International Journal of Educational Development 97 (2023) 102717

Contents lists available at ScienceDirect

International Journal of Educational Development

journal homepage: www.elsevier.com/locate/ijedudev

Children's schooling experiences and child hope in South Sudan

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ARTICLE INFO

Keywords:
Corporal violence
School environment
Child hope
Child wellbeing
Perception of safety

ABSTRACT

The study aims to understand corporal violence in schools among students 10–20 in a conflict-affected community in South Sudan, and how violence, mental health, and perception of safety influence hope using baseline data from a school wellbeing training evaluation. In univariate logistic regressions, child hope was significantly associated with perception of safety ($\beta = 0.10$, $p < 0.001$) and mental health ($\beta = -0.04$, $p < 0.001$), and association with past-week violence was significant but mixed (emotional: $\beta = -0.10$, $p = 0.006$; physical: $\beta = 0.13$, $p = 0.004$). Girls had significantly lower hope overall. Child hope is influenced by experiences and environments both within and outside of school, and girls may be particularly vulnerable to external factors. Resilience may explain the relationship between violence and hope.

1. Introduction

Corporal punishment in schools is a widely accepted form of violence against children that has long-term consequences for their mental and physical health, behavior, and academic performance (Heekes et al., 2022). Negative schooling experiences can also affect children's self-efficacy in the immediate term and in the future, hindering the ability of children to achieve their goals (Smiley et al., 2021). These experiences can be particularly difficult for girls in low-income countries who face gender-based discrimination, stigma, and other harmful social norms that result in their higher dropout from school than boys (Sampa et al., 2021; Sandøy et al., 2016). Nevertheless, in conflict-affected communities such as those in Unity State, South Sudan, where children experience heightened violence, abuse, neglect, and exploitation in both their communities and in their homes (Ellsberg et al., 2020; South Sudan Humanitarian Needs Overview, 2020, 2019), the school setting could be a critical space to provide essential child protection services and improve children's wellbeing (O'Gorman et al., 2016).

To build the evidence base on corporal punishment in South Sudan and to test evidence-based approaches to improving child wellbeing, the International Rescue Committee (IRC) undertook a project with the ultimate goal of strengthening the prevention of and response to violent punishment against children by teachers and other personnel in schools. The present study utilizes baseline data from the evaluation of a multicomponent intervention to prevent and reduce the use of corporal punishment in schools, with the goal of better understanding the schooling experiences of boys and girls aged 10–20 years in South Sudan. The baseline analyses aim to answer two overarching research questions: 1) What is the extent of corporal violence in schools in Panyijiar County, South Sudan, and 2) How do corporal punishment, mental health, and perception of safety influence children's hope and expectations for the future? The baseline study also sought to explore the unique experiences of girls in South Sudan and how gender discrimination and menstrual stigma might further influence girl children's hope for the future.

The following subsections outline the situation in South Sudan and the pathways between children's experiences in schools and their wellbeing that are further explored in the results of the study.

Abbreviations: IRC, International Rescue Committee; GBV, gender-based violence; IPV, intimate partner violence; CHS, Children's Hope Scale; IPSCAN, International Society for the Prevention of Child Abuse and Neglect; CTS, Conflict Tactics Scale; ICAST-C, ISPCAN Child Abuse Screening Tool Children's Version; MADICS, Maryland Adolescent Development in Context Study; MFQ, Mood and Feelings Questionnaire; DRC, Democratic Republic of Congo.

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https://doi.org/10.1016/j.ijedudev.2022.102717
Received 24 July 2022; Received in revised form 13 December 2022; Accepted 21 December 2022
Available online 7 January 2023

1.1. Conflict and the experiences of children in South Sudan

South Sudan gained its independence from Sudan in 2011 after decades of civil conflict that culminated in the Comprehensive Peace Agreement. Fresh conflict then erupted from tensions between ethnic and political factions in the country's leadership during the 2013 Crisis. Outbreaks in conflict continue to disrupt governance and displace communities in several states, including Unity State. Communities in Panyijiar County, Unity State, are severely affected by inter-communal conflict, revenge killing, displacement, and recruitment of children into armed groups and cattle camps (South Sudan Humanitarian Needs Overview 2020, 2019).

Schooling conditions in Panyijiar County are unsafe due to insecurity, inaccessible locations, and poor infrastructure, and according to the General Education Strategic Plan (2017–2022), 20% of pupils reported feeling unsafe on their journey to school and nearly half feel unsafe using school toilets. Violent discipline measures used by teachers including corporal punishment and verbal abuse are exacerbated by norms of violence in their homes and communities (General Education Strategic Plan, 2017—2022, 2017). The closure of schools due to COVID-19 in 2020 and 2021 further disrupted education and increased psychosocial distress and risk of violence and exploitation within the home for many children.

Recent laws passed by the South Sudanese government have sought to prevent corporal punishment by making it illegal to use in schools or other institutions. The 2008 Child Act states that children cannot be subjected to corporal punishment "by chiefs, police, and teachers, prison guards in any place or institution including schools, prison and reformatories" (Section 21b), and that those who are convicted will be penalized through prison or fines (Section 35) (The Child Act, 2008). The Act also states that it is the duty every member of the community who suspects that a child's rights are being infringed to report the matter to the chief, social worker, local government official, police, or public attorney to investigate and take appropriate action (Section 34). However, the breakdown of rule of law and loss of protective social networks due to the complex humanitarian situation in South Sudan has resulted in a general culture of impunity related to violence (Ellsberg et al., 2021).

