140,000	168 (74.3)	58 (25.7)		
Number of children			1.44	0.291
≤3	379 (83.3)	76 (16.7)		
>3	89 (88.1)	12 (11.9)		
Age of youngest child			23.14	<0.001
<2	81 (77.1)	24 (22.9)		
2-5	221 (88.0)	30 (12.0)		
6-10	93 (88.6)	12 (11.4)		
11-15	59 (84.3)	11 (15.7)		
16-17	14 (56.0)	11 (44.0)		
Relationship to child			5.74	0.301
Mother	387 (85.1)	68 (14.9)		
Father	67 (81.7)	15 (18.3)		
Others	16 (66.2)	5 (23.8)		
Household size			0.96	0.361
≤5	384 (83.5)	76 (16.5)		
>5	84 (87.5)	12 (12.5)		
Socio-economic status			18.34	<0.001
High	161 (76.7)	49 (23.3)		
Middle	269 (87.3)	39 (12.7)		
Low	38 (100.0)	0 (0.0)		

The bivariate analysis for witnessed physical abuse highlights several statistically significant factors. Caregiver's age ($p=0.014$) is significant, with physical abuse most commonly witnessed by caregivers in the 40–49 age group (89.3%) before dropping to 71.4% for those aged 60–69. Level of education ($p<0.001$) shows a clear downward trend; witnessed physical abuse is at 100% for caregivers with primary or no formal education, and steadily decreases to 78.9% for those with tertiary education. A similar trend exists for the spouse's education level ($p=0.002$), dropping from 100% for no formal education down to 77.3% for tertiary education. Occupation ($p<0.001$) is significant, peaking among caregivers at Skill level 5 (90.2%) and Skill level 6 (90.0%). Monthly income ($p=0.002$) exhibits a downward trend, with witnessed physical abuse declining as income rises, from 95.2% among those earning $< \text{N}70,000$ to 77.7% for those earning $\geq \text{N}140,000$. The spouse's income ($p<0.001$) is also significant, reflecting the highest prevalence in the $\text{N}70,000\text{--}139,999$ category (93.2%). Furthermore, the age of the youngest child ($p<0.001$) shows a trend where the incidence peaks in the 2–5 years (88.0%) and 6–10 years (88.6%) groups, then steadily declines to 56.0% in the 16–17 years group. Lastly, socio-economic status ($p<0.001$) is strongly associated, with a 100% prevalence observed in the low socio-economic group compared to 76.7% in the high group.

Table 16: Predictors of Witnessed Physical Abuse

Predictors	β	Odds Ratio	95% CI Lower	95% CI Upper	p-value
Age of caregiver	-0.041	0.959	0.922	0.999	0.043
Occupation					
Skill level 2	-2.315	0.099	0.005	1.927	0.127
Skill level 3	-2.223	0.108	0.006	1.996	0.135
Skill level 4	-0.356	0.700	0.038	12.752	0.810
Skill level 5	-0.657	0.519	0.028	9.583	0.659
Skill level 6*		1			
Monthly Income (₦)					
<70,000	2.741	15.496	1.316	182.423	0.029
70,000–139,999	0.149	1.161	0.606	2.226	0.653
≥140,000*		1			
Spouse's Income (₦)					
<70,000	0.002	1.002	0.347	2.894	0.997
70,000–139,999	1.462	4.313	1.994	9.328	<0.001
≥140,000*		1			
Age of Youngest Child					
<2	1.052	2.863	0.700	11.713	0.143
2–5	2.075	7.964	2.063	30.751	0.003
6–10	2.379	10.794	2.707	43.037	0.001
11–15	1.977	7.220	1.719	30.325	0.007
16–17 *		1			

Nagelkerke $R^2 = 30.7\%$;

In the multivariate logistic regression model predicting physical abuse, the age of the caregiver and the age of the youngest child (specifically the 11–15-year category) were identified as significant predictors. For every unit increase in the age of the caregiver, there is a 5.0% increase in the odds of physical abuse (aOR = 1.050), and this is statistically significant (95% CI: 1.012–1.089, $p = 0.010$). Regarding the age of the youngest child, those in the 11–15-year age group had 3.32 times higher odds of being victims of physical abuse (aOR = 3.318, 95% CI: 1.000–11.013, $p = 0.050$) compared to the reference group of 16–17-year-olds. Other variables in the model, such as the caregiver's monthly

income and the spouse's monthly income, did not show a statistically significant predictive relationship with physical abuse.

Table 17a: Socio-demographic characteristics and Witnessed Emotional abuse

Variable	Yes (n=257) Freq	No (n=299) Freq	Test statistic χ^2	p-value
Age of caregiver			3.79	0.439
20-29	49 (50.5)	48 (49.5)		
30-39	107 (45.7)	127 (54.3)		
40-49	81 (45.5)	97 (54.5)		
50-59	15 (37.5)	25 (62.5)		
60-69	5 (71.4)	2 (28.6)		
Sex			6.61	0.012
Female	229 (48.5)	243 (51.5)		
Male	28 (33.3)	56 (66.7)		
Marital status			14.83	0.004
Single	23 (63.9)	13 (36.1)		
Married	201 (44.7)	249 (55.3)		
Separated	11 (64.7)	6 (35.3)		
Divorced	4 (19.0)	17 (81.0)		
Widowed	18 (56.3)	14 (43.8)		
Level of Education			33.08	<0.001
Tertiary	139 (45.9)	164 (54.1)		
Secondary	108 (56.3)	84 (43.8)		
Primary	10 (25.0)	30 (75.0)		
No Formal Education	0 (0.0)	21 (100.0)		
Spouse Education			22.97	<0.001
Tertiary	147 (53.1)	130 (46.9)		
Secondary	46 (33.6)	91 (66.4)		
Primary	8 (25.0)	24 (75.0)		
No Formal Education	0 (0.0)	4 (100.0)		
Occupation			28.97	<0.001
Skill level 2	39 (52.0)	36 (48.0)		
Skill level 3	57 (40.1)	85 (59.9)		
Skill level 4	102 (61.4)	64 (38.6)		
Skill level 5	55 (33.7)	108 (66.3)		
Skill level 6	4 (40.0)	6 (60.0)		
Spouse Occupation			24.91	<0.001
Skill level 2	69 (54.3)	58 (45.7)		
Skill level 3	25 (52.1)	23 (47.9)		
Skill level 4	88 (43.6)	114 (56.4)		
Skill level 5	14 (20.9)	53 (79.1)		
Skill level 6	5 (83.3)	1 (16.7)		

Ethnic group			0.765	0.398
Non-Edo indigenes	68 (43.0)	90 (57.0)		
Edo indigenes	189 (47.1)	212 (52.9)		

Table 17b: Socio-demographic characteristics and Witnessed Emotional abuse

Variable	Yes (n=257) Freq	No (n=299) Freq	Test statistic χ^2	p-value
Spouse's Ethnicity			1.133	0.310
Non-Edo indigenes	69 (48.3)	74 (51.7)		
Edo indigenes	133 (42.9)	177 (57.1)		
Religion			14.45	<0.001
Christianity	253 (48.1)	273 (51.9)		
Islam	4 (17.4)	19 (82.6)		
African Traditional Religion	0 (0.0)	7 (100.0)		
Marriage type			19.90	<0.001
Monogamous	198 (47.6)	218 (52.4)		
Polygamous	3 (8.6)	32 (91.4)		
Family type			3.98	0.051
Nuclear	241 (47.5)	266 (52.5)		
Extended	16 (32.7)	33 (67.3)		
Monthly income (₦)			32.54	<0.001
<70,000	8 (12.7)	55 (87.3)		
70,000-139,999	146 (49.3)	150 (50.7)		
≥140,000	103 (52.3)	94 (47.7)		
Spouse's income (₦)			9.35	0.009
<70,000	12 (35.3)	22 (64.7)		
70,000-139,999	72 (37.9)	118 (62.1)		
≥140,000	117 (51.8)	109 (48.2)		
Number of children			7.83	0.006
≤3	223 (49.0)	232 (51.0)		
>3	34 (33.7)	67 (66.3)		
Age of youngest child			15.08	0.004
<2	43 (41.0)	62 (59.0)		
2-5	104 (41.4)	147 (58.6)		
6-10	57 (54.3)	48 (45.7)		
11-15	44 (62.9)	26 (37.1)		
16-17	9 (36.0)	16 (64.0)		
Relationship to child			14.14	0.006
Mother	217 (47.7)	238 (52.3)		
Father	26 (31.7)	56 (68.3)		
Others	14 (73.7)	5 (26.3)		
Household size			11.97	0.001
≤5	228 (49.6)	232 (50.4)		
>5	29 (30.2)	67 (69.8)		
Socio-economic status			13.38	0.001

High	106 (50.5)	104 (49.5)
Middle	144 (46.8)	164 (53.2)
Low	7 (18.4)	31 (81.6)

Significant associations for emotional abuse were found for caregiver sex ($p=0.012$), marital status ($p=0.004$), level of education ($p<0.001$), spouse education ($p<0.001$), occupation ($p<0.001$), spouse's occupation ($p<0.001$), religion ($p<0.001$), marriage type ($p<0.001$), monthly income ($p<0.001$), spouse's income ($p=0.009$), number of children ($p=0.006$), age of youngest child ($p=0.004$), relationship to child ($p=0.006$), household size ($p=0.001$), and socio-economic status ($p=0.001$). There is a clear upward trend in witnessed emotional abuse as the age of the youngest child increases, rising from 41.0% in children under 2 to a peak of 62.9% in children aged 11–15 years. Conversely, a downward trend is associated with the number of children; households with ≤ 3 children (49.0%) witnessed more emotional abuse than those with >3 children (33.7%). Females (48.5%) witnessed significantly more emotional abuse than males (33.3%).

