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Declaration

I, Manuela Balliet, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

I have read and understood the School's definition of plagiarism and cheating given in the Research Degrees Handbook. I have acknowledged all results and quotations from the published or unpublished work of other people.

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Abstract

Background

Violence against children is a global health concern affecting one in two children worldwide. Schools can play a critical role in violence prevention, while in many parts of the world, violence in schools is pervasive. In Sub-Saharan African schools, common perpetrators of violence in childhood besides household members include teachers and school peers. Violence in childhood is associated with adverse health and education outcomes over the life course. In Côte d'Ivoire, 1 in 4 girls (28%) and over one-third of boys (35%) experience one or more forms of violence by teachers and peers despite several initiatives to reduce school violence.

Aim and objectives

This PhD explored factors related to physical and emotional violence perpetrated against children in school in Côte d'Ivoire. Specifically, this doctoral research aimed at investigating the co-occurrence of experiences of physical violence by multiple perpetrators among schoolchildren, examining the individual characteristics associated with teachers' self-reported use of violence towards students and exploring teachers' perspectives and understanding of the notions of childhood corporal punishment in the socio-cultural context of post-conflict Côte d'Ivoire.

Methods

I conducted secondary analyses of data from the National Violence Against Children Survey (VACS) and from the formative evaluation of an intervention aimed at reducing violence from teachers to students (APEV). Firstly, I employed multivariable logistic regression of country-level survey data from children in school to examine the overlap of experiences of physical violence perpetrated by household members, teachers and peers. Secondly, I conducted multivariable logistic regression of survey data collected among teachers through a formative evaluation of APEV to determine the associations between teachers' use of physical and emotional violence and individual characteristics (sociodemographic, attitude towards violence, job-related feelings and mental health). Thirdly, I analysed teachers' perceptions of

childhood and corporal punishment through in-depth interviews and focus group discussions derived from the formative evaluation.

Results

This research revealed that physical and emotional violence against schoolchildren is pervasive and condoned in Côte d'Ivoire. Schoolchildren's experiences of violence by different perpetrators overlap across contexts. I found that children who experienced physical violence from adults in their household were more likely to experience physical violence from teachers and be involved in physical fights. I also observed an association between experiencing community-related risk factors (e.g. feeling unsafe, experiencing violence from peers) and involvement in physical fights.

Factors associated with teachers' reported use of violence differ for emotional violence and physical violence. I observed that teachers with low acceptance of violence, those who perceived that parents did not accept violence, female teachers and those with high job motivation were less likely to report the use of physical violence.

Teachers' conceptualisation of corporal punishment in childhood through the lens of culture and the persisting violence in post-conflict Côte d'Ivoire influence teachers' endorsement and use of violent discipline towards students. The conceptualisation of Ivorian childhood in the local context influences teachers' use of corporal punishment in school. Other factors influencing teachers' perceptions of corporal punishment included the history of colonialism and structural influences of the harmful effects of the conflict.

Conclusion

My PhD findings underscore the need for integrated whole-school interventions to reduce the (co)-occurrence of violence against children in and beyond school. Interventions and policies that provide better working conditions for teachers and support their mental health are needed to build better and contextually appropriate responses to reduce violence against children in schools. Developing opportunities for critical reflection around the notion of the African Child, their rights and responsibilities should include teachers, parents and community leaders. Support for teachers in post-conflict settings should include trauma-informed approaches.

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Dissemination

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Oral presentation

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Table of abbreviations

APEV: Apprendre en Paix, Éduquer sans Violence (French for Learning in peace and educating without violence)

CDC: Centres for Disease Control and Prevention, US

COGES: School Committee in Côte d'Ivoire

FGD: Focus Group Discussion

IDI: In-depth Interview

NGO: Non-governmental organisation

SSA: Sub-Saharan Africa

UN: United Nations

UNICEF: United Nations Children and Education Fund

UNCRC: United Nations Convention on the Rights of the Child

VAC: Violence against children

VACS: Violence against Children Survey

WHO: World Health Organization

COVID-19 Statement

In the present statement, I explain the disruption caused by the COVID-19 pandemic in the course of my research. I also describe how I navigated the challenges created by the pandemic.

I originally planned to collect qualitative data in primary schools as part of my PhD (see Appendix III). However, in March 2020, shortly after I received local ethics approval in Côte d'Ivoire and had set up all the necessary logistics to start data collection, the country entered a general lockdown. This led to curfews, movement restrictions and nationwide school closures. Children were withdrawn from school for three months, followed by the school holiday. Shortly after the start of school in September 2020, the presidential election in October 2020 saw an increase in insecurity and violent incidents across the country. Primary schools were temporarily closed in November and December 2020 due to insecurity in and around schools. This exacerbated COVID-19-related difficulties in collecting primary data for my PhD.

My supervisory team was regularly in touch and supportive from the lockdown until the end of the post-electoral period. The fieldwork was put on hold until feasible alternatives were agreed upon with the supervisory team.

Given the limited possibility of resuming fieldwork, it was agreed with my supervisors to suspend data collection in primary schools, an important component of the PhD. An adaptation of the research protocol was put forward by using an existing dataset for which I had collected data immediately before my PhD started. This was for a project led by my supervisor. The study was relevant to my PhD objectives. Therefore, we decided to analyse these data instead. An extension of the approval of the local ethics was sought, which further delayed the research.

During these highly challenging and unexpected circumstances, I had to navigate multiple hurdles, including high amounts of stress, the disappointment of not completing a piece of

research I had designed and planned wholeheartedly and adjusting to remote supervision. Moreover, while I had joined social and research groups and networks at LSHTM and across the University of London during the first year of my PhD in London, during the pandemic restrictions, I felt isolated from my friends and support network.

There were resources I utilised from a local university in Abidjan. For instance, I was able to learn from a group of statisticians at ENSEA (National School of Applied Statistics and Economics in Abidjan), deepen my statistical skills, and get insights from local researchers on my research.

In summary, I was unable to complete my field data work in primary school because of COVID-19-related challenges. However, I adapted my research protocol by relying on an alternative dataset and extending my network of local researchers in Côte d'Ivoire.

1 Introduction

In this chapter, I first introduce the concept, context and burden of violence against children (VAC) globally and in Sub-Saharan Africa. I explain the central role of schools in preventing VAC and the focus of this doctoral study on physical and emotional violence perpetrated against schoolchildren. I present the context of VAC research in Côte d'Ivoire, specifically the first National Survey on Violence Against Children (VACS) and the formative evaluation of the APEV intervention by Graines de Paix, the findings of which are analysed in this research project. Finally, I delineate the aim and specific objectives of this PhD.

1.1 Preventing VAC in and beyond school: the need for data to catalyse action

Violence against children (VAC) is a fundamental violation of human and children's rights (1). It has harmful repercussions on the child and adverse outcomes throughout the life course (2-8). Yet, global estimates indicate that over half of all children worldwide are victims of at least one form of violence every year (9).

Enacted in 1990, the United Nations Convention on the Rights of the Child (UNCRC, article 19) called on countries to end all forms of VAC (1). A quarter of a century later, this call was set as a specific target in the United Nations' Sustainable Development Goals (SDGs) agenda, to be achieved by 2030 (10).

Much of this violence occurs in schools, is physical, and occurs largely in the Global South, particularly in Sub-Saharan Africa (SSA) (9). The United Nations demographic trends project a 32% increase in the number of babies born in the African Region and a 31% increase in youth in the same region between 2015 and 2030 (11). As the majority of SSA countries are working towards achieving universal primary education (SDG 4), and eliminating all forms of VAC (SDG 12) (10), it is imperative to ensure that schoolchildren live, learn and grow up in safe environments.

VAC can be prevented. School has emerged as a strategic location for initiatives to end VAC in and beyond school, as shown in studies conducted in Uganda, Jamaica and the United States of America (12-14). In recent years, efforts have been made to generate country-level data to call for action to end VAC in and beyond school.

However, the vast majority of research on what works to prevent violence against children in schools was conducted in the Global North by researchers and funding from these countries (15). Although valuable, this evidence might only be suitable to some contexts.

This thesis aims to help fill the gap of Global South researchers leading local VAC research. The doctoral research investigates risk factors for violence perpetration and victimization among teachers and children who go to school using robust data from Côte d'Ivoire's first nationally representative survey and data derived from a formative evaluation of an intervention aiming to reduce VAC from teachers to students. The findings presented in this thesis contribute to strengthening the development of actions related to child health and wellbeing in Côte d'Ivoire and similar settings.

1.2 Literature review

1.2.1 Defining VAC

Violence against children is a commonly used concept in public health. The UNCRC, an international treaty that sets out the civil, political, economic, social, health, and cultural rights of children worldwide, and calls all countries to end “physical or mental violence, injury and abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse in all settings, including home and schools to ensure the safety and rights of children” (1). This definition is aligned with the World Health Organisation (WHO), a UN organisation with a public health mandate, which classifies violence into four categories: (a) physical, (b) sexual, (c) psychological, (d) involving deprivation or neglect (2).

This PhD focuses on violence perpetrated against children in school, particularly physical and psychological violence. “Psychological” and “emotional” violence are used interchangeably in the literature (16). This PhD will use the term “emotional violence” for consistency with the national surveys conducted on violence against children around the world (17).

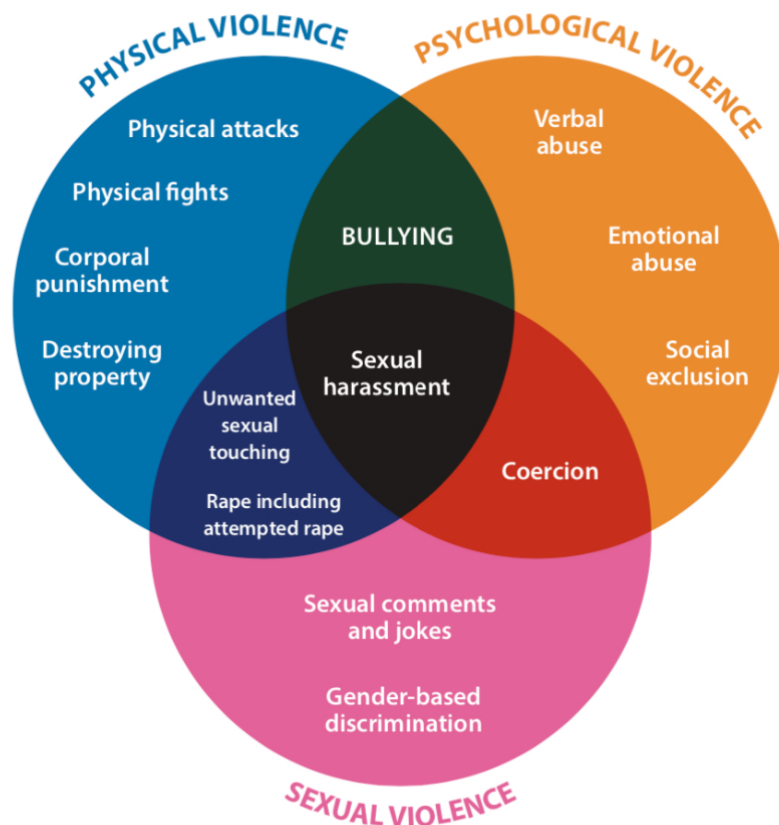
Physical violence against a child is “any act that causes actual physical harm or has the potential to harm the child” (2). Corporal punishment is a type of physical violence used to discipline a child, however light (3). The word “discipline” means “to educate” and broadly refers to punishment. Psychological or emotional violence against a child includes non-physical acts resulting in or with the potential of causing adverse effects on the emotional

health and development of a child. Severe physical violence and some forms of emotional violence are apparent because they result in injuries, bruises, cuts or cause the child to cry. Some other forms of violence may be perceived as “light” or subtle as they might not be readily observable, or their adverse effects are not immediately noticeable.

According to UNESCO, school violence is pervasive and affects an overwhelming number of children in all countries around the world (18). The UNESCO framework of school violence (figure 1) indicates that the main forms of violence perpetrated in school against children include bullying, physical fights, sexual violence and corporal punishment by teachers. Figure 1 also illustrates that the different forms of violence are intertwined and often co-occur.

The focus on physical and emotional violence in this project is due to the scale of physical and emotional violence in school in the study setting of this PhD and the cross-cultural complexity and sensitivity in representing and discussing sexual violence and neglect/deprivation with children, which is beyond the scope of this PhD (2).

Figure 1. Conceptual framework of school violence, UNESCO (18)

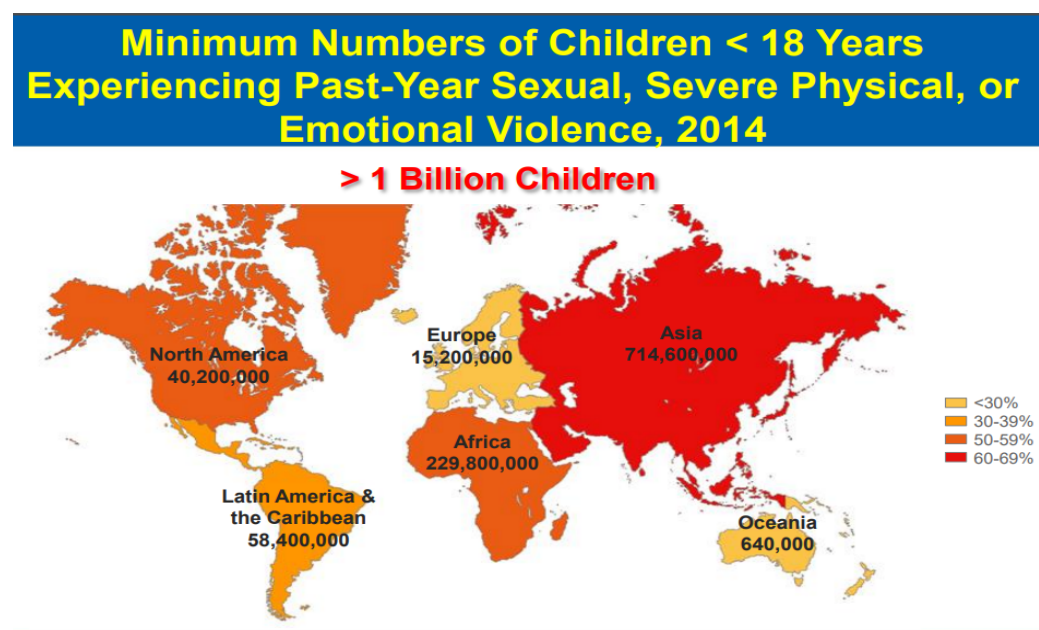


1.2.2 The global prevalence of violence against children

High-quality population-based surveys have revealed that the burden of VAC extends worldwide, with one billion children aged 2-17 experiencing physical, sexual, emotional, or multiple types of violence in the past year (9). This is half of the child population in the world (9).

Figure 2 below shows that the African and Asian regions had the highest numbers of children who had experienced violence during the past year in 2014. In these regions, there remains a paucity of political and financial investment to prevent children from experiencing violence (19) and social norms as key drivers of violence in childhood have not been addressed (20). Although all forms of VAC affect girls and boys, girls are more vulnerable to physical and sexual violence (21).

Figure 2. The global burden of violence against children in 2014 (9)

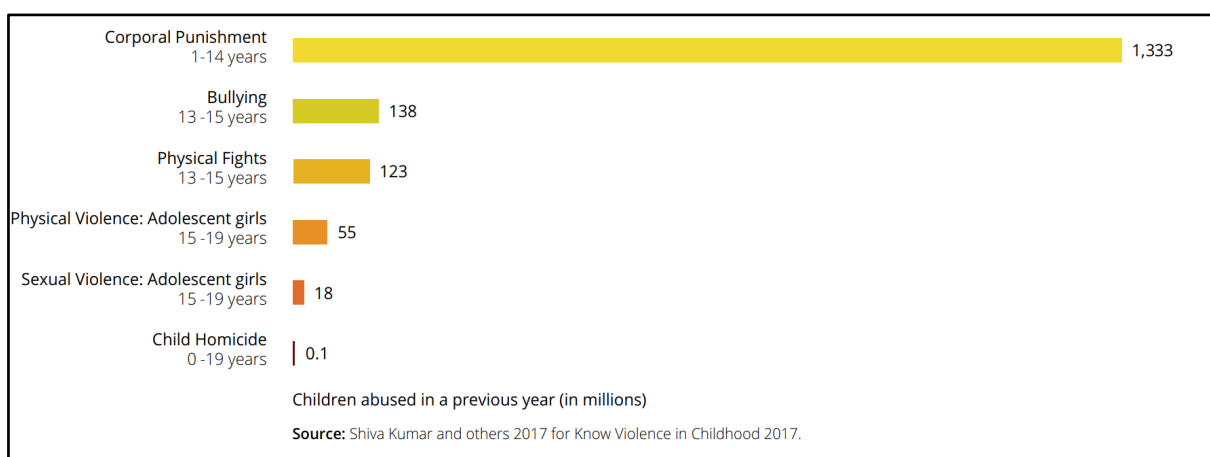


Corporal punishment is by far the most prevalent form of VAC, followed by bullying and physical fights (figure 3). School corporal punishment is allowed in a third (35%) of the world's nations and legally banned in 128 countries (22). To date, only 12 nations have formally banned corporal punishment in all settings in SSA (22). Estimates of the proportion of students who have experienced corporal punishment vary by country. In a report from 63 countries, of which half had formally prohibited school corporal punishment, it was reported

that in nine countries, at least 90% of students had experienced corporal punishment, and in 11 countries, over 70% of students had experienced corporal punishment (14). In the remaining 43 countries, the proportion ranged from 13% to 69%.

Children can experience any or multiple types of violence in any location, ranging from the home and relatives' houses, schools, care and justice systems, the workplace and the community (3). However, experiences of violence are more prevalent in the child's immediate environment: at home, in the community and in school.

Figure 3. Global burden of violence against children by type of violence



1.2.3 Perpetrators of VAC

Perpetrators of VAC include parents, relatives, caregivers, family and school peers, intimate partners, adults in the community, and strangers (9). A systematic review and analysis of large datasets from 171 countries revealed that the most frequent perpetrators of physical and emotional VAC are household members, followed by student peers (23).

In families, VAC is often used in discipline and child rearing (24). Schools can also be violent places, and for children already experiencing violence at home, this can have cumulative adverse effects (25). A global systematic analysis of perpetrators of VAC indicated that 70% of schoolboys and 80% of their female counterparts aged between 8-11 years had experienced physical and emotional violence from student peers in the past year (23). Besides student peers, there is a data gap on other perpetrators of violence in school. The limited data on the global prevalence of school violence suggest that a large proportion of children suffer from violence perpetrated by school staff and peers. Data from the Violence Against

Children and Youth Surveys (VACS) conducted between 2014 and 2019 in Nigeria, Zambia, Rwanda, Côte d'Ivoire and Kenya show that teachers are common perpetrators of violence in school (26-30). In Côte d'Ivoire, the primary focus of this PhD, VACS found that teachers were the most frequent perpetrators of the first incident of physical violence, and peers were among the most common perpetrators of physical and emotional violence (26).

1.2.4 Health and education consequences of violence against children

VAC has immediate consequences on the child and negative repercussions later in adulthood. Exposure to violence in childhood can disrupt childhood development, health and well-being. VAC is a major cause of injuries and can lead to physical and psychological disability or child death (5). Violence in childhood is strongly associated with severe mental illness in the child, including depression, psychosis, self-harm, and suicide (3). Witnessing VAC can cause similar distress. As a result of VAC, children can often suffer from learning difficulties and low educational achievement (24). A survey conducted in South Africa and Malawi found that children exposed to emotional violence for discipline were more than ten times less likely to be enrolled in school (31).

A longer-term association between violence in childhood and health risk behaviour and disease in adulthood has been established (25). Violence in childhood can impair brain development in ways that may increase the risk for substance use and other mental disorders in adulthood (7, 32). Later on in life, victims of VAC are more likely to display adverse behaviour patterns such as aggressive behaviour, as observed in longitudinal studies (8, 33-35). Moreover, health conditions, including ischemic heart disease, cancer, chronic lung disease, skeletal fractures, and liver disease, as well as poor self-rated health, were associated with the breadth of childhood exposures (25). Experiencing violence in childhood is also a predictor for perpetuating violence against children, creating a cycle of intergenerational transmission and persistence of violence (36, 37). The economic costs of perpetration and persistence of violence against children are significant as they increase health, welfare and security expenditures while decreasing rates of productivity (38, 39).

As the prevalence of school-based violence is very high, the burden is also concerning. School corporal punishment has been linked to poor learning outcomes compared to children who were not in a punitive environment, injuries, pain and physical discomfort, and mental health

and behavioural problems (14). However, it remains unclear what proportion of the total burden of VAC relates to school violence compared to violence experienced outside of school.

1.3 The study context

1.3.1 A profile of Côte d'Ivoire

Country presentation

Côte d'Ivoire is one of the most flourishing economies of West Africa (40). The country is characterised by a young population; about half of the 23 million inhabitants of Côte d'Ivoire are aged 0-14 (41). The population is spread evenly between urban and rural areas and nearly half of the Ivorian population are women (42).

The Ivorian population is a mosaic of four main ethnic groups: Akan, Gour, Mande and Krou (43). These groups are made up of over sixty languages. Following independence from France in 1960, French has remained the official teaching and administrative language spoken by half of the population (43).

There are 31 regions in Côte d'Ivoire. The Tonkpi Region is one of the largest, located in the far west mountains. Man is its capital and main city. Dan or Yacouba, from the Mande ethnic group, are the most important indigenous people and language in the region. Tonkpi is also home to several non-indigenous Ivorian populations and foreigners of African origin, mainly from neighbouring countries Liberia, Guinea, Mali and Burkina Faso.

Despite Côte d'Ivoire's enormous economic potential (40), poverty affects half of the population and is more pronounced in rural areas (60%) (42). Life expectancy at birth is 56 for females and 54 for males.

Despite having ratified most of the international instruments on gender, Côte d'Ivoire is ranked 136th out of 144 in the world for Gender Equality by the World Economic Forum 2015 (42). The majority of women in Côte d'Ivoire are vulnerable. The maternal mortality rate is among the highest in the world, with around 614 deaths per 100,000 live births (44). Nearly half (47%) of women live below the poverty line, i.e. under \$1.90 a day versus 46% for men (45). Data from the National Institute of Statistics revealed that three-quarters of women in rural areas live below the poverty line, do not have access to basic social services and are

vulnerable to harmful traditional practices, mainly female genital mutilation and child marriage (14).

Côte d'Ivoire has ratified almost all international conventions on child protection, including the United Nations Convention on the Rights of the Child (UNCRC) and the African Charter on the Rights and Welfare of the Child. Since its independence, Côte d'Ivoire has taken important measures to protect children (46). The latest Constitution was adopted in 2016 through law n° 2016-886. This was the fourth (after the constitutions of 1959, 1960 and 2000) and established the Third Republic. The 2016 Constitution reiterated the specific needs of children and youth: prevention of their vulnerabilities (articles 16 and 32), protection against violence and gender-based violence (GBV) (article 35) and mandatory school for boys and girls (article 10) (47). Over the years, the Constitution amendments were progressively translated into reforms, policies and programmes to protect the rights and welfare of children.

In 2012, the Government developed the National Child Protection Policy (PNPE), which presents the vision, principles and strategic actions for child protection in Côte d'Ivoire. First implemented in 2014 through a national strategy 2014-2018, the PNPE was revised in 2022, informed by the findings of the national survey on violence against children (VACS) and the MICS (Multi Cluster Indicator Survey). The revised PNPE also drew on the 2012 PNPE achievements, lessons learned and VAC emerging issues, notably the protection of children online.

In 2018, Côte d'Ivoire acquired a Pathfinder status where the Government formally committed to implementing comprehensive multisectoral actions to prevent VAC. An Interministerial Committee for Child Protection (CIMPE) was created, assisted by a Task Force, UNICEF and other multilateral partners to ensure an effective implementation of laws and policies related to child protection. To date, the Minister of Family, Women and Children coordinates the CIMPE, which includes the ministries of education, justice, health, youth, and social affairs.

In 2019, the Government launched a free-of-charge Child Helpline or 116, to report cases of child abuse and direct victims to support services. Other important policies to protect children include the National Action Plan to combat trafficking, exploitation and child labour of 2019-

2023 (PAN), the National Policy for Orphans and Other Vulnerable Children Due to HIV AIDS (PN-OEV) and the National Strategy for the Fight Gender-Based Violence (SNLVBG) 2009-2014. The National Program for Community Animation in Child Protection (PNACPE) in 2015, and the Program for the Protection of Vulnerable Children and Adolescents (PPEAV). Community mechanisms or “child protection committees” were set up following the implementation of the community child protection animation programme, for awareness purposes, throughout the national territory. These committees make it possible to collect information on VAC in the community and by the community. In school, efforts to prevent VAC include the enactment of a ministerial order formally prohibiting corporal punishment and humiliating treatment for children in school (48).

Despite these measures, findings from the three studies of this PhD indicate that VAC persists in and beyond school.

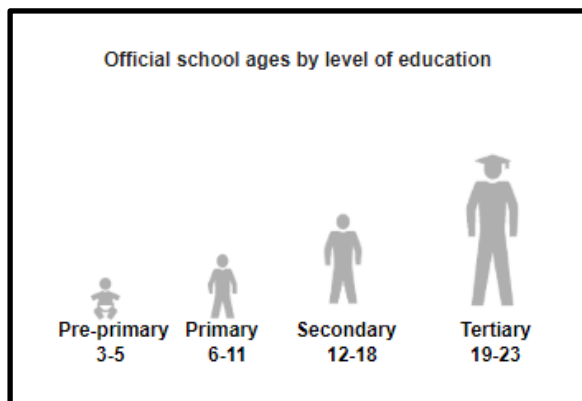
Schooling in Côte d’Ivoire

According to the 2016 Constitution, school is mandatory for all children aged 6-16 years in Côte d’Ivoire (49). Côte d’Ivoire devotes 25% of the state budget to education and training; this is a little more than 5% of its Gross Domestic Product (GDP) (50). Figure 4 below shows that the education system is divided into four main stages: preschool, primary school, secondary school and tertiary (51). In primary school, initiatives to promote compulsory education for all children had a positive impact on the enrolment rate: nine girls are enrolled for every ten boys (52). Despite important efforts in recent years, efforts are needed to achieve SDG to “ensure inclusive and equitable quality education for all” (50). According to the latest MICS (50), the number of children aged 6-11 years outside the school system was high, with completion rates still low among children from the poorest households (58%), and children living in rural areas (73.5%). Girls are more likely to drop out of school prematurely than boys (34% versus 29%). Only 14% of girls go to secondary school, compared to 30% of boys (51).