1.2. Corporal punishment against children in schools

Corporal punishment is used globally as a means of correcting or controlling children in schools, with an estimated 60% of children experiencing it during their lifetime across Southeast Asia, Africa, Central America, and the Eastern Mediterranean (Heekes et al., 2022). Despite being recognized as a form of child abuse (UNCRC, 2006), approximately one-third of countries worldwide have no legal prohibition of corporal punishment (Global Initiative to End All Corporal Punishment of Children, 2021).

There is limited data on the prevalence of corporal violence in schools in South Sudan, and comparisons are difficult to draw across countries and regions due to a lack of standardization in measurement (Devries et al., 2018). However, across East Africa, prevalence of corporal punishment is high, with roughly half of children in Uganda (54%) and Tanzania (46%) reporting past-week prevalence of corporal punishment (Heekes et al., 2022) and up to 38% of children in Ethiopia reporting past-week prevalence of corporal punishment (Oganda Portela and Pells, 2015). In other nations experiencing humanitarian crises and conflicts, the prevalence of corporal punishment is heightened; a cross-sectional study conducted in 23 government schools in Afghanistan found that 100% of observed teachers in boys' schools used corporal punishment, while 20% of observed teachers in girls' schools used corporal punishment (Save the Children, 2011).

A child's experience of violence in school varies based on their identity and the context in which the school is situated. Research from high income countries suggests that primary school age children are more likely to be exposed to corporal punishment than older children (Gershoff, 2017). While there is less evidence from LMICs, similar trends were identified in Ethiopia, where past-week prevalence of corporal punishment was 12% among 15-year-olds and 38% among 8-year-olds (Oganda Portela and Pells, 2015). There is mixed evidence as to whether children with disabilities experience a higher risk of corporal punishment (Heekes et al., 2022); for example, one study in Uganda found disability status to be associated with lower risk of experiencing corporal punishment, while a study in the United States found it to be associated with an increased risk of experiencing punishment (Devries et al., 2014; Gershoff and Font, 2016). A recent study examining students' perception of safety in school found that children with vision and hearing disabilities were significantly less likely to perceive themselves as safe at school compared to children without disabilities, and that this also impacted their performance in school (Zuilkowski and Marty, 2021).

Additionally, multiple studies report that boys experience a higher risk of corporal punishment than girls (Gershoff, 2017; Heekes et al., 2022). However, girls are at greater risk of experiencing sexual violence and humiliating treatment in schools (Oganda Portela and Pells, 2015) and other forms of gender-based violence (GBV) and discrimination. For example, qualitative interviews with girls in schools in Ghana and Kenya revealed how teachers humiliated or punished girls who soiled their clothes or disposed of menstrual products in school latrines (Chebii, 2018; Rheinländer et al., 2019). Another qualitative study from Kenya found that corporal punishment as a motivational tool could perpetuate gender violence in schools (Vanner, 2018).

Levels of corporal violence in schools may also be influenced by the level of economic and physical security in the surrounding community. One study in Uganda found that students who experienced previous forms of violence or were of low socioeconomic status were at increased risk of experiencing corporal violence in schools (Devries et al., 2014). The implications of poverty for children—such as not having the correct uniform or equipment, or missing school frequently due to the inability to pay fees or the need to do unpaid work to support their families—can inhibit their ability to meet the school's expectations and therefore result in higher use of corporal violence (Morrow and Singh, 2014). While in some locations rural students experience a higher risk of corporal violence than urban and peri-urban students, the opposite was true in other locations (Heekes et al., 2022; Oganda Portela and Pells, 2015). There is a dearth of evidence from conflict and humanitarian settings examining corporal violence in schools and the effects of conflict and displacement on levels of violence; however, factors such as lower socioeconomic status and societal norms of violence that are associated with higher levels of violence in schools are often exacerbated in humanitarian crises (Rubenstein and Stark, 2017). One study in conflict-affected communities in northeast Nigeria found that higher conflict intensity reduced school enrollment for both boys and girls (Bertoni et al., 2019). Another study from Nigeria found that community-level violence, which often results in the closure of schools, further affects students' perception of safety in protracted conflicts and therefore the school environment (Zuilkowski and Marty, 2021).

1.3. Consequences of corporal violence in schools

Exposure to violent punishment in school has been associated with physical injuries; poor mental and behavioral health including depression, anxiety, and hyperactivity; and antisocial behavior including aggression and perpetuating intimate partner violence (Hecker et al., 2013; Heekes et al., 2022; Talwar et al., 2011). Girls who experience corporal punishment in school are also more likely to experience intimate partner violence (Heekes et al., 2022). On the other hand, legal bans of corporal punishment in school have been found to reduce peer violence in an ecological study of 88 countries (Elgar et al., 2018).

The use of corporal violence in schools also negatively impacts the learning environment overall, as it is associated with poor educational

outcomes for students in math, vocabulary, and reading in the short term (Gershoff, 2017), and impedes educational performance over time (Oganda Portela and Pells, 2015). This can interact with context-specific power and social dynamics that discriminate against children from certain groups. For example, one study from India found that, while corporal punishment resulted in minor differences in the probabilities for test scores for children from more advantaged social groups, for children from disadvantaged social groups, corporal punishment resulted in a much bigger difference in student performance (Kumar et al., 2022).