Table 18: Predictors of Witnessed Emotional Abuse

Predictors	β	Odds Ratio	95% CI Lower	95% CI Upper	p-value
Sex					
Female	0.540	1.716	0.913	3.226	0.093
Male*		1			
Monthly income (₦)					
<70,000	-2.642	0.071	0.013	0.381	0.002
70,000–139,999	0.131	1.140	0.673	1.930	0.626
≥140,000*		1			
Spouse's occupation					
Skill level 2	-19.824	0.000	<0.001	<0.001	0.999
Skill level 3	-1.026	0.358	0.036	3.551	0.383
Skill level 4	-1.268	0.281	0.038	2.072	0.215
Skill level 5	-3.135	0.044	0.003	0.607	0.020
Skill level 6*		1			
Age of youngest child					
<2	0.505	1.657	0.370	7.424	0.508
2–5	0.654	1.924	0.548	6.757	0.306
6–10	1.473	4.364	1.139	16.713	0.032
11–15	1.402	4.063	0.999	16.523	0.050
16–17 *		1			

Nagelkerke $R^2 = 33.9\%$

The multivariate model for emotional abuse revealed that the age of the youngest child is a major significant predictor, particularly for those in the older age categories. Children in the 6–10 year category (aOR = 4.364, 95% CI: 1.139–16.713, $p = 0.032$) and the 11–15-year category (aOR = 4.063, 95% CI: 0.999–16.523, $p = 0.050$) showed significantly higher odds of experiencing emotional abuse compared to those in the reference group (16–17 years). Additionally, caregivers at occupation skill level 5 were found to have 95.6% lower odds of reporting emotional abuse (aOR = 0.044, 95% CI: 0.003–0.607, $p = 0.020$) compared to the reference group.

Table 19a: Socio-demographic characteristics and Witnessed Neglect

Variable	Yes (n=162) Freq	No (n=394) Freq	Test statistic χ^2	p-value
Age of caregiver			10.90	0.027
20-29	23 (23.7)	74 (76.3)		
30-39	77 (32.9)	157 (67.1)		
40-49	49 (27.5)	129 (72.5)		
50-59	8 (20.0)	32 (80.0)		
60-69	5 (71.4)	2 (28.6)		
Sex			14.23	<0.001
Female	152 (32.2)	320 (67.8)		
Male	10 (11.9)	74 (88.1)		
Marital status			2.11	0.725
Single	12 (33.3)	24 (66.7)		
Married	131 (29.1)	319 (70.9)		
Separated	3 (17.6)	14 (82.4)		
Divorced	5 (23.8)	16 (76.2)		
Widowed	11 (34.4)	21 (65.6)		
Level of Education			22.47	<0.001
Tertiary	76 (25.1)	227 (74.9)		
Secondary	78 (40.6)	114 (59.4)		
Primary	6 (15.0)	34 (85.0)		
No Formal Education	2 (9.5)	19 (90.5)		
Spouse Education			4.90	0.176
Tertiary	83 (30.0)	194 (70.0)		
Secondary	43 (31.4)	94 (68.6)		
Primary	5 (15.6)	27 (84.4)		
No Formal Education	0 (0.0)	4 (100.0)		
Occupation			8.39	0.077
Skill level 2	19 (25.3)	56 (74.7)		
Skill level 3	34 (23.9)	108 (76.1)		
Skill level 4	62 (37.3)	104 (62.7)		
Skill level 5	45 (27.6)	118 (72.4)		
Skill level 6	2 (20.0)	8 (80.0)		
Spouse Occupation			12.41	0.014
Skill level 2	45 (35.4)	82 (64.6)		
Skill level 3	7 (14.6)	41 (85.4)		
Skill level 4	65 (32.2)	137 (67.8)		
Skill level 5	12 (17.9)	55 (82.1)		
Skill level 6	2 (33.3)	4 (66.7)		

Ethnic group			12.083	0.001
Non-Edo indigenes	29 (18.4)	129 (81.6)		
Edo indigenes	133 (33.2)	268 (66.8)		

Table 19b: Socio-demographic characteristics and Witnessed Neglect

Variable	Yes (n=162) Freq	No (n=394) Freq	Test statistic χ^2	p-value
Spouse's Ethnicity			2.911	0.096
Non-Edo indigenes	34 (23.8)	109 (76.2)		
Edo indigenes	98 (31.6)	212 (68.4)		
Religion			3.02	0.231
Christianity	157 (29.8)	369 (70.2)		
Islam	3 (13.0)	20 (87.0)		
African Traditional Religion	2 (28.6)	5 (71.4)		
Marriage type			4.01	0.052
Monogamous	126 (30.3)	290 (69.7)		
Polygamous	5 (14.3)	30 (85.7)		
Family type			1.16	0.326
Nuclear	151 (29.8)	356 (70.2)		
Extended	11 (22.4)	38 (77.6)		
Monthly income			11.63	0.003
<70,000	8 (12.7)	55 (87.3)		
70,000-139,999	100 (33.8)	196 (66.2)		
≥140,000	54 (27.4)	143 (72.6)		
Spouse's income			10.70	0.005
<70,000	3 (8.8)	31 (91.2)		
70,000-139,999	50 (26.3)	140 (73.7)		
≥140,000	78 (34.5)	148 (65.5)		
Number of children			0.75	0.398
≤3	129 (28.4)	326 (71.6)		
>3	33 (32.7)	68 (67.3)		
Age of youngest child			8.77	0.066
<2	23 (21.9)	82 (78.1)		
2-5	69 (27.5)	182 (72.5)		
6-10	32 (30.5)	73 (69.5)		
11-15	29 (41.4)	41 (58.6)		
16-17	9 (36.0)	16 (64.0)		
Relationship to child			18.89	<0.001
Mother	145 (31.9)	310 (68.1)		
Father	9 (11.0)	73 (89.0)		
Others	8 (42.1)	11 (58.9)		
Household size			0.00	1.000
≤5	134 (29.1)	326 (70.9)		
>5	28 (29.2)	68 (70.8)		
Socio-economic status			12.38	0.002

High	55 (26.2)	155 (73.8)
Middle	104 (33.8)	204 (66.2)
Low	3 (7.9)	35 (92.1)

Child neglect was significantly associated with caregiver age ($p=0.027$), sex ($p<0.001$), level of education ($p<0.001$), spouse's occupation ($p=0.014$), monthly income ($p=0.003$), spouse's income ($p=0.005$), relationship to child ($p<0.001$), and socio-economic status ($p=0.002$). A general upward trend is seen with the age of the youngest child, with neglect rising from 21.9% in the <2 age group to 41.4% in the 11–15 age group. Female caregivers reported a much higher prevalence of witnessed neglect (32.2%) compared to male caregivers (11.9%). Additionally, neglect was most frequently witnessed in middle socio-economic status households (33.8%).

Table 20: Predictors of Witnessed Child Neglect

Predictors	β	Odds Ratio	95% CI Lower	95% CI Upper	p-value
Age of caregiver	0.018	1.018	0.988	1.050	0.246
Spouse's income (₦)					
<70,000	-1.379	0.252	0.066	0.965	0.044
70,000–139,999	-0.641	0.527	0.295	0.941	0.030
≥140,000*		1			
Level of Education					
Tertiary	0.157	1.170	0.161	8.499	0.876
Secondary	0.449	1.567	0.245	10.028	0.636
Primary	0.028	1.029	0.061	17.255	0.984
No Formal Education*		1			

Nagelkerke $R^2 = 18.2\%$

In the model predicting neglect, the spouse's monthly income was a significant predictor. Specifically, having a spouse with a monthly income of <70,000 was associated with 74.8% lower odds of neglect (aOR = 0.252, 95% CI: 0.066–0.965, $p = 0.044$) compared to the reference group of ≥140,000. For every unit increase in the caregiver's age, there is a 1.8% increase in the odds of neglect (aOR = 1.018), which was not statistically significant (95% CI: 0.988–1.050, $p = 0.246$).

Table 21a: Socio-demographic characteristics and Witnessed Child labour

Variable	Yes (n=150) Freq	No (n=406) Freq	Test statistic χ^2	p-value
Age of caregiver			7.88	0.094
20-29	18 (18.6)	79 (81.4)		
30-39	60 (25.6)	174 (74.4)		
40-49	57 (32.0)	121 (68.0)		
50-59	14 (35.0)	26 (65.0)		
60-69	1 (14.3)	6 (85.7)		
Sex			6.65	0.011
Female	137 (29.0)	335 (71.0)		
Male	13 (15.5)	71 (84.5)		
Marital status			4.07	0.401
Single	9 (25.0)	27 (75.0)		
Married	118 (26.2)	332 (73.8)		
Separated	3 (17.6)	14 (82.4)		
Divorced	8 (38.1)	13 (61.9)		
Widowed	12 (37.5)	20 (62.5)		
Level of Education			7.52	0.076
Tertiary	78 (25.7)	225 (74.3)		
Secondary	52 (27.1)	140 (72.9)		
Primary	9 (22.5)	31 (77.5)		
No Formal Education	11 (52.4)	10 (47.6)		
Spouse Education			4.19	0.233
Tertiary	73 (26.4)	204 (73.6)		
Secondary	31 (22.6)	106 (77.4)		
Primary	12 (37.5)	20 (62.5)		
No Formal Education	2 (50.0)	2 (50.0)		
Occupation			6.82	0.144
Skill level 2	26 (34.7)	49 (65.3)		
Skill level 3	41 (28.9)	101 (71.1)		
Skill level 4	48 (28.9)	118 (71.1)		
Skill level 5	33 (20.2)	130 (79.8)		
Skill level 6	2 (20.0)	8 (80.0)		
Spouse Occupation			6.45	0.166
Skill level 2	41 (32.3)	86 (67.7)		
Skill level 3	14 (29.2)	34 (70.8)		
Skill level 4	42 (20.8)	160 (79.2)		
Skill level 5	20 (29.9)	47 (70.1)		
Skill level 6	1 (16.7)	5 (83.3)		
Ethnic group			22.543	<0.001
Non-Edo indigenes	20 (12.7)	138 (87.3)		
Edo indigenes	130 (32.4)	271 (67.6)		