To meet the growing need for education, the state has developed a partnership with private schools (50). Private schools include denominational and secular schools. They are required to align with (but are not limited to) a mandatory curriculum of the national education ministry. A situational analysis commissioned by Unicef on children’s education in Côte

d'Ivoire identified barriers limiting access to quality primary education (50). On the supply side, quality primary education is mixed across public and private schools. The difference between public and private schools is that public schools suffer from basic or absence of infrastructure, limited support for teachers, especially those living in rural areas, and the absence of school canteens. The disparities between public and private schools can increase inequalities towards children from resource-poor settings, rural areas and those with vulnerabilities. On the demand side, barriers to children's education include the persistence of direct and indirect costs accentuated by the often late distribution of school kits, the absence of school canteens and free meal programs in most schools; the use of children for household chores; the lack of inclusiveness of the education system towards children living with disabilities; the rejection by some parents of the formal education system due to their religious beliefs, patriarchal or traditional values and violence in school (50).

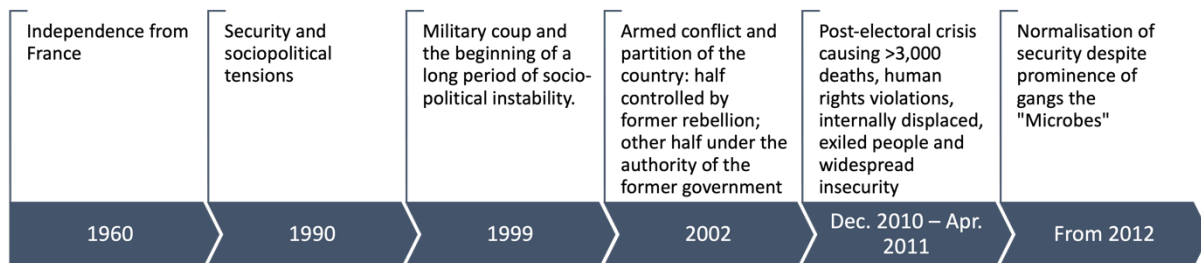
Figure 4. Education system in Côte d'Ivoire, Adapted from UNESCO 2019 (42).



History of conflict and violence in Côte d'Ivoire

Côte d'Ivoire, erstwhile a peaceful nation, experienced over a decade of socio-political crises from 1999 until 2011.

Figure 5. Timeline of socio-political and military crises in Côte d'Ivoire from Independence until 2012



As shown in Figure 5, the security and socio-political situation deteriorated in the 1990s and a series of coup d'états and military-political crises punctuated this period. The causes most often mentioned to explain the different crises are deep socio-political divisions; problems related to land, especially in rural areas; the polarisation of ethnic groups; unfair access to basic social services; or the exclusion and political instrumentalisation of youth (53).

Following the post-election crisis in April 2011, the political situation gradually normalised throughout the country. However, violence remains widespread, particularly in some neighbourhoods. Those neighbourhoods that continue to be affected by violence are typically deprived, have high levels of youth unemployment and were particularly affected by the post-election crisis (53). The crisis influenced the creation of organised youth gangs "*the Microbes*," in the neighbourhoods of Abidjan and large cities in the country. *The Microbes* are known to be disadvantaged young people who have dropped out of school (53). They assault their victims with machetes, and knives and often rob and kill them. In the absence of an efficient government response, youth in some neighbourhoods retaliate by using violence against *the Microbes* (53).

The conflict disrupted the education system in Côte d'Ivoire, and this has adversely affected social cohesion and a peaceful learning environment (54).

1.3.2 Violence in school in Côte d'Ivoire

The scope of the problem

Violence in schools exists in the context of multi-faceted intergenerational violence in conflict-affected Côte d'Ivoire. In 2009, Côte d'Ivoire formally banned the enactment of physical and emotional punishment in any form whatsoever by teachers in schools (48). Numerous initiatives have resulted from the formal ban, including the addition of a child protection module in teachers' ongoing training and educating over 20,000 teachers across the country about peace culture and non-violent teaching methods (54, 55). Moreover, all teachers are required to abide by a strict code of conduct in school, failing which leads to withdrawal of the teacher's license. Despite all these measures, violence perpetrated by teachers persists across public and private schools, depriving students of a protective and safe learning environment.

Descriptive quantitative research and in-depth qualitative studies on violence in schools in Côte d'Ivoire are scarce. Only one nationally representative cross-sectional study conducted between 2013 and 2014 was identified in the grey literature (56). The study was commissioned by the government of Côte d'Ivoire (Ministry of Education or MENET) and UNICEF. The MENET study revealed that children experience and witness all forms of violence in school, including for teaching purposes. Seven out of ten students – across urban and rural areas, girls or boys, types of household, primary and secondary schools combined – experienced at least one manifestation of verbal, physical or other forms of violence in the past year, and educational violence is widespread and condoned (56). Teachers and peer students, especially boys, are the most common perpetrators of school violence in Côte d'Ivoire. Primary school students are 2.5 times more exposed to educational violence than secondary school students (57).

An analysis of nationally representative data is needed to investigate school children's experiences of violence by teachers, peers (schoolmates, siblings and friends) and household members, and understand how this perpetration overlaps. I will discuss this in the VACS analysis paper (Chapter 2).

1.3.3 Norms and acceptability of school violence in Côte d'Ivoire

In Côte d'Ivoire, some forms of VAC are commonly tolerated and not considered as violence, but instead child discipline. These shared perceptions are maintained or changed by

communal approval or disapproval (58). In this context, there is a perception that child discipline is used to establish strict discipline, values, and respect for parents or elders in the child or adolescent based on submission and fear (56). The acceptability of child discipline is fuelled by the idea that violence is a normalised phenomenon governed by the misconception that it is enacted in the child's best interests. In school, violent teaching practices are part of a dominant social norm, notwithstanding the Ministry's prohibition of corporal punishment (56). The MENET findings indicated that one in three parents tolerates physical violence as a necessary means of educating their children (14). Half of the surveyed teachers in the MENET study reported that parents or guardians ask them to use corporal punishment against their children in cases of misbehaviour or poor school results. Violence can be perpetrated and transmitted through groups and generations by fear of social sanctions and the desire to win family and community approval (59).

The specificities of culture, traditions and religion are sometimes advanced to justify particular social practices that perpetuate violence. In many traditionally patriarchal communities, peer violence perpetration is gendered due to social acceptance that violence can be used in certain situations to affirm or maintain one's sense of masculinity (60, 61). Local norms condoning gendered behaviours such as wife beating increase the likelihood of intergenerational reproduction of gender-based violence for boys witnessing domestic violence (62-64).

The MENET study suggests that the vast majority of victims of child violence remain silent and do not receive the support they need (56). They fear talking to adults about their experiences or denouncing their teachers through referral structures. The limited data available show that high school students (45%) are more likely than primary students (31%) to report their experiences of violence. Girls are more likely than boys to talk about their experiences of violence (41).

Little is known about the endorsement of corporal punishment among school children from nationally representative data and how this is related to schoolchildren's experiences of violence. This will be addressed in the VACS analysis paper 1 (Chapter 2).

Interventions to reduce school violence are limited in Sub-Saharan Africa. A recent scoping review on school-based interventions to reduce VAC in the Global South identified 20 successful interventions, 29 promising programmes and 14 ineffective programmes (14). The findings pointed to the need for multi-component interventions that are rigorously evaluated and implemented over the long term.

1.4 Thesis rationale and research gap

The need to explore country-level information on context, perpetrators, and victims of violence against children who go to school in Côte d'Ivoire

Besides teachers, household members and peers are common perpetrators of school violence in Sub-Saharan Africa (23). In Côte d'Ivoire, only one study has sought to provide estimates of children's vulnerability to violence in schools, the context and perpetrators of VAC in school (56). However, the study did not explore how violence by different perpetrators co-occurs among children who go to school. Effective initiatives to address VAC in school at the national level can only be implemented at scale if we (a) understand the extent of VAC in Côte d'Ivoire schools from a robust nationally representative survey, (b) explore the characteristics of victims, and (c) investigate the overlap between physical violence perpetrated by multiple types of perpetrators.

The need to explore teachers' predictors and perceptions of violence perpetration against children in school in Côte d'Ivoire

There is a need to study teachers' predictors and perceptions of use of violence in order to contribute to inform efforts targeted at reducing violence from teachers to students. In Sub-Saharan Africa, only one study has been identified that explores the risk factors of school staff as perpetrators of violence towards their students (65). The study, conducted in Uganda between 2012 and 2014, was a multi-level analysis of risk factors of school staff's perpetration of violence. It reported that teachers' individual factors, such as condoning physical violence, age, having children, and being a victim of IPV, were associated with self-reported use of violence against their pupils. No association was observed for school- and community-related factors. However, Côte d'Ivoire differs from Uganda in important ways: culturally, socially and historically. It is unknown whether the same patterns hold in Côte d'Ivoire. Moreover, there

is the need to understand the context of teachers' use of corporal punishment through exploring their perceptions and experiences of perpetrating violence towards their students, especially younger children, in the cultural and social context of Côte d'Ivoire, which have not been studied.

Given the harms caused by VAC, the prevalence of VAC in Côte d'Ivoire schools (from the VACS data), and the limits of recent initiatives to eradicate the practice, it is imperative to understand the extent of the problem in schools and how and why VAC persists in schools in Côte d'Ivoire, in order to inform efforts to reduce the harm caused to children. Culturally informed programmes are urgently needed to protect children, and these can only be designed effectively if we have a comprehensive understanding of the phenomenon within the particular socio-cultural context of Côte d'Ivoire.

1.5 PhD Aim and objective

1.5.1 Overall PhD aim

The aim of this doctoral study was to explore risk factors, children's experiences and teachers' understanding of physical and emotional violence perpetrated against school children in Côte d'Ivoire.

1.5.2 PhD research questions

The overall aim of this PhD was achieved through three specific objectives:

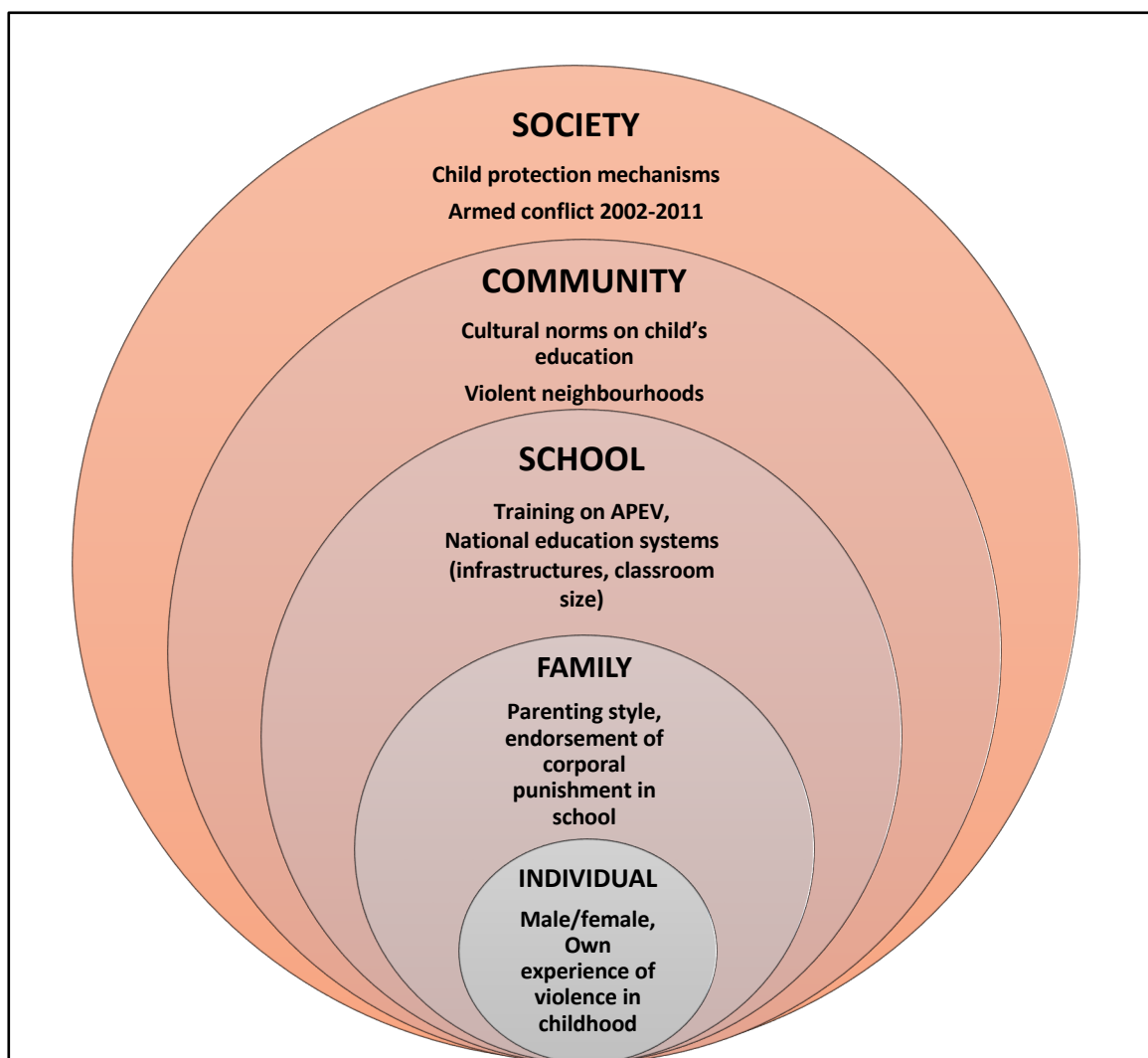
1. To explore national-level data on the co-occurrence of experiences of physical violence by multiple perpetrators among schoolchildren in Côte d'Ivoire.
2. To explore individual characteristics associated with teachers' self-reported use of emotional and physical violence towards students in schools in a post-conflict setting in Côte d'Ivoire.
3. To explore teachers' perspectives and understanding of the notions of childhood corporal punishment in the socio-cultural context of Côte d'Ivoire.

2 Methods

2.1 Context of doctoral research and conceptual framework

In this section, I set out a conceptual framework with which to analyse factors associated with teachers' perpetration of VAC and show how schoolchildren's experiences of physical violence by teachers co-occur with that enacted by other perpetrators. The conceptual framework presented in Figure 7 below is adapted from the WHO social-ecological framework of risk factors of interpersonal violence (2). This framework was selected as it shows that the roots and consequences of violence against children in school span across multiple layers. Violence against children in Côte d'Ivoire schools is influenced by structural factors, including the long history of conflict, the political agenda to protect children, parenting style, educational practices in school, the community environment and cultural acceptability of VAC.

Figure 6. Conceptual framework of factors influencing violence against schoolchildren in Côte d'Ivoire, adapted from WHO Social ecological model (2)



This conceptual framework is general and does not highlight specific hypotheses for testing. However, a more specific framework of analysis is presented within each paper.

2.2 Methodological approach

A mixed-methods approach combining quantitative and qualitative methodologies is valuable in exploring complex issues in school (66). The benefit of mixed-methods research is that it provides breadth and depth of understanding and corroboration (67) owing to the generalisability of the quantitative approach and the depth in capturing the complexity of social issues offered by qualitative analyses (68). This PhD employs a mixed-methods approach and will use an explanatory design whereby qualitative analyses will complement and be used to interpret quantitative findings (69). It analysed data derived from quantitative and qualitative studies. I utilised two quantitative datasets. Firstly, I employed multivariable logistic regression of country-level survey data from children in school to examine the overlap

of experiences of physical violence perpetrated by household members, teachers and peers from the National Violence Against Children Survey (VACS, 2018). Secondly, I conducted multivariable logistic regression of survey data collected among teachers through a formative evaluation of an intervention to reduce violence from teachers to students (APEV) to determine the associations between teachers' use of physical and emotional violence and their individual characteristics (sociodemographic, attitude towards violence, job-related feelings and mental health). Thirdly, I analysed teachers' perceptions of childhood and corporal punishment through in-depth interviews and focus group discussions derived from the APEV formative evaluation.

2.3 Ethical clearance

The APEV formative evaluation received ethical approval from the London School of Hygiene and Tropical Medicine Ethics Committee (ref 14014 and 14537) and the local ethics board or Centre Nationale d'Éthique de la Recherche (CNER) based in Abidjan, Côte d'Ivoire (55). VACS are approved by the CDC's Institutional Review Board and the Ethical Review Committee of the country in which it is implemented (70); CNER in the case of Côte d'Ivoire.

This PhD received a favourable ethical opinion from the London School of Hygiene and Tropical Medicine Ethics Committee (LSHTM ref. 17938) and the National Ethics Committee of Life Science and Health/Comité National d'Éthique des Sciences de la Vie et de la Santé (formerly CNER) based in Abidjan, Côte d'Ivoire (N/Ref: 165-19/MSHP/CNESVS-km).

2.4 Thesis structure

The overall structure of the study takes the form of six chapters. Chapter One situates the context of the study and presents the overall aim and specific objectives. Chapter Two is concerned with the methodology used for this study. Chapters Three to Five present the research findings in the form of three papers prepared for publication but not yet published. Finally, Chapter Six summarises and discusses the findings, the strengths and limitations and recommends future work and implications for policy.

2.5 Role of the candidate

I (MB) conceptualised the research questions for the PhD and designed the analysis under the supervision of my primary supervisor, Dr Clare Tanton (CT), and with support from my other supervisors, Prof. Karen Devries (KMD) and Prof. Shelley Lees (SL). For the VACS paper, MB and CT conducted the statistical analyses. KMD and FAJM supported the imputation for the statistical analyses. MB drafted the manuscript and other co-authors inputted. For the APEV quantitative study, YABN and DGFN conducted the data collection. PTK, MD and LQT coordinated the APEV formative evaluation project, while MB drafted the manuscript and co-authors provided their insights. KMD designed and obtained funding for the APEV formative evaluation project. For the APEV qualitative research, I (MB) conducted the data collection (IDIs and FGDs) and coded the data with the support of YABN and under the supervision of SL. I also designed the analysis plan for the qualitative study with the technical support of SL. MB drafted the manuscript and co-authors provided insights.

3 Research paper 1

The co-occurrence of physical violence experiences among schoolchildren perpetrated by parents, peers and teachers: a secondary analysis of data from the National Violence against Children Survey (VACS) in Côte d'Ivoire

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Journals:

- The Lancet Global Health – format of the current draft
- Journal of Interpersonal Violence

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3.1 Summary

Background School can play a critical role in violence prevention, but in many parts of the world, physical violence in school is pervasive. Few studies have examined how violence from parents and peers may influence children's experience of physical violence from teachers in school in Sub-Saharan Africa. This study examines the associations between physical violence (PV) by parents and peers and that experienced by teachers in school among children in Côte d'Ivoire. We also explored associations between the experience of physical violence and children's involvement in physical fights.

Methods We used data from 794 females and males aged 13-17 years currently enrolled in school who participated in the national Violence Against Children Survey (VACS). We employed bivariate and adjusted logistic regression models to examine associations between the violence perpetrated by household members and peers and 1) the experience of physical violence perpetrated by teachers over the past 12 months (primary outcome); 2) children's involvement in physical fights.

Findings We found that over 4 in 10 boys and girls aged 13-17 in school reported experience of physical violence in the past year. In this group, experiences of physical violence in the past 12 months were high for any perpetrator: peer violence was the highest (24.3%), followed by parents (17.5%) and adult members in the community including teachers (12.9%). 29.8% were involved in physical fights. We found that children who experienced physical violence from adults in their household were more likely to experience physical violence from teachers (AOR:2.71;95%CI:1.45-5.08) and be involved in physical fights (AOR:1.97;95%CI:1.04-3.76). We found a strong association between community unsafety (OR:2.33;95%CI:1.28-4.24), witnessing violence in the community (AOR:1.72;95%CI:1.01-2.94), peer violence (AOR:3.58;95%CI:2.03-6.33) and schoolchildren's involvement in physical fights. We found no effect modification of this association by violence prevention education.

Interpretation The experiences of physical violence from different perpetrators among school children in Côte d'Ivoire overlap and may have secluded manifestations, locations and contexts. Our findings underscore the need for whole school programmes to prevent violence

against children as children at risk of violence in school may also need secondary prevention at home and in their community.

Funding This research received funding from the OAK Foundation Research Fellowship programme through the Together for Girls partnership.

3.2 Introduction

Violence against children affects one billion children or half of the world's child population every year (9). Much of this violence is physical and occurs mainly in the Global South (9). Evidence has shown the deleterious short- and long-term consequences of violence in childhood on health, education, and the economy (2, 3). Harmful effects include injuries, health risk behaviours and diseases in adulthood (7, 8, 25, 32-35). Exposure to violence in childhood, including witnessing violence, is associated with an increased risk of perpetrating violence and experiencing intimate partner violence (IPV) therefore creating a cycle of violence (36, 37, 71). Children who experience multiple forms and episodes of violence, or polyvictimization, are prone to cumulative and severe adverse effects (72-74). Polyvictims often behave aggressively toward others, as reported in Kenya (75) and are more likely to develop psycho-social problems compared to children with no or fewer victimisation experiences, as observed among children in Turkey (76).

Sub-Saharan Africa is the region of the world with the highest number of children (77). As the majority of Sub-Sahara African countries are working towards achieving universal primary education under sustainable development goal 4 (SDG 4), and eliminating all forms of violence against children (SDG 12) by 2030 (10), it is imperative to ensure that schoolchildren live, learn and grow up in safe environments. Over the past decade, nationally representative data on violence against children from African nations have consistently reported parents, adult caregivers, school peers and teachers as common perpetrators of violence against children (26-28, 78-87). Few studies have explored the interplay between the different perpetrators of physical violence among schoolchildren using nationally representative data from Sub-Saharan Africa.

Violence against children can be prevented, and school has emerged as a strategic location to end violence against children in and beyond school, as found in South Africa and Kenya (12, 13). However, the vast majority of research on what works to prevent violence against children in schools was conducted in North America (15). Although valuable, this evidence might not be suitable to other contexts as victims' and perpetrators' risk factors may differ.

School violence is pervasive in Sub-Saharan Africa (26-28, 78-88). Children who experience more or severe school violence might experience other forms of violence outside of school.

Currently, interventions to prevent violence treat children similarly. There is the need to explore other experiences of violence among schoolchildren outside of school so that interventions can incorporate other trauma and needs.

Committed to strengthening child protection through evidence-driven policies and programs, the government of Côte d'Ivoire implemented its first national Violence Against Children Survey (VACS) in 2018. VACS reported high rates of violence among children in Côte d'Ivoire with 47.1% of girls and 60.8% of boys who reported physical violence in childhood (83). Parents and adult caregivers were the most common perpetrators of physical violence in childhood. Witnessing violence in childhood was common in the home and in the neighbourhood. School-related violence impacts children in Côte d'Ivoire with 28% of girls and 34% of boys who experienced one or more forms of physical or sexual violence from teachers and/or classmates (46).

VACS indicators of safe environments indicate that one in ten females and males missed school or did not leave home due to safety problems. Despite a Ministerial Order against corporal punishment in school (48), it is still used, normalised and socially accepted as a means to educate a child (3, 56). Among young adults (18-24 years old), about three in ten females and males agreed that teachers needed to use corporal punishment (89).

Over the past decade, the Ministry of Education has put in place training programs in collaboration with NGOs to train teachers on non-violent discipline (90) and students on non-violence education and life skills (46). Little is known about the extent to which children at the national level have been exposed to the training and whether exposure to these programmes has influenced their experiences of violence. Nationally representative studies are needed to develop locally adapted interventions that can be implemented at scale. School-related VACS data analyses present an opportunity to further our understanding of common risk and protective factors to protect children from violence.

The aim of this study is to explore the co-occurrence of experiences of physical violence among children who go to school in Côte d'Ivoire. The research investigates whether children who experience physical violence from household members and peers are more likely to experience physical violence from teachers and be involved in physical fights. Specifically, we

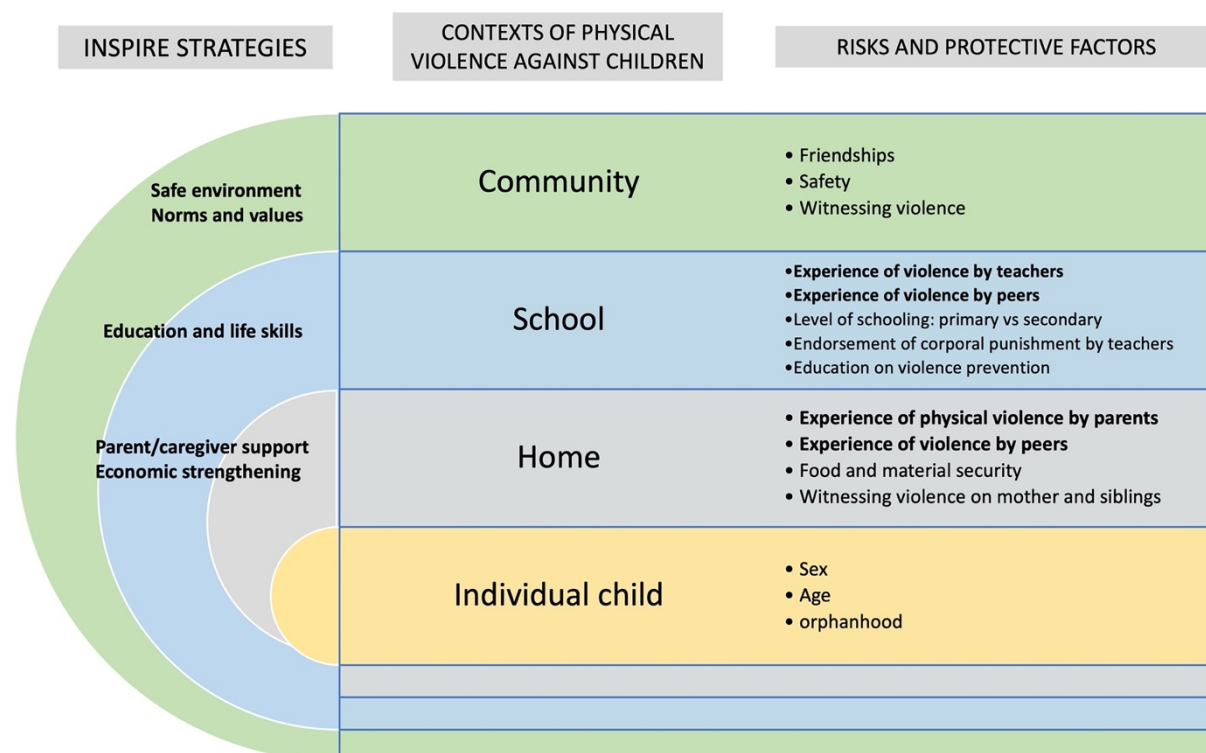
describe the prevalence and perpetrators of physical violence against children currently in school. We then explore the experience of physical violence by household members (parents and adult caregivers), peers (schoolmates, siblings, and friends) and their independent associations with schoolchildren's experience of physical violence by teachers, adjusted for individual, school and community characteristics. Finally, to explore the effects of life skills education, we examined the association between the experience of physical violence by parents, teachers and peers and students' involvement in physical fights and whether this association is moderated by violence prevention education.