The conceptual framework elaborated on and tested by Smiley et al. (2021) shows how different school, family, and external factors (demographic and socioeconomic factors, history of violence, and economic shocks and hardship) influence the violence experienced by children, thereby influencing their overall wellbeing. Community and family attitudes and norms toward violence moderate these socioecological risk factors and influence the levels of violence experienced by children, which can in turn lead to worse health outcomes and increased risk-taking behaviors. For example, a study among elementary school students and their parents in Taiwan found that parental attitudes toward corporal punishment and the actual use of corporal punishment was found to have a negative effect on children's depression and involvement in school violence (Chen, 2014). Similarly, teachers' attitudes toward violence and its acceptance in society was found to be linked to the maintained practice of violent discipline among educators in Ghana (Buckler, 2018). The interaction of these factors leads to negative impacts on educational outcomes and children's wellbeing overall (Smiley et al., 2021).

1.4. Child hope and wellbeing

Child wellbeing is a dynamic concept that encompasses areas multiple socioecological levels. To conceptualize the holistic wellbeing of a child, one must understand not only the child's physical and mental health but also their social, cognitive, educational, and economic outcomes, as well as their perception of and participation in their own situation (Smiley et al., 2021; UN High Commissioner for Refugees UNHCR, 2021). While such a dynamic and holistic concept is difficult to capture in one measure, child hope is a strong indicator for child wellbeing and resilience as a construct that includes both a child's belief in their ability to reach their own goals (agency) and their belief in their ability to find a means to achieve them (pathways) (Gilman et al., 2006; Savahl et al., 2013). As operationalized by Snyder et al. (1997), the construct of child hope is linked to mental health, but it also comprises optimism about the future and belief in one's ability to reach one's own goals (Snyder et al., 1997). In conflict and humanitarian settings, hope could be a protective factor for children who have experienced violence or other traumatic events (Eggerman and Panter-Brick, 2010). Child hope has been found to be positively associated with psychosocial wellbeing including higher levels of life satisfaction, social support, self-esteem, and personal adjustment (Edwards et al., 2007; Gilman et al., 2006; Merkas and Braja-Zganec, 2011; Savahl et al., 2013).

The relationship between child hope, mental health outcomes, and aspirations for the future are linked with a child's educational outcomes and school experiences. Individual characteristics such as self-esteem and life satisfaction, as well as community and social characteristics such as perceived social support, are dimensions of hope (Merkas and Braja-Zganec, 2011) and are associated with children's experiences in school (Bonell et al., 2013; Heekes et al., 2022). These dimensions of child wellbeing have also been found to be protective against community violence to promote wellbeing (Savahl et al., 2013). This paper will further explore these links between child hope, children's school experiences including corporal violence and perception of safety, and other socioeconomic factors with the aim of making schools in conflict-affected communities a safe and supportive space to improve children's wellbeing.

2. Methods

2.1. Study design and sample

The present analyses use baseline quantitative data as part of a quasi-experimental evaluation of "Safer Schools for the Wellbeing of Children", a complex school-based intervention developed by the IRC which aims to prevent and respond to the use of violence in schools through a combined teacher training and community-based approach. Baseline, cross-sectional data were collected from 1250 respondents across 32 primary schools in the greater Nyal and Ganyiel located in Panyijiar County, Unity State, South Sudan, between April and June 2021. Participants were students ages 10–20, randomly selected from the schools, who consented to participate in the Safe to Learn study (20 boys and 20 girls per school). Older adolescents ages 18–20 were included in the sample to account for the ages at which many South Sudanese youth complete schooling.

2.2. Data collection

The survey was administered by gender-matched enumerators who read the questions out loud to the respondent and recorded their response in a tablet using Kobo software. Enumerators were hired externally for the research team and received extensive training and practice in maintaining ethical principles such as ensuring privacy, confidentiality, and safety of participants, as well as working with children and recognizing verbal and non-verbal cues to anticipate their needs, and IRC child safeguarding policies and procedures. As English versions of tools were used while surveys were conducted in Nuer language, enumerators were trained to review the meaning of tools in English and on the correct and standardized interpretation into Nuer language verbally.

2.3. Ethical safeguards

The research was conducted in accordance with global ethical standards for research on involving children and research on violence (Graham et al., 2013; Schenk and Williamson, 2005; World Health Organization, 2007). Interviews with children were carefully conducted in a private space where confidentiality could be maintained, and care giver consent and assent of the minor was obtained in advance of starting the baseline survey. All respondents received referral information for follow-up services. The study protocols and tools were reviewed and approved by the IRC Institutional Review Board (CYPD 1.00.015) and a local Technical Advisory Group consisting of representatives from the local authority in Panyijiar County and humanitarian agencies working in schools in Panyijiar County.