Table 21b: Socio-demographic characteristics and Witnessed Child labour

Variable	Yes (n=150) Freq	No (n=406) Freq	Test statistic χ^2	p-value
Spouse's Ethnicity			0.560	0.491
Non-Edo indigenes	34 (23.8)	109 (76.2)		
Edo indigenes	84 (27.1)	226 (72.9)		
Religion			9.29	0.011
Christianity	142 (27.0)	384 (73.0)		
Islam	3 (13.0)	20 (87.0)		
African Traditional Religion	5 (71.4)	2 (28.6)		
Marriage type			3.76	0.070
Monogamous	104 (25.0)	312 (75.0)		
Polygamous	14 (40.0)	21 (60.0)		
Family type			2.60	0.128
Nuclear	132 (26.0)	375 (74.0)		
Extended	18 (36.7)	31 (63.3)		
Monthly income (₦)			0.001	1.000
<70,000	17 (27.0)	46 (73.0)		
70,000-139,999	80 (27.0)	216 (73.0)		
≥140,000	53 (26.9)	144 (73.1)		
Spouse's income (₦)			6.23	0.045
<70,000	5 (14.7)	29 (85.3)		
70,000-139,999	43 (22.6)	147 (77.4)		
≥140,000	70 (31.0)	156 (69.0)		
Number of children			5.84	0.019
≤3	113 (24.8)	342 (75.2)		
>3	37 (36.6)	64 (63.4)		
Age of youngest child			21.20	<0.001
<2	13 (12.4)	92 (87.6)		
2-5	68 (27.1)	183 (72.9)		
6-10	30 (28.6)	75 (71.4)		
11-15	28 (40.0)	42 (60.0)		
16-17	11 (44.0)	14 (56.0)		
Relationship to child			10.79	0.030
Mother	132 (29.0)	323 (71.0)		
Father	13 (15.9)	69 (84.1)		
Others	5 (26.3)	14 (73.7)		
Household size			2.38	0.130
≤5	118 (25.7)	342 (74.3)		
>5	32 (33.3)	64 (66.7)		
Socio-economic status			5.38	0.068
High	62 (29.5)	148 (70.5)		
Middle	73 (23.7)	235 (76.3)		
Low	15 (39.5)	23 (60.5)		

The bivariate analysis reveals statistically significant associations between witnessed child labour and caregiver sex, ethnic group, religion, spouse's income, number of children, age of the youngest child, and relationship to the child. Female caregivers (29.0%) witnessed significantly more child labour than male caregivers (15.5%, $p=0.011$). Edo indigenes (32.2%) reported a higher frequency of child labour than non-Edo indigenes (22.3%, $p=0.010$). Religion ($p=0.011$) is significant, with practitioners of African Traditional Religion reporting the highest prevalence (71.4%) compared to Christians (27.0%) and Muslims (13.0%). An upward trend is observed with the spouse's income ($p=0.045$), where witnessed child labour increases from 14.7% for those earning $< \text{₦}70,000$ to 31.0% for those earning $\geq \text{₦}140,000$. Households with >3 children (36.6%) witnessed significantly more child labour than those with ≤ 3 children (24.8%, $p=0.019$). The age of the youngest child ($p<0.001$) displays a strong upward trend; the prevalence of witnessed child labour steadily rises as the child's age increases, going from 12.4% for children <2 years to 44.0% for children aged 16–17 years. Finally, the relationship to the child ($p=0.030$) is significant, with mothers (29.0%) reporting much higher frequencies than fathers (15.9%).

Table 22: Predictors of witnessed Child Labour

Predictors	β	Odds Ratio	95% CI Lower	95% CI Upper	p-value
Ethnic group					
Non-Edo indigenes	-0.518	0.595	0.370	0.958	0.033
Edo indigenes*		1			
Religion					
Christianity	-2.433	0.088	0.010	0.806	0.031
Islam	-3.168	0.042	0.003	0.612	0.020
African Traditional Religion*		1			
Spouse's monthly income (₦)					
<70,000	-1.147	0.317	0.106	0.953	0.041
70,000–139,999	-0.586	0.557	0.338	0.917	0.021
≥140,000*		1			
Number of children					
≤3	-0.625	0.535	0.288	0.993	0.047
>3*		1			

Nagelkerke $R^2 = 12.9\%$

In the multivariate logistic regression model predicting child labour, significant predictors include the ethnic group, religion, spouse's monthly income, and the number of children in the household. Non-Edo indigenes have 40.5% lower odds of witnessing child labour (aOR=0.595, 95% CI: 0.370–0.958, $p=0.033$) compared to Edo indigenes. Regarding religion, when compared to the African Traditional Religion reference group, both Christianity (aOR=0.088, 95% CI: 0.010–0.806, $p=0.031$) and Islam (aOR=0.042, 95% CI: 0.003–0.612, $p=0.020$) are associated with significantly lower odds of child labour being witnessed. The spouse's monthly income is similarly a significant predictor; caregivers whose spouses earn <70,000 have 68.3% lower odds (aOR=0.317, 95% CI: 0.106–0.953, $p=0.041$), and those earning 70,000–139,999 have 44.3% lower odds (aOR=0.557, 95% CI: 0.338–0.917, $p=0.021$) compared to the ≥140,000 reference group. Finally, having ≤3 children is significantly protective, decreasing the odds of witnessing child labour by 46.5% (aOR=0.535, 95% CI: 0.288–0.993, $p=0.047$) relative to households with >3 children.

**SECTION E: PRACTICES AND CONTROL METHODS OF CHILD INJURY AND
VIOLENCE.**

Table 23: Practices and control methods of child injury and violence

Variable	Frequency(n=572)	Percent
Staircase in the house	190	33.2
Staircase has a guardrail (n =190)	155	81.6
Staircase with adequate lighting (n =190)	128	64.2
Location of the kitchen		
Inside the house	448	78.3
Outside the house	124	21.7
Abuse alcohol in front of children	114	19.9
Smoking in front of children	86	15.0
Medicines within children's reach	165	28.8
Flammable materials within children's reach	138	24.1
Children have access to small beads	124	21.7
Children play unsupervised	224	39.2
Children have access to stored chemicals	106	18.5

The most common safety practice or environmental factor reported was having the kitchen located inside the house 448 (78.3%), 190(33.2%) had a staircase in their house, with 155 (81.6%) of those with a staircase had a guardrail while only 128 (64.2%) reported having a staircase with adequate lighting. Negative practices included 224 (39.2%) of caregivers allowing children to play unsupervised, abusing alcohol in front of children 114 (19.9%) and 165(28.8%) leaving medicines within children's reach. Smoking in front of children was the least frequent negative practice 86 (15.0%).

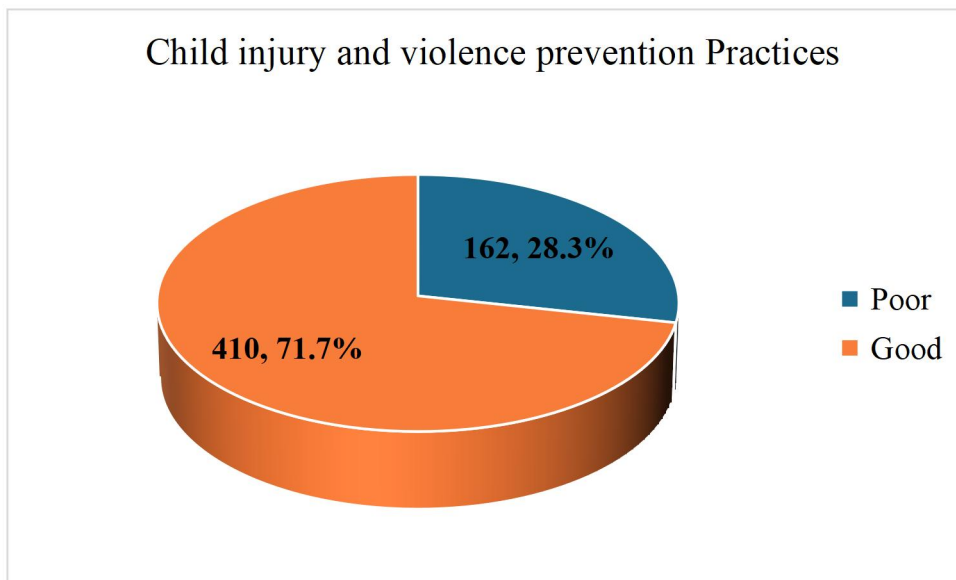


Fig 4: Child injury and violence prevention Practices

Overall, 410 (71.7%) of caregivers demonstrated good safety practices.