Conceptual framework and hypothesis

We drew on a) the INSPIRE framework (89), a set of seven evidence-based strategies for countries and communities to eliminate violence against children; and b) the World Health Organization's ecological model (2), to explore experiences of physical violence from parents/adult caregivers and peers and investigate whether these are associated with the experience of physical violence by teachers, after adjusting for individual-, school-, and community-related factors.

The INSPIRE framework is useful as it has formed the basis of the national action plan (NAP) developed in response to VACS surveys across sub-Saharan Africa (91). It will provide a framework to interpret and disseminate the results of our findings for future uptake in NAPs. In line with the scope of this study, we developed the conceptual framework presented in Figure 1, built around four dimensions from five of the seven strategies of the INSPIRE framework. In the first dimension, we hypothesised that community-level factors such as friendships, safety and witnessing violence in the community influenced the experience of physical violence by children. In the second dimension, we hypothesised that school-related factors such as level of schooling, norms around corporal punishment by teachers, and education on violence prevention education would influence the experience of corporal punishment by teachers. In the third dimension, we posited that children who lack food and material security at home and from violent homes would likely experience violence by teachers. Finally, at the individual level, the child's sex, age and orphanhood could influence the experience of physical violence.

Figure 7 Conceptual framework of factors associated with the co-occurrence of experiences of physical violence from different perpetrators among schoolchildren in Côte d'Ivoire



3.3 Methods

Study design

We analysed the 2018 Côte d'Ivoire VACS (30). VACS are nationally representative household surveys that measure the prevalence, past 12-month incidence and circumstances surrounding sexual, physical and emotional violence in childhood, adolescence before age 18, and young adulthood, e.g. before age 24. Implemented in 2018, VACS is the first population-level dataset on violence against children in the country with 1,200 females (overall response rate= 92.4%) and 1,208 males (overall response rate= 87.7%) interviewed face-to-face (17). VACS uses a three-stage multistage geographically clustered sample design to generate nationally representative estimates. Male and female samples are drawn separately and produce separate estimates. International and national surveys used to inform the VACS questionnaire are presented in Annex 1. A summary of the VACS survey is presented in box 1, and full details are available in the survey report (30).

Box 1: VACS survey design

Lead	Ministry of Women, Family and Children (MFFE), government of Côte d'Ivoire
Coordination	PNOEV – The National Programme for the Care of orphans and other Children and other Children Made Vulnerable by HIV/AIDS, MFFE
Implementing stakeholders	National Institute of Statistics
Technical support	US Centers for Diseases Control and Prevention (CDC)
Additional support	Other multilateral agencies
Sample	2,408 13-24 years old
Sampling frame	RGPH 2014
Methods	<ul style="list-style-type: none"> • Local interviewers hired on their research experience on gender-based violence and HIV, knowledge of local context. • Interviewers received extensive training on methods, ethics and study procedures (17). • Questionnaires programmed in CSPro into netbooks. • Survey is pilot-tested before implementation • Interviews conducted in private areas to ensure confidentiality
Survey measures	Demographics, socioeconomic status, education Gender attitudes related to violence; Perception of safety; Witnessing violence; violence victimization; Violence perpetration; Health risk behaviours—including HIV risk; health outcomes—including physical, mental, sexual and reproductive health outcomes (e.g. unintended pregnancy) Service seeking and utilization after experiencing violence.

Analysis sampling

We used data from a sub-sample of 794 females and males aged 13-17 years currently enrolled in school.

Measures/variables

Details of measures and variables used in this analysis are presented in table 1 below.

Table 1 Variables type and definition for analysis

Variable	Type	Definition
Outcome		
Experience of physical violence from teacher	Yes/No	Past 12m, physical punishment or correction by a teacher by shaking, hitting or spanking.

Variable	Type	Definition
		[Teacher variable derived from Adult member of the Community variable].
Involvement in physical fights	Yes/No	Past 12m, had the respondent been involved in physical fights
Exposure		
Sociodemographics		
Age (years) <i>[13-14]</i> <i>[15-17]</i>	Yes/No	Respondent's age
Sex <i>Female</i> <i>Male</i>		Respondent's sex
Orphanhood <i>Mother and/or father dead Not orphan</i>		Respondent either lost of one or both parents
Home-related factors		
Household food/material security <i>Security</i> <i>No security</i>	Yes/No	Household has enough money for food and the most important things such as clothing, school fees, or medical care.
Witness home violence on mother and siblings in the past year	Yes/No	Combined variable of the following two: 1) In the past 12m, has seen father or stepfather hit, punch kick or beat mother or step-mother being hit, punched, kicked or beaten 2) OR has seen a parent punch, kick or beat brothers and sisters.
Experience of physical violence from parents, adult caregivers and relatives	Yes/No	In the past 12m, has a parent or adult caregiver punished or corrected respondent
School-related factors		

Variable	Type	Definition
Current level of education <i>Primary school</i> <i>Secondary school</i>	Yes/No	Respondent is currently in school at the time of the study
Endorsement of corporal punishment by teachers	Yes/No	Beliefs around physical punishment of a child by a teacher in order to educate him, for instance, spanking or hitting the child with a hand.
Education on violence prevention education, past 12mt A. How to manage anger B. How to avoid physical fights and violence C. How to avoid bullying	Yes/No	During this school year, was respondent taught in any classes any of A, B or C
Community-related factors		
Friendships	Yes/No	How much does respondent talk to friends about important things: a lot, some, not too much, not at all. Turned into a binary variable. Yes: a lot, or some, not too much No: Not at all
Safety, past 12m	Yes/No	Respondent did not leave home because of fear of violence in the community (threats, extortions), fear of the police or army in the streets, felt unsafe for any reason.
Witness, past 12m	Yes/No	In the past 12m, has witnessed physical violence by strangers or people you know well in the community/neighbourhood.

Variable	Type	Definition
Peer violence, past 12m	Yes/No	In the past 12m, has experienced physical violence from people of their own age such as siblings, classmates, neighbours, strangers, not including their romantic partner

Statistical analysis

All analyses were conducted in Stata IC Version 17 (92). We accounted for complex survey design (weight, cluster, and strata). The sociodemographic characteristics of respondents in school who reported past 12-month experience of physical violence by type of perpetrators were summarised using unweighted counts and weighted percentages to account for the sampling design by age group, sex, school-related factors, orphanhood, household characteristics, friendships and safety. We first described the prevalence and perpetrators of physical violence against children currently in school in the past year, by type of perpetrator.

We employed multivariable logistic regression to calculate odds ratios (OR) and 95% confidence intervals (95% CI) and explore the experiences of physical violence by household members (parents and adult caregivers), peers (schoolmates, siblings and friends) and their independent associations with schoolchildren's experience of physical violence by teachers, adjusted for individual, school and community characteristics. We developed the multivariable model in layers according to the conceptual framework (figure 1).

We used logistic regression to explore the association between the experience of physical violence by parents, teachers and peers and their independent association with students' involvement in physical fights adjusted for individual, school and community characteristics. We developed the multivariable model in layers according to the conceptual framework (figure 1). Within logistic regression, we assessed effect modification by violence prevention education. Most students had received education on how to avoid physical fights. Therefore, it was not interesting to combine all three variables: education on 1) anger management; 2) avoidance of physical fights and 3) avoidance of bullying. We explored whether each violence prevention education had an effect on the association between the experience of physical violence and children's involvement in physical fights.

Missing data

We observed low levels of missing data (less than 10%). In line with the prevalence estimates method used in the Good School study (12), we assigned the value “No” to missing responses (91).

3.4 Results

Characteristics of sample

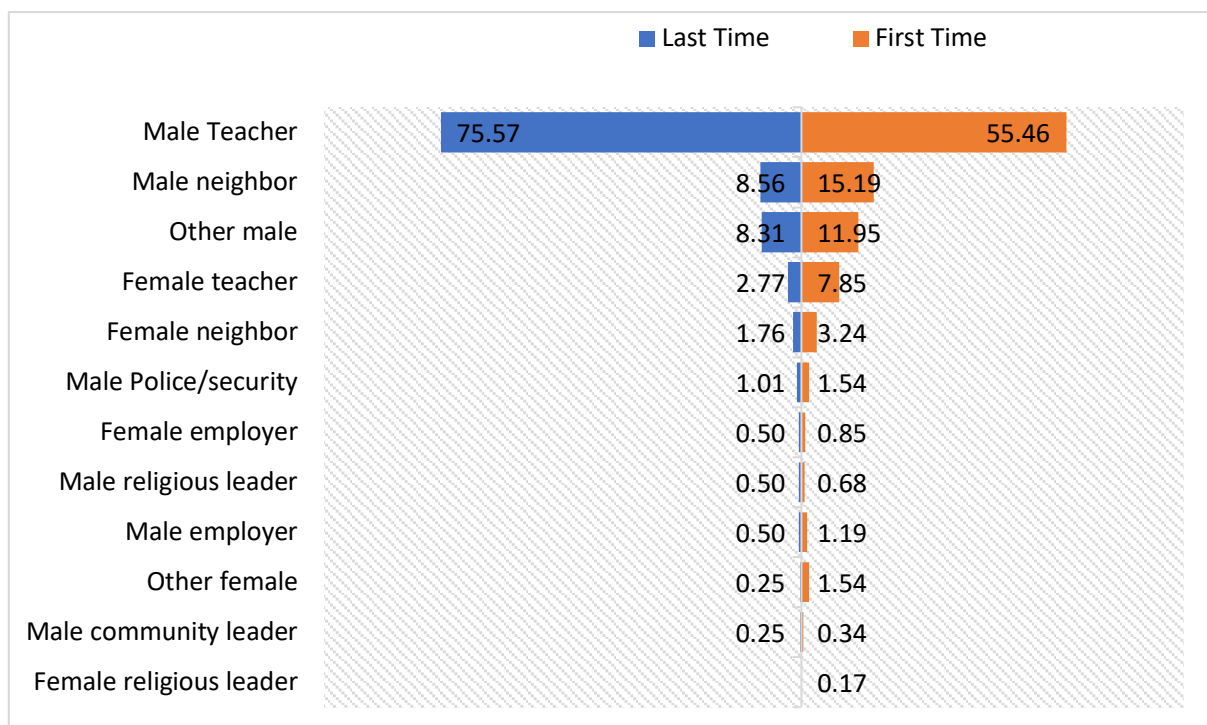
Table 2 presents descriptive statistics of children aged 13-17 years currently in school who reported physical violence in the past 12 months, by type of perpetrator. Nearly half of schoolchildren were 13-14 years old (43.3%) and 45.7% were female. The percentage of schoolchildren who reported having lost either a mother, a father or both was 15.2%. Over a quarter of schoolchildren (26.3%) did not have food and material security and 18.6% reported witnessing violence against mothers and siblings at home. A minority of schoolchildren indicated that they were in primary school (21.1%). Most schoolchildren had received education on physical fights avoidance during the past school year (61.4%).

Prevalence of physical violence in the past year among schoolchildren aged 13-17

The prevalence of physical violence by any perpetrator among schoolchildren was high (38.2%). Peers were the most common perpetrators with one in four schoolchildren reporting experience of physical violence from schoolmates/siblings/friends in the past year (24.3%). They were followed by parents/caregivers (17.5%) and adults in the community including teachers (12.9%). The prevalence of physical violence from teachers in the past 12 months was the lowest (6.9%). Male teachers are the most common type of perpetrator of the first and last episode of physical violence (Figure 2). Schoolchildren aged 13-14 years, boys, orphans, those who witnessed violence at home as well as those who witnessed violence in the community reported higher prevalences of physical violence by any type of perpetrators. One in four (26.0%) children in primary school reported physical violence from their teachers, compared to 1 in 50 for those in secondary school (1.9%). Almost half of those who witnessed violence on mother and siblings reported physical violence from parents/caregivers (32.7%) vs 14.02% of those who had not witnessed violence on mother and siblings).

One in ten schoolchildren who endorse corporal punishment by a teacher reported higher prevalence of violence from teachers (10.5% vs 5.3% of those who do not endorse corporal punishment). Those who felt unsafe in the community experienced more exposure to physical violence by any perpetrator (61.2%) vs 34.6% of those who did not feel unsafe. Among those who had received violence prevention in the past school year, higher prevalences of physical violence from any perpetrator were reported among those who were not taught how to manage anger (41.5%) and those who were not taught how to avoid physical fights (38.7%).

Figure 2 First time and last time perpetrator of physical violence against children by adults in the community in childhood including 13-17 years, VACS Côte d'Ivoire 2018



Association between the experience of physical violence by parents/caregivers and adult relatives and the experience of PV by teachers

Table 3 presents the results of bivariate and multivariable analyses conducted to explore the association between the experience of physical violence by parents, adult caregivers and relatives and the experience of physical violence by teachers. At the bivariate level, significant associations with experiencing PV by teachers were found for the younger age group (13-14 years old), schoolchildren who witnessed violence on mother and siblings in the past year, experienced violence from parents/caregivers in the past year, currently in primary school or less and endorsed corporal punishment by teachers. No association was observed for the

experience of physical violence from peers after adjusting for individual, school and community-related factors.

At the multivariable level (MV), only association for age group, physical violence by parents/caregivers and adult relatives and endorsement of corporal punishment by teachers remained. Schoolchildren aged 13-14 years old had a five times higher risk of experiencing PV by teachers (AOR: 5.78; 95%CI 2.25-14.87) than those aged 15-17 years old. Schoolchildren who experienced violence from parent/caregivers and adult relatives were three times more likely to experience PV by teachers (AOR: 2.71; 95%CI 1.45-5.08) than those who did not report PV by parents/caregivers. Those who endorsed corporal punishment by teachers were twice more likely to experience PV by teachers (OR: 2.10; 95% 1.04-4.24).

Association between experiences of violence by parents/peer/teacher and schoolchildren's involvement in physical fights

At the bivariate level, we observed that students who had lost mother or father were less likely to be involved in physical fights. This was not maintained at the MV level. No other sociodemographics emerged as significantly associated with physical fights in either bivariate or adjusted models. Children with no household food and material security were less likely to be involved in physical fights. No association was found between teachers' violence and involvement in physical fights.

The inclusion of gender in each layer of our model did not make any difference to our odd ratios and findings. Orphanhood, household food and material security, the current level of education, endorsement of corporal punishment by teachers, community safety and witnessing violence in the community were included as covariates in the adjusted model for involvement in physical fights.

Results from the adjusted logistic regressions (Table 3) indicate that children in school who had no food and material security in the household were less likely to be involved in physical fights (AOR:0.54;95%CI:0.33-0.89), experiencing physical violence from parents/caregivers (AOR:1.97;95%CI:1.04-3.76), being in primary school (AOR:1.66;95%CI:1.04-2.66), witnessing violence in the community (AOR:1.72;95%CI:1.01-2.94) and experiencing physical violence from peers (AOR:3.58;95%CI:2.03-6.33) were strongly associated with involvement in physical fights. No evidence of effect modification by the violence prevention variable was identified.

Table 2 Characteristics of children aged 13-17 years currently in school who reported physical violence in the past year, by type of perpetrator, VACS Côte d'Ivoire 2018

Characteristics of children aged 13-17 years currently in school	Unweighted denominator	Percentage [95% CI]	Perpetration of physical violence against children in the past 12 months % [95% CI]				
			By adult members of the community including teachers	By teachers	By parents, caregivers/adult relatives	By peers	By any perpetrators
Overall	794	100%	12.9 [9.8-16.7]	6.9 [4.3-11.0]	17.5 [13.6-22.2]	24.3 [19.8-29.3]	38.2 [32.9-43.7]
Sociodemographic							
Age (years)							
[13-14]	371	43.3 [38.4-48.4]	18.5 [12.4-26.7]	12.6 [7.1-21.4]	19.1 [14.3-25.0]	23.0 [17.8-29.1]	42.3 [35.3-49.5]
[15-17]	433	56.7 [51.6-61.6]	8.6 [6.0-12.0]	2.6 [1.4-4.8]	16.2 [11.0-23.4]	25.3 [19.1-32.6]	37.5 [29.9-45.8]
Sex							
<i>Male</i>	446	54.3 [43.9-64.3]	13.9 [9.6-19.8]	8.2 [4.4-14.8]	20.9 [15.0-28.3]	26.1 [19.6-33.9]	41.9 [34.2-50.1]
<i>Female</i>	348	45.7 [35.7-56.1]	11.6 [7.6-17.3]	5.4 [2.7-10.7]	13.4 [9.2-19.3]	22.1 [16.2-29.3]	33.7 [26.8-41.4]
Orphanhood							
<i>Mother and/or father dead</i>	125	15.2 [11.7-19.6]	17.9 [10.9-28.0]	6.5 [3.3-12.3]	22.7 [10.7-41.9]	32.8 [19.5-49.5]	48.2 [34.8-61.9]
<i>Not orphan</i>	662	84.8 [80.4-88.4]	11.5 [8.3-15.8]	6.8 [3.9-11.6]	16.3 [12.5-21.1]	22.9 [18.9-27.6]	36.1 [30.7-41.8]
Home-related characteristics							
Household food and material security							
<i>Has food/material security</i>	579	73.7 [67.5-79.2]	12.8 [9.5-17.1]	6.8 [4.3-10.8]	18.3 [14.01-23.5]	26.4 [20.9-32.7]	39.4 [33.5-45.7]
<i>No security</i>	212	26.3 [20.9-32.5]	13.2 [7.9-21.3]	7.3 [3.6-13.9]	15.4 [10.3-22.2]	18.6 [12.0-27.7]	34.9 [26.0-45.0]
Witness home violence on mother and siblings in the past year							
<i>Yes</i>	127	18.6 [14.6-23.3]	20.8 [14.2-29.4]	10.9 [5.6-20.2]	32.7 [20.4-48.0]	41.7 [29.6-54.9]	58.5 [50.6-70.8]
<i>No</i>	666	81.5 [76.8-85.4]	11.1 [8.2-14.8]	6.0 [3.7-9.5]	14.02 [10.8-18.1]	20.3 [16.3-25.1]	33.6 [28.9-38.6]
School-related characteristics							
Current level of education							

<i>Primary</i>	169	21.1 [16.6-26.5]	31.9 [21.3-44.8]	26.0 [16.0-39.2]	26.1 [18.7-35.2]	23.4 [15.4-33.9]	51.8 [41.7-61.8]
<i>Secondary or higher</i>	625	78.9 [73.5-83.4]	7.8 [5.8-10.4]	1.9 [1.0-3.4]	15.2 [11.0-20.5]	24.5 [19.1-30.9]	34.5 [28.6-40.9]
Endorsement of corporal punishment by a teacher							
<i>Endorses</i>	237	31.4 [27.1-36.1]	14.7 [9.3-22.5]	10.5 [5.8-18.2]	23.7 [14.0-37.3]	34.3 [25.4-44.6]	50.4 [39.4-61.4]
<i>Does not endorse</i>	556	68.6 [63.9-72.9]	12.1 [9.14-15.7]	5.3 [3.3-8.6]	14.7 [11.0-19.2]	19.7 [15.5-24.7]	32.6 [28.1-37.6]
Education on anger management during school year							
<i>Taught how to manage anger</i>	243	30.2 [25.3-35.6]	10.7 [6.5-17.2]	8.4 [4.7-14.6]	9.3 [4.9-17.2]	19.3 [13.4-26.9]	30.3 [22.0-40.1]
<i>Not taught how to manage anger</i>	547	69.8 [64.4-74.7]	13.6 [9.9-18.3]	6.2 [3.6-10.7]	21.0 [15.6-27.7]	26.2 [20.5-33.0]	41.5 [34.9-48.3]
Education on physical fights avoidance during school year							
<i>Taught how to avoid physical fights</i>	492	61.4 [55.9-66.6]	11.8 [8.2-16.7]	7.1 [4.2-11.8]	18.3 [13.1-24.8]	23.8 [17.8-30.9]	37.7 [30.2-45.9]
<i>Not taught how to avoid physical fights</i>	301	38.6 [33.4-44.1]	14.6 [10.3-20.3]	6.7 [3.6-12.0]	16.3 [10.9-23.7]	24.8 [18.0-33.2]	38.7 [31.6-46.3]
Education on avoiding bullying during school year							
<i>Taught how to avoid bullying</i>	166	20.9 [16.6-26.0]	16.3 [10.8-24.0]	9.7 [5.1-17.7]	16.6 [10.8-24.7]	26.5 [18.7-36.2]	43.7 [33.3-54.8]
<i>Not taught how to avoid bullying</i>	609	79.1 [74.0-83.4]	11.7 [8.4-16.2]	6.1 [3.7-10.1]	17.9 [13.4-23.6]	24.1 [19.2-29.6]	36.9 [31.4-42.7]
Community-related factors							
Friendships							
<i>Talk to friends</i>	467	57.6 [52.3-62.8]	13.2 [9.4-18.2]	6.5 [3.5-11.7]	20.2 [14.8-26.9]	28.2 [22.1-35.1]	42.7 [36.4-49.3]
<i>Don't talk to friends</i>	325	42.4 [37.2-47.7]	12.4 [8.4-17.8]	7.4 [4.4-12.1]	13.9 [8.9-21.2]	18.7 [12.7-26.7]	31.8 [23.3-41.7]
Community Safety							
<i>Felt unsafe</i>	106	13.9 [10.8-17.6]	23.9 [15.5-35.0]	9.3 [3.9-20.5]	35.6 [24.5-48.5]	43.1 [30.7-56.5]	61.2 [48.9-72.2]
<i>Did not feel unsafe</i>	685	86.2 [82.4-89.2]	11.2 [8.3-14.8]	6.6 [4.2-10.1]	14.6 [10.7-19.7]	21.3 [16.7-26.9]	34.6 [29.1-40.6]
Witness violence in the community in the past year							
<i>Yes</i>	135	21.3 [17.2-26.1]	18.0 [11.7-26.7]	5.7 [2.6-12.1]	23.9 [15.9-34.3]	45.5 [33.7-57.9]	57.1 [43.7-69.5]
<i>No</i>	576	78.7 [73.9-82.8]	12.5 [8.8-17.5]	7.7 [4.5-13.3]	14.1 [10.2-19.1]	17.9 [13.9-22.9]	32.4 [26.7-38.6]

Involvement in physical fights, past 12m							
<i>Yes</i>	213	29.8 [25.2-34.7]	21.1 [16.0-27.3]	7.8 [4.2-14.2]	28.8 [20.8-38.2]	43.9 [34.9-53.2]	62.0 [52.8-70.5]
<i>No</i>	579	70.2 [65.3- 74.8]	9.41 [6.5-13.5]	6.6 [4.0-10.5]	12.73 [8.5-18.7]	16.0 [11.8-21.3]	28.1 [23.0-33.9]

Table 3 Bivariate and multivariable of covariate with experience of PV by teachers and involvement in physical fights

Outcome variable	Characteristics	% (95%CI)	Unadjusted OR ^b (95% CI)	p-value	Adjusted OR ^b (95% CI)	p-value	
Overall = 794	-	-	-	-	-	-	
Factors associated with experience of PV by teachers N= 789; 6.9% (4.3-11.0)							
Experience of physical violence perpetrated by teachers ^a	Sociodemographics						
	Age group (years) N=789						
	[13-14]	5.4 (3.0-9.6)	5.33 (2.19-12.96)	<0.0001	5.78 (2.25-14.87)	<0.0001	
	[15-17]	1.5 (0.8-2.7)	1		1		
	Sex ^a N=789						
	Male	4.5 (2.3-8.4)	1.56 (0.57-4.26)	0.38	1.38 (0.50-3.82)	0.53	
	Female	2.5 (1.2-5.0)	1		1		
	Orphanhood ^a N=783						
	Mother and/or father dead	1.0 (0.5-1.9)	0.95 (0.39 - 2.27)	0.90			
	Mother and father alive	5.8 (3.3-9.9)	1				
	Home-related factors						
	Household food and material security ^a N=786						
	No security	1.9 (1.0-3.6)	1.07 (0.59-1.94)	0.83			
	Security	5.0 (3.1-8.0)	1				
	Witnessed violence on mother and siblings in the past year, past 12m N=788						
Yes	2.0 (1.0-4.1)	1.91 (1.0-3.65)	0.05				

No	4.9 (3.1-7.7)	1			
Physical violence by parents, adult caregivers & other adult relatives, past 12m ^a N=789				2.71 (1.45-5.08)	0.002
Yes	2.6 (1.3-5.0)	3.05 (1.64-5.68)	0.001		
No	4.4 (2.8-6.8)	1		1	
School-related factors					
Current level of education N=789					
Primary	5.4 (3.0-9.6)	18.31(7.89-42.51)	<0.0001		
Secondary or higher	1.5 (0.8-2.7)	1			
Endorsement of corporal punishment by teachers ^a N= 788					
Yes	3.3 (1.8-6.1)	2.08	0.02	2.10 (1.04-4.24)	0.04
No	3.6 (2.3-5.8)	1			
Taught how to avoid anger, past school year N= 785					
No	4.4 (2.5-7.4)	0.73 (0.36-1.45)	0.37		
Yes	2.5 (1.3-4.7)	1			
Taught how to avoid physical fights and violence, past school year N=788					
No	2.6 (1.5-4.6)	0.94 (0.49-1.80)	0.85		
Yes	4.3 (2.5-7.4)	1			
Taught how to avoid bullying, past school year N= 771					
No	4.9 (3.0-7.9)	0.61 (0.31-1.20)	0.14		
Yes	2.0 (1.0-4.2)	1			
Community-related factors					
Talk to friends N=787					
No	3.1 (1.9-5.0)	1.15 (0.59-2.23)	0.40		
Yes	3.7 (2.0-6.9)	1			
Felt unsafe in the community N=786			0.31		