2.4. Measures

The measures used for each construct are reported in Table 1. Child hope was used as the dependent variable for the study. Child hope was measured using a continuous variable derived from the Children's Hope Scale (CHS) (Snyder et al., 1997), which has recently been validated among South Sudanese children ages 9–14 living in Uganda (Metzler et al., 2022), as well as with adolescent girls ages 10–14 living in a complex humanitarian setting in eastern Democratic Republic of Congo (DRC) (Stark et al., 2017), and among adolescents 14–17 in South Africa (Savahl et al., 2013). The adapted version used in this study employed a 3-point Likert scale to simplify the response options for use with younger adolescents. Correlate variables tested for their association with child hope included perception of safety, mental health, and emotional and physical violence. Perception of safety in school was a continuous measure adapted from the ADD Student Health Surveys and the UNICEF Child Friendly Schools Initiative (Godfrey et al., 2012). Mental health was measured using the Mood and Feelings Questionnaire and assessed

Table 1
Measures and constructs.

Construct	Measure	Construction/Scale	Example Items
Child hope	• Adapted from Children's Hope Scale • Continuous measure (range: 0–3)	• Six items assessing hope using a 3-point Likert scale rating from never/none of the time to most of the time • Higher score suggesting higher self-perception of ability to achieve goals • Chrombach's alpha = 0.70	• Do you think you are doing pretty well? • Can you think of many ways to get the things in life that are most important to you? • Are you doing just as well as other kids your age? • When you have a problem, do you come up with a lot of ways to solve it? • Do you think the things that you have done in the past will help you in the future? • Do you know that you can find ways to solve a problem, even when others want to quit?
Perception of safety	• Adapted from ADD Health & student health surveys and UNESCO Child Friendly School • Continuous measure (range: 0–23) summing the frequency to which a respondent had experienced the promotion or prevention of safety in school in a typical week	• 23 items assessing perception of safety coded based on frequency at which the respondent experienced a safety-related act during a typical school week; all of the time (4 or 5 days out of the week), most of the time (3 days out of the week), sometimes (1 or 2 days out of the week), or never (0 days). • Responses tallied to form a continuous summary measure • Chrombach's alpha = 0.80	• How many days during the week do you feel that your teachers care about you? • How many days during the week do you feel safe in school? • How many days during the week you did not want to come to school because of how the teachers treated you? • How many days during the week is this school a welcoming place for all types of students?
Mental health	• Adapted from Mood and Feelings questionnaire (MFQ) • Continuous measure (range: 0–24) summing the number of statements with a respondent reporting a statement related to mood and feelings as not true, sometimes true, or always true	• 12 items assessing mood and feelings using a scale from not true, sometimes true, or always true • Higher score denotes more severe depressive symptoms • Chrombach's alpha = 0.84	• In the past two weeks, did you feel very sad? • In the past two weeks, did you feel worthless? • In the past two weeks, did you think you could never be as good as other kids? • In the past two weeks, did you feel supported by a member of your family?
Emotional violence	• Adapted from ICAST-C • Binary summary variable indicating an affirmative response (yes) to any act of psychological violent discipline against the child by a teacher or other adult in school; it does NOT include non-violent discipline	Nine binary items (yes/no) assessing past week psychological violent discipline	• Did the teacher ever shout at you? • Did the teacher ever humiliate you or embarrass you? • Did the teacher ever keep you away from other children to make you feel bad or lonely? • Did the teacher ever steal, break or ruin your belongings/things?
Physical violence	• Adapted from ICAST-C • Binary summary variable indicating an affirmative response (yes) to any act of physical violent discipline against the child by a teacher or other adult in school; it does NOT include non-violent discipline	19 binary items (yes/no) assessing past week physical violent discipline	• Did the teacher ever hit or slap you as punishment? • Did the teacher ever hit you with a cane or stick? • Did the teacher ever make you clean toilets, pick up trash, fetch water or do other labour as punishment?
Gender-based discrimination	• Adapted from the MADICS scales on racial discrimination and gender discrimination • Continuous measure (range: 1–5) averaging a student's response to four statements about how often they experience discrimination by teachers in school: every day, once or twice each week, a few times each month, or a few times each year	• Four items assessing hope using a 5-point Likert scale rating from "Never/None of the time" to "Every day" • Higher score denotes worse experience of gender discrimination • Chrombach's alpha = 0.80 • Module only asked to those respondents who answered "Girl" to gender question at beginning of survey (skipped for those who answered "Boy" or "Other")	• How often do you feel that teachers call on you less often than they call on other boys, because you are a girl? • How often do you feel that teachers grade you harder than they grade boys, because you are a girl? • How often do you feel that you get disciplined more harshly by teachers than boys, because you are a girl? • How often do you feel that teachers think you are less smart than you really are because you are a girl?

(*continued on next page*)

Table 1 (*continued*)

Construct	Measure	Construction/Scale	Example Items
Menstrual stigma	• Adapted from questionnaire module on period stigma among adolescent boys and girls in Northern Tanzania • Continuous measure (range: 0–5) summing the affirmative responses (yes=1, no=0) to five questions about experiences of stigma or shame related to menstruation and menstrual hygiene in school	• Five binary questions summed in a continuous measure • Higher score denotes worse experience of stigma related to menstruation • Module only asked to those respondents who answered "Girl" to gender question at beginning of survey (skipped for those who answered "Boy" or "Other")	• Do you feel like having your period is something that one must hide from others? • Would you feel ashamed if other girls knew that you were on your period? • Would you feel ashamed if other boys knew that you were on your period? • If people knew that you have ever had your period, would you be afraid of teachers not being understanding or helpful? • Do you feel ashamed during your period? • Do you have difficulty seeing, even if wearing glasses?
Disability	• Adapted from Washington Group Short Set (WG-SS) • Categorical measure indicating the child's level of difficulty with 6 functional domains: vision, hearing, mobility, self-care, remembering, and communication	6 items assessing level of difficulty using a Likert scale rating (no difficulty, some difficulty, a lot of difficulty, cannot do at all)	• Do you have difficulty hearing, even if using a hearing aid? • Do you have difficulty with self-care such as washing all over or dressing?

as a continuous summary variable (Angold and Costello, 1987).