Table 24a: Socio-demographic characteristics and Child injury and violence prevention Practices

Variable	Good (n=410) Freq	Poor (n=162) Freq	Test statistic χ^2	p-value
Age of caregiver			12.031	0.017
20-29	80 (80.8)	19 (19.2)		
30-39	176 (73.0)	65 (27.0)		
40-49	119 (64.3)	66 (35.7)		
50-59	28 (70.0)	12 (30.0)		
60-69	7 (100.0)	0 (0.0)		
Sex			6.828	0.010
Female	336 (69.6)	147 (30.4)		
Male	74 (83.1)	15 (16.9)		
Marital status			14.822	0.005
Single	36 (97.3)	1 (2.7)		
Married	324 (69.7)	141 (30.3)		
Separated	14 (82.4)	3 (17.6)		
Divorced	13 (61.9)	8 (38.1)		
Widowed	23 (71.9)	9 (28.1)		
Level of Education			121.055	<0.001
Tertiary	264 (83.5)	52 (16.5)		
Secondary	137 (70.3)	58 (29.7)		
Primary	8 (20.0)	32 (80.0)		
No Formal Education	1 (4.8)	20 (95.2)		
Spouse_Level of Education			104.980	<0.001
Tertiary	245 (85.1)	43 (14.9)		
Secondary	74 (52.5)	67 (47.5)		
Primary	5 (15.6)	27 (84.4)		
No Formal Education	0 (0.0)	4 (100.0)		
Occupation of Caregiver			87.757	<0.001
Skill level 2	66 (83.5)	13 (16.5)		
Skill level 3	128 (85.9)	21 (14.1)		
Skill level 4	135 (80.4)	33 (19.6)		
Skill level 5	73 (44.2)	92 (55.8)		
Skill level 6	8 (72.7)	3 (27.3)		

Table 24b: Socio-demographic characteristics and Child injury and violence prevention Practices

Variable	Good (n=410) Freq	Poor (n=162) Freq	Test statistic χ^2	p-value
Spouse's occupation			52.649	<0.001
Skill level 2	104 (80.0)	26 (20.0)		
Skill level 3	39 (78.0)	11 (22.0)		
Skill level 4	154 (72.6)	58 (27.4)		
Skill level 5	22 (32.8)	45 (67.2)		
Skill level 6	5 (83.3)	1 (16.7)		
Ethnicity			0.938	0.353
Non-Edo indigenes	110 (68.8)	50 (31.2)		
Edo indigenes	300 (72.8)	112 (27.2)		
Spouse Ethnicity			1.620	0.234
Non-Edo indigenes	109 (73.6)	39 (26.4)		
Edo indigenes	215 (67.8)	102 (32.2)		
Religion			12.436*	0.002
Christianity	395 (73.3)	144 (26.7)		
Islam	11 (44.0)	14 (56.0)		
African Traditional Religion	3 (42.9)	4 (57.1)		
Atheism	1 (100.0)	0 (0.0)		
Marriage type			49.615	<0.001
Monogamous	319 (74.0)	112 (26.0)		
Polygamous	6 (17.1)	29 (82.9)		
Spouse's income (₦)			34.372	<0.001
<70,000	21 (58.3)	15 (41.7)		
70,000–139,999	113 (57.1)	85 (42.9)		
>140,000	190 (82.3)	41 (17.7)		
Monthly income (₦)			86.324	<0.001
<70000	15 (23.4)	49 (76.6)		
70000-139999	226 (74.6)	77 (25.4)		
>140000	169 (82.4)	36 (17.6)		
Number of children			62.040	<0.001
≤3	367 (78.8)	99 (21.2)		
>3	43 (40.6)	63 (59.4)		
Age of youngest child			15.748	<0.001
<2	82 (77.4)	24 (22.6)		
2-5	168 (63.6)	96 (36.4)		
6-10	84 (79.2)	22 (20.8)		
11-15	56 (78.9)	15 (21.1)		
16-17	20 (80.0)	5 (20.0)		
Household size			70.071	<0.001
≤5	372 (79.0)	99 (21.0)		
>5	38 (37.6)	63 (62.4)		
Knowledge			51.933	<0.001
Good	303 (81.7)	68 (18.3)		
Poor	107 (53.2)	94 (46.8)		
Attitude			53.193	<0.001
Positive	296 (82.2)	64 (17.8)		
Negative	114 (53.8)	98 (46.2)		

*- Fisher's Exact

All socio-demographic variables examined, except ethnicity and spouse's ethnicity, were statistically significant with practice. The age of the caregiver ($p=0.017$) shows a significant association with a trend where good practice initially decreasing as age increases up to 49 years before rising again in older groups, while sex ($p=0.010$), marital status ($p=0.005$), and occupation ($p<0.001$) also demonstrate significant associations. A clear decreasing trend is observed for both the caregiver's education level ($p<0.001$) and the spouse's education level ($p = <0.001$), where the proportion of good practice drops sharply as formal education levels decrease. In contrast, monthly income ($p<0.001$) shows a positive increasing trend, with good practice rising significantly as income levels move from the lowest to the highest brackets. Household dynamics also play a significant role, as the number of children ($p<0.001$), the age of the youngest child ($p<0.001$), and total household size ($p<0.001$) were significantly associated with the outcome. Specifically, a decreasing trend in good practice is seen as the number of children increases beyond three and as the total household size expands beyond five members. Also, caregivers with good knowledge of child injury and violence prevention had a higher proportion of those with good practice (81.7%) and caregivers with positive attitude also made up a higher proportion of those with good practice (82.3%) and these findings were statistically significant.

Table 25: Predictors of Good Child injury and violence prevention Practices

Predictors	β	Odds ratio	95% CI for OR Lower	95% CI for OR Upper	p-value
Age of caregiver	-0.042	0.959	0.919	1.001	0.055
Sex of caregiver					
Female	-3.029	0.048	0.002	1.247	0.068
Male*		1			
Level of Education					
Tertiary	1.975	7.208	0.614	84.662	0.116
Secondary	2.487	12.029	1.084	133.511	0.043
Primary	2.634	13.929	0.759	255.765	0.076
No Formal Education*		1			
Occupation					
Skill level 2	1.728	5.631	0.564	56.193	0.141
Skill level 3	0.912	2.489	0.272	22.794	0.420
Skill level 4	1.412	4.105	0.493	34.159	0.191
Skill level 5	0.841	2.318	0.280	19.197	0.436
Skill level 6*		1			
Spouse occupation					
Skill level 2	-3.555	0.029	0.002	0.432	0.010
Skill level 3	-2.563	0.077	0.005	1.121	0.061
Skill level 4	-1.670	0.188	0.016	2.269	0.189
Skill level 5	-2.295	0.101	0.008	1.314	0.080
Skill level 6*		1			
Marriage type					
Monogamous	0.793	2.209	0.442	11.037	0.334
Polygamous*		1			
Monthly income (₦)					
<70,000	-1.503	0.223	0.069	0.723	0.012
70,000–139,999	0.439	1.551	0.800	3.008	0.194
>140,000*		1			
Spouse's income (₦)					
<70,000	-1.473	0.229	0.067	0.785	0.019
70,000–139,999	-1.152	0.316	0.152	0.655	0.002
>140,000*		1			
Number of children					
≤3	0.545	1.724	0.786	3.783	0.174
>3*		1			
Age of child					
<2 years	-0.286	0.751	0.162	3.476	0.715
2–5 years	-0.479	0.620	0.153	2.504	0.502
6–10 years	0.564	1.757	0.413	7.468	0.445
11–15 years	0.406	1.501	0.333	6.777	0.597
16–17 years*		1			
Knowledge					
Poor	-0.802	0.448	0.249	0.809	0.008
Good*		1			
Attitude					
Negative	-0.012	0.988	0.533	1.833	0.971
Positive*		1			

*** Reference, CI – Confidence interval, OR – Odds ratio, R^2 = 35.4 – 50.0%**

Significant predictors of good practice of child injury and violence prevention in the multivariate analysis included secondary education ($p = 0.043$), spouse's occupation at skill level 2 ($p = 0.010$), monthly income below ₦70,000 ($p = 0.012$), and spouse's monthly income both below ₦70,000 ($p = 0.019$) and between ₦70,000 and ₦139,999 ($p = 0.002$).

Caregivers with secondary education were 12.0 times more likely to demonstrate good preventive practices compared to those with no formal education (OR = 12.029, 95% CI: 1.084–133.511, $p = 0.043$), a statistically significant finding. In contrast, caregivers whose spouses held skill level 2 occupations had a 97.1% decrease in the odds of good practice relative to those with spouses in skill level 6 occupations (OR = 0.029, 95% CI: 0.002–0.432, $p = 0.010$). Income emerged as a consistent independent predictor of practice. Caregivers earning less than ₦70,000 monthly had a 77.7% decrease in the odds of good practice compared to those earning over ₦140,000 (OR = 0.223, 95% CI: 0.069–0.723, $p = 0.012$). Similarly, spousal income demonstrated a protective effect: when the spouse earned less than ₦70,000, the odds of good practice were reduced by 77.1% (OR = 0.229, 95% CI: 0.067–0.785, $p = 0.019$), and when the spouse earned between ₦70,000 and ₦139,999, the odds were reduced by 68.4% (OR = 0.316, 95% CI: 0.152–0.655, $p = 0.002$), both relative to spousal income exceeding ₦140,000.

Other variables in the model, including caregiver age, sex, tertiary education, primary education, occupation, marital status, number of children, and age of the youngest child, were not statistically significant as independent predictors of good practice. The model explained between 35.4% and 50.0% of the variance in preventive practice outcomes ($R^2 = 35.4$ –50.0%).