	Yes	1.3 (0.6-3.0)	1.47 (0.70-3.09)			
	No	5.6 (3.6-8.6)	1			
	Witnessed violence in the community, past 12m N=707			0.52		
	Yes	1.2 (0.6-2.7)	0.71 (0.26-1.98)			
	No	6.1 (3.4-10.62)	1			
	Physical violence by peers, past 12m N=789			0.22		
	Yes	2.5 (1.4-4.4)	1.76 (0.71-4.38)			
	No	4.5 (2.4-8.3)	1			
	Involvement in physical fights, past 12m N=787			0.52		
	Yes	2.3 (1.2-4.5)	1.21 (0.68-2.17)			
No	4.6 (2.9-7.4)	1				
Association between experience of PV outside of school and schoolchildren's involvement in physical fights N=792; 29.8% (25.2-34.7)						
Involvement in physical fights at least once, past 12m	Sociodemographics					
	Age group N=792			1.82		
	[13-14]	14.3 (11.3-18.0)	1.31 (0.88-1.95)			
	[15-17]	15.46 (12.3-19.3)	1		-	
	Sex N=792			0.40		
	Male	17.2 (12.7-22.7)	1.22 (0.77-1.93)		1.39 (0.85-2.28)	0.19
	Female	12.6 (8.7-18.0)	1	1		
	Orphanhood N=785			0.06		
	Mother and/or father dead	3.2 (2.1-4.9)	0.58 (0.33-1.02)		0.71 (0.39-1.30)	0.26
Mother and father alive	26.3 (22.0-31.2)	1	1			

Home-related factors					
Household has food and material security N=789			0.02		0.02
No security	24.1 (19.9-28.8)	0.58 (0.37-0.90)		0.54 (0.33-0.89)	
Security	5.7 (4.0-8.1)	1		1	
Witnessed violence on mother and siblings, past 12m N=791			0.14		-
Yes	7.2 (4.5-11.6)	1.67 (0.85-3.28)			
No	22.6 (18.8-26.8)	1			
Physical violence by parents, adult caregivers & other adult relatives, past 12m N=792					
Yes	8.6 (5.9-12.3)	2.77 (1.43-5.33)	0.003	1.97 (1.04-3.76)	0.04
No	21.2 (17.6-25.4)	1		1	
School-related factors					
Current level of education N=792			0.07		0.04
Primary	8.1 (5.4-11.9)	1.63 (0.97-2.73)		1.66 (1.04-2.66)	
Secondary or higher	21.7 (18.2-25.7)	1		1	
Endorsement of corporal punishment by teacher N=791			0.08		-
Yes	11.0 (8.31-14.4)	1.43 (0.96-2.11)			
No	18.7 (15.5-22.4)	1			
Physical violence by teachers, past 12m N=787					
Yes	2.3 (1.2-4.5)	1.21 (0.68-2.17)	0.52		-
No	27.0 (23.0-31.3)	1			
Community-related factors			0.20		

	Talk to friends N=790					
	No	18.5 (14.8-22.9)	0.76 (0.50-1.16)			-
	Yes	11.2 (8.4-14.9)	1			
	Felt unsafe in the community, past 12m N=789					
	Yes	6.4 (4.5-9.1)	2.33 (1.28-4.24)	0.006		-
	No	23.3 (19.2-28.0)	1			
	Witnessed violence in the community, past 12m N=709					
	Yes	9.6 (6.8-13.3)	2.43 (1.42-4.17)	0.001	1.72 (1.01-2.94)	0.05
	No	19.7 (15.9-24.2)	1		1	
	Physical violence by peers, past 12m N=792					
	Yes	13.0 (9.9-17.1)	4.10 (2.56-6.56)	<0.0001	3.58 (2.03-6.33)	<0.0001
	No	16.7 (13.4-20.7)	1		1	

3.5 Discussion

Summary of main findings

In this analysis of nationally representative data from Côte d'Ivoire, we found that over 4 in 10 boys and girls aged 13-17 in school reported experience of physical violence in the past year. In this group, experiences of physical violence in the past 12 months were high for any perpetrator: peer violence was the highest (24.3%), followed by parents (17.5%) and adult members in the community, including teachers (12.9%). In our conceptual framework that combined the INSPIRE framework (89) and WHO ecological model (2), we hypothesized that community-level factors, school-related factors, home-related factors and individual-level factors have an influence on children's experiences of physical violence. Consistent with our hypotheses, we observed an overlap of the experiences of physical violence by different perpetrators at home, school and the community. We found that children who experienced physical violence from adults in their household were more likely to experience physical violence from teachers and be involved in physical fights. Violence from teachers was more commonly experienced by children in primary school. We also observed an association between experiencing community-related risk factors (e.g. feeling unsafe, experiencing violence from peers) and involvement in physical fights, and this association had no effect modification by violence prevention education.

Comparison with other literature

High prevalence of school and other violence

The high estimates of experiences of violence from different perpetrators among school children found in this study are consistent with other VACS findings in Sub-Saharan Africa (26-28, 78-88). A previous cross-sectional survey identified in the grey literature and carried out among primary and secondary school students, teachers and parents in Côte d'Ivoire on national estimates of children's vulnerability, context and perpetrators of violence in schools found that 70% reported physical violence by school peers, 40% of students are physically punished by their teachers and (56). Further efforts are urgently needed to prevent violence perpetrated against schoolchildren through evidence generated to inform programming and policy.

Association between parent/peer violence and violence from teacher

Importantly, we found that the experience of physical violence by parents and adult caregivers or relatives was significantly associated with both the experience of physical violence by teachers in bivariate and adjusted models. These results corroborate the findings of previous work that found that children in violent households are at higher risk of being victims of VAC (93-96). These findings highlight the need for strong family support to protect children against almost all forms of violence (97, 98). Our findings underscore the need for integrated programmes to fight VAC as children at risk of violence in school may also need secondary prevention at home and in their community.

We observed that schoolchildren who experienced physical violence from peers had higher odds of experiencing physical punishment by teachers, although no statistical significance was found. A previous analysis of a school-based survey in Uganda found that factors associated with physical violence from peers were overlapping and included exposure to interparental emotional and physical violence and supportive of attitude towards corporal punishment by teachers (99). These experiences of physical violence from different perpetrators may have overlapping or secluded manifestations, locations and contexts. School could play an important role in reducing the impact of children's experiences of violence (12), while for some children, school experiences exacerbate their other experiences.

Association between parent/peer and teacher violence and involvement in physical fights

The experience of violence by parents/caregivers and adult relatives was significantly associated with students' involvement in physical fights in the past year. Our findings are in accordance with a cross-sectional survey of adolescents living in high-risk communities which found a strong association between experience of physical violence in childhood and peer violence perpetration, especially for boys (100).

We found a strong association between community unsafety (OR:2.33;95%CI 1.28-4.24), witnessing violence in the community (AOR:1.72;95%CI:1.01-2.94), peer violence (AOR:3.58;95%CI:2.03-6.33) and schoolchildren's involvement in physical fights. Previous work has shown that children who witness violence in the community are at higher risk of being bullied and experiencing violence (101). Our findings corroborate that supportive

relationships can protect children living in violent communities (102). This highlights the need for a safe environment and neighbourhood to prevent VAC as recommended by the INSPIRE strategies (89).

Schoolchildren's individual characteristics and co-occurrence of violence

It has been suggested that violence against children in school is gendered (103). This study has not been able to demonstrate this. Although no association was observed with gender, boys had higher odds of experiencing physical violence by teachers. These findings should be interpreted with caution as the odd ratio for the gender variable is notable but the wide confidence interval suggests a lower precision.

Interestingly, at the school level, children who endorsed corporal punishment by teachers were twice more likely to experience physical violence by teachers. This could suggest that beliefs and norms around violence against children are perpetuated and may be reproduced by children and later in adulthood (71). Moreover, schoolchildren in the younger age group (13-14 years old) and those in primary school had higher odds of experiencing physical violence by teachers. This highlights the importance of contexts and individual characteristics in violence victimization.

School violence prevention education

No effect modification of anger management, physical fights avoidance and bullying avoidance was found between experience of violence from different perpetrators and involvement in physical fights. There is a need to further our understanding of the content of the training on violence prevention education, explore whether it is drawn from robustly evaluated intervention adapted to context (violent community, witnessing violence at home, etc.)

Strengths and limitations

In this exploratory study, we analysed for the first time in Sub-Saharan Africa the co-occurrence of schoolchildren's experiences of physical violence by parents/caregivers and adult relatives, peers and teachers using data from a nationally representative survey (VACS). Our findings provide insights into the overlap of the experiences of violence in the different spheres of children's life: home, school and the community.(104)

A major limitation of this study could be the underestimation of the prevalence of violence perpetrated by parents and teachers in the past 12 months. The teacher variable was calculated as a deriving variable from that of adults in the community. Moreover, recall bias and fear of reporting violence from authority figures could have lowered the report of violence. To mitigate the potential of disclosure, interviews are conducted in confidentiality (70).

As VACS did not survey children under the age of 13, the extent of physical violence by different perpetrators among younger children, especially in those in early years of schooling, was not included.

Research Implications

While 60% of children reported having received education on physical fights prevention in the past school year, only 20% had education on bullying avoidance, and 30% on anger management. Further work is needed to evaluate the violence prevention education programme in Côte d'Ivoire, including when and how it was delivered, acceptability, barriers and markers of impact.

Violence frequently co-occurs but is often analysed quantitatively as a binary exposure, which does not consider the range and complexity of experiences. Future analyses may benefit from a person-centred approach (e.g. latent class analysis) through which experiences are allowed to cluster at the individual level in order to understand which children are at higher risk of experiencing violence from multiple perpetrators.

A further study could investigate diverse forms of children's exposure to physical violence by teachers to allow a classification of school violence. Further work should be undertaken to explore the vulnerability of children in the younger age group starting from preschool. The gender dimension of school-related violence should also be explored through qualitative research.

In-depth qualitative research should be undertaken to complement the VACS data. This should explore schoolchildren's accounts and experiences of physical and emotional violence from teachers, peers and caregivers. Future work should include children from violent neighbourhoods, drawing on our key findings, which indicate the strong relationship between

unsafe community (including witnessing violence in the community) and physical violence victimization among school children.

Policy implications

The strong relationships between violence from different perpetrators as well as attitudes to the use of corporal punishment and feelings of safety within the community, suggest a whole-school integrated approach which includes family and community members, as well as children themselves. School can be an entry point to prevent violence; it is essential to invest in research and implementation of well-designed and evaluated school programs to reduce violence from teachers to students, such as the Good School Toolkit in Uganda (12) and the IRIE classroom Toolbox in Jamaica (13). The Good School Toolkit in Uganda is an example of a rigorously evaluated school-wide intervention through a randomised controlled trial that brings together teachers, students and school-affiliated community members working together to reduce physical violence from school staff to students (12). Evidence from the Good School Toolkit found reduced violence from teachers and peers. Caregiver violence was lower in intervention schools than in control schools, suggesting that some of the ideas of the toolkit may have spread into the community. Teachers' training and support should incorporate the management of children exposed to violence at home and in the community.

3.6 Conclusion

Schoolchildren in Côte d'Ivoire experience high levels of physical violence by different perpetrators: parents/caregivers or adult relatives, peers and teachers. These experiences overlap and may have secluded manifestations, locations and contexts. Our findings underscore the need for whole school programmes to prevent violence against children as children at risk of violence in school may also need secondary prevention at home and in their community.

3.7 Ethics

VACS are approved by the CDC's Institutional Review Board and the Ethical Review Committee of the country in which it is implemented (70). This study received ethics approval from the London School of Hygiene and Tropical Medicine Research Ethics Committee (LSHTM, réf. 17938) and Côte d'Ivoire Comité National d'Éthique des Sciences de la Vie et de la Santé (CNESVS) ref. N/Réf: 165-19/MSHP/CNESVS- km.

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3.10 Appendix 1 International and national surveys used to inform the VACS questionnaire.

Abbreviation	Survey
DHS	Demographic and Health Survey
NISVSS	National Intimate Partner and Sexual Violence Surveillance System
CSA	The Child Sexual Assault Survey
LONGSCAN	Longitudinal Studies of Child Abuse and Neglect
ICAST	ISPCAN Child Abuse Screening Tool
BSS	HIV/AIDS/STD Behavioural Surveillance Surveys
YRBS	Youth Risk Behaviour Survey
Add Health	National Longitudinal Study of Adolescent Health
N/A	World Health Organization (WHO) Multi-country Study on Women's Health and Domestic Violence against Women.
BRFSS	Behavioural Risk Factor Surveillance System
N/A	Hopkins Symptoms Checklist
MICS 4	Multi Cluster Indicator Survey
GSBHS	Global School-Based Health Survey

4 Research paper 2

Teachers' characteristics and their association with the perpetration of emotional and physical violence towards students in Côte d'Ivoire

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4.1 Abstract

Objective: To explore factors associated with the reported use of physical (PV) and emotional violence (EV) by teachers against children in school.

Setting: Primary schools in the Tonkpi Region, Northwest of Côte d'Ivoire

Participants: 160 primary-school teachers participating in a classroom-based intervention to reduce violence toward students completed a cross-sectional survey prior to the intervention.

Primary outcome measures: Our primary outcome measures were teachers' self-reported use of i) physical violence and ii) emotional violence, in the last term. We used multivariable logistic regression analysis to examine factors associated with teachers' self-reported use of PV and EV against students in the past term.

Results: 55% of respondents reported using EV and 28% PV in the past term. In multivariable analysis, we observed that teachers with low acceptance of violence were less likely to report use of PV [OR=0.16;95%CI:0.05-0.55]. Teachers who perceived that parents did not accept violence were less likely to report use of EV [OR=0.29;95%CI:0.12-0.74]. Respondents with low self-efficacy in the classroom [OR=2.57;95%CI:0.88-7.47] and those with poor mental health [OR=3.95;95%CI:1.55-10.07] (vs good mental health) were more likely to report EV. Female [OR=0.33] and other types of teachers [OR=0.32] (vs being a teacher) were less likely to report use of EV. Those who had been in their current job longer [OR=3.41] (vs. less than five years) and those with poor knowledge of the consequences of violence towards children [OR=2.06] (vs good knowledge) were more likely to report the use of PV.

Conclusions: Use of PV and EV towards students is high among teachers in Northwest Côte d'Ivoire. Factors associated differ for PV and EV. Teacher's gender, attitudinal norms towards violence, self-efficacy and mental health are strong predictors of violence perpetration against students. Interventions addressing these factors are needed to reduce violence against children.

Keywords: violent discipline towards students, teachers' characteristics, physical violence, emotional violence, attitude towards violence, mental health

Article Summary

Strengths and limitations of this study

- The first study to assess the association between teachers' individual characteristics and reported use of emotional and physical violent discipline against children in school in Côte d'Ivoire.
- The only study to date that explored teachers' attitudes and parental attitudes towards violence as predictors of emotional and physical perpetration by teachers towards students.
- Limitations include social desirability and recall bias.

4.2 Introduction

Teacher-perpetrated violence against children in school is highly prevalent globally despite increasing legal prohibition (1-8). Violence in childhood is associated with short and long term negative outcomes for health, mental health and educational attainment (2). Teachers have recourse to violent disciplinary techniques as educational techniques and a means to control children's behaviour (105). Research indicates a persisting trend in violent discipline in school (12, 105-107) even for minor misconducts (14, 108). Corporal punishment or physical violence can include spanking, slapping, pinching or pulling students' ears or hair (13). Emotional violence can include teachers cursing, insulting, threatening or humiliating students (109). The variability of the prevalence of child victimisation by teachers in school is marked by higher violence in the Global South (12, 105, 107, 110-112).

School-based interventions to prevent violence from teachers to students are scarce globally and have become an area of increasing research (113). Promising interventions include the Good School Toolkit in Uganda (12) and the Irie Classroom Toolbox in Jamaica (13). Robustly evaluated through randomised-controlled trials (RCTs) in primary school for the Good School Toolkit and in preschool for the Irie Classroom Toolbox, the two interventions are designed to equip teachers with non-violent positive discipline. The two studies found a significant decrease in the use of physical violence by teachers who had received the intervention. The EmpaTeach intervention was evaluated through an RCT in a humanitarian setting in Tanzania (114). Although it did not find evidence of a reduction of physical violence from teachers towards students, it positively influenced teachers' use of positive discipline and attitudes towards violence. The intervention Interaction Competencies with Children – for Teachers (ICC-T) to reduce the use of physical and emotional violence by teachers at primary and secondary/junior high schools in Ghana, Tanzania and Uganda is currently being evaluated (115).

Despite the magnitude of the phenomenon, causal factors leading teachers to employ violent disciplinary techniques are not fully understood. Globally, empirical quantitative studies are limited (65, 116-121) and include two in Sub-Saharan Africa, both conducted in Uganda. The two studies show that individual and socio-ecological factors are associated with teachers reported use of violence against children in school settings. Merrill's analysis (65) was derived

from data on a cluster-randomised trial to prevent violence from teachers in primary schools in Uganda and explored characteristics of school staff that were associated with the reported use of physical violence towards their students (65). Teachers' age (30-39 years old), being a headteacher, having 1-2 children, endorsing physical violence and own experience of childhood violence were positively correlated with perpetration of physical violence towards students. No associations were established for school- and community-related factors. The second scholarship was a cross-sectional study that revealed that teacher's stress level was associated with the use of violent discipline and positive attitude, and the relationship between stress and violent discipline was mediated through the endorsement of violent discipline (119).

Studies from other regions have revealed other factors associated with teachers' use of violent discipline. Societal and gender norms such as patriarchy (60, 61), experiencing and witnessing violence in childhood (118, 122), difficult working conditions for teachers (23-25) can also be predictors of perpetration of violence against children. In addition, professional training on non-violent techniques and knowledge of the detrimental effects of violence on the child decrease the risk of using violent discipline, as reported by teachers (122-128).

In Côte d'Ivoire, violence against children in schools in the Tonkpi Region is influenced by structural factors including the long history of armed conflicts in neighbouring countries and later at the national level. The years of conflict have affected the education system including teachers working conditions. At the time of the study, numerous initiatives had been implemented to reduce violence in school including a formal ban on corporal punishment in school (48) and the training of teachers across the country in peace culture and non-violent teaching methods (54, 55). Despite these measures, violence against children in school remains widespread. The Violence against Children Survey (VACS) conducted in 2018 revealed that 34% of male students and 28% of female students experience one or more forms of physical and sexual violence from their teachers or classmates (30).

Much less is known about students' experience of emotional violence perpetrated by teachers. Teachers claim to take over a social dominant norm whereby parents ask them to use corporal punishment against their children in case of misconduct or poor school performance (56). No studies have investigated the relationships between perceptions of

parental attitude around discipline and teachers' use of violent discipline towards students. Furthermore, it is unknown how factors related to teachers' job (motivation and self-efficacy in the classroom) are linked to their use of emotional and physical violence. The inter-relation between conflict, education and violence is of major importance given the central role of schools in providing a safe space and an opportunity to interrupt the transmission of violence through peace culture education.

This indicates a need to study factors associated with the use of violent discipline by teachers in order to inform efforts and design interventions targeted at reducing violence from teachers to students in the specific context of Côte d'Ivoire. The aim of the present analysis is to explore factors associated with the use of physical and emotional violence by teachers against children in primary school in Côte d'Ivoire.

4.3 Methods

We performed a secondary analysis of baseline survey data obtained during a formative evaluation of the APEV intervention. Developed by the NGO Graines de Paix, APEV stands for “Apprendre en Paix, Eduquer sans Violence” (French for “Learning in Peace, Educating without Violence”). It is a brief educational intervention which aims to strengthen teachers’ capacity to adopt a non-violent pedagogical approach to reduce the use of physical and emotional violence. The baseline survey was administered in February 2018 to a sample of 160 teachers from over 60 primary schools who were participating in the intervention across the Tonkpi region (North-West of Côte d’Ivoire).

APEV is delivered through a Train the Trainer model. The intervention is described in Box 1. Results of the formative evaluation are presented in a previous publication (129).

Box 1 APEV peace culture training model for teachers by Graines de Paix, 2018

<p>APEV or Apprendre en Paix et Eduquer sans Violence, a peace-culture intervention by Graines de Paix</p>	<ul style="list-style-type: none">• Step 1 - Graines de Paix staff trained teacher-counsellors who are experienced teachers in the National Education system in charge of delivering and coordinating initial and routine teacher training sessions.• Step 2 - Teacher-counsellors purposively recruited two teachers from each school to participate in the intervention based on their personal judgement about the teacher’s ability to inspire positive behavioural change among other teachers in their school.• Step 3 - Teacher-counsellors deliver APEV through a two-day training followed by two individual observations with one-to-one follow-up sessions. Educational kits and materials containing experimental activities to be carried out with the students in the classroom are distributed to teachers. during training, teachers are equipped with classroom tools as an alternative to corporal punishment. The training also contributes to strengthening personal development skills.
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Procedure

The baseline survey was administered immediately prior to the first training day of the intervention. Teachers self-completed surveys on electronic tablets using Open Data Kit (ODK) software. The baseline survey took between 20-40 minutes to complete. The questionnaire was piloted, adapted and translated from English into French by the research team and Graines de Paix staff to ensure reliability. Questions were cognitively tested and further refined with teachers.

Informed consent

Informed written consent was obtained from participants before entering the survey. Participants were notified in consent forms and verbally that disclosure of any acts of serious violence against students would necessitate a referral to child protection services.

Patient and Public Involvement

This study does not involve any patients.

Main Outcome measure

Our primary outcome measures were teachers' self-reported use of i) physical violence and ii) emotional violence, in the last term. The outcomes were modelled as binary variables i.e. coded "yes" for any report of any form of physical and/or emotional violence in the last term. This was based on 32 items for physical violence and six items for emotional violence (see Appendix Table 1). The questions were based on the ICAST (International Society for the Prevention of Child Abuse and Neglect/ISPCAN- Child Abuse Screening Tools) (130) and the WHO Multi-Country Study on Women's Health and Domestic Violence against Women (131).

Exposure variables

Measures used in this analysis are shown in Appendix Table 1. Gender and teacher's experience of intimate partner violence (IPV) were modelled as binary variables. IPV items were adapted from the WHO Multi-Country Study on Women's Health and Domestic Violence against Women (131). All other exposure variables were modelled as categorical variables: age, marital status, number of dependents, job at school, time in current job, highest qualification, mental health, self-efficacy, teacher's perception of parental acceptance of physical discipline in school and knowledge of consequences of violence. Items to assess teachers' job-related feelings were drawn from the Maslach Burnout Inventory – Educators Survey (MBI-ES) (132). Teachers' self-efficacy items were adapted from the Norwegian Teacher Self-Efficacy Scale (NTSES) (133). All other questions were developed and adapted to the local context in consultation with Graines de Paix staff, Ministry of Education experts and the research team, and cognitively pre-tested.

Exploratory factor analysis generated an 8-item measure assessing teachers' knowledge of the consequences of violence (Cronbach's alpha: 0.81), a 10-item measure assessing teacher

self-efficacy in the classroom (Cronbach's alpha: 0.73), a 6-item measure assessing teachers' acceptance of physical discipline in school (Cronbach's alpha: 0.90) and a 6-item measure assessing teacher's perception of parental acceptance of physical discipline in school (Cronbach's alpha: 0.96). Furthermore, we used Cronbach's alpha to investigate whether sets of items could be grouped as composite scores, and following this, eight composite measures were created for the exposure variables (see Appendix Table 1). For these variables, scores were summed, and the response distribution of the sums was examined. Based on distribution, scores were constructed as binary to represent low and high, or thirds to represent low, medium, and high (see Appendix Table 1).

Conceptual framework

The conceptual framework presented in Figure 1 below relates to the exposure variables derived from the dataset. It draws from the WHO social-ecological framework of risk factors of interpersonal violence (2), is informed by the literature (13, 18), and is supported by contextual knowledge. Our conceptual framework shows that causes of violence perpetrated by teachers towards students span across multiple layers. Specifically, we hypothesised three layers of risk factors from the most distal to the use of violence: sociodemographic characteristics, attitude towards/experience of violence; and job-related feelings and mental health (65, 119).

Figure 8 Conceptual framework of factors associated with teachers' use of violent discipline towards students in school



Statistical analysis

Analyses were conducted in STATA IC Version 17.0 (92). We present descriptive statistics using numbers and percentages for categorical variables or continuous variables, means (and standard deviations) or medians (and inter-quartile ranges) for non-normally distributed variables. We first described the prevalence of physical and emotional violence perpetration over different time periods and the overlap between the use of these forms of violence.

We used logistic regression to calculate odds ratios (OR) and 95% confidence intervals (95% CI) to show the associations between each of the exposures and the use of i) emotional violence and ii) physical violence in the past term.

We developed the multivariable model in layers according to the conceptual framework (figure 1). Gender was included in the models *a priori* since the experience of and use of violence is highly gendered in the Côte d'Ivoire context (30).

We first took the layer conceptualised to be most distal to the use of violence (sociodemographic variables). We included all variables associated with the outcome in bivariate analysis with a significance level of $p < 0.1$ in a multivariable model. We proceeded

by layers to adjust for confounding at each stage. We then removed variables one by one until all remaining variables were associated with the outcome at $p < 0.1$.

Next, we developed a multivariable model for the variables representing attitudes to violence, including all variables associated with the outcome in bivariate analysis with a p -value of < 0.1 and adjusting for sociodemographic variables. We then removed variables one by one and retained those with a p -value of < 0.1 in the multivariable model. We repeated this for the final layer of job-related variables, adjusting for sociodemographic and attitudinal variables. We present ORs and 95% CIs for variables in each of these multivariable models. Finally, we included variables from all these layered models into a final multivariable model and presented ORs and 95% CIs for these associations.

Missing data

We observed low levels of missing data, as detailed in Appendix Table 2. In line with the prevalence estimates method used in the Good School study (12), we assigned the value “No/unsure” to responses “I want to skip” and “declined”. Respondents missing 50% of items were dropped: one respondent for the variable “number of dependents” and one respondent excluded for one item on “knowledge of consequences of violence on children”.