Emotional and physical violence in schools were measured as binary summary variables indicating experience of any act of psychological or physical violent discipline against the child by a teacher or other adult in school. Commonly used survey instruments for measuring experiences with corporal punishment are act-based and ask about specific experiences, such as being hit, slapped, or pinched, without utilizing subjective labels such as "violence." (Merrill et al., 2020) Two of the main validated instruments used in the literature for measuring experiences of corporal punishment are the International Society for the Prevention of Child Abuse and Neglect Screening Tool (ICAST-C) and the Parent-Child Conflict Tactic Scale (CTS) (IPSCAN, 2006; Merrill et al., 2020; Straus et al., 1998). While both instruments include questions about both physical and emotional abuse, the ICAST-C asks about a larger number of specific forms of violence, including forced labor, denial of food, and forcing a child to stand in uncomfortable positions. Both of these instruments have been adapted for measuring experiences of corporal punishment in schools in low- and middle-income countries (Devries et al., 2015; Masath et al., 2020). This study utilized the ICAST-C (IPSCAN, 2006) to capture a broader spectrum of violent acts. The full list of acts for both physical and emotional corporal violence can be found in Table 1.

Correlates of gender-based discrimination and stigma related to menstruation were also assessed for their association with child hope among girls. Gender-based discrimination was assessed continuously using a measure adapted from the Maryland Adolescent Development in Context Study (MADICS) scales on racial and gender discrimination (Cogburn et al., 2011). Menstrual stigma was also measured continuously using an adapted module from a questionnaire on period stigma among adolescent boys and girls in Tanzania (Benshaul-Tolonen et al., 2020).

Demographic variables including age, grade, disability level, displacement status, caregiver, and study site were also examined for their association with child hope. Disability level was measured using the Washington Group Short-Set and summarized as a three-level categorial variable indicating no disability, mild disability, or moderate/severe disability (The Washington Group on Disability Statistics, 2016).

2.5. Analysis

The paper first examines socio-demographic characteristics for participants, stratified by gender and survey site. Overall frequencies or means of demographic data and correlates of interest were assessed for their relationship with Children's Hope Score using cross-tabulations and Pearson correlation coefficients. Hypothesized correlates were then assessed through gender-stratified, unadjusted linear regression models. Covariates that were significantly associated with Children's Hope Score at the alpha < 0.05 level for either boys or girls were retained in the final adjusted models which included both sexes in an overall model. Mixed-effect linear regression models were developed to test for adjusted associations between Children's Hope Score and correlate variables, accounting for clustering at the site level. Correlate variables included in the final models were perception of safety, mental health, past-week emotional violence, and past-week physical violence. Final models were adjusted for demographic characteristics that were theoretically significant or statistically significant in bivariate models: gender, age, grade, disability level, displacement status, and caregiver (biological parent or other). Complete case analyses were implemented for missing data in all models. Analyses were conducted using R version 4.1.1.

3. Results

3.1. Descriptive statistics

Descriptive statistics are organized by gender of the respondent in

Table 2
Participant demographics and children's hope score by gender (N = 1250).

	Overall % (N) Mean (SD)	Boy's Sample % (N) Mean (SD)	Girl's Sample % (N) Mean (SD)	p-value
Overall	-	51.1% (637)	48.9% (610)	
Demographics				
Age Mean (SD) (range: 10–18)	14.5 (2.5)	14.5 (2.6)	14.6 (2.3)	0.53
Grade Mean (SD) (range: 1–12)	4.1 (2.2)	4.2 (2.2)	4.1 (2.2)	0.53
Disability level[i]				< 0.001***
None	75.3% (928)	76.9% (494)	73.4% (434)	
Mild	17.2% (212)	18.7% (120)	15.6% (92)	
Moderate/Severe	7.5% (93)	4.4% (28)	11.0% (65)	
Current displacement status (SD)	43.3% (540)	43.1% (277)	43.6% (263)	0.91
Primary Caregiver Other than Mother / Father	15.0% (187)	14.0% (89)	16.1% (98)	0.34
Site				0.63
Ganyiel	49.8% (634)	49.0% (317)	50.5% (314)	
Nyal	50.2% (628)	51.0% (326)	49.5% (302)	
Child's Hope				
Children's Hope Score, 6-items Mean (SD) (range: 0–3)	2.1 (0.4)	2.2 (0.4)	2.0 (0.4)	< 0.001***
Hypothesized Correlates				
Perception of Safety Score Mean (SD) (range: 0–23)	12.0 (2.2)	12.2 (2.3)	11.7 (2.1)	< 0.001***
Mood and Feeling Score Mean (SD) (range: 0–24)	4.1 (3.8)	3.6 (3.3)	4.6 (4.2)	< 0.001***
Experienced Emotional Violence in the past week	24.5 (300)	19.3 (120)	29.9 (180)	< 0.001***
Experienced Physical Violence in the past week	56.0 (669)	50.9 (311)	61.3 (358)	< 0.001***

[i]Disability level defined on an ordinal scale of 3: none, mild (some difficulty), and moderate (a lot of difficulty) or severe (cannot do at all) on core functions in the Washington Group Short Set (WG-SS) including seeing, hearing, mobility, self-care, remembering, and communication.