CHAPTER FIVE

DISCUSSION

This study assessed child injury and violence prevention among caregivers in Ovia North-East Local Government Area, Edo State. It focused on caregivers' knowledge, attitude, prevention practices, the types and frequency of child injury and violence witnessed, and the factors associated with child injury and violence prevention. The findings provide community-level evidence on child safety in a semi-urban and rural local government area where children are exposed to home hazards, road risks, harmful disciplinary practices, and weak formal reporting systems.

Caregivers' knowledge of child injury and violence prevention methods was assessed. The study found that all respondents had heard of child injury and child violence. Most caregivers correctly defined child injury and child violence, and the commonest source of information was common sense, followed by parents and friends, social media, books, and health workers. The finding shows that awareness was widespread, but the source of information was not always formal or technically reliable. This distinction is important because knowing that child injury and violence exist is not the same as understanding how to prevent them consistently in the home, school, road, and community environment. This finding is similar to the 2016 urban community-based study on Child injury and violence prevention amongst mothers in an urban community in Benin City, Nigeria, conducted in Egor Local Government Area, Edo State. The study found that a majority had good knowledge of child injury and violence prevention, although preventive practice remained inadequate.¹² The similarity may be due to the fact that both studies were conducted in Edo State, where caregivers are likely to share similar social exposure, family structures, media access, religious influence, and community understanding of common childhood hazards. However, the present study included a broader caregiver population in Ovia North-East LGA, not mothers alone, and this may explain why awareness appeared very wide across respondents. The finding also agrees with the 2023 cross-sectional study titled Child injuries in Lebanon: assessing mothers' injury prevention knowledge, attitude and practices, conducted among 264 mothers of under-five children in Lebanon. That study used systematic sampling and

questionnaire-based data collection, and found that many mothers had fair knowledge of injury prevention, while a sizeable group still had poor knowledge.⁶ The present finding appears stronger than the Lebanese finding, possibly because the current study assessed both injury and violence in a community where respondents may have been exposed to repeated informal warnings about domestic hazards, child abuse, road danger, and violence against children. The Lebanese study was also restricted mainly to unintentional injuries, while the present study covered child violence as well, which may have widened recognition of harmful events. A similar but less favourable pattern was reported in the 2025 descriptive cross-sectional study titled Knowledge, attitude and practices among caregivers regarding prevention of unintentional and accidental childhood injuries in preschool children, conducted in India among 192 caregivers of preschool children. The Indian study used convenience sampling and structured questionnaires, and found that caregivers had important knowledge gaps even when attitudes towards child safety were generally positive.¹⁹ The difference may be related to sampling method, local safety education exposure, and the fact that the Indian study focused on preschool accidental injuries, while the present study asked caregivers about a wider set of familiar domestic and violence-related risks. The very high awareness recorded in Ovia North-East LGA should not be interpreted as complete preparedness. Since common sense and informal social networks were leading sources of information, some caregivers may know the names of hazards without knowing the correct preventive action. A caregiver may recognise burns, falls, choking, poisoning, physical abuse, or female genital mutilation as harmful, but still keep kerosene within reach, allow unsupervised play, ignore unsafe roads, or use physical punishment. This creates a knowledge-quality problem rather than a simple awareness problem. Health education in the LGA should therefore move beyond general statements such as 'protect children' and should teach specific child-proofing behaviours. Primary health centres, schools, churches, mosques, market associations, and community groups should demonstrate how to store medicines, chemicals, blades, kerosene, matches, small beads, hot liquids, and electrical items safely. Caregivers should also be taught how to identify abuse, report abuse, and respond after injury. Using visual aids and constant repetitions at places where caregivers already gather, especially immunisation clinics, antenatal clinics, school meetings, religious women's groups, and community development meetings. The finding also shows why source of information matters. Information obtained from parents, friends, social media, or common sense may be useful for recognising danger, but it may also preserve wrong practices across generations. For example, a caregiver may have heard repeatedly that children are naturally prone to falling or that beating is a

normal way of correcting disobedience, and such ideas can weaken prevention even where general knowledge is good. Child safety messages should therefore correct misinformation without blaming caregivers, using simple examples from ordinary household life in Ovia North-East LGA.

Caregivers' attitude towards child injury and violence prevention practices was also assessed. The findings showed that many caregivers rejected the idea that injury is simply part of a child's learning process, recognised that injuries are preventable, supported the use of seatbelts, agreed that violent films can negatively influence children, supported road safety education, and accepted the importance of seeking medical care after injury and reporting child abuse. At the same time, some caregivers still agreed with statements suggesting harsh handling of children, while some remained neutral on harmful practices. This indicates that the attitude pattern was favourable overall, but not fully protective. This finding is comparable to the 2025 descriptive cross-sectional study in India, which examined 192 caregivers of preschool children. The study found generally positive attitudes to child safety despite persistent gaps in knowledge and practice.¹⁹ The similarity suggests that caregivers can emotionally agree with child safety messages even when their homes and daily routines do not fully reflect those beliefs. In both settings, caregivers may see child safety as desirable, but competing pressures such as work, poverty, household size, poor housing conditions, and limited supervision time can weaken actual prevention. The finding also shares features with the 2023 cross-sectional study in Lebanon, which included 264 mothers of under-five children. That study found fair maternal knowledge and varying injury prevention practices, showing that attitude alone was not enough to guarantee safe behaviour.⁶ The similarity may be because both Lebanon and Nigeria have family-centred child care arrangements where mothers and caregivers are expected to protect children, but may not always have the resources, space, or support needed to translate good intentions into consistent preventive action. The finding differs from the 2025 descriptive cross-sectional study conducted in Oyo State, Nigeria, among 200 mothers of under-five children. That study reported strong fatalistic beliefs, with many mothers believing that only God can protect children and that supervision cannot prevent injuries.¹⁸ In the present study, many caregivers accepted that injury is preventable and supported road safety, medical care, and child protection policies. This difference may reflect variation in health education exposure, urbanisation level, religious interpretation, community safety messaging, and how questions were framed. In Ovia North-East LGA, the high level of schooling among many respondents may also have contributed to a more preventive attitude. A favourable attitude is important because child safety begins with the caregiver's perception of responsibility. When caregivers believe that injuries are

preventable, they are more likely to supervise children, remove hazards, seek care early, and report abuse. However, when violence is normalised as discipline, children remain exposed to repeated physical and emotional harm. Violence against children has effects beyond immediate pain. It can contribute to fear, withdrawal, poor school performance, mental health problems, future violent behaviour, and long-term social instability.^{5,28,29} Health workers and community leaders should challenge harmful beliefs that make injury and violence appear normal. Messages should separate discipline from violence, explain that supervision can prevent injury, and make reporting abuse a community responsibility rather than a family embarrassment. Faith leaders and traditional leaders should be deliberately included because they influence how families interpret discipline, protection, obedience, and child rights. The attitude findings also point to the need for repeated community dialogue rather than one-off lectures. A caregiver who was raised with harsh discipline may accept non-violent parenting in theory but return to physical punishment under stress. Therefore, attitude change should be reinforced through schools, worship centres, health facilities, and community associations until non-violent discipline and active supervision become accepted community norms.

Practices of childhood injury and violence prevention, including control methods among caregivers, were assessed. The findings showed that many caregivers had good overall prevention practices, but unsafe household conditions and behaviours were still present. Some households had staircases without adequate lighting or guardrails, medicines and flammable materials within children's reach, access to small beads and chemicals, children playing without supervision, and alcohol or smoking exposure in front of children. These findings show that while the overall practice score appeared favourable, important preventable risks remained inside the home. This finding is better than that of the 2016 Child injury and violence prevention amongst mothers in Egor local government area in Benin City, Nigeria. That study found poor practice among many mothers despite good knowledge.¹² The present study may have performed better because of differences in time, community exposure, caregiver composition, education level, and increasing public discussion on child abuse and safety since the earlier study. However, both studies point to the same concern: knowledge does not automatically remove hazards from the child's environment. The finding is also better than the 2020 cross-sectional descriptive study titled Mothers' knowledge and subjective practice toward the most common domestic injuries among under-five children, conducted in Mansoura, Egypt, among 100 mothers from urban and rural areas. That study used home visits and structured questionnaires, and found that mothers' subjective practices were largely improper, with unsafe home environments

contributing to many domestic injuries.²³ The difference may be because the Mansoura study focused strongly on domestic injuries among under-five children, while the present study measured broader safety practices across different child ages and household contexts. Direct home observation in the Egyptian study may also have captured more hazards than self-report in the present study. The present finding is supported by the 2023 qualitative and quantitative study titled Caregiver accounts of unintentional childhood injury events in rural Uganda, conducted among 56 caregivers. That study documented 86 unintentional injury events and found that poor supervision and environmental hazards were major contributors to injuries, especially during play or while children accompanied caregivers to farms.⁸ This closely reflects the finding that unsupervised play and household hazards remain important. The similarity may be due to shared realities across many African settings, where caregivers combine childcare with trading, farming, domestic labour, transport stress, and other responsibilities that reduce direct supervision. The practice findings mean that household safety interventions should be concrete and low-cost. Caregivers do not only need warnings, they need simple routines they can repeat. Medicines should be stored high or locked away, kerosene and chemicals should be kept away from food and children's reach, hot water and cooking pots should be handled away from children, small beads and coins should be removed from play areas, and younger children should not be left near stairs, roads, wells, open water containers, sockets, or sharp objects. Where households have staircases, lighting and guardrails should be promoted as basic safety requirements. Health workers should use home-safety checklists during clinic counselling and community outreach. Caregivers should be taught practical first-aid education to know what to do immediately after burns, cuts, choking, poisoning, falls, suspected fractures, and suspected abuse. Early correct action can reduce complications, while delays, unsafe traditional remedies, silence after abuse, and wrong first-aid practices can worsen injury outcomes. Primary health centres should include child injury first aid in routine health talks, and schools should teach age-appropriate safety messages to children. The practice findings should also be interpreted with caution because reported good practice may not always represent consistent practice inside the home. Caregivers may know or report what is socially acceptable, but the daily realities of work, poverty, crowded housing, fatigue, and competing domestic responsibilities can make prevention inconsistent. This means that interventions should not assume that knowledge alone has solved the problem. Follow-up counselling, demonstration, environmental inspection, and community support are still needed.