4.4 Results

Characteristics of participants

Participant characteristics are shown in Table 1. Almost two-thirds (62%) were male. Participants’ ages ranged from 21 to 60 years (mean: 37.03; SD=7.6), and sixty percent of respondents were aged 30-39. Just under half (44%) were in a relationship, and 62% had three or more dependents. Around three-quarters (74%) of participants were teachers at the school, with 12% teaching assistants or volunteer teachers. Fifty-eight percent of the participants had more than five years teaching experience. The highest qualification among participants was mostly A Level (48%) and GCSE/Other (37%).

Teachers’ reported perpetration of violence towards students

Table 1 below shows the high reported prevalence of violence used by teachers towards students. Emotional violence was more common than physical violence, with 72.5% of respondents reporting using emotional violence ever and 55.0% in the last term. While 36.2%

reported ever using physical violence towards students and 27.5% reported use of physical violence in the last term. As shown in Figure 2, there was a lot of overlap between use of physical and emotional violence with 35.0% of teachers reporting having used both emotional and physical violence ever and only 1.2% reporting only using physical violence. Similarly, over a quarter of teachers (26%) reported using both emotional and physical violence in the last term against 2% for physical violence only.

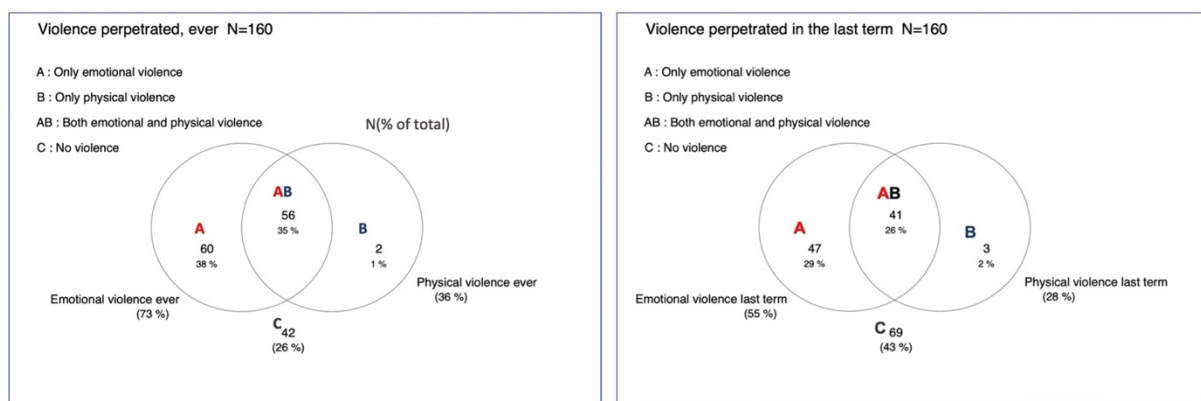
Table 1 Teachers’ characteristics and prevalence of violence perpetration, APEV baseline survey (2018)

	No.	%
N=160		
Gender (N=160)		
Male	99	61.9
Female	61	38.1
Age (years)		
less than 30	18	11.2
30-39	96	60.0
40 and more	46	28.7
Marital status		
Single	42	26.2
In a relationship (not married)	71	44.4
Married	47	29.4
Number of dependents⁴		
Two or less	60	37.7
Three or more	99	62.3
Job at school		
Director	22	13.8
Teacher	119	74.4
Teacher Assistant/Volunteer		
Teacher	19	11.9
Time in current job (years)		
Less than one	21	13.1
1 to 2	21	13.1
3 to 5	25	15.6
Over 5	93	58.1
Highest qualification		

⁴ N=159 (1 missing value)

University degree	24	15.0
A level	77	48.1
GCSE/Other	59	36.9
Use of violence against students		
Emotional violence, ever	116	72.5
Emotional violence, last term	88	55.0
Physical violence, ever	58	36.2
Physical violence, last term	44	27.5

Figure 2 Overlap of the forms of violence perpetrated by teachers, APEV baseline survey (2018)



Factors associated with teachers' self-reported use of violence

Table 2 shows results from the bivariate associations between teachers' individual characteristics and self-reported reported use of violence against students in the past term. In the unadjusted models (ORs, CIs, and p-values in table 2) for sociodemographic explanatory variables, female teachers (vs male) and other type of teacher-volunteer, director, assistant- (vs teacher) were less likely to report use of emotional violence. Having been in current job for 5 years or more was positively associated with use of both emotional and physical violence. For physical violence, age ≥ 40 and being married were positively associated with self-report of use of physical violence. Finally, teachers with GCSE/Other qualifications (vs those with higher qualifications) were less likely to use physical violence.

For attitude towards violence/experience of violence, low acceptance of violence towards students and perceived low acceptance of physical discipline by parents were strongly associated with lower prevalence of both emotional and physical violence in the past term. No association was observed between respondents' experience of IPV or poor knowledge of

the consequences of violence and their self-reported use of emotional violence. However, both were positively associated with the use of physical violence.

Job-related feelings and mental health analysis found that highly motivated teachers were less likely to use both forms of violence. Low self-efficacy was positively associated with use of emotional violence, and low mental health is strongly associated with self-reported use of emotional and physical violence.

In the first stage of building the multivariable model (model 1), after adjusting for other sociodemographics, we observed that female teachers and those with other job at school-volunteer, director, assistant- (vs teacher job) were less likely to report use of emotional violence (Table 3). Being 5 years or more in current job was positively associated with self-reported use of physical violence, while respondents with GCSE/other qualifications were less likely to report use of physical violence. In model 2, after simultaneously adjusting for sociodemographic and attitudinal characteristics, we observed that respondents with low acceptance of violence were less likely to report physical violence (0.17; 0.05 - 0.51) and those who perceived low acceptance of physical discipline by parents were less likely to report emotional violence (0.27; 0.12 - 0.62) in the past term with consistent odds with bivariate level. Respondents with poor knowledge of the damaging consequences of violence towards students (2.11; 0.92 – 4.84) were more likely to report use of physical violence.

In the final multivariable model, female teachers (0.33; 0.13 - 0.78), those with other types of job vs teachers (0.32; 0.13 - 0.78) and those with perceived low acceptance of physical discipline by parents (0.29; 0.12 - 0.74) were less likely to report emotional violence. The odds of reporting emotional violence increased for teachers with low self-efficacy (2.60; 1.07 - 6.30) and those reporting poor mental health had nearly four times the odds to use emotional violence (3.95; 1.55 - 10.07). For physical violence, respondents in their current job for 5 years or more (3.41; 1.25- 9.31) had higher odds of reporting violence. Teachers with GCSE or less (0.29; 0.12 - 0.74) and those who reported low acceptance of violence towards students (0.16; 0.05 - 0.55) were less likely to report physical violence. Finally, poor knowledge of the consequences of violence against children (2.06; 0.89- 4.77) was not associated with reporting physical violence.

Table 2 Bivariate associations between teacher's characteristics and self-reported use of emotional and physical violence towards students in the last term

		Emotional violence					Physical violence				
	(N)	n	%	OR	95%CI	p value	n	%	OR	95%CI	p value
All participants	160	55.0					27.5				
Socio-demographic characteristics											
Gender											
Male	99	62	62.6	1		0.01	30	30.3	1		0.31
Female	61	26	42.6	0.44**	(0.23 - 0.85)		14	23.0	0.69	(0.33 - 1.43)	
Age											
<40	114	62	54.4	1		0.81	26	22.8	1		0.04
>40	46	26	56.5	1.09	(0.55 - 2.17)		18	39.1	2.18**	(1.04 - 4.54)	
Marital status											
Unmarried	113	62	54.9	1		0.96	26	23.0	1		0.05
Married	47	26	55.3	1.02	(0.51 - 2.02)		18	38.3	2.08*	(1.00 - 4.32)	
Number of dependents											
Two or less	60	33	54.1	1		0.86	16	26.2	1		0.82
Three or more	99	55	55.6	1.02	(0.54 - 1.95)		28	28.3	1.08	(0.53 - 2.23)	
Job at school											
Teacher	119	73	61.3	1			34	28.6	1		
Other type of teacher (volunteer, director, assistant)	41	15	36.6	0.36***	(0.17 - 0.76)	0.006	10	24.4	0.81	(0.36 - 1.82)	0.60
Time in current job (years)											
Less than 5	67	31	46.3	1		0.06	12	17.9	1		0.02
5 years or more	93	57	61.3	1.84*	(0.97 - 3.47)		32	34.4	2.40**	(1.13 - 5.13)	
Highest qualification											
A-Level or more	101	55	54.5	1		0.86	33	32.7	1		0.06

GCSE/Other	59	33	55.9	1.06	(0.56 - 2.03)		11	18.6	0.47*	(0.22 - 1.03)	
Attitude towards/experience of violence											
Teachers' attitude towards violence											
High acceptance	56	36	64.3	1			26	46.4	1		
Moderate acceptance	52	34	65.4	1.05	(0.48 - 2.31)	0.002	13	25.0	0.39**	(0.17 - 0.87)	<0.001
Low acceptance	52	18	34.6	0.29***	(0.13 - 0.65)		5	9.6	0.12***	(0.04 - 0.36)	
Parental attitude towards physical discipline											
High acceptance	56	37	66.1	1			25	44.6	1		
Moderate acceptance	50	32	64.0	0.91	(0.41 - 2.03)	0.002	12	24.0	0.39**	(0.17 - 0.87)	0.001
Low acceptance	54	19	35.2	0.28***	(0.13 - 0.61)		7	13.0	0.18***	(0.07 - 0.48)	
IPV experience											
Not experienced IPV	125	67	53.6	1			30	24.0	1		
Experienced IPV	35	21	60.0	1.30	(0.61 - 2.78)	0.50	14	40.0	2.11*	(0.96 - 4.66)	0.06
Knowledge of damaging consequences of violence towards students											
Good knowledge	86	44	50.0	1			16	18.2	1		
Poor knowledge	73	44	61.1	1.45	(0.77 - 2.72)	0.25	28	38.9	2.72***	(1.33 - 5.59)	0.006
Job-related feelings and mental health											
Job motivation											
Low motivation	51	32	63.3	1			20	39.2	1		
Moderate motivation	55	33	63.0	0.89	(0.41 - 1.95)	0.08	14	25.5	0.53	(0.23 - 1.21)	0.05
High motivation	54	23	43.1	0.44**	(0.20 - 0.96)		10	18.5	0.35**	(0.14 - 0.86)	
Teacher's self-efficacy											
High efficacy	51	22	43.1	1			11	21.6	1		
Moderate efficacy	35	21	60.0	1.98	(0.82 - 4.74)	0.12	13	37.1	2.15	(0.82 - 5.59)	0.28
Low efficacy	74	45	60.8	2.04*	(0.99 - 4.22)		20	27.0	1.35	(0.58 - 3.12)	
Teachers' mental health											

Good	58	21	36.2	1			10	17.2	1		
Moderate	53	36	67.9	3.73***	(1.70 - 8.20)	0.001	16	30.2	2.08	(0.84 - 5.10)	0.07
Low	49	31	63.3	3.03***	(1.38 - 6.69)		18	36.7	2.79**	(1.14 - 6.82)	

*** p<0.01, ** p<0.05, * p<0.1

Table 3 Multivariable associations between teacher's characteristics and reported use of violence towards students

	Emotional violence			Physical violence		
	OR (95% CI)					
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Socio-demographics						
Gender: Female	0.49** (0.25 -0.95)	0.46** (0.23 - 0.93)	0.33*** (0.13 - 0.78)	1.20 (0.49- 2.95)	1.16 (0.44 - 3.01)	1.08 (0.41 - 2.84)
Job at school: other type of teacher (volunteer, director, assistant)	0.40** (0.19- 0.85)	0.37** (0.17- 0.81)	0.32** (0.13 - 0.78)			
Time in current job: 5 years or more				3.78*** 1.45 - 9.83)	3.61** (1.33 - 9.74)	3.41** (1.25 - 9.31)
Highest qualification: GCSE/Other				0.31*** (0.13 - 0.72)	0.31** (0.13 - 0.78)	0.29** (0.12 - 0.74)
Attitudinal		Adjusted for socio-demographics			Adjusted for socio-demographics	
Acceptance of violence towards children: moderate					0.49 (0.21 - 1.19)	0.56 (0.22 - 1.43)
Acceptance of violence towards children: low					0.17*** (0.05 - 0.51)	0.16** (0.05 - 0.55)
Teacher's perception of parental acceptance of physical discipline: moderate		1.08 (0.46 - 2.52)	1.79 (0.69 - 4.65)			

Teacher's perception of parental acceptance of physical discipline: low		0.27*** (0.12 - 0.62)	0.29*** (0.12 - 0.74)			
Poor knowledge of damaging consequences of violence towards students					2.11* (0.92 - 4.84)	2.06* (0.99 - 4.77)
Job-related feelings			Adjusted for socio-demographics and attitudinal			Adjusted for socio-demographics and attitudinal
Job motivation: moderate						0.46 (0.18 - 1.19)
Job motivation: high						0.61 (0.21 - 1.78)
Teacher's perceived self-efficacy: moderate			2.57* (0.88 - 7.47)			
Teacher's perceived self-efficacy: low			2.60** (1.07 - 6.30)			
Mental health: moderate			5.37*** (2.11 - 13.65)			
Mental health: poor			3.95*** (1.55 - 10.07)			

*** p<0.01, ** p<0.05,
*p<0.1

4.5 Discussion

Summary of findings

The current study identifies individual characteristics which are associated with teachers' self-reported use of violence towards students. Our findings provide important insights into risk factors for violent discipline in schools and therefore contribute to informing school-related violence prevention programs for safe schools. We found that both forms of violence, emotional and physical towards students, are common and overlap. Almost three in four respondents reported ever using emotional violence and over a third reported ever using physical violence towards students. Numerous interesting associations emerged with the data suggesting distinct relationships between teachers' characteristics and either emotional or physical violence. We found strong evidence that being a female teacher, other jobs at school (volunteer, director, and assistant), lower qualifications, low acceptance of violence by teachers and their perception of low acceptance of physical discipline by parents are associated with a lower prevalence of violence perpetration. However, being in current job for 5 years or more, poor knowledge of the consequences of violence on children, low self-efficacy in the classroom, and poor mental health were risk factors for perpetrating violent discipline by teachers. These findings support the hypothesis of our conceptual framework that the causes of violence perpetrated by teachers towards students span across multiple layers: sociodemographic characteristics, attitude towards violence, job-related feelings and mental health.

Emotional violence vs physical violence

The high prevalence of teacher's reported use of violence towards students found in this study is consistent with previous research in Sub-Saharan Africa. Self-reported use of physical violence in the past week was recorded among primary school teachers in Uganda (65) and both physical and emotional violence in the past month by secondary school teachers (119). The high prevalence of school violence and the overlap of violence experiences identified in this study are reported by nationally-representative prevalence estimates of the VACS (30). Although the VACS offers limited information about the extent of emotional violence perpetrated by teachers on students. The high prevalence of emotional violence found in this

study (almost double that of physical violence) could suggest more visibility of emotional violence towards students with increasing legal restrictions and scrutiny around violent discipline in school.

Teacher's sociodemographic and violence perpetration

Our finding that teachers' gender was not associated with perpetration of physical violence is aligned with a previous research (65). We found that female teachers were less likely to use emotional violence than male teachers, while other studies showed that perpetration of emotional violence did not differ according to teacher's gender (119, 134). The inconsistency may be due to the specificities of cultural and gender norms across settings.

Although no evidence for association was identified between teachers' age and violence perpetration, our findings that teachers with more years of experience and presumably older had higher odds to report use of physical violence may suggest encouraging insights in light with the current teacher training on non-violent teaching techniques.

Volunteers, directors and assistants (vs teachers) were less likely to report use of emotional violence and a similar association for physical violence was observed in a previous study (65). In exploring the specificities of the teacher's role that influence their reported higher use of physical violence, we note that over 60% of teachers (vs other types of school staff) had A-level or more. A similar direction of association was found previously with no statistical significance (65). This may suggest that those with lower qualifications might have received a more tailored and adapted teaching training and qualification whilst those with higher qualifications may not have been specifically trained as teachers.

Attitudes, norms and violence in education

This study provides evidence that violence perpetration is linked to attitudes and norms. Attitude towards violence, perception of parental attitudes and knowledge of consequences of violence on children were strong predictors of reported use of emotional and physical violence. Nationally representative surveys have previously reported that beliefs endorsing violence for education purposes were pervasive in Côte d'Ivoire (30, 50). The present study calls for a deeper understanding of the mechanism through which social norms and attitudes

shape the use of violence for educational purposes, and the need for the implementation of positive and context-adapted interventions, and the need for learning and practising new skills to prevent violence.

Job-related feelings and mental health

Highly motivated teachers reported a lower prevalence of physical violence, and those with low self-efficacy used more emotional violence. These findings are supported by the acceptability of the Graines de Paix intervention (129). Our findings point to the nature and extent of support in place to encourage teachers in their role and over time, and whether there are other school-related factors that contribute to their motivation and self-efficacy in the classroom.

Teachers with poor mental health had higher odds to report emotional violence. A previous study in Sub-Saharan Africa found that staff members' mental health was not related to increased use of physical violence against students (129). Our findings, therefore, underscore the importance of teachers' mental health and wellbeing as an important problem to address more broadly, not only to mitigate violence towards children.

Strengths and limitations

The present study conducted in the northwest of Côte d'Ivoire was designed to determine risk factors associated with teachers' use of violence towards students. In reviewing the literature, limited scholarship was identified on this issue. To our knowledge, this is the first study to assess association between teacher's individual characteristics and reported use of emotional and physical violent discipline in Côte d'Ivoire. Furthermore, a major strength of this study is that it is the only one, to our knowledge, to have explored teachers' attitudes and parental attitudes towards violence as predictors of emotional and physical perpetration by teachers towards students.

A major limitation of this study is social desirability bias due to the sensitive issue of violence against children. Respondents were informed of the ethical obligations to refer cases of violence, and this may have led to lower level of disclosure especially severe violence. This study is also limited to the teacher's report. Children may have reported higher rates of violence victimization and allowed triangulation of teacher's report of violent discipline. With

a small sample size and proportions of female teachers, this study was unable to detect small associations between variables. Data are from primary school teachers only and cannot be extrapolated to secondary schools where there may be different attitudes, norms and motivations. Our findings highlight the need for nationally representative analyses of teacher's factors associated with the use of violence towards their students. Past-term report of violence in this study is subject to recall bias like similar cross-sectional studies on reported use of violence against children. This could underestimate the prevalence of violence used by teachers towards their students.

Implications for research, interventions and policy

The high prevalence of emotional violence found in this study suggests a need to review and strengthen teachers' initial and ongoing training to incorporate knowledge and skills tailored to each form of violence, emotional and physical. Learning and skills for non-violent educational practices should consider the differences and consequences of emotional vs physical violence on children to address interpersonal relations between teachers and their students.

The present study did not establish a relationship between a teacher's gender and the use of physical violence, while report of emotional violence was less common among female teachers. The VACS Côte d'Ivoire revealed that male teachers perpetrate more violence, and that boys and girls experience high rates of physical, emotional and sexual violence (30). Further work is required to understand how the gender dimension influences violence perpetration in school setting and shed light on school-related gender-based violence perpetration and victimization.

Norms and beliefs about violence against children and the use of violence in education are an important focus for future work to incur behaviour change among teachers and parents through preventative interventions specific to the socio-cultural context of Côte d'Ivoire.

4.6 Conclusion

Our findings suggest that use of both emotional and physical violence towards students is high among teachers in Côte d'Ivoire. Teachers' gender, attitudinal norms towards violence,

self-efficacy and mental health are strong predictors of use of violence towards students. Interventions and policies that take these factors into consideration are needed to build better and contextually appropriate responses to reduce violence against children in schools

4.7 Ethics

The APEV formative evaluation received ethical approval from the London School of Hygiene and Tropical Medicine Ethics Committee (ref 14014 and 14537) and local ethics approval CNER based in Abidjan (55). The present study received approval from the London School of Hygiene and Tropical Medicine Ethics Committee (LSHTM ref. 17938) and the National Ethics Committee of Life Science and Health/Comité National d'Éthique des Sciences de la Vie et de la Santé based in Abidjan, Cote d'Ivoire (N/Ref: 165-19/MSHP/CNESVS-km).

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4.9 Contributorship statement

MB and CT designed the study. SL and KMD reviewed the protocol. MB, CT and FAJM conducted the statistical analyses. KMD imputed on the statistical analyses. YABN and DGFN conducted the data collection. PTK, MD and LQT coordinated the APEV formative evaluation project. MB drafted the manuscript and other authors shared their insights. KMD obtained funding for the APEV formative evaluation project.

4.10 Competing interests

None.

4.11 Funding

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4.12 Data Sharing statement

No additional data are available.

4.13 References

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5 Research paper 3

"Hitting a child in that way is not violence to me!" A qualitative exploration of childhood, culture and corporal punishment in school in a post-conflict setting in Côte d'Ivoire

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5.1 Abstract

Background: School corporal punishment is a daily reality for many children in Sub-Saharan Africa. In Côte d'Ivoire, a country profoundly affected by a long history of armed conflict, 28% of female and 34% of male students experience one or more forms of physical violence by teachers despite implementing child protection mechanisms. In Ivorian society, corporal punishment is part of a broader social norm that condones its use to educate the child. Little is known about how teachers' constructions of childhood may influence their use of corporal punishment.

Aim: This study explores teachers' perspectives on childhood and corporal punishment in the socio-cultural context of Côte d'Ivoire.

Methods: A qualitative study was conducted in the Tonkpi Region, a conflict-affected area in the Northwest of Côte d'Ivoire. A purposive sampling recruited eleven teachers and two teacher-counsellors from primary schools. We conducted three focus group discussions and seven in-depth interviews. Informants reported contextual explanations surrounding the use of violent discipline toward students. Thematic analysis was employed to identify and interpret meanings in the local context.

Results: Our first key finding is the tension between teachers' local considerations of child protection versus the global definition and practice of child protection stipulated by UNCRF. Our second important finding is that the conceptualisation of Ivorian childhood in the local context influences teachers' use of corporal punishment in school. Other factors influencing teachers' perceptions of corporal punishment included history of colonialism and structural influences of the harmful effects of the conflict.

Conclusion: Context-informed interventions are needed to reduce violence from teachers and provide children with a safe school environment. Developing opportunities for critical reflection around the notion of childhood, their rights and responsibilities should include teachers, parents and community leaders. Support for teachers in post-conflict settings should include trauma-informed approaches.

5.2 Introduction

Corporal punishment in school is a daily reality for many children in the Global South (9, 135). National surveys across thirteen African countries on experiences of violence in childhood (VACS) have consistently reported that teachers are common perpetrators of corporal punishment in school (26-28, 78-88). Primary school students and poorer children are more subject to a higher level of corporal punishment (136-138).

Robust research evidence has shown that corporal punishment is associated with a wide range of harmful effects on the child's physical and mental health, education and future life outcomes (3, 7, 25, 31, 32). Experiencing violence in childhood is associated with the perpetration of violence, with evidence reporting higher perpetration of violence for boys (36, 37) and victimization for girls (139), creating a cycle of intergenerational transmission and persistence of violence in society (140). The economic costs of violence against children are significant as it increases health, welfare and security expenditures while decreasing rates of productivity (38, 39).

The United Nations Convention on the Rights of the Child (UNCRC) defines corporal or physical punishment as *“any punishment in which physical force is used and intended to cause some degree of pain or discomfort, however light, as well as non-physical forms of punishment that are also cruel and degrading”* (141). It involves kicking, hitting children with the hand or using objects such as sticks, cane, and whips to inflict punishment on children (141). Enacted in 1990, the UNCRC called on countries to end all forms of corporal punishment in all settings, including home and schools to ensure the safety and rights of children (141). A quarter of a century later, this call was set as a specific target on the United Nations' global agenda to achieve the Sustainable Development Goals (SDGs) by 2030 (10).

The use of corporal punishment in school has been recorded throughout history, from ancient times to early civilisations until today (142). Colonial schools relied on corporal punishment to establish authority, as observed in Kenya (143). Historically, teachers' training has condoned corporal punishment as an effective way to discipline a child (144).

In recent years, efforts have been made to reduce the risk of violence against children in and around school. This includes government-led and inter-agency initiatives to develop and

implement laws and evidence-based strategies that protect children's rights and safety in school (22). To date, school corporal punishment is still not entirely prohibited in 64 states worldwide. In Sub-Saharan Africa, only 12 African nations have legally banned corporal punishment in school (22).

The shift to a legal ban on corporal punishment in school has not always translated into attitudinal changes among teachers. Research has highlighted the debate between community perspectives on violence versus a globalised approach to child protection. A recent study conducted in Tanzania, where school corporal punishment is lawful, has shown the discrepancies between the meanings and perspectives of physical punishment among community members and that promoted by a globalised child protection framework (145). Research in Kenya and South Africa where corporal punishment in school is prohibited has reported persisting use of corporal punishment by teachers who have regulated their disciplinary practices without necessarily changing their perceptions and attitudes toward corporal punishment (128, 146).

The persistence of corporal punishment in school does not occur in a vacuum. In some societies, the specificities of culture and traditions are often advanced to justify particular social practices perpetuating physical violence against children in educational settings. A systematic review of studies concerned with social norms around corporal punishment in low- and middle-income countries revealed that corporal punishment in school is usually employed in a broader socio-cultural context that condones its use for educating a child (147). In addition, previous studies reported high levels of violence from teachers in primary school in post-conflict setting in Congo and Burundi (148).

The intimate relationship between education and culture has been reported in Côte d'Ivoire (149). To understand how and why school corporal punishment is enacted, it is important to situate the child in its cultural and social context. Understanding teachers' conceptualisations of childhood and violence is important to understand how they view child discipline. To our knowledge, no research has been conducted in Côte d'Ivoire on exploring teachers' constructions of childhood and how this influences their use of corporal punishment. Drawing on qualitative research with schoolteachers in post-conflict Côte d'Ivoire, this study aims to

explore teachers' perspectives on childhood and corporal punishment against children in school in the socio-cultural context of Côte d'Ivoire.

5.3 Methods

5.3.1 Study design and APEV formative evaluation

This paper reports on the analysis of data from the APEV formative evaluation by Graines de Paix- an international NGO. APEV stands for “Apprendre en Paix, Eduquer sans Violence”, French for “Learning in peace and educating without violence”. It is a brief educational intervention aiming at reducing the use of violence against students in the classroom (150). Graines de Paix developed APEV in close collaboration with the Ivorian Ministry of Education.