Table 2. Respondents were 14.5 years of age (SD=2.5; range 10–18) on average and in grade 4 of schooling (SD=2.2; range:1–12). The majority of students surveyed reported no disability (75.3%). Disability level differed between boys and girls, with a greater number of girls reporting a moderate and/or severe disability level overall (11.0% of girls compared to 4.4% of boys; $p < 0.001$). Almost half of the students in the sample (43.3%) reported being currently displaced or living in a location which is not their usual or permanent home.

Overall, girls reported lower hope, with a mean score of 2.0 out of 3 (SD=0.4) compared to a mean score of 2.2 (SD=0.4) among boys ($p < 0.001$). Regarding safety and wellbeing at school, girls reported lower perception of safety with a score of 11.7 (SD=2.1) as compared to boys, with a mean perception of safety score of 12.2 (SD=2.3; $p < 0.001$). Girls also reported worse mental health outcomes, with a mean mood and feeling score of 4.6 (SD=4.2) while boys reported a significantly higher mean score of 3.6 (SD=3.3; $p < 0.001$), suggesting more severe depressive symptoms.

Reported physical and emotional violence experiences also significantly varied by gender, with girls in the sample being significantly more likely to have experienced past week physical violence (61.3% of girls compared to 50.9% of boys; $p < 0.001$) and emotional violence (29.9% of girls compared to 19.3% of boys; $p < 0.001$). Still, physical and emotional violence experiences at school were prevalent among all respondents, with a majority of the sample (56%) reporting physical violence experiences in the past week and around a quarter (24.5%) experiencing emotional violence in the past week.

3.2. Child hope and associated correlates

3.2.1. Unadjusted associations between child hope and hypothesized correlate variables

In unadjusted logistic regressions accounting for clustering at the school level (Table 3), child hope was most strongly significantly associated with perception of safety ($\beta = 0.10, p < 0.001$), as well as mental health (β = -0.04, $p < 0.001$). Emotional and physical violence experiences at school in the past week were also significantly associated with child hope (emotional: β = -0.10, $p = 0.006$; physical: $\beta = 0.13$, $p = 0.004$).

Gender and grade were most strongly associated with child hope (gender: $\beta = 0.22$; grade: $\beta = 0.02, p < 0.001$). Age also had a significant, positive association with child hope ($\beta = 0.01$, $p = 0.025$). Mild and moderate/severe disability levels were significantly negatively associated with child hope (mild: β = -0.09, $p = 0.003$; moderate/severe: β = -0.13, $p = 0.003$). In addition, study site was significantly negatively associated with child hope (β = -0.19, $p = 0.004$). Demographics of current displacement status and having a primary caregiver other than mother or father were not significantly associated with child hope and thus were dropped from the full adjusted models.

3.2.2. Adjusted associations between child hope and hypothesized correlate variables

In the final model adjusting for significantly associated demographics and clustering at the school level (Table 3), perception of safety score and mood and feeling score remained strongly significantly associated with child hope (safety: $\beta = 0.08$, $p < 0.001$; mood and feeling: β = -0.02, $p < 0.001$). Past week experiences of emotional and

Table 3
Unadjusted and adjusted associations between children's hope and correlate variables for full sample (N = 1142).[i-ii]

	Unadjusted Model β (95% CI; p-value)	Adjusted Model β (95% CI; p-value)
Demographics		
Age	0.01 (0.00 0.02; 0.025)*	0.01 (−0.00, 0.02; 0.130)
Grade	0.02 (0.01, 0.03; <0.001)***	0.01 (0.00, 0.02; 0.04)*
Disability level (Ref. = none)		
Mild	-0.09 (−0.02, −0.03; 0.003)**	-0.03 (−0.09, 0.01; 0.210)
Moderate/Severe	-0.13 (−0.22, 0.05; 0.003)**	0.01 (−0.08, 0.10; 0.820)
Current displacement status	0.00 (−0.05, 0.05; 0.990)	-
Primary Caregiver Other than Mother / Father	-0.04 (−0.10, 0.02; 0.150)	-
Site (Ref. = Ganyiel)		
Nyal	-0.19 (−0.31 0.07; 0.004)**	-0.17 (−0.27, −0.05; 0.008)**
Gender (Ref. = Girl)		
Boy	0.22 (0.18, 0.26; <0.001)***	0.17 (0.14, 0.22; <0.001)***
Correlate Variables		
Perception of Safety Score Mean (SD) (range: 0–23)	0.10 (0.09, 0.11; <0.001)***	0.08 (0.07, 0.09; <0.001)***
Mood and Feeling Score Mean (SD) (range: 0–24)	-0.04 (−0.05 −0.03; <0.001)***	-0.02 (−0.02, −0.01; <0.001)***
Experienced Emotional Violence in the past week	-0.10 (−0.15, −0.05; 0.006)**	0.04 (−0.020, 0.09; 0.210)
Experienced Physical Violence in the past week	0.13 (0.08, 0.18; 0.004)**	0.04 (−0.01, 0.09; 0.150)

[i]Adjusted for age, grade, site, disability status, and clustering at the site level. [ii] Missing= 83.

physical violence in school did not retain significant associations with child hope.