The types and frequency of child injury and violence witnessed by caregivers were identified. The study found that child injury was commonly reported, with falls being the leading injury, followed by cuts and burns. Less common but important injuries included choking, road traffic accidents, poisoning, animal bites, and electric shock. Most reported injuries occurred a limited number of times, but the presence of repeated injury among some children indicates that certain households may have persistent environmental or supervision risks. This finding is similar to the 2023 multi-centre prospective injury registry study titled Fall injuries in Sub-Saharan Africa, conducted across 23 health facilities in Malawi and Tanzania. The study found that falls were among the major causes of trauma, particularly among children and young people.³ The similarity is expected because falls are closely linked to children's movement, play, climbing, poor supervision, unsafe household structures, and unsafe play spaces. The reported presence of unsafe staircases, inadequate lighting, and unsupervised play provides a plausible local explanation for why falls were prominent. The finding also agrees with the 2023 Nigerian study conducted at the National Orthopaedic Hospital in Lagos and reported falls as a major cause of paediatric musculoskeletal injuries, with many injuries occurring at home.¹⁰ The agreement between the Lagos hospital-based evidence and the Ovia North-East community-based evidence suggests that the home remains a central setting for childhood injury in Nigeria. The difference is that the Lagos study captured children who reached a trauma centre, while the present study captured caregiver-reported community experiences, including injuries that may never reach a hospital. The finding also relates to the 2024 tertiary hospital study in Nigeria on Pattern of unintentional injuries in children seen in a tertiary hospital in Nigeria. The study documented patterns of unintentional injuries among children attending a tertiary facility and reinforced the importance of falls, road traffic injuries, burns, and other preventable causes.⁴² The present study is consistent with this pattern but adds a community prevention dimension by identifying household practices that may precede these injuries. Caregivers frequently reported witnessing violence against children, with physical abuse being the most common form, followed by emotional abuse, neglect, child labour, bullying, sexual abuse, and female genital mutilation. This agrees with the 2022 national survey titled Violence against children in Nigeria, conducted by the National Population Commission of Nigeria (NPopC) and UNICEF Nigeria. The national survey documented the high burden of physical, emotional, and sexual violence experienced by Nigerian children before adulthood.⁵ The similarity suggests that Ovia North-East LGA reflects a wider Nigerian pattern where violence against children is often normalised, underreported, or treated as private family discipline rather than a preventable public health and child protection problem. The

violence finding is also consistent with the 2021 multi-country Demographic and Health Survey Analysis on violent discipline against children in sub-Saharan Africa. The study used multi-country DHS data and found that violent discipline remains common across many sub-Saharan African countries.²⁶ The similarity may be due to shared social norms around corporal punishment, obedience, authority, and silence around domestic violence. In Ovia North-East LGA, the reported support for government policies against child labour and abuse is encouraging, but high witnessing of violence shows that policy acceptance has not yet translated into full protection. These findings require prevention to be treated as a local child survival and development issue. Falls, burns, cuts, poisoning, choking, road injuries, and abuse are not isolated accidents; they represent repeated exposure to unsafe physical and social environments. When injury and violence are common, children face pain, disability, fear, missed school, family financial burden, and avoidable healthcare use. Local government authorities should therefore strengthen school health programmes, PHC reporting, social welfare referral, road safety education, and community child protection systems. The pattern of injury and violence also suggests that prevention should be age-sensitive. Younger children are more vulnerable to falls, burns, choking, poisoning, and drowning-related household hazards because of their curiosity and limited ability to recognise danger. Older children may be more exposed to road traffic risks, bullying, child labour, harsh discipline, and sexual violence. Caregiver education should therefore be tailored to the child's stage of development rather than delivered as a single general message for all children.

Factors associated with child injury and violence prevention among caregivers were identified. The study found that caregiver age, education, marital variables, marriage type, occupation, income, number of children, household size, and socioeconomic status were important across knowledge, attitude, and practice. Younger caregivers, caregivers with higher education, those with higher income, those with fewer children, and those in smaller households generally showed better knowledge, attitude, or practice. After adjustment, age, education, and monogamous marriage type remained important predictors of good knowledge; monogamous marriage type remained a significant predictor of good attitude; and caregiver occupation remained a significant predictor of good practice.

The association between education and better knowledge is consistent with the 2023 cross-sectional study in Lebanon among 264 mothers of under-five children, which found that maternal knowledge and prevention practices varied with caregiver characteristics.⁶ It is also consistent with the 2025

descriptive cross-sectional study in India among 192 caregivers of preschool children, where gaps in knowledge and practice reflected the need for structured caregiver education.¹⁹ Education likely improves access to health information, ability to understand risk, willingness to question harmful norms, and capacity to apply safety instructions in the home. The role of household size and number of children is also important. Larger households and households with more children had poorer knowledge, attitude, or practice patterns in this study. This is plausible because supervision becomes more difficult when many children share the same home, when caregiving is spread across multiple adults, or when domestic work competes with child monitoring. The 2023 Uganda study among 56 caregivers supports this interpretation because injuries often occurred when children were unsupervised or when caregivers were occupied with other tasks.⁸ In Ovia North-East LGA, large households may increase the number of hazards, reduce attention per child, and make responsibility for child safety less clear.

The finding on occupation as a predictor of good practice is also reasonable. Occupation reflects daily routine, income stability, time spent at home, exposure to information, and ability to modify the household environment. Caregivers with more stable or skilled work may have better access to safety information and resources, but some occupations may also reduce supervision time. The 2023 study in Edo State titled Assessment of WHO/UNICEF key household practices in a rural community in Edo State, Nigeria, examined household practices and showed that caregiver and household factors influence child health practices.²⁷ The present study extends this by showing that occupation may shape practical safety behaviour, not just awareness. Marriage type was a notable predictor of both good knowledge and good attitude. Caregivers in monogamous unions showed better outcomes compared with those in polygamous unions. This may reflect differences in household structure, decision-making, resource distribution, emotional burden, and clarity of responsibility for children. In more complex family settings, multiple caregivers may assume that someone else is watching the child, while conflict or competition for resources may reduce consistent supervision. This does not mean that polygamous households are inherently unsafe, but it shows that larger or more complex family systems may require targeted safety counselling. The finding that age reduced the likelihood of good knowledge after adjustment may reflect generational differences in education, exposure to formal child protection messages, media use, and acceptance of modern safety practices. Older caregivers may rely more on experience and tradition, while younger caregivers may be more exposed to health workers, social media, school-based messages, and child rights information. This makes intergenerational

communication important. Older caregivers, grandparents, and senior household members should not be excluded from health education because they often supervise children and influence discipline practices. Households with lower income may be unable to afford safer housing, proper storage containers, secure cooking areas, transport to hospital, or school-based care. Even when they know what should be done, poverty may prevent action. Safety interventions should therefore not be designed as messages alone. Local authorities and NGOs should support low-cost household safety kits, community first-aid training, child protection referral desks, safer school routes, and neighbourhood supervision systems. Interventions should prioritise large households, lower-income households, households with many children, caregivers with limited schooling, and complex family structures. Child injury and violence prevention is shaped by individual knowledge, family organisation, household resources, community norms, and policy systems. A caregiver may have good intentions, but unsafe housing, poor income, harmful norms, lack of reporting systems, and weak community enforcement can still expose children to injury and violence. Prevention programmes in Ovia North-East LGA should therefore combine caregiver education with family counselling, community mobilisation, school involvement, PHC-based screening, and policy enforcement. The finding that several factors were associated with prevention also supports targeted programming. A uniform message for all caregivers will miss households where the risk is higher because of poverty, large family size, low education, unstable occupation, or complex marital arrangements. The LGA should identify vulnerable households through PHCs, schools, community health workers, and social welfare officers, then provide more intensive counselling and follow-up to those families. This approach is more likely to reduce injuries and violence than broad messages that reach everyone but change little.

CONCLUSION

This study found that caregivers in Ovia North-East LGA had widespread awareness and generally good knowledge of child injury and violence prevention, although much of their information came from informal sources rather than structured health education. Caregivers also demonstrated generally favourable attitudes towards prevention, medical care, road safety education, abuse reporting, and policies against child labour, but some harmful beliefs around harsh child handling and punishment were still present.

The study also found that prevention practices were generally good, but important household hazards remained. These included unsafe staircases, poor lighting, medicines and flammable materials within children's reach, access to small objects and chemicals, unsupervised play, and exposure to smoking or alcohol use in the home. Falls, cuts, and burns were the leading injury concerns, while physical abuse was the most commonly witnessed form of violence against children.

Factors associated with child injury and violence prevention included caregiver age, education, occupation, income, marriage type, number of children, household size, and socioeconomic status. After adjustment, age, education, marriage type, and occupation remained particularly important predictors across knowledge, attitude, and practice. The findings show that improving child safety in Ovia North-East LGA requires more than awareness creation. It requires practical home-safety education, non-violent discipline promotion, targeted support for vulnerable households, stronger reporting systems, and policy enforcement at the community level.