Between 2012 and 2017, over 23,000 preschool and primary school teachers and preschool students across the country participated in the training intervention (150). The APEV intervention was structured as a Train the Trainer model over one project cycle whereby first, Graines de Paix staff train teacher-counsellors on the intervention. Teacher-counsellors are experienced teachers who deliver and coordinate initial and routine teacher training sessions. Second, teacher-counsellors deliver APEV through a two-day training followed by two individual observations with one-to-one follow-up sessions.

An evaluation was conducted in 2018 to measure the acceptability of APEV among teachers and explore how the intervention induced peaceful education behavioural changes (55). We conducted the formative evaluation during the routine implementation of APEV in the Tonkpi region, Northwest of Côte d'Ivoire. This region was severely affected by the violence caused during the conflict. The area received special attention from the Government and NGOs to implement peace-building interventions, including schools. The qualitative component of APEV was split into two phases, an exploratory phase in February 2018 and the second round in September 2018. All teachers and teachers-counsellors included in this study received the intervention between February and June 2018.

5.3.2 Data collection process

The first author conducted three Focus Group Discussions (FGDs) and eight in-depth interviews (IDIs) in September 2018 with teachers and teacher-counsellors who had received

APEV training and were previously surveyed as part of the quantitative component of the study (90). Quantitative survey data collection was an opportunity to build rapport with teachers and identify those likely to disclose detailed information for the qualitative component. IDIs were conducted with five male teachers, two female teachers, one female and one male teacher-counsellors from urban and rural schools. Informants were recruited from urban and rural schools based on their availability and the researcher's judgement on their ability to provide detailed information. Three FGDs were conducted, two with teachers only and one with teacher-counsellors. The first FGD with teachers included five male and one female teacher recruited from two public schools in an urban area. Based on their availability, the second FGD with teachers was conducted with three female teachers from a private school. The third FGD was conducted with one female and one male teacher counsellor. To protect their identity, participants were asked to select aliases of famous Ivorians, which were used throughout the FGDs. Five teachers who participated in the FGDs were also recruited for IDIs and used the same pseudonym.

A topic guide was developed based on the research questions and informed by the literature and the first author's knowledge of the context. Further adjustments to the topic guide were performed during data collection subject to emerging themes. Exploratory and open-ended questions about teachers' experiences of corporal punishment were used to discuss contextual factors related to corporal punishment with participants. IDIs and FGDs were conducted in French, recorded and fully transcribed and translated into English by the first author with the support of a research assistant who had received training in good research practices. The research assistant had participated in the quantitative component of the study and had good knowledge of the study context. Notes on body language, pauses, tone of voice and emotions were taken. Respondents were compensated for their time and travel.

5.3.3 Analysis

Thematic analysis was employed in the qualitative data analysis following the recommended steps of transcription, familiarising with the data, coding, developing and applying an analytical framework, charting the data into a matrix, and interpreting the data (151). NVIVO 12 software (152) was used to store, organise and code the data effectively. Building on familiarisation with the data, transcripts were coded using open coding. The coding frame

was developed by the first author, reviewed by the research assistant and finalised upon common agreement between the first and last authors. An inductive approach was adopted by coding substantial context, perceptions, beliefs, values and behaviour around corporal punishment in school and allowing for new insights. Data was interpreted alongside field notes on observations, relationships and causality between interrelated ideas grouped into codes.

5.3.4 Ethical considerations

Before each interview and focus group discussion, participants read the informed consent form and were made aware that disclosing any acts of serious violence against students would necessitate a referral to child protection services. Participants signed the consent form before entering the study.

Ethical approval for the primary data collection was obtained from the London School of Hygiene and Tropical medicine (ref 14014 and 14537) and Comité National d’Ethique et de la Recherche (CNER) based in Abidjan, Côte d’Ivoire (55). The present study received approval from the London School of Hygiene and Tropical Medicine Ethics Committee (LSHTM ref. 17938) and the National Ethics Committee of Life Science and Health/Comité National d’Éthique des Sciences de la Vie et de la Santé (CNESVS) based in Abidjan, Côte d’Ivoire (N/Ref: 165-19/MSHP/CNESVS-km).

5.3.5 The Context of Côte d’Ivoire

5.3.5.1 Country profile

Since its Independence from France in 1960, Côte d’Ivoire has remained an economic hub in West Africa (153). The country is characterised by a young population, with children 0-14 years old representing 42% of the total population (154). After enjoying a long period of relative peace and prosperity, the security and socio-political situation degraded with the coup d’état in 1999, followed by a protracted armed conflict from 2002 until 2011. This period is widely known in Côte d’Ivoire as *the crisis*. Following the end of the conflict, the socio-political situation and economic flourishing gradually normalised. However, violence remained widespread, particularly in some neighbourhoods affected by the post-election crisis (53). The crisis influenced the creation of organised youth gangs, *the “Microbes”*, in the

neighbourhoods of Abidjan and large cities in the country. Despite a decrease in poverty, 29,8% of the population lives below \$1.90 a day (40).

5.3.5.2 History of violence in education in Côte d'Ivoire

Culture and traditional education in Côte d'Ivoire

Traditional education, which preceded colonial schools in Côte d'Ivoire, was characterised by multiple school systems corresponding to each ethnic group's specificities (155). The use of physical force was an essential pedagogical means through which learning was transmitted to children through pain and suffering (156, 157). Knowledge in traditional education was transmitted verbally and used through storytelling and proverbs, according to the ethnic group's cultural environment, with religion, sacred and magic spirits at the heart of the system. Traditional school systems were profoundly opposed to colonial- European- schools. The shift to colonial and later post-colonial school systems was abrupt and dismissive of society and cultural specificities (155).

Child protection in the current school system

The current education system was inherited from the French colonial schools. School is mandatory in Côte d'Ivoire for children aged 6-16 with pre-school, primary and secondary school levels. Nine girls are enrolled for every ten boys in primary school, and nearly one in four children do not complete primary school (57). In 2009, a Ministerial Order formally banned all forms of corporal punishment and humiliating treatment by teachers in schools (48). This measure was accompanied by adopting a strict code of conduct for teachers and integrating a module on non-violent discipline into teachers' initial and ongoing training.

Over the past decade, Côte d'Ivoire has placed child protection among its national development priorities as a Pathfinder country committed to ending all forms of violence against children. Important steps include the development and implementation of a National Child Protection Policy (PNPE) and the launch of a national helpline to report cases of violence against children.

School corporal punishment

Despite the implementation of child protection mechanisms, physical violence perpetrated by teachers remains a significant concern, with 28% of female and 34% of male students who have experienced one or more forms of physical and sexual violence by teachers and

classmates (VACS) (83). This deprives students of a protective and safe learning environment. In Côte d'Ivoire; corporal punishment is known as the *chicotte*. Historically, the *chicotte* designates a whip used during colonisation as an instrument of captivity, torture, and punishment. The term is broadly used today to refer to any corporal punishment inflicted on someone. At a societal level, corporal punishment is often justified by cultural and social norms that tolerate the use of violence as a child-rearing method in education.

A cross-sectional study commissioned by UNICEF in 2015 reinforced the view that violence in school is primarily caused by socio-cultural norms, the dysfunction of the school system and the family environment (56). The study reported that corporal punishment is used to establish strict discipline, values, and respect for parents or elders, based on submission and fear (56). Moreover, one in three parents tolerates physical violence as a necessary means of educating their children. Half of the surveyed teachers reported that parents or guardians ask them to use corporal punishment against their child in case of misbehaviour or poor school results. The recent Côte d'Ivoire Violence against Children and Youth Survey (VACS) reported that nearly 30% of females and males aged 18-24 endorse the necessity of corporal punishment on children by parents and teachers (83).

5.4 Findings

Four interrelated themes emerged from the analysis. Theme 1 focuses on teachers' socio-cultural conceptualisations of childhood and the role of discipline in educating the child. Theme 2 focuses on the legacy of the armed conflict in influencing teachers' views of childhood violence. Theme 3 focuses on the historical and structural influences on teachers' experiences of the education system and the use of corporal punishment. Theme 4 focuses on teachers' perspectives of school corporal punishment prevention in contemporary schooling.

Theme 1: Teachers' socio-cultural conceptualisations of childhood

The theme "African child" emerged throughout the data. In the specific context of the Ivorian culture, the traditional characterisation of childhood considers the biological and socio-cultural perspectives particular to each ethnic group. One participant described the categories of childhood from their region. These categories are not merely linked to age but

are marked by stages of development with varied maturity criteria from one ethnic group to another.

“In Senoufo country, you are 60 years old; you are a man, you have a child, as long as your father lives, you are still a child. The second definition of a child is one who was not initiated even if he was 80 years old. Thirdly, a child is someone who does not have a home. This means that if you are 40 years old and do not have a wife with you at home, you are considered a child, while the definition of Europe of a child is a person under the age of 18.” (Teacher-counsellor, September 2018)

In traditional society, the primary function of education was to transmit knowledge and values deeply rooted in cultural heritage. Such teaching was delivered everywhere and by everyone:

“Today, the education of the child no longer belongs to society. I would like us to return to our traditions where the education of a child belonged to everyone.” (Male teacher, FGD, September 2018)

Childhood is characterised by social duties towards authority figures, mainly older family members, community, and society.

“The State tells us that children only have rights, not duties. But the child must be made to understand that he has duties towards his parents, vis-à-vis the society that educates him!” (Male teacher, FGD, September 2018)

Corporal punishment -or *the chicotte*- is a constitutive element of the “African child” education. *The chicotte* has different manifestations or characterisations across “ethnic groups” and family backgrounds.

“Already in Africa, the child's education is based on *the chicotte*. Here, parents already tend to hit the children at home. The child already forged his character around *the chicotte*. He is used to *the chicotte*. Only *the chicotte*, the shouting, the *côcôtas* [knock on the head using the fingers closed in a fist] can control him. The ethnic group X uses oxtail to beat their children, the dried oxtail!” (Teacher, female FGD)

Parental beliefs and attitude towards using the *chicotte* to educate a child was highlighted. “I talked to his dad, who said, “No, you must hit him, you have to hit him. You take the *chicotte*! Myself, I hit him at home, he knows. You must hit him; otherwise, he will disrespect you!”” (Teacher, female FGD)

Besides family members, the legitimacy of inflicting corporal punishment on a child extends to members of the community and even strangers.

“When we were children, suppose we did something wrong. An older person passing by, not knowing your father or mother, could punish you. Then he would take you home, greet your dad and say, “This is what your son did”. Your dad would say, “Did you beat him?” He would respond, “I did!”. Your dad would reply ““ Thank you very much”.” (Male teacher, FGD, September 2018)

Comparisons of child-rearing approaches were made with the Western world, where “*le petit blanc*” or “the white kid” has their educational practices adapted to their realities. This comparison with the West illustrates the perception that children’s rights forbidding corporal punishment are a foreign concept that challenges African “traditions”.

“I cannot say that we are violent, but our educational environment is rooted in our traditions. It's cultural.” (Male teacher, FGD, September 2018)

“In Africa, *the chicotte* is necessary. White kids were born with their own. They were never given a *côcôtas*. They have never seen *the chicotte*. But we, even at home, from the foundation was *the chicotte*. So, it's in the blood, if I may say so. Wherever we see a child, we need to have *the chicotte*. That is the only thing the little Black child is afraid of.” (Female teacher, FGD, September 2018)

The terms “Black child”, “in the blood”, “rooted”, “foundation”, and “traditions” designate a sense of identity. Further attestation that participants’ customary practices do not align with the “White” is expressed in the conflicting meaning of other concepts:

“You are often told that the child is not a slave to work in the cocoa plantations. This doesn't suit us Africans. During the holidays, the child must clean the cocoa fields. And at the beginning of the school year, dad and mum also need a little money to get you

to school. You work with your parents; they say it's slavery. See that? All this makes children go against their parents.” (Teacher, female FGD, September 2018)

Some participants were nostalgic of the traditional education of children. They related social issues, including juvenile delinquency, with their current time changes.

“Before, it was not like that in Africa. Before the issues escalated, we had already solved the problem. So children were scared of teachers. You couldn't see a child with a weapon, no, no, no. But today, you see children with weapons everywhere.” (Male teacher, FGD, September 2018)

In summary, for the informants in this study, constructions of childhood and corporal punishment are deeply rooted in the sociocultural environment in which they occurred. The following section discusses how violence resulting from the violent conflict has shaped teachers' perspectives of children.

Theme 2: The influence of the conflict on teachers' perspectives of childhood violence

The armed conflict, also known as *the crisis*, has heavily influenced teachers' perspectives on children whose behaviour has been affected by the war. Teachers and teacher-counsellors reflected on the “collateral effects” of “the crisis” in their “rebel-controlled” region. They reported having “seen many things” that could imply the types and magnitude of violence during the conflict and the years after.

“You know that the North and then the West have been severely affected by this crisis. During this crisis, they have seen many things. The crisis has traumatised a little.” (Female teacher, IDI, September 2018)

“I was telling you that this place suffered from the collateral effects of the crisis that arose on September 19 [2002] in Côte d'Ivoire. Because the New Forces quickly covered the cities of the North, the rebellion faded in the western region, they could no longer advance, they made a city here, and so we had the collateral effects.” (Teacher-counsellor, FGD, September 2018)

During “the crisis”, violence was widespread in children’s surroundings and throughout their developmental years. As a result, children’s reproduction of violence was perceived to be inevitable. There was the belief among participants that the boundaries of violence expanded to the post-conflict period and therefore affected a whole “generation”.

“The children learned to do like them for ten years. The crisis is gone; these children who were at the age of puberty became adults after the end of the war. So we had that effect.” (Teacher-counsellor, FGD, September 2018)

Most key informants referred to a “new generation” of children born during “the crisis”. There were suggestions that “the crisis” had permeated violence in children and favoured the creation of organised and dangerous youth gangs known as “the Microbes”. Participants described “the Microbes” as referring to “the children”.

“The Microbes children, so-called “children in conflict with the law”. Because they were born when there was violence. Today, these children are raging everywhere. Nothing can be done to them. If you intervene, you will have problems. That made children turn violent in Africa.” (Male teacher, IDI, September 2018)

Further to gravitating around youth gangs, the children of “the crisis” were involved in illicit activities, as one participant described:

“This background is a logical continuation as it has favoured several activities, including the proliferation of drugs. I am referring to any kind of traffic. For example, I take street drugs. There's a lot of pharmacy stuff. People go to buy them in neighbouring countries and come to sell them here! When the mother goes to the surrounding markets, her daughter, my student, will replace her in our local market.” (Male teacher, FGD, September 2018)

The above results suggest that the conflict had harmful effects on the children and influenced teachers’ representation of children in this study. The next section provides insights into historical and structural factors influencing teachers’ perspectives of school corporal punishment.

Theme 3: Historical and structural influences on school corporal punishment

From colonial violence to corporal punishment in contemporary schools

The influence of colonial history on teachers' perspectives of their use of corporal punishment emerged. First, the burden of violence under colonial power was underlined.

“Non-violence allowed Côte d’Ivoire to be independent [from France], to have more educated people. If President Houphouët [first president of independent Côte d’Ivoire] did not cultivate peace, the colonisers would still be here, and we would still be under the yoke of colonisation.” (Male teacher, IDI, September 2018)

Second, teachers widely used the colonial and historical noun “*chicotte*” or its verbal form interchangeably with corporal punishment to legitimise the enactment of violence.

“The teacher did not beat the student to the point of hurting her. He just used the *chicotte!*” (Female teacher, FGD, September 2018)

Thirdly, violence remained pervasive after Independence and have lessened in contemporary schools.

“In 1979, 1980, when I arrived in primary school, I saw what they said that in primary school they hit, they really hit you.” (Male teacher, IDI, September 2018)

“We had to easily understand that the practice before independence or during the beginnings of independence is no longer the same practice today.” (Teacher-counsellor, September 2018)

Moreover, teachers highlighted the nuance between the “*chicotte*” and violence. They classify corporal punishment into two categories: “*violence faible*” or “weak violence” was widely tolerated among participants. The second category, “*violence dure*” or “harsh violence”, was extensively deprecated. As a result, the use of “weak violence” was commonly reported among participants.

“I call it “weak violence”. Shouting at a child, we do it all the time. The most important thing is to learn and then stop the other harsh violence.” (Male teacher, IDI, September 2018)

“At times, we shout. We do things just to calm the children down but not to the point of martyring them.” (Female teacher, FGD, September 2018)

Furthermore, teachers used the adjectives “small” and “little” to diminish the effects of the violence employed. For teachers from backgrounds where the *chicotte* was widely used in school, corporal punishment was considered normal and integrated as an educational model in line with cultural realities in favour of guaranteed school performance.

“This is not violence, the type of violence we are talking about. Hitting a child in that way is not violence to me. It's just a way to say, “eh little one, what you just did there, you have to stop, it's not normal!” And he understands easily.” (Male teacher, IDI, September 2018)

As in colonial times, the “*chicotte*” involved the use of objects to inflict physical harm, as described by a teacher-counsellor:

“You find objects that could serve for corporal punishment stored in the cupboard. A flexible water pipe, a small wooden stick, and when you see the object, you realise that it has been used.” (Teacher-counsellor, September 2018)

Classroom challenges and national education challenges

Since teachers legitimised corporal punishment, they described circumstances in which they would use the *chicotte* in school, mainly in the classroom.

Firstly, teachers have seen their role evolve in recent years. Thus, the learned teacher who used to inspire fear and respect among students was introduced to a child-centred pedagogy requiring children's more “active” participation. As a result, teachers feel threatened in their authority. “Weak violence” is also a means to forge or claim a teacher's identity and sustain status as a person of authority.

“The teacher before was at the centre of knowledge. He was the only one at the centre of knowledge. Today, we are in the active method where the teacher asks the questions, and the students give the answers. Do you see? We are no longer using the same methods. We evolve.” (Male teacher, FGD, September 2018)

“I showed them that I am the teacher, and they are the learners. And they owe me respect. So sometimes, I scare them so that at least they can respect me.” (Male teacher IDI, September 2018)

Secondly, some suggestions were that children’s misconduct in the classroom would give teachers recourse to corporal punishment.

“Some students spend their time chatting. This disturbs the classrooms next door. So I prefer to pull their ears or give them a *côcôtas*, and then I continue my class.” (Teacher, female FGD, September 2018)

Secondly, the *chicotte* was used to “control” the classroom during lessons and improve students’ performance:

“For me, the *chicotte* also had its place in children's success because it appeals to them. You will be beaten when you do not follow the class to behave well. It took us to study at home. You learned your geography lesson by heart to not be beaten.” (Male teacher, IDI, September 2018)

Thirdly, almost all participants noted that corporal punishment in school could only be interpreted by acknowledging the national education challenges. They stated that difficult working conditions, such as overcrowded classrooms and lack of infrastructure, lead them to use corporal punishment:

“I remember I had 110 students in CM2 [year 6]. 110! Here, our reality is that we have overcrowded classes. Our conditions are becoming an obstacle to the application of non-violent discipline.” (Male teacher, IDI, September 2018)

These results indicate that teachers generally face everyday challenges in the classroom and school. The following section is concerned with teachers’ engagement with child protection mechanisms and how this has shaped their attitude towards corporal punishment.

Theme 4: Teachers’ perspectives of corporal punishment prevention in contemporary schooling.

Key informants recognised that corporal punishment prevention measures were widely implemented across the national education system. This was manifested by enforcing a strict “*règlement intérieur*” teachers’ code of conduct firmly forbidding corporal punishment.

“From now on, the “*règlement intérieur*” is not only for the director and teachers but also established as a slip largely amplified among the national education hierarchy. The inspector, the regional director, the prefect, and the gendarmerie will receive a copy. And from the moment the teachers decide to sign the code of conduct, you consent to the consequences and corrective measures.” (Male Teacher-counsellor, IDI, September 2018)

Moreover, corporal punishment prevention actions were further reflected by launching a child helpline to report and address teachers' use of corporal punishment. The importance of children’s voice in the justice system was also described:

“Nowadays, we see that the children are invited to certain pieces of training. They are given a free number: “If your teacher abuses you, call us.” So you see that today the teacher is disarmed of *the chicotte*.” (Male teacher, FGD, September 2018)

“It is the word of the child that they respect. The director didn't consider what the teacher said. The teacher was about to lose her job at the start of the next school year. In order not to avoid this, she was assigned somewhere else. She said, “Ma'am, I was assigned to the back of beyond. I am no longer paid as it should be.” So, it is tough.” (Teacher, Female FGD, September 2018)

From the teachers’ training perspective, priority was given to developing their knowledge and skills about children’s rights, understanding violence against children, and reducing teachers' violence in the classroom.

“We had many things in the training, eh. We were told not to use violence against children purely and on all levels. Humiliation, corporal, physical violence, verbal, punitive disciplines, etc.” (Male teacher, FGD, September 2018)

“During the training, teachers appreciated that children have the same feelings as adults. When they discovered the feeling side of things, they were comfortable. And

during the activities in the classroom, you could see that the children were impressed.” (Female teacher-counsellor, IDI, September 2018)

The enforcement of corporal punishment prevention measures meant that teachers’ practices were underreported or somewhat hidden for those who still endorse corporal punishment. Reducing the use of *the chicotte* could be driven by fear of sanctions.

“If you don't threaten them, you're lost. We cannot do without threatening them. They know very well that we must no longer use *the chicotte*. They know that the person visiting the classroom is the teacher’s boss and that the teacher is tense and stressed. And this is when they will test you. So you can't do otherwise. ” (Teacher, Female FGD, September 2018)

Furthermore, challenges in transitioning to alternative punishment were described. Some teachers felt they needed to be equipped and supported to handle certain situations.

“I want to do a reading session. A child sleeps: you wake him up. He continues to sleep. You wake him up again; he keeps sleeping. Are you going to let him continue in his sleep? If, by chance, the pedagogical passes by: - “Why is he sleeping in class?”. Automatically, you are told off! You set a bad example! What will you do? Today, teachers are between a rock and a hard place. We are told, “do this” and at the same time “don't do that”. Others no longer know where to situate themselves. Today, teachers will certainly work, but no longer with conviction.” (Male teacher, IDI, September 2018)

Participants who expressed optimism about non-violent discipline stipulated that it would be a long “generation” process to observe genuine changes given the history of violence.

“With the next generation, non-violence will be real. The seeds that we are sowing now, we are going to water them so that they reach maturity and that we have a world free of violence.” (Male teacher, FGD, September 2018)

5.5 Discussion

This paper set out to understand why corporal punishment persists among teachers in a post-conflict setting despite implementing corporal punishment prevention measures. The Tonkpi Region, Northwest of Cote d'Ivoire region, was profoundly affected by a long history of armed conflict. During those years, students and teachers cohabited with violence in their community, family, and school.

Four interrelated themes emerged from our findings. Firstly, we found that for teachers in this study, the constructions of childhood and violence against children are deeply rooted in the sociocultural environment in which they occurred. How children are considered and educated by figures of authority in their societies would influence the use of corporal punishment in school. Secondly, teachers' views on "children" were heavily influenced by the legacy of the conflict. This exacerbated the legacy of corporal punishment already present in the study context. Thirdly, we found that the history of colonisation and its legacy of corporal punishment contributes to teachers' persisting use of corporal punishment in school. Finally, we found tensions between teachers' perspectives of school corporal punishment prevention in contemporary schooling as opposed to a global definition of child protection.

The themes identified in this study are consistent with our conceptual framework adapted from the WHO social-ecological framework to understand violence against children. The relationship between the themes highlights the complex interplay between societal, community (including school), family and individual factors in understanding violence against children in post-conflict Cote d'Ivoire. On a societal level, violent discipline is entrenched in a colonial narrative, the history of armed conflict and child protection mechanisms. The reproduction of colonial behaviours or beliefs that, without coercion, "the African is slow to understand" (158) contributes to perpetuating violence against children. Furthermore, the protracted military crisis and violence strongly impacted socialisation and educational practices in rebel-besieged areas. Children who witnessed and experienced violence during that time used violence for communication and social interaction, as seen in four countries across Sub-Saharan Africa (104). For teachers in this context, violence was used to exercise their authority and control students' behaviour. Corporal punishment prevention measures do not seem to change teachers' attitudes towards violence.

At the community level, school is treated as an extension of the home and vice versa. The distance and the separation no longer exist between these two entities, and this authorises violent educational practices by adults in the community, including teachers. The absence of demarcation between the home and school also observed in other studies (159), involves harmonising educational practices between parents and teachers for more consistency with the “child student”. Indeed, teachers very often use the term “children” rather than “students”. They teach their “children” and not students, thus claiming more rights and duties towards them. Among perpetrators of violence, we can include older peers who have experienced violent discipline at home and in school. This leads to reproductive behaviours or beliefs that these practices are beneficial for the children.

Violent discipline in school is an immediate act of the teacher. However, it is approved by parents, caregivers, families and communities. They authorise, encourage, and condone it. If this attitude of parents can be voluntary in certain cases, it is the result of fears in other instances: opposing violent discipline by teachers can lead to the marginalisation of the child by the teacher.

The traditional characterisation of the notion of childhood

Our findings indicate that how children are conceptualised and educated by authority figures would influence teachers' use of corporal punishment. The notion of childhood is created by sociohistorical and cultural processes, as observed in previous studies by (160, 161). Teachers' conceptualisations of childhood are embedded in the socio-cultural reality of the “African” child. The *chicotte* is viewed as the education tool *par excellence*, an intermediary between authority figures, namely parents and teachers, and the child for educational purposes. Religious and cultural practices strongly influence childhood and children's vulnerability to violence (162). Teachers' accounts of corporal punishment were reminiscent of their own “positive” experiences of corporal punishment as students. Teachers and parents who endorse corporal punishment consider the teacher's role as an extension and substitute of parental authority in school. As a result, childhood and corporal punishment intersect intimately in the child's life, especially at home and school. This paradigm emerging from our findings is not exclusive to African societies (145, 163) but was also observed in Western societies in the past (164, 165).

School corporal punishment and the legacy of the conflict

Similar to our findings, other studies have observed that the intersection of childhood and violence are not unitary phenomena experienced similarly everywhere (145, 156, 162, 166). Among teachers in this study, perspectives on “children” and “violence” were heavily influenced by their experience of the conflict, which was believed to have produced a “new generation” of violent and irrepressible children. Previous work conducted in rebelled-occupied zones in Côte d’Ivoire corroborates that school violence had worsened during the years of crisis (157). Although the conflict exacerbated insecurity in violent neighbourhoods and communities, school violence was strongly present before the conflict in the form of verbal abuse, physical aggression and incivilities from students and corporal punishment by teachers (167).