Within the adjusted model, the positive association between gender and child hope remained significant within the adjusted model, with boys having significantly higher child hope than girls ($\beta = 0.17$, $p < 0.001$). The adjusted model also retained grade and study site as having a significant association with child hope (grade: $\beta = 0.01$, $p = 0.040$; site: $\beta = -0.17$, $p = 0.008$). Age and disability status, meanwhile, did not retain their significance in the adjusted model.

4. Discussion

4.1. Child hope, perception of safety, and wellbeing

Students in Panyijiar County reported moderate levels of hope, with a mean child hope score of 2.1 on the 3-point scale as most children responded "Some of the time" on average to the six items about themselves and how they compare to their peers. While slight variation in approaches to calculating the CHS make it difficult to directly compare across settings, evidence from other contexts demonstrates similar findings. Studies utilizing a 5-point scale found similar low and moderate levels of self-perception, with a mean score of 2.34 among girls in DRC (Stark et al., 2017), 2.2 among boys and girls in Nepal, 2.6 in Burundi, and 2.6 in Indonesia (Haroz et al., 2017). In another study utilizing a 6-point scale in Croatia, students reported an average score of 4.43, demonstrating moderate but slightly higher levels of child hope (Merkas and Braja-Zganec, 2011).

The study identified that both a child's perception of safety and her/his mental health are significant predictors of child hope. Among students in Panyijiar County, an increased perception of safety within schools resulted in higher child hope, while worse mental health (higher MFQ score) was associated with lower hope. The majority of evidence examining child experiences in school and outcomes of wellbeing and educational attainment is from high-income countries; nevertheless, several recent studies explore the perception of safety and mental health outcomes as they relate to a student's school experiences. Significant evidence demonstrates that feeling unsafe at school is associated with poor mental health problems for students such as symptoms of anxiety and depression, as well as high levels of maladaptive behaviors and worse classroom engagement and academic outcomes (Côté-Lussier and Fitzpatrick, 2016; Gilman et al., 2006; Nijs et al., 2014; Smiley et al., 2021). Maladaptive behaviors in the classroom, school attendance, and academic achievement have also been found to be linked to child hope, with youth reporting low levels of hope also reporting poor classroom engagement (Gilman et al., 2006). A study on violence against children from northeast Nigeria found that experiences of physical, emotional, and sexual violence is significantly associated with worse emotional awareness and lower self-esteem and worse outlook, and that experiencing more than one type of violence can have cumulative effects (Smiley et al., 2021). Inversely, perception of being safe in school has been linked to higher levels of student wellbeing overall, including classroom engagement, academic adjustment, and other measures of mental health and self-esteem (Côté-Lussier and Fitzpatrick, 2016; Savahl et al., 2013). One study among conflict-affected communities in Nigeria found that perception of safety in school was positively associated with outcomes of educational achievement such as literacy, though this had mixed effects for students with a hearing or seeing disability (Zuilkowski and Marty, 2021).

4.2. Child hope and experiences of violence in school

When examining experiences of violence in school and their association with child hope, findings were mixed. Experiences of violence in school were significantly associated with child hope in the univariate model, but while emotional violence was associated with a slight decrease in child hope, physical violence was associated with a slight increase in child hope. In the full model controlling for demographics, mental health, and perception of safety, the association between violence and child hope was null.

Local child protection experts with the IRC highlighted how corporal punishment in the form of less severe physical violence is a common practice both in schools and at home. The community, including children, therefore perceive it as a normal disciplining practice and in some instances even as an act of positive attention (for example, the teacher is paying attention to them and therefore it is a positive interaction). In addition, in conflict affected areas where physical violence is even more common, resilience in the face of daily violence may be even stronger. They therefore hypothesize that the repetitive experiences of physical violence and subsequent acceptance by the community may contribute positively to increasing children's capacity for resilience against violence, which could explain the positive association between physical violence and child hope.

Sensitivity analyses were conducted to explore different approaches to measuring corporal violence in schools and whether this changed relationship between experiences of corporal violence and child hope. First, the authors examined the difference between lifetime and current (past week) experiences of violence constructed using the mean number of acts emotional and physical violence. In univariate models, lifetime experience of emotional violence remained significantly negatively associated with child hope while lifetime physical violence experiences were negatively associated (inverse to past week physical violence experience) but not practically or statistically significant (emotional: $\beta = -0.04$, $p = <0.001$; physical: $\beta = -0.004$, $p = 0.53$). In the full model, mean number of acts of emotional violence was no longer significantly associated with child hope. Second, binary constructions of emotional and physical violence were calculated by indicating 1 if the respondent said "Yes" to any act of emotional violence and 0 if they said "No" to all, and respectively for acts of physical violence. Inferences remained the same as the past-week construction for the binary construction of lifetime experience of emotional and physical violence, with only lifetime experience of any physical violence retaining its positive significant association in the full model ($\beta = 0.090$, $p = <0.001$).