CONTRIBUTION TO KNOWLEDGE

This study contributes current community-level evidence on child injury and violence prevention among caregivers in Ovia North-East Local Government Area, Edo State. It provides local data on caregiver knowledge, attitude, practice, common child injury types, witnessed forms of violence, and the social factors associated with prevention. This is useful because community-level evidence on child injury and violence prevention in Ovia North-East LGA is limited.

The study also contributes by assessing child injury and child violence together. Many studies focus only on unintentional injuries or only on violence, but children experience both physical hazards and harmful social behaviours in the same household and community environment. By studying both, this research gives a fuller picture of child safety risks and prevention needs.

The study further contributes evidence that good awareness does not completely remove risk. Even with favourable knowledge and attitude, children were still exposed to falls, cuts, burns, unsupervised play, household hazards, and violence. This supports the need for interventions that move beyond information sharing to practical behaviour change and household safety support.

POLICY IMPLICATIONS OF STUDY FINDINGS

The findings support the need for a local child injury and violence prevention policy framework within Ovia North-East LGA. Child safety should be integrated into primary healthcare, school health services, community development activities, social welfare programming, and local government planning. Injury and violence prevention should not be treated only as a hospital issue because many risks begin inside the home and community before a child ever reaches a health facility.

Primary health centres should be formally used as routine child safety education points. During antenatal care, immunisation, child welfare clinics, outreach programmes, and school health visits, caregivers should receive structured counselling on home safety, supervision, first aid, road safety, poisoning prevention, burn prevention, and non-violent discipline. These messages should be harmonised across health facilities so that caregivers receive consistent information.

The LGA should also strengthen child protection reporting and referral pathways. Health workers, teachers, religious leaders, community leaders, and social welfare officers should know how to respond when child abuse, neglect, sexual abuse, child labour, female genital mutilation, or repeated injury is suspected. A clear referral pathway should link the family, school, PHC, social welfare unit, police where necessary, and appropriate child protection services.

Housing and environmental safety should be considered in local planning. Community health and environmental health officers can promote safe staircases, proper lighting, safe storage of chemicals and medicines, safer cooking spaces, and safer play environments. Road safety measures around schools, markets, and residential areas should also be strengthened because children are exposed to road traffic risk during play, school movement, and household errands.

The findings also justify targeted support for vulnerable households. Families with many children, large household sizes, low income, low education, and complex family arrangements should receive more intensive counselling and follow-up. Policies should be practical enough for low-income households, using low-cost safety solutions rather than recommendations that caregivers cannot afford.

RECOMMENDATIONS

To the Government and Ovia North-East Local Government Authority

Develop and fund a community-based child injury and violence prevention programme through primary health centres, schools, religious bodies, and community associations.

Create a clear local reporting and referral pathway for child abuse, neglect, sexual abuse, child labour, female genital mutilation, and repeated unexplained injury.

Support low-cost household safety campaigns focusing on safe storage of medicines, chemicals, kerosene, matches, sharp objects, small beads, and other choking hazards.

Strengthen road safety education and environmental safety measures around schools, markets, worship centres, and residential areas.

Include child injury and violence surveillance in PHC and school health records so that local trends can be monitored and acted upon.

To Healthcare Institutions and Health Workers

Integrate child injury and violence prevention education into antenatal clinics, immunisation clinics, child welfare clinics, school health programmes, and community outreach.

Use practical demonstrations, posters, and home-safety checklists instead of verbal health talks alone.

Prioritise counselling for caregivers from large households, households with many children, low-income homes, complex family structures, and caregivers with limited formal education.

Train health workers to identify signs of abuse, neglect, non-accidental injury, and repeated injury, and to refer appropriately.

Teach basic first aid for burns, cuts, poisoning, choking, falls, and road traffic injuries.

To Schools, Religious Bodies, and Community Leaders

Teach child safety, road safety, non-violent discipline, and abuse reporting through parent meetings, school health activities, sermons, and community gatherings.

Challenge harmful norms that justify beating, starvation, humiliation, forced labour, female genital mutilation, and silence after abuse.

Encourage community child safety committees to support early reporting, referral, and follow-up of suspected violence against children.

To Caregivers

Inspect the home regularly for hazards such as medicines, chemicals, kerosene, matches, sharp objects, hot liquids, small beads, exposed sockets, unsafe stairs, open water containers, and unsafe cooking areas.

Avoid leaving children unsupervised near roads, kitchens, staircases, wells, water containers, electrical points, sharp objects, chemicals, and fire sources.

Seek prompt medical care after serious injury and report suspected abuse, sexual violence, neglect, child labour, or female genital mutilation to appropriate authorities.

Use non-violent discipline and avoid beating, starvation, humiliation, threats, and other forms of physical or emotional abuse.

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APPENDIX I

INFORMED CONSENT FORM

TITLE OF STUDY:

Child injury and violence prevention among caregivers in Ovia North-East Local Government Area.

INSTITUTION:

Department of Public Health and Community Medicine, College of Medicine, University of Benin,
Benin City, Edo State, Nigeria.

PRINCIPAL INVESTIGATORS:

PARTICIPATION:

Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue your participation at any time without penalty or loss of benefits. The principal investigators may decide to withdraw you from the study if we are unable to obtain the necessary information.

INTRODUCTION:

We are conducting research to assess the knowledge, attitude, and practices of child injury and violence prevention methods amongst caregivers in Ovia North-East LGA.

PROCEDURES TO BE FOLLOWED:

If respondents agree to participate, they will be administered a questionnaire. This questionnaire will assess their knowledge, attitude, and practices of child injury and violence prevention methods.

BENEFITS:

Participants will contribute to important research that may help drive policies for better child injury and violence prevention in their community. The results of this study may also help in understanding the factors that are associated with child injury and violence and how to best mitigate these factors.

COMPENSATION:

Participants will not receive any financial compensation for their participation.

DURATION OF PARTICIPATION:

This study requires only the completion of a questionnaire. There will be no follow-up or additional information required.

WHO CAN PARTICIPATE IN THIS STUDY:

The study focuses on caregivers in Ovia North East LGA. Participants will be selected from different communities to ensure representation across various demographics.

ASSURANCE OF CONFIDENTIALITY OF VOLUNTEER'S IDENTITY:

Records related to your participation will remain confidential. Your name will not be used in any report resulting from this study. All questionnaires, computerized records, and data analysis will contain only a unique study number, not your name.

PERSONS AND PLACES FOR ANSWERS REGARDING YOUR RIGHTS AS A RESEARCH SUBJECT:

If you have any questions regarding the study or believe you have any research-related concerns, please contact:

Fisayo Suliah Aremu

Benin City, Edo State, Nigeria.

Phone number: +2348098990088

Email: fisayomlove@gmail.com

Daniel Osahenrhumwen Edomwonyi

Benin City, Edo State, Nigeria.

Phone number: +2347051881218

Email: dedomwonyi9@gmail.com

Ethics and Research Committee,

University of Benin Teaching Hospital,

Benin City.

Email: ubthresearchethics@gmail.com

Phone number: 07063331337

CERTIFICATION OF CONSENT

I, _____ having full capacity to consent for myself do thereby consent to my participation in the research study.

The methods and means by which the study will be conducted have been explained to me by Ethical Committee. I have been given the opportunity to ask questions concerning this investigational study, and any such questions have been answered to my full and complete satisfaction.

I understand that I may at any time during the course of this study revoke this consent and withdraw myself from the study without prejudice.

Participant's Signature: _____

Date: _____

APPENDIX II (QUESTIONNAIRE DESIGN)

DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY MEDICINE

SCHOOL OF MEDICINE, UNIVERSITY OF BENIN

**CHILD INJURY AND VIOLENCE PREVENTION AMONG CAREGIVERS IN OVIA
NORTH-EAST LGA**

INFORMED CONSENT STATEMENT

Dear Respondent, We are 600 level medical students of the University of Benin, Benin City, conducting a research study on child injury and violence prevention among caregivers in Ovia North-East LGA. Your participation is entirely voluntary, and all information provided will be kept confidential and used solely for research purposes. By filling out this questionnaire, you consent to participate in this study.

Instructions: Please tick [☐] the appropriate box or write in the space provided.

SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Age at last birthday: _____
2. Gender: [☐] Male [☐] Female
3. Marital Status: [☐] Single [☐] Married [☐] Divorced [☐] Separated [☐] Widowed
4. Level of Education: [☐] No formal education [☐] Primary [☐] Secondary
[☐] Tertiary [☐] Others, Specify _____
5. Spouse's level of Education: [☐] No formal education [☐] Primary [☐] Secondary
[☐] Tertiary [☐] Others, Specify: _____
6. Occupation: _____
7. Spouse Occupation: _____
8. Ethnic group _____
9. Ethnicity of spouse _____
10. Religion: _____
11. Marriage type (a) monogamous (b) polygamous
12. Family type (a) nuclear (b) extended
13. Monthly income _____

14. Monthly income of spouse _____
15. Number of children currently under your care: _____
16. Age of the youngest child under your care: _____
17. Relationship to child _____
18. Household size _____

SECTION B: KNOWLEDGE OF CHILD INJURY AND VIOLENCE PREVENTION

19. Have you heard about child injury? (a) Yes (b) No
20. If "yes" to the question above, what was the source of information:
- ☐ Common sense ☐ From parents and relatives ☐ From the media ☐ From friends ☐
- Reading books on child safety ☐ From doctors and other health personnel
- ☐ Others (specify) _____
21. At what age is a person officially no longer a "child" by law? : _____
22. What is the best way to describe "Childhood Injury"? (Single Best)
- (a) It is only when a child is crying
- (b) It is any physical harm to a child's body, whether it was an accident or done on purpose.
- (c) It is something that happens only to children who are playing rough
- (d) It is a normal thing that must happen to every child.
- (e) It only counts as an injury if the child is bleeding.
23. Have you ever heard of child violence before? (a) Yes (b) No
24. What does "Child Violence" mean? (Single Best)
- (a) It is only when someone beats a child.