Influence of colonialism on the persisting use of corporal punishment

Teachers’ beliefs that corporal punishment was rooted in the African Child’s upbringing were also reported elsewhere (168). However, previous ethnographic studies in Ghana (169) and qualitative research in Botswana (168) have supported the sustained influence of European colonialism on African schools and its derived authoritarian practices to educate the “African child”. The preservation and normalised use of the term *chicotte*, rooted in the violent history of colonisation, suggest persisting violence through corporal punishment. The formal ban on school corporal punishment is insufficient to induce attitudinal changes toward corporal punishment against children. Teachers and parents still support corporal punishment even when banned, as observed elsewhere (128). Therefore, social norms that consider corporal punishment “necessary” and “good” are essential in shaping attitudes that condone and perpetuate violence against children in education.

Global vs local interpretation of corporal punishment

Teachers argued that the global framework drew on Western realities. They perceived child protection measures as colonially imposed and hindering their cultural identity. Similar findings were derived from ethnographic research conducted among school teachers in Tanzania (145) and child protection policy-makers and implementers in Zanzibar (163). The great majority of research supporting current global evidence on the harmful effects of

corporal punishment was conducted in the Global North (3, 7, 25, 31, 32). This may influence the interpretation and applicability of such findings in the local context of Sub-Saharan Africa.

Recommendations for policy and practice

Context-informed programmes are urgently needed to protect children from violence in school. Our findings on understanding childhood and corporal punishment in the local context contribute to informing ongoing and future interventions to reduce violence from teachers to students. A frank discussion with teachers, parents and community leaders about the notion of the African child, their rights and responsibilities would help ensure their views are listened to and negotiated so that education about the benefits of changing norms could occur. Teachers would also need reinforcement of their training on the harms caused by corporal punishment and the necessity of alternative positive discipline drawing on evidence from local research. Teachers should also be equipped with school infrastructure that will improve their working conditions and facilitate the implementation of alternative positive discipline. Additionally, support for teachers in post-conflict settings should integrate trauma-informed approaches, including managing children whose behaviour has been affected by the war.

Furthermore, there is a need to involve local and grassroots organisations that build on the local mode of child-rearing practices to prevent violence against children. Finally, it is essential to invest in research and implementation of well-designed and evaluated school programmes to reduce violence from teachers to students, such as the Good School Toolkit in Uganda (12) and the IRIE classroom Toolbox in Jamaica (13). Promising results were found from the APEV formative evaluation, which should be rigorously evaluated for potential implementation at larger scale (170).

Strengths and limitations

This is the first study documenting views on childhood and corporal punishment in school in a post-conflict setting in Côte d'Ivoire. Little is known about teacher violence in post-conflict settings. This study makes important contribution to the literature.

This study explores socio-cultural, structural and historical factors related to violence against children in schools in Côte d'Ivoire. The insights gained from this study will expand our

understanding of school-related violence against children in support of the national survey on violence against children (83).

Teachers' ease in disclosing their recourse to corporal punishment in the classroom suggests they were open to discussing violence against children. A possible explanation could be the participatory training in non-violent teaching techniques (APEV), including personalised support for each trained teacher in the present research period. There was a sense that the training had reinforced interest among teachers who felt that their inputs were recognised. Another possible explanation could be the benefits of discussing the challenges they face in their teaching role with a local researcher. This provides important insights into future data collection methods and teams.

Some limitations should be noted. Triangulation with children and the national education hierarchy would provide further insights. Participants were chosen through convenience sampling and the availability of teachers who were more engaged with the Graines de Paix intervention. Perspectives of less engaged teachers with the intervention would have been valuable. The small number of participants in this study means that the results cannot be generalised.

Further research

More research is needed to explore children's and parents' conceptualisation of childhood and school-related violence. Children's participation in research on school violence should be subject to carefully developed child-friendly data collection methods and support that safeguard children's rights, well-being, and safety during and after the research. Furthermore, research on gender-based perpetration and victimisation of school violence is essential for ensuring that schools are safe for the most vulnerable. More research is recommended on interventions for teachers in conflict-affected settings.

5.6 Conclusion

Context-informed interventions are needed to reduce violence from teachers and provide children with a safe school environment. Developing opportunities for critical reflection around the notion of the African Child, their rights and responsibilities should include

teachers, parents and community leaders. Support for teachers in post-conflict settings should include trauma-informed approaches.

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6 Discussion

This final chapter builds on the findings of the research papers (Chapters 3, 4 and 5). It synthesises and discusses the key research findings along with some recommendations to guide policy and programming to prevent violence against children in Côte d'Ivoire. Section 6.1 highlights the key findings from the analysis of the VACS data on the experiences of physical violence by multiple perpetrators among schoolchildren in Côte d'Ivoire (chapter 3), the analysis of characteristics associated with teachers' self-reported use of emotional and physical violence towards students in school in a post-conflict setting in Côte d'Ivoire (chapter 4) and the qualitative research on teachers' perspectives and understanding of the notions of childhood and corporal punishment in the socio-cultural context of Côte d'Ivoire (chapter 5). I then point out the strengths and limitations in section 6.2, and I outline the policy implications of the thesis in section 6.3 and future avenues for VAC research prevention in 6.4. I end with a conclusion in section 6.5.

6.1 Principal findings

6.2 Synthesis of the main findings

My PhD set out to understand the experiences of violence among children who go to school, and explore risk factors for the use of violence among teachers and how they understand their use of corporal punishment within the socio-cultural context of Côte d'Ivoire. My findings contribute to the literature on factors related to physical and emotional violence perpetrated against school children in post-conflict Côte d'Ivoire.

Our conceptual framework, adapted from the WHO social-ecological framework of risk factors of interpersonal violence (2), was helpful in facilitating the understanding that the roots and consequences of violence against children in school span across multiple layers. Violence against children in Côte d'Ivoire schools is influenced by structural factors, including the long history of conflict, the political agenda to protect children, parenting style, educational practices in school, the community environment and cultural acceptability of VAC.

A major finding emerging across all research papers is that physical and emotional violence is pervasive among children who go to school in Côte d'Ivoire. The analysis of nationally

representative data (Chapter 3) found that nearly half (42.3%) of boys and girls aged 13-17 in school reported experience of physical violence in the past year by any perpetrator: peer violence was the highest, followed by parents and adult members in the community, including teachers. Findings from the APEV quantitative analysis on teacher-perpetrated violence indicated that 55% of teachers reported using EV and 28% PV in the past term (Chapter 4). The study also found that both forms of violence, emotional and physical towards students, are common and overlap (Chapter 4). The high prevalence of emotional violence found in this study (almost double that of physical violence) could suggest more visibility of emotional violence towards students with increasing legal restrictions and scrutiny around violent discipline in school.

Another important finding from this doctoral research is that children in Côte d'Ivoire who experience school violence (from peers and teachers) also experience other forms of violence outside of school (by household members and community members). The VACS analysis (Chapter 3) found that children who experienced physical violence from adult household members were more likely to experience physical violence from teachers than those who did not experience physical violence from household members (AOR:2.71;95%CI:1.45-5.08) and be involved in physical fights (AOR:1.97;95%CI:1.04-3.76). We also observed a strong association between community factors (feeling unsafe in the community (OR:2.33;95%CI:1.28-4.24), witnessing violence in the community (AOR:1.72;95%CI:1.01-2.94), experiencing violence from peers (AOR:3.58;2.03-6.33) and involvement in physical fights, irrespective of whether children had received violence prevention education. As observed in Chapter 4, two-thirds of teachers believed that parents had a high or moderate acceptance of physical discipline. The qualitative research (Chapter 5) corroborated parental beliefs and attitudes towards using the *chicotte* to educate a child. It also highlighted teachers' support of corporal punishment.

The current doctoral research also found that teachers' individual characteristics influence their use of violence towards students. Results of the APEV quantitative analysis presented in Chapter 4 found strong evidence that being female, having other jobs at school (volunteer, director, or assistant), having lower qualifications, low acceptance of violence, and their perception of low acceptance of physical discipline by parents are associated with a lower likelihood of teachers reporting violence perpetration. However, being in their current job for

five years or more, poor knowledge of the consequences of violence on children, low self-efficacy in the classroom, and poor mental health were risk factors for perpetrating violent discipline by teachers.

Finally, the qualitative results (Chapter 5) help us to understand that teachers' views on school corporal punishment in post-conflict Côte d'Ivoire are influenced by the traditional characterisation of the "African child", the legacy of the armed conflict, and the history of violence under colonial power. By situating the child in the Ivorian socio-cultural context, teachers described childhood through the emerging theme of the African child. Being a child is not only determined by age but is also characterised by social duties towards the elders and community, including teachers. Most teachers perceived corporal punishment as a constitutive element of the African child's upbringing across ethnic groups and family backgrounds. The history of colonisation influenced teachers' views on corporal punishment against students. When asked about their use of corporal punishment against children, teachers widely reported using the "*chicotte*", a colonial and historical instrument of torture and submission. Teachers' views on "children" were also heavily influenced by the legacy of the conflict. Both teachers and children experienced the trauma of the armed conflict, which has deeply influenced the creation of youth gangs. Teachers perceived the *violent youth* as perpetrators of violence, no longer capable of being educated without corporal punishment. This exacerbates the use of school corporal punishment.

6.3 Comparison with other literature

The aim of this doctoral study was to explore risk factors, children's experiences and teachers' understanding of physical and emotional violence perpetrated against school children in Côte d'Ivoire.

High prevalence of school and other violence

The high estimates of schoolchildren's experiences of violence from different perpetrators are consistent with other VACS findings in Sub-Saharan Africa (91, 171-173) and a previous cross-sectional survey identified in the grey literature and carried out among primary and secondary school students (56). Teachers' self-reported use of violence observed in the APEV study is reported by nationally representative prevalence estimates of the VACS (30). Self-reported use of physical violence in the past week was recorded among primary school

teachers in Uganda (65), and both physical and emotional violence in the past month by secondary school teachers (119). Although the VACS offers limited information about the extent of emotional violence perpetrated by teachers on students, our findings are consistent with the literature on the prevalence, scale and scope of violence against children in Côte d'Ivoire and the Region.

National-level data on the co-occurrence of experiences of physical violence by multiple perpetrators among schoolchildren in Côte d'Ivoire

Consistent with the literature, my PhD's findings suggest that schoolchildren's experiences of physical violence from different perpetrators overlap and may have isolated manifestations, locations and contexts. Previous work found that children in violent households are at higher risk of being victims of VAC (93-96), and those who witness violence in the community are at higher risk of being bullied (101). This highlights the need for strong family support and safe environment to protect children against almost all forms of violence (97, 98). We found no association between experiencing physical violence from peers and the experience of violence by teachers.

This doctoral study supports evidence from previous research on the association between the endorsement of corporal punishment and perpetuation of corporal punishment (71). This underscores the importance of addressing social norms to prevent VAC.

Individual characteristics associated with teachers' self-reported use of emotional and physical violence towards students in schools in a post-conflict setting in Côte d'Ivoire

Our finding that teachers' gender was not associated with the perpetration of physical violence is aligned with a previous research (65). We found that female teachers were less likely to use emotional violence than male teachers. At the same time, other studies showed that the perpetration of emotional violence did not differ according to the teacher's gender (119, 134). The inconsistency may be due to the specificities of cultural and gender norms across settings. Volunteers, directors and assistants (vs teachers) were less likely to report the use of emotional violence and a similar association for physical violence was observed in a previous study (65). This may suggest that those with lower qualifications might have received

a more tailored and adapted teaching training and qualification whilst training those with higher qualifications may have included less on alternative discipline.

Highly motivated teachers reported a lower prevalence of physical violence, and those with low self-efficacy used more emotional violence. Teachers with poor mental health had higher odds of reporting emotional violence. A previous study in Sub-Saharan Africa found that staff members' mental health was unrelated to increased use of physical violence against students (65). Our findings, therefore, underscore the importance of teachers' support, mental health and wellbeing as an important problem to address more broadly, not only to mitigate violence towards children.

To explore teachers' perspectives and understanding of the notions of childhood and corporal punishment in the socio-cultural context of Côte d'Ivoire

My PhD findings support earlier observations, which showed that the notion of childhood is created by sociohistorical and cultural processes, as observed in previous studies by (160, 161). Teachers' conceptualisations of childhood are embedded in the socio-cultural reality of the "African" child. Religious and cultural practices strongly influence childhood and children's vulnerability to violence (162). As a result, childhood and corporal punishment intersect intimately in the child's life, especially at home and school. This intersection emerging from our findings is not exclusive to African societies (145, 163) but was also observed in Western societies in the past (164, 165).

The challenges in adhering to the standard definition of violence in childhood proposed by UNCRC and WHO have been reported previously (145, 168). My PhD findings corroborate those of previous work in Sub-Saharan Africa that corporal punishment is inherent to the African child's education (145, 169). Teachers argued that the global child protection framework drew on Western realities. They perceived child protection measures as colonially imposed and hindering their cultural identity. Similar findings were derived from ethnographic research conducted among child protection policy-makers and implementers in Zanzibar (163). The great majority of research supporting current global evidence on the harmful effects of corporal punishment was conducted in the Global North (3, 7, 25, 31, 32). This may influence the interpretation and applicability of such findings in the local context of

Sub-Saharan Africa. Tensions in the meaning of corporal punishment raise challenges in measuring VAC, especially when collecting data from the perpetrators and children.

Among teachers in this study, perspectives on “children” and “violence” were heavily influenced by their experience of the conflict, which was believed to have produced a “new generation” of violent and irrepressible children. Similar to our findings, other studies have observed that the intersection of childhood and violence are not unitary phenomena experienced similarly everywhere (145, 156, 162, 166).

6.4 Strengths and limitations

A major strength of this PhD is that it uses unique datasets. First, it utilises robust nationally representative data from the Violence Against Children Survey.

To my knowledge, this PhD includes the first study to assess the association between teachers’ individual characteristics and reported use of emotional and physical violent discipline in Côte d’Ivoire. Furthermore, it includes the only research, to my knowledge, to have explored teachers’ attitudes and parental attitudes towards violence as predictors of emotional and physical perpetration by teachers towards students. The third study was the first to document teachers’ views on childhood, corporal punishment, and neo-colonial ideas of child protection in schools in a post-conflict setting in Côte d’Ivoire. The PhD findings are essential contributions to the debate around local vs global definitions of child protection, as actual data on this topic is limited.

This research is subject to several limitations. First, data from the three studies were collected at different time points and for different purposes. Therefore, I was only able to obtain data on some factors of potential relevance, especially data from parents and children from the youngest school-going age group.

In the VACS analyses, we encountered challenges in measuring violence perpetrated by teachers using the authority figure variable. Given the scope of violence perpetrated on schoolchildren, national surveys on school violence should refine the measures of violence by teachers and other perpetrators. As VACS did not survey children under 13, the extent of physical violence by teachers towards younger children, especially in those in the early years of schooling, was not included.

The APEV datasets (quantitative and qualitative) were limited to the Tonkpi Region. They would not allow the generalisability of data to other geographical areas, including some that were also severely affected by the conflict. Participants were chosen through convenience sampling and the availability of teachers who were more engaged with the Graines de Paix intervention. Selection bias could therefore have occurred. The perspectives of teachers who were less engaged with the intervention would have been valuable. Further work is needed to optimise our understanding of teachers' and children's experiences of school violence in other post-conflict settings in Côte d'Ivoire and the region.

As originally planned, the qualitative research to explore schoolchildren's perspectives and experiences of VAC was a major component of this PhD. I was unable to complete the data collection for this study due to the COVID-19 pandemic (see COVID-19 statement above). Further qualitative work is needed to include the voices of children.

Another limitation is the potential for social desirability bias due to the sensitive issue of violence against children.

6.5 Future research

This project provides insights into understanding violence perpetration and victimization among schoolchildren in Côte d'Ivoire. The knowledge generated through this PhD has highlighted areas where further research could improve our understanding of the co-occurrence of violence among schoolchildren in Côte d'Ivoire.

Violence by multiple perpetrators frequently co-occurs but is often analysed quantitatively as a binary exposure, which does not consider the range and complexity of experiences. Future analyses may benefit from a person-centred approach, such as a latent class analysis (174) through which experiences are allowed to cluster at the individual level to understand which children are at higher risk of experiencing violence from multiple perpetrators and better understand the co-occurrence of VAC.

Given the efforts deployed by the National Education Ministry to train teachers in peace culture (170) and students in life skills (46), further work is needed to evaluate the violence prevention education programme in Côte d'Ivoire, including when and how it was delivered, acceptability, barriers and markers of impact.

This PhD provides insights into risk factors associated with physical and emotional violence perpetrated against children by teachers. However, the dataset was from a post-conflict setting and, therefore, not generalisable. A further quantitative analysis of emotional violence from the nationally representative dataset (VACS) is recommended. While the negative health consequences of all forms of violence have been widely documented (6, 175), there is limited emphasis on emotional violence (176, 177). Similarly, interventions focusing on preventing emotional violence are narrow (178).

The present study did not establish a relationship between teachers' gender and the use of physical violence, while reports of emotional violence were less common among female teachers. Further work is required to understand how gender norms relate to violence perpetration and victimization in school and shed light on school-related gender-based violence (SRGBV) perpetration and victimization (179).

Drawing on this PhD qualitative research findings and other work in the region (169), in-depth qualitative research should explore the influence of colonialism on the Ivorian contemporary schooling system, its disciplinary practices and the African Child's educational experiences. Since modern schooling in Africa was a colonial heritage, teachers' and children's experiences will provide insights into colonial constructions of physical and emotional violence in education and support efforts to decolonise the school system.

In-depth qualitative research should explore schoolchildren's accounts and experiences of all forms of violence from teachers, peers and caregivers. Given that children are both victims and perpetrators of violence, it is important to prevent them from becoming perpetrators of violence in turn. Understanding their experiences, knowledge and perceptions of violence in school by "entering" their school world would be a milestone in preventing the "cycle of violence" (140) and a leap forward in violence prevention in schools. Qualitative studies with young children are currently lacking in Côte d'Ivoire, and therefore recommended, especially for children from the youngest age of preschool and school. Future work should include children from violent neighbourhoods, drawing on our key finding, which indicates the strong relationship between community insecurity and physical violence victimization among school children. The "Microbes" phenomenon should also be investigated to explore the links between school, youth violence and conflict.

6.6 Policy implications

In this section, I discuss the implications of my findings for policy and practice in the field of VAC in Côte d'Ivoire.

Côte d'Ivoire has put efforts into preventing violence against children in school over the past decade. Important strategies include the implementation of a National Child Protection Policy as a strategic framework on the issue of child protection (180) and the enactment of a ministerial order formally prohibiting corporal punishment and humiliating treatment for children in school (48). Furthermore, Côte d'Ivoire acquired a Pathfinder status whereby the government formally committed to comprehensive multisectoral actions to prevent VAC (46). Despite these measures, findings from the 3 studies of this PhD indicate that VAC persists in and beyond school.

These PhD findings are an important contribution to continuing efforts to prevent VAC in and beyond school. My results provide stakeholders with contextual information and recommendations derived from robust analysis of a nationally representative survey from children and youth (VACS) and cross-sectional data from the APEV formative evaluation. These PhD findings are valuable for decision-makers, researchers at the country level and stakeholders from the multiple spheres of child protection settings, including home, school and the community.

Interventions need to account for children's multiple experiences of violence, as those who experience school violence from teachers and school peers also experience violence outside of school. The experience of violence in different spaces by different perpetrators and its co-occurrence affect both how to support children and also highlights the need for intervention to cover different places and address norms change.

The high prevalence of emotional violence found in this PhD suggests a need to review and strengthen teachers' initial and ongoing training to incorporate knowledge and skills tailored to each form of violence, emotional and physical. Learning and skills for non-violent educational practices should consider the differences and consequences of emotional vs physical violence on children to address interpersonal relations between teachers and their students.

It is essential to invest in research and implementation of well-designed and evaluated school programmes to reduce violence from teachers to students, such as the Good School Toolkit in Uganda (12) and the IRIE classroom Toolbox in Jamaica (13). This PhD's findings provide with a good opportunity to develop evidence-based and community-wide interventions centred around children, teachers and parents.

Teachers are variable in their use of violence, which is influenced by their personal characteristics. Teachers need specific attention to ensure they are equipped with school infrastructure that will improve their working conditions and facilitate the implementation of alternative positive discipline. Resources and support for teachers' mental health and surveillance of their well-being should be provided through ongoing supervision. Additionally, support for teachers in post-conflict settings and unsafe community should integrate trauma-informed approaches, including the management of children whose behaviour has been affected by violence.

Results from the qualitative study indicate that context-informed programmes are urgently needed to protect children from violence in school. A discussion with teachers, parents and community leaders about the notion of the African child, their rights and responsibilities would help ensure their views are listened to and negotiated so that education about the benefits of changing norms could occur. Teachers would also need reinforcement of their training on the harms caused by corporal punishment and the necessity of alternative positive discipline drawing on evidence from local research.

Finally, there is a need to involve local and grassroots organisations that build on the local mode of child-rearing practices to prevent violence against children.

6.7 Conclusion

School children in Côte d'Ivoire experience high levels of physical violence by different perpetrators: parents/caregivers or adult relatives, peers and teachers. These experiences overlap and may have secluded manifestations, locations and contexts. At school level, teachers' gender, attitudinal norms towards violence, self-efficacy and mental health are strong predictors of use of violence towards students. Teachers' views and perspectives on childhood and violence are embedded in the traditional characterisation of childhood, legacy

of the armed conflict and colonialism. These considerations influence their use of corporal punishment in school.

Context-informed interventions are needed to reduce violence from teachers and provide children with a safe school environment. Our findings underscore the need for whole-school programmes to prevent violence against children as children at risk of violence in school may also need secondary prevention at home and in their community. It is important to develop opportunities for critical reflection around the notion of the African Child and their rights and responsibilities, and such initiatives should include teachers, parents and community leaders. Support for teachers in post-conflict settings should include trauma-informed approaches.

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8 Appendix I: Topic guide for FGDs and IDIs, APEV qualitative component



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Formative evaluation of APEV Côte d'Ivoire

September 2018

Topic guide for FGDs and In-depth interviews

Topics and questions

Teacher took part in previous surveys to evaluate use of violence and knowledge of non-violence techniques following the training in February. In this current interview, we want to identify factors that would make them feel comfortable to disclose information about the use of violence on pupils.

Background

1. Background and role
 - Current title, role and responsibilities in the school [**Probe:** *How long in the school? Which class do they teach? What is the age range of their pupils?*]
 - Previous job
 - Job satisfaction

Views on APEV

2. What are your views on Graines de Paix non-violent teaching techniques?
3. What are your experiences about applying non-violent teaching techniques in your classroom

Content of questions

4. What would make you/other teachers feel comfortable to disclose information on the use of violence on pupils

5. Content of all surveys done [**Probe:** before and after the training in February 2018, follow up study in June 2018]
 - Feelings about answering “yes” to violence questions.
 - Content of the survey reflecting violence specificities in Cote d’Ivoire? [**Probe:** were all types of violence covered? Was teacher able to respond to all questions as they wish to?]

Confidentiality

6. Worried that anyone would find out about their answers?

Rapport with hierarchy

7. Relation with director, pedagogical advisor, and inspector [**Probe:** how often do you meet, what do you discuss?]
8. Any Pressure to participate in the training

Consent form

9. Feelings about referral to social centre

Survey tool and environment

10. Views on survey tool [**Probe:** self-administered survey on tablet]
 - Convenience of survey location
 - Time to complete the survey
 - Time pressure by comparing to other teachers
 - Comments by others (teachers, surveyors, etc.)
11. Preference of self-administered survey over one-to-one interview

Financial incentive

12. Feeling about financial compensation for time and transport

Any other detail?

13. Other reason that has been missed/anything that they did not get a chance to discuss fully

End of interview

9 Appendix II: Research protocol for qualitative research

Violence against children in school in Côte d'Ivoire: a mixed-methods study to explore drivers of perpetration by teachers and peers

Research Degree student: Manuela Balliet

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Adapted from the report submitted for upgrading from MPhil to PhD
September 2019

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9.1 Rationale for qualitative research

The need to understand children's experiences of violence

Given that children are both victims and perpetrators of violence, it is important to prevent them from becoming perpetrators of violence in turn. Understanding children's experiences, knowledge and perceptions of violence in school by "entering" their school world would be a milestone in preventing intergenerational transmission of violence and a leap forward in violence prevention in schools. Currently, studies from children's perspectives on school violence are lacking in Côte d'Ivoire.

9.1.1 Research objective

1. To explore children's representation, experiences and reproduction of physical and emotional violence in school in Côte d'Ivoire.

9.1.2 Research questions

1. How do children understand and define the boundaries of violence perpetrated by teachers and peers?
2. How is discipline manifested in school, as per children's accounts?
3. What is the process by which children replicate their experience and witnessing of physical and emotional violence in school and does violence reproduction varies between boys and girls?
4. What are children's experiences in relation to reporting experiences of violence in school?

9.2 METHODS

9.2.1 Children in qualitative research

To date, there is no standardised fashion to collect data from children in the field of violence research (21). Historically, children's participants have been excluded from qualitative research and researchers have explored children's experiences through adult's perspectives (181). However, several researchers argue that children are the most reliable source of information about themselves, and have developed techniques for eliciting this information (182). Young children from age 3 have been shown to have excellent recall of adverse events related to illness and violence (181). Furthermore, the agenda on Children's Rights has emphasised the importance of children's active participation and meaningful involvement in research (183-189). This study will seek to obtain data on children's experiences, perceptions and reproduction of violence in school by "entering" the child's world and collecting data from children themselves.

9.2.1.1 *Setting*

Due to safety reasons during the pre-electoral period when the data will be collected, it will not be possible to conduct the qualitative research with the children in Tonkpi. To overcome limitations caused by a change of study location, a systematic approach will be adopted by selecting alternative location and a school that present similarities with the Tonkpi study. Thus, a school in the District of Abidjan will be selected as a case study for the qualitative research with the children for a number of similarities to Tonkpi as described in Table 2 below. The post electoral conflict of 2010-2011 caused serious casualties and targeted killings in the District of Abidjan. Moreover, Abidjan is exposed to a high level of violence and is severely affected by the scourge of the "Microbes". Furthermore, teachers in Abidjan have been trained on the APEV intervention (150).