(b) Any physical, emotional, or sexual action directed at a child that results in harm, injury, or fear.

(c) It is just a way to make sure children are not spoiled.

(d) It only happens in broken homes.

(e) It is when a child fights with their friends.

25. Have you ever received any information or training on how to prevent child injuries and violence? ☐ Yes ☐ No

26. If Yes to Q25, what was your source of information? (Tick all that apply)

☐ Health facility/Healthcare workers ☐ Radio/Television ☐ Social Media ☐ Family and friends ☐ Community Leaders ☐ Religious leaders

27. Which of the following do you consider common causes of child injuries at home? (Tick all that apply)

☐ Burns ☐ Falls ☐ Choking on Small objects/toys ☐ Poisoning ☐ Drowning ☐ Cuts
☐ Others: _____

28. Which of the following do you recognise as forms of violence against children? (Tick all that apply)

☐ Beating that leaves marks or bruises ☐ Constant shouting, insulting, or shaming
☐ Denying the child food or medical care ☐ Sexual abuse ☐ Kidnapping ☐ Female genital mutilation/ Cutting ☐ Others: _____

29. Child injuries and violence can occur in: (Tick all that apply)

☐ Home ☐ School ☐ Playground ☐ When a child is hawking goods ☐ Place of worship ☐ During visitation ☐ Others (specify): _____

30. Which of these things in the house can easily start a fire if a child plays with them? (Tick all that apply)

☐ Matches and lighters ☐ A candle left burning near a curtain ☐ A kerosene lamp kept on the ground ☐ An electric iron that is still turned on ☐ A plastic bucket of water.

31. What makes the road dangerous for children in your area? (Tick all that apply)

☐ Crossing the road without a grown-up. ☐ Sitting in front of a motorcycle
☐ Playing football on the side of a busy road ☐ Walking on the road at night in dark clothes. ☐
Not looking before crossing the road.

32. Child injury and violence can result in (Tick all that apply): ☐ Social withdrawal

☐ Death ☐ Disability ☐ Depression ☐ Illness ☐ Others (specify): _____

SECTION C: ATTITUDE TOWARDS CHILD INJURY AND VIOLENCE PREVENTION

Please indicate your level of agreement with the following statements:

(SA = Strongly Agree, A = Agree, N = Neutral, D = Disagree, SD = Strongly Disagree)

S/N	Statement	SA	A	N	D	SD
33.	Allowing children to get injured is part of their learning process					
34.	Child injury and violence can be prevented					
35.	Children must be handled with 'strong hands'					

36.	Children should always use seatbelts in cars					
37.	Watching violent films influence children negatively					
38.	Female Genital mutilation is right					
39.	Teaching children about safe road behavior (e.g., crossing roads carefully) is very important					
40.	Caregivers should seek medical care immediately after a serious injury					
41.	It is right to starve a child if they misbehave					
42.	Reporting child abuse or violence is important, even if the child is not mine					
43.	Government should make policies against parents who encourage their children to hawk goods					

SECTION D: TYPES AND FREQUENCY OF WITNESSED CHILD INJURY AND VIOLENCE

44. In the past 12 months, has any child under your care experienced an injury requiring medical attention or first aid? ☐ Yes ☐ No

45. If Yes to Q44, what type of injury was it? (Tick all that apply)

☐ Fall ☐ Burn ☐ Cut ☐ Poisoning (swallowing medicine/chemicals) ☐ Choking

☐ Road Traffic Accident ☐ Electric shock ☐ Animal bites ☐ Other: _____

46. How many times have injuries occurred to children in your care over the past year? _____

47. Have you witnessed acts of violence against children? _____

48. In your community or household, how often do you witness acts of violence against children? ☐

Very frequently ☐ Occasionally ☐ Rarely ☐ Never

49. What types of violence have you noticed? (tick all that apply)

☐ Physical abuse ☐ Emotional abuse ☐ Neglect ☐ Bullying

☐ Sexual abuse ☐ Child labour ☐ Female genital mutilation / Cutting

50. If you have witnessed child violence, what type was the most common? (Single Best)

(a) Physical abuse (severe beating, burning)

(b) Emotional abuse (verbal insults, threats)

- (c) Neglect (abandonment, starvation)
- (d) Bullying (by peers or older individuals)
- (e) Rape.
- (f) Others (Specify): _____

SECTION E: PRACTICES AND CONTROL METHODS

- 51. Do you have staircases in/outside your house? ☐ Yes ☐ No
- 52. If yes to the above question, do your stairs have guardrails? ☐ Yes ☐ No
- 53. Do you have adequate lighting in your staircase areas? ☐ Yes ☐ No
- 54. Where is the location of your kitchen? ☐ Inside the house ☐ outside the house
- 55. Does anyone in your family abuse alcohol in the presence of your children? ☐ Yes ☐ No
- 56. Does anyone in your family smoke cigarettes in the presence of your children? ☐ Yes ☐ No
- 57. Are your medicines kept within reach of your children? ☐ Yes ☐ No
- 58. Do you keep flammable materials like matches within the reach of your children?
☐ Yes ☐ No
- 59. Do your children have access to small beads, coins, or batteries? ☐ Yes ☐ No
- 60. Do you leave your children to play unsupervised? ☐ Yes ☐ No
- 61. Can your children gain access to your stored fuels/pesticides/harmful chemicals like bleach? ☐
Yes ☐ No



HEALTH RESEARCH ETHICS COMMITTEE (HREC)

UNIVERSITY OF BENIN TEACHING HOSPITAL
P.M.B. 1111 BENIN CITY NIGERIA Telephone: 052-600418 Website: ubth.org

CHIEF MEDICAL DIRECTOR
Prof. (Mrs) I.N Ize-Iyamu

DIRECTOR OF ADMINISTRATION
Jim Uwadie, Esq

CHAIRMAN
Prof. (Mrs.) Antoinette N. Ofili



HREC OFFICE:

Committee email: ubthresearchethics@gmail.com
Registration Number:
NHREC-UBTH-HREC/24/12/2022B

PROTOCOL NUMBER: ADM/E 22/A/VOL. VII/14865491272129

PROPOSAL TITLE: "CHILD INJURY AND VIOLENCE PREVENTION AMONG CAREGIVERS IN
OVIA-NORTH EAST LOCAL GOVERNMENT AREA, EDO STATE"

PRINCIPAL INVESTIGATOR(S): AREMU FISAYO, EDMONYI DANIEL

DEPARTMENT/INSTITUTION: DEPARTMENT OF PUBLIC HEALTH AND COMMUNITY
MEDICINE, SCHOOL OF MEDICINE, UNIVERSITY OF BENIN,
BENIN CITY, EDO STATE, NIGERIA

DATE CONSIDERED: MARCH 31ST, 2026

DECISION OF THE COMMITTEE: APPROVED

THIS APPROVAL DATES 31/03/2025 TO 19/03/2027. IF THERE IS DELAY IN STARTING THE RESEARCH,
PLEASE INFORM THE HREC SO THAT THE DATES OF APPROVAL CAN BE ADJUSTED ACCORDINGLY
REMARK:

CHAIRMAN: PROF. (MRS) A.N. OFILI

SIGNATURE &

DATE 31/3/2026
Signature.....
Date.....
UNIVERSITY OF BENIN TEACHING HOSPITAL
HEALTH RESEARCH ETHICS COMMITTEE
BENIN CITY P.M.B. 1111

SUPERVISOR (S): PROF. V.Y. ADAM

DECLARATION BY INVESTIGATOR(S):

PROTOCOL NUMBER (please quote in all enquiries)

Note that no participant accrual or activity related to this research may be conducted outside of these dates and you are to furnish the committee with the research activities at the completion of the study. All informed consent forms used in this study must carry the HREC assigned number and duration of HREC approval of the study. In multiyear research, endeavor to submit your annual report to the HREC early in order to obtain renewal of your approval and avoid disruption of your research. No changes are permitted in the research without prior approval by the HREC except in circumstances outlined in the Code. The HREC reserves the right to conduct compliance visit your research site without previous notification.

Signature & Date..... 31/3/2026



ubthresearchethics@gmail.com

Registration Number: NHREC/24/01/2020

APPENDIX III (ETHICAL CLEARANCE)

APPENDIX IV (PLAGIARISM TEST)

INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER OFFICE (IPTTO)
Vice Chancellor's Office
University of Benin
PMB1154, Benin City, Nigeria



CLEARANCE FORM

DATE: 18/05/2026

NAME: EDMWONYI DANIEL

MATRIC NO: MED187389

DEPARTMENT: MEDICINE

FACULTY: MEDICINE

SESSION OF GRADUATION: 2023/2024

DIRECTOR
IPTTO
UNIBEN, BENIN CITY
Head Of Unit (IPTTO)

INTELLECTUAL PROPERTY & TECHNOLOGY TRANSFER OFFICE (IPTTO)
Vice Chancellor's Office
University of Benin
PMB1154, Benin City, Nigeria



CLEARANCE FORM

DATE: 18th May 2026

NAME: Sulich Lisayo Aremu

MATRIC NO: med187370

DEPARTMENT: medicine

FACULTY: medicine

SESSION OF GRADUATION: 2024

DIRECTOR
IPTTO
UNIBEN, BENIN CITY
Head Of Unit (IPTTO)

APPENDIX V (GANTT CHART)