Table 4 Description of the similarities and differences of the two areas of qualitative research

Similarities/Difference	Qualitative research in Tonkpi with teachers	Abidjan with children
--------------------------------	---	------------------------------

Similarity	Severely affected by post electoral conflict 2010-2011	Severely affected by post electoral conflict 2010-2011
Similarity	Violent neighbourhood predominantly by the “Microbes”	Violent neighbourhood predominantly by the “Microbes”
Similarity	Primary school	Primary school
Similarity	1500 teachers trained on APEV	4000 teachers trained on APEV
Difference	One rural and 3 urban schools	One semi-urban school
Difference	3 public and 1 private school	1 public or private school

9.2.1.2 Participants and sampling

a) Sample size

According to the latest school directorate in Côte d’Ivoire, primary school children’s age varies between 5 and 11 years old (190). Qualitative data will be collected from around 156 primary school children aged 5 to 11 as presented in figure 6 below. A semi-urban school in the District of Abidjan will be selected where teachers have received APEV training. The qualitative research activities will include one week of participant observation to familiarise myself with the school environment and refine data collection tools, 20 role-plays with children aged 5-8 followed by open discussion, and 6 FGDs with children 9-11 years old.

Figure 9 Breakdown of activities and sample size

5 **role-plays** followed by open discussion x 4 classrooms (year 1 to year 4) x 6 children per role-play = **120 children**

3 **FGDs** x 2 classrooms x 6 children per FGD = **36 children**

Total= 156 children

qualitative interviews and FGDs (56). This study will seek voluntary participation among children who

have met the consent procedure criteria as described in Appendix 10 (191, 192). However, cultural sensitivity and school willingness to cooperate in the study will determine whether to engage with head teacher or any other staff member to help selecting students.

Head teacher will advise on an appropriate day and time for data collection. Ideally, this will be outside of school hours, in school premises out of sight of teachers and other students not participating in the activity. The location should provide safety for both children and the research team.

9.2.1.3 *Research Team*

I will conduct the qualitative research activities with the support of a research assistant and a child protection officer. A research assistant with qualitative research experience will be recruited from a pool of researchers who contributed to the data collection of APEV formative evaluation. The research assistant will receive refresher training on good research practices. Additional training will be provided on methods and tools for this specific study. Regular meetings with the research assistant will be held to ensure that the implementation and running of the qualitative research are done consistently. A child protection officer will be recruited from the local child protection services to provide assistance to the children in the event of immediate emotional distress during the activities.

9.2.1.4 *Methods*

a) Field Observation

In order to generate naturally occurring data (192), a one-week direct observation will be conducted for familiarisation with children and their school environment. Involvement in participant's actions will be minimal in order to stimulate naturally occurring behaviour.

Children will be observed in the classroom and courtyard, before and after classroom and during breaks. Disciplinary methods by teachers and violence from peers, physical and verbal, will be recorded. For teachers, corporal punishment will be observed for the place this is used, the tools used and children's response to discipline. Observation of serious violence will be reported to child protection services based on predefined criteria described in section on child protection below.

Peer violence will be observed for attitude of children towards each other, gesture, content and manifestation of games, jokes, nicknames, tone of voice. I will also observe whether there are variation by gender of sex of perpetrators and victims.

A draft of the field observation guide is presented Appendix 11. This will be finalised before field work and refined during field work subject to emerging phenomenon observed.

b) Role-play followed by open discussion with children aged 5-8 years old

In order to collect information on children's views in an interactive and child-friendly manner, role-plays will be used (193). In this context, role-play is preferred to other child-friendly techniques such as drawing pictures on a topic related to teachers, because theatre is embedded in Ivorian art and culture (194). Ivorian theatre has its source in colonial period and is rooted in the oral tradition of the nation (195, 196). School fairs, extra curriculum activities and major national entertainment programmes for children such as Wozo Vacances include theatrical performance (196, 197). This includes children as young as preschool level.

A minimum of five role-plays per classroom will be conducted to stimulate discussion with children aged 5-8 i.e. in four classrooms (year 1 to year 4). Each role play will be followed with open discussion. The number of role-plays will depend on data saturation.

African-looking dolls and other toy figures will be made available to the children to represent school pupils. Children will be encouraged to use any tool available in the classroom during the performance. Role-plays will be conducted in groups of 6 children and will consist in one student impersonating a teacher on discipline during classroom or in school and experiences of violence from other students.

In order to analyse meaningfully the content of the role-plays, the research assistant and I will take notes of gestures, toys handling, emotions displayed by the children who do the role-play and others children observing the role-play.

Role-plays will be immediately followed by open discussion. Children will be asked to comment on the role-plays and their experiences relate to the performance. Additional questions on experiences of violence and discipline will also be discussed. A draft of the topic guide for role-plays is presented in Appendix 12. This will be finalised before field work and refined during field work subject to emerging themes.

In the unlikely event that role-plays do not generate data on teaching methods and use of violence, observation will help identifying other suitable activities to trigger discussion on violence according to children's age.

c) Focus Group Discussions with children aged 9-11 years old

School-based focus group discussions (FGDs) are an appropriate method to elicit children's views, insights and experiences of violence in school, according to previous research (198, 199). FGDs will be utilised with children aged 9-11 years old to collect data from children in a more relaxed environment among their peers (200-206).

Three FGDs will be conducted in group of six children in two classrooms (year 5 and 6) two gender-segregated groups and one gender-mixed groups on the hypothesis that there will be varying degree of disclosure between mixed and gender-homogenous groups.

FGDs will be conducted around the following topics:

- Views on violence and discipline
- Views on perpetrators and location of violence in school
- Experiences of violence in school from others
- Experiences of violence perpetration

A suggested draft of the topic guide is presented in Appendix 13 for open-ended questions. The topic guide will be finalised before fieldwork and refined during field work subject to emerging themes.

9.2.1.5 *Qualitative data analysis*

Field observation, role-plays followed by open discussion and FGDs will be audio-recorded using a password-protected smart phone with built-in encryption functionality and Internet access. The device also has the functionality to eliminate background noise to improve quality of recordings. Files will be uploaded to my personal university server immediately after role-play and FGD. The smartphone will be hidden from view when not in use. In the unlikely event of Internet failure, files will be transferred at the earliest opportunity.

Audios recordings and field notes will be fully transcribed and translated into English. In order to facilitate data reduction, display, and analysis and interpretation, concept mapping will be used employing the qualitative software NVivo12 (152). This will also be supported by interconnections between data from different respondent groups by age, sex and classroom stage (207). Concept maps will be created with broader concepts at the top of the hierarchy

and will integrate words into concepts in the map to analyse for children's meaning across concepts. Data analysis will use the recommended steps of a constructivist grounded theory approach to generate a theory (208). These steps involve simultaneous collection and analysis of data, creation of analytic codes and categories developed from data, discovery of basic social processes in the data, inductive construction of abstract categories, theoretical sampling to refine categories, writing analytical memos as the stage between coding and writing and the integration of categories into a theoretical framework.

In order to manage the volume of qualitative data in a time-effective manner, the research assistant will support transcription, translation and coding.

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9.4 Appendix 1: Flow of role-plays and FDGs with children in school

- **Start of activities:** before every activity, the researcher and research assistant will ensure the room is safe and private; that the child protection officer is present; that all tools necessary for the activities are available. A draft of the tools checklist is provided in Appendix 14.
- **Participants:** in a given classroom, children who qualify for the study will be called forward in the room.
- **Nicknames:** to protect children's identity, children will be asked to choose a nickname based on their favourite animal, cartoon character, sport person or singer.
- **Ground rules:** children will be involved in creating a set of ground rules to observe during the activities to stimulate a pleasant environment for all.
- **Icebreaker:** famous local game for children in which researcher, research assistant and children participate altogether. This will contribute to children feeling confident and relaxed to participate in the activities.
- **Start of activities:** once the researcher deems the children ready to start, activities will commence. Details of each activity is described in sections below.
- **End of session:** children will be thanked and compensated for their time with each receiving a pack comprising of a notebook, a pen and fresh juice. This was previously done in research on school violence (56). No incentive will be given. Before leaving, the research group will hand over children's supervision to teachers/school staff.

9.5 Appendix 2: Ethical Considerations

a) Consent procedures

A child inclusion in the study will be subject to meeting the criteria as per the full consent chain described below. The consent procedure comprises a cascade of consent from different parties, as presented in figure 9 below. First, the study will seek head teacher consent. Second, approval of school committee- COGES Côte d'Ivoire- will be sought, not a formal consent. Thirdly, parental consent will be sought and for parents who are unable to read and/or speak French, translation will be provided in local language and consent form read and explained. Finally, a child assent will be required to participate in the study.

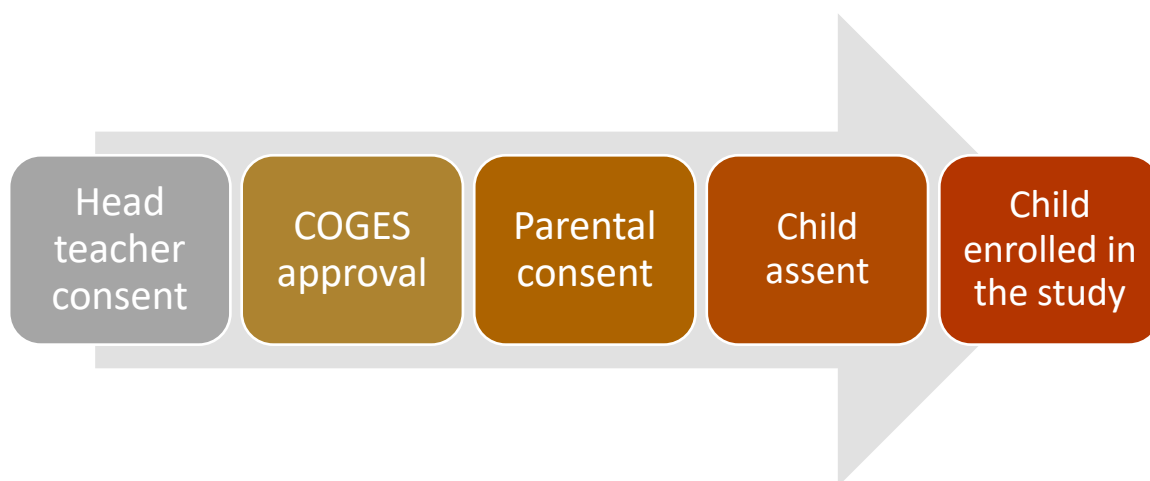


Figure 10 Consent procedure for children participation in qualitative study

Informed consent and assent forms will contain information on the background, aim of the study and referral process. Parents will be informed that their children's details may be passed to child protection services as needed.

b) Confidentiality

Children included in the study will be enrolled on a confidential identity list only accessible by myself. The list will not be disclosed to another party other than child protection services. The identity list will contain the child's name, age, gender, classroom and nickname used in the study. To protect the children in case of theft, no other identifiers will be recorded on the list. The sheet will only be used to select children before each activity. Following the data collection, the sheet will be securely stored in a locked cabinet at LSHTM for follow up with Child Protection Services as necessary. The confidential identity list with children's identifiers will be destroyed at the end of the study.

Before the start of each activity, an attendance sheet will be used to record the age, gender, classroom and nickname of each participant. A template will be produced before data collection.

The research assistant will have access to the attendance sheet but not the confidential identity sheet. The child protection officer may have access to the attendance sheet and for the confidential identity sheet solely for the purpose of providing child protection services.

To protect teacher's identity, children will be asked not to name a teacher during the activities.

c) Child Protection

This study does not anticipate any harm to children during the planned exercises. However, disclosure and discussion of violence may cause immediate emotional distress. Local child protection services will be contacted by written correspondence to inform them of the study ahead of field work. Before the start of the data collection, a meeting in person will be held with the local child protection services to agree on predefined criteria for referrals e.g. nature, severity and timing of violence reported. Counselling support during and after the data collection will also be discussed. A school counsellor will be recruited from the local child protection services to assist during the data collection and provide immediate and future emotional support to children as necessary. In the event of emotional distress from the children, signs of tiredness or desire to leave the study, activities will be immediately interrupted and reviewed for adjustments before resuming.

Processes in place to protect the child and research team from retaliation after violence report, albeit very low risk, will be discussed with child protection services. Essentially, discussion will consider the school's complaints procedure and how effectively the school works with the child protection services if disclosure of violence is made by a child.

9.6 Appendix 3: Field observation guide

- Describe the school environment, safe and unsafe places
- How teachers interact with children in the classroom?
- In classroom, which teaching methods are used by teachers?
- Do teachers use Charter of classroom (non-violent sanctions by APEV)?
- Children reaction to types of discipline?
- How children interact with each other? *Chatting during the lesson; threatening, Pushing each other, bullying due to disability, physical appearance, school grades, family background and characteristics*
- What are the types of games they use? Which toys and tools they use to play?
- Which language do they use? Jokes and lexicon? Metaphors and images, character they try to mimic
- Note anything else that is relevant to understanding the context of violence against children in school

9.7 Appendix 4: Topic guide for role-plays and open discussion

Children aged 5-8

In groups of 6

a) Role play activities

- *A volunteer is asked to step forward while other children watch.*
- You are asked to impersonate a teacher.
- The toys presented represent your pupils.
- You can use anything else around you
- Show me how a teacher does when a student does not listen in the classroom.
- Show me how a teacher does when a student disturbs other student
- Show me how a teacher does when two students fights in the classroom or in the courtyard?
- Show me how a teacher does when a student does not know their lesson
- Show me how a teacher does when someone arrives late
- Show me how two friends are not happy with each other in school.

b) Open discussion immediately following role-play

- **Views on violence and discipline**
 - Meaning of violence and punishment
 - Consequences of violence and discipline on the child now and later in life
- **Views on perpetrators and location of violence in school**
 - School staff involved in physical and emotional discipline, male, female, head teacher, strangers
 - Other students involved in physical and emotional discipline, student representative
 - Manifestation of peer/group violence
 - Manifestation of violence in classroom or other places in school, toilets, courtyard
 - Views on peer violence against the opposite sex
- **Experiences of violence in school from others**
 - Share stories of you/friends or another known person who have experienced violence by teachers, school staff, students or anyone else in the school. Objects or methods used for discipline. Circumstances, location in/around school and time.
 - Actions undertaken after acts of violence
- **Experiences of violence perpetration**
 - Stories of violence perpetrated by another student/a child you know/in your classroom or in the school. Circumstances, location in/around school and time.

- Stories of violent attitude against the opposite sex. Circumstances, location in/around school and time.

9.8 Appendix 5: Topic guide for Focus Group Discussions

Children 9-11 years old

In group of 6

- **Views on violence and discipline**
 - Meaning of violence more broadly and in school
 - Meaning of discipline
 - Consequences of violence and discipline on the child now and later in life

- **Views on perpetrators and location of violence in school**
 - School staff involved in physical and emotional discipline, male, female, head teacher, strangers
 - Other students involved in physical and emotional discipline, student representative
 - Manifestation of peer/group violence
 - Manifestation of violence in classroom or other places in school, toilets, courtyard
 - Views on peer violence against the opposite sex

- **Experiences of violence in school from others**
 - Share stories of you/friends or another known person who have experienced violence by teachers, school staff, students or anyone else in the school. Objects or methods used for discipline. Circumstances, location in/around school and time.
 - Share stories about instances when others have asked teachers to discipline you.
 - Actions undertaken after acts of violence

- **Experiences of violence perpetration**
 - Stories of violence perpetrated by another student/a child you know/in your classroom or in the school. Circumstances, location in/around school and time.
 - Stories of violent attitude against the opposite sex. Circumstances, location in/around school and time.

9.9 Appendix 6: Checklist for activities

Tick the box to confirm all items are available for the activities

Role-plays and open discussion

Assent forms	
iPhone	
Observation notes book	
Toys	
Envelopes to secure assent forms	
Pen	
Children's packs comprising of notebook, pen and juice.	

Focus group discussion

Assent forms	
iPhone	
Observation notes book	
Envelopes to secure assent forms	
Pen	
Children's packs comprising of notebook, pen and juice.	

9.11 Appendix 8: Consent form head teacher

Research project: Exploring violence in school in Côte d'Ivoire

Hello, my name is Manuela Balliet. I am a researcher at the London School of Hygiene and Tropical Medicine, England.

As part of my PhD research, I am conducting a study to understand about experiences around violence and discipline in schools in the particular socio-cultural context of Côte d'Ivoire. Results of this study will enhance efforts to prevent violence against children in school and inform programs for safer schools. During this study, I will conduct role-plays followed by discussion with children aged 5-8 years and group discussions with children 9-11 years old. During the first week of the study, I will do some observation in the school to familiarise myself with the study setting. I will ensure not to disturb classrooms and any other school activities.

Today, I would like to gain your permission and the school management team to conduct this study. Participation in this study is voluntary. In case you give your consent, the COGES will also be informed about this study and parental consent will be sought. Parents will be provided with all necessary information about this study. Children will only be included in this study if their parents have given their consent and they themselves have agreed to participate.

The role-plays and discussion with the children will be informal and children will be encouraged to talk freely about anything they feel is related to the questions about violence. I would appreciate your cooperation in identifying an appropriate time and location to conduct the study in a safe and private manner. All activities will be audio-recorded. All information that identifies the child and the school will be stored separately from the responses. Audio-recordings will be transcribed and used for analysis for the purpose of this study. Transcripts may also be used for future studies. However, children's personal data will always be protected. Audio-recordings and documents with personal identifiers will be destroyed at the end of the study. No photos or videos will be taken as part of this study.

Role-plays and open discussions with the children aged 5-8 will take no longer than half an hour. The group discussion with children aged 9-11 years will take no longer than 45 min. Children can decide to stop their participation any time during the study and this is not a problem. I will be assisted by another researcher, ----- to ensure the activities are run smoothly. A child protection officer will also be present to provide assistance and support to the child as necessary.

The content of the discussion with the children is strictly confidential and will not be shared with another party unless the discussions raise any issues that makes me think that a child's safety or welfare might be at risk. In that case, I am obliged to report this information might be passed on Child Protection Services.

The study has been approved by the Comité National d’Ethique et de la Recherche (CNER) in Abidjan and the Ethics Committee at the London School of Hygiene and Tropical Medicine.

If you have any questions about the project, you can ask me, now. You can also contact me or my supervisor if you have questions in the future:

Manuela Balliet
London School of Hygiene and Tropical Medicine
Tavistock place
Email: Manuela.balliet@lshtm.ac.uk
Mobile: 0044 7778 346991

Professor François-Joseph Azoh
Ecole Normale Supérieure d’Abidjan
Email : azohfj@yahoo.fr
Mobile : 00225 07694838

TO BE COMPLETED BY RESEARCHER (read out to head teacher)

I have read this form, or had it read and explained to me. I understand the information and was able to ask all my questions. I consent to that my school takes part in this activity. I understand that my name, the children’s name, and their parents’s name will not be used in any reports. If I have questions in the future about the research I know I can ask one of the people listed above.

I voluntarily give permission for my school to participate in this study by signing below.

Are you willing that your school participates in this study?

DOES NOT AGREE TO PARTICPATE

AGREES TO PARTICPATE

Head teacher name (**print**)

Head teacher signature

Date

Name of researcher (**print**)

Researcher signature

Date

9.12 Appendix 9: Consent form parents

Research project: Exploring violence in school in Côte d'Ivoire

Hello, my name is Manuela Balliet. I am a researcher at the London School of Hygiene and Tropical Medicine, England.

As part of my PhD research, I am conducting a study to understand about experiences around violence and discipline in schools in the particular socio-cultural context of Côte d'Ivoire. Results of this study will enhance efforts to prevent violence against children in school and inform programs for safer schools. Today, I would like to gain your permission for your child/children's participation in my study.

During this study, I will conduct role-plays followed by discussion with children aged 5-8 years and group discussions with children 9-11 years old. During the first week of the study, I will do some observation in the school to familiarise myself with the school setting. I will ensure not to disturb classrooms and any other school activities.

Participation in this study is voluntary. There is no problem if you do not want your child/children to participate in the study, your child/children would still be treated the same. The school management and COGES have also been informed about this study and have given their approval. Your child/children will only be included in this study if you have given your consent and they themselves have agreed to participate. In this case, I will ask them to sign another form for which you will receive a copy. Once you receive the copy, please keep it safely as a proof that your child/children has/have participated in this study.

The activities will take place in a safe place approved by the head teacher. Role-plays and open discussions with the children aged 5-8 will take no longer than half an hour. The group discussion with children aged 9-11 years will take no longer than 45 min. Children can decide to stop their participation any time during the interview and this is not a problem. I will be assisted by another researcher, ----- to ensure the activities are run smoothly. A child protection officer will also be present to provide assistance and support to the child as necessary.

All information that identifies a child and the school will be stored separately from the responses. All activities will be audio-recorded. Audio-recordings will be transcribed and used for analysis for the purpose of this study. Transcripts may also be used for future studies. However, children's personal data will always be protected. Audio-recordings and documents with personal identifiers will be destroyed at the end of the study. No photos or videos will be taken as part of this study.

The content of the discussion with the children is strictly confidential and will not be shared with another party unless the discussions raise any issues that makes me think that a child's safety or welfare might be at risk. In that case, I am obliged to report this information to the Child Protection Services.

The study has been approved by the Comité National d’Ethique et de la Recherche (CNER) in Abidjan and the Ethics Committee at the London School of Hygiene and Tropical Medicine.

If you have any questions about the project, you can ask me or my supervisor:

Manuela Balliet
London School of Hygiene and Tropical Medicine
Tavistock place
Email: Manuela.balliet@lshtm.ac.uk
Mobile: 0044 7778 346991

Professor François-Joseph Azoh
Ecole Normale Supérieure d’Abidjan
Email : azohfj@yahoo.fr
Mobile : 00225 07694838

TO BE COMPLETED BY RESEARCHER (read out or translated to parent)

I have read this form, or had it read, explained or translated to me. I understand the information and was able to ask all my questions. I consent to that my child/children take part in this activity. I understand that my name and my child/children’s name will not be used in any reports. If I have questions in the future about the research I know I can ask one of the people listed above.

I voluntarily give permission for my child/children NAME OF THE CHILD-----

----- to participate in this study by signing below.

Are you willing that your child/children participate in this study?

DOES NOT AGREE TO PARTICPATE

AGREES TO PARTICPATE

*Parent name (**print**)

Name of researcher (**print**)

*Parent signature

Researcher signature

Date

Date

*Witness name (**print**)
In case parent is illiterate

Witness signature

Date

9.13 Appendix 10: Assent form for children aged 5-8 years old

Title of project: Exploring violence against children in school in Côte d'Ivoire
Child to give this copy of this assent form to their parents/guardians as a proof of their participation in the study.

Hello, my name is Manuela Balliet. I am doing some work to understand your experiences around violence and discipline in schools as well as other experiences in your lives. If your parents have agreed, your participation in this study means that you will do role-plays with toys followed by a discussion group with other students. After the study I will take the toys back.

I will be assisted by another researcher -----, and a counsellor in case you need help with anything.

After I have explained what I am trying to do and you have had all your questions answered, you will be asked to sign or put your name on this paper to confirm you agree to participate. I will also ask for your permission to audio record the discussion. During the interview you can talk freely about anything you feel is related to the questions about violence.

The role-plays and discussion will be in a quiet place and will take about half an hour, which is the same amount of time as one lesson. . If at any point, you want to go to the toilet or need anything please let me know. Also if the discussion goes on longer and you need to leave to do other things, please feel free to let me know and you may go. If you find some of the questions difficult to answer, don't worry and let me know. There are no right or wrong answers or views.

Everything you tell us today is only for this study and will not be told to someone else. If you tell me about something that makes me think that you have been hurt, I may need to let someone know so I can do my best to keep you safe.

Tick the boxes if you agree	
I was informed that the study is to experiences around violence and discipline in schools	<input type="checkbox"/>
The researcher has explained the study to me.	<input type="checkbox"/>
I have asked all the questions I wanted to and understood the responses they gave me.	
I was told everything I wanted to know about what I have to do to be in the study.	<input type="checkbox"/>
I know I can stop being in the study whenever I want, for any reason and I will still be looked after the same.	<input type="checkbox"/>
I want to take part in this study.	<input type="checkbox"/>

 *Child name (**print**)

 *Date

**Researcher and research assistant will write and date for children who cannot write*

9.14 Appendix 11: Assent form for children aged 9-11 years old

Title of project: Exploring violence against children in school in Côte d'Ivoire
Child to give this copy of this assent form to their parents/guardians as a proof of their participation in the study.

Hello, my name is Manuela Balliet. I am doing some work to understand your experiences around violence and discipline in schools as well as other experiences in your lives. If your parents have agreed, your participation in this study means that you will participate in a discussion group with other students.

I will be assisted by another researcher -----, and a counsellor in case you need help with anything.

After I have read this form and you have had all your questions answered and feel that you understand what you will have to do, you will be asked to sign this assent form. I will also ask for your permission to audio record the discussion. The interview will be informal and you will be encouraged to talk freely about anything you feel is related to the questions about violence.

The discussion should take no longer than 45 min, and will be conducted in a private place. If at any point you want to go to the toilet or need anything please let me know. Also if the discussion goes on longer and you need to leave to do other things, please feel free to let me know and you may go. Some of the questions might talk about things that some people find quite personal, or may be difficult to answer. You have the right to stop the discussion at any time, or to skip any questions that make you feel uncomfortable or you don't want to answer. There are no right or wrong answers or views.

I will not tell to anyone anything you choose to tell me during this discussion. Only the research team and myself will know your answers. Information about your name will be stored separately from the recordings and answers, and your answers will be put together with answers from many other young people who have taken part in the discussions. If direct quotes are used in any research report or documents – then your name will not be shown and therefore no one will know who said these words. If the discussion raises any issues that you would like to discuss further with a counsellor or support worker, we would be happy to help arrange this. If you tell me about something that makes me think your current safety or wellbeing might be at risk or that you have been hurt, I may need to let a counsellor know so that I can do my best to keep you safe.

Your participation is completely voluntary, but telling us about your experiences could be very helpful for improving peace education and reducing violence against children in Côte d'Ivoire.

The study has been approved by organisations in charge of ethics (good research practices) and the London School of Hygiene and Tropical Medicine and here in Côte d'Ivoire.

Tick the boxes if you agree

I was informed that the study is to explore understand experiences around violence and discipline in schools	<input type="checkbox"/>
The researcher has explained the study to me.	<input type="checkbox"/>
I have asked all the questions I wanted to and understood the responses they gave me.	
I was told everything I wanted to know about what I have to do to be in the study.	<input type="checkbox"/>
I know I can stop being in the study whenever I want, for any reason and I will still be looked after the same.	<input type="checkbox"/>