Other studies exploring the relationship between stress, violence exposure, and outcomes of psychosocial wellbeing have identified similar patterns where perception of safety in school and mental health or hope for the future is not fully explained by experience of violence. One hypothesis is related to level of vulnerability and capacity to cope with adverse experiences, whereby those students who feel safer and more engaged in the classroom may be less sensitive to external factors influencing wellbeing (Pagani et al., 2012), and those youth who are most vulnerable (showing lower levels of classroom engagement or additional academic risk) are more sensitive to external factors and therefore more affected by feeling unsafe (Côté-Lussier and Fitzpatrick, 2016). Similarly, research rooted in psychological theory related to an optimal amount of stress (Braverman, 2005; Forgas, 2019; Yerkes and Dodson, 1908) has explored how continued exposures to negative experiences over time, such as corporal violence in schools, could attenuate the emotional effects of such an experience (Isaacs et al., 2015; Savahl et al., 2013).

Another hypothesis identified in the literature is the comparative strength of the association between hope and wellbeing. A study by Savahl et al. (2013) in South Africa found that hope was a stronger predictor of child wellbeing than exposures to community violence. While exposure to community violence was significantly associated with wellbeing, the effect was made negligible by a range of other contributing factors, and child hope was a significantly stronger predictor of wellbeing than violence experience (Savahl et al., 2013). Similarly, in a nationally representative study in the US, among those children who had experienced two or more adverse experiences, those children who showed aspects of resilience were more likely to be engaged in school and show other aspects of educational attainment than those not exhibiting resilience (Bethell et al., 2014). While these findings

demonstrate that childhood hope and resilience could be a protective factor against adverse effects of community violence, approaches to improve child wellbeing should also consider the limitations of such pathways in settings where the majority of children may be highly vulnerable to poor social and economic conditions, such as in conflict- or crisis-affected communities.

Teacher training and positive discipline and praise techniques could be a less harmful approach to promoting educational attainment while also protecting child wellbeing and building resilience. For example, recent studies have found mixed results for the association between physical and verbal discipline and educational performance, while teacher praise has been found to significantly improve outcomes of wellbeing and educational attainment for children. One study in Gambia found that while a teacher who beats students was associated with higher test scores, students who reported being beaten the day before had lower test scores, whereas public praise from teachers was also associated with higher test scores (Gundersen and McKay, 2019). Another study from India found that experience of corporal punishment was associated with lower reading and math scores, while praise by teachers significantly increased the probability of achieving high scores (Kumar et al., 2022). More evidence on positive reinforcement approaches could be useful for better understanding how to promote children's resilience and improve their mental health without causing harm.

4.3. Child hope and gender-related discrimination and stigma

Gender was highly associated with child hope in the fully adjusted model, with significantly higher child hope among boy children compared to girl children. To explore these gender differences further, we conducted sensitivity analyses examining the influence of gender discrimination and period stigma on child hope in univariate and multivariate analyses. These additional analyses revealed no statistically or practically significant association between child hope and gender discrimination or stigma related to girls' menstruation (gender discrimination: $\beta = 0.01$, $p = 0.77$; menstrual stigma: $\beta = 0.03$, $p = 0.34$), and so they were not included in the final models. These findings suggest that a constellation of individual, family, and community factors may influence girls' lower hope, beyond traditionally narrowed-down indicators of stigma related to menstruation and teacher-initiated discrimination against girl children.

Additionally, there is a dearth of evidence examining the associations of corporal violence and school-based peer violence by gender, and those studies that do are from predominantly high-income countries (for example, Bonell et al., 2013; Côté-Lussier and Fitzpatrick, 2016; Ttofi and Farrington, 2011). One study in Malawi used longitudinal data to examine the relationship between school violence and learning outcomes stratified by gender and found that the experience of violence influenced learning outcomes for both boys and girls but that the specific learning outcomes differed by gender (Psaki et al., 2017). Another study from Nigeria found that for girls, experiencing sexual violence on their way to or from school leads to a higher likelihood of early marriage and pregnancy, lower social and emotional functioning, lower self-efficacy, and mental health that could contribute to worse educational outcomes (Smiley et al., 2021). These experiences of violence also influence perception of safety in school and therefore school attendance, which may affect girls in particular (Smiley et al., 2021).

Evidence from high-income countries has identified conflicting trends in experience of violence and related outcomes. While several studies have found that boys are more likely to feel unsafe at school and experience corporal violence (Côté-Lussier and Fitzpatrick, 2016), others have identified stronger associations between school safety concerns and impacts on wellbeing for girls than for boys. One study in the Netherlands found that the relationship between school safety and psychosocial functioning is stronger for girls than for boys (Nijs et al., 2014). Another study from the US found that threats of physical violence or injury had greater indirect impacts on academic performance and depression for girl students compared to boys students (Kim et al., 2020). This evidence demonstrates that lower child hope among girl children could be related to the ways in which boys and girls internalize or externalize mental health problems related to experiences of violence.

Alternatively, lower hope among girls not linked to gender discrimination or menstrual stigma within schools could result from girls' experiences outside of school. This was also the conclusion drawn from a randomized controlled trial of a teacher training program to reduce violence against children in schools in Uganda, which found that the program was more effective at reducing violence for boys than girls (Devries et al., 2017). The study hypothesized that gender norms and experiences outside of school, including other forms of GBV, could influence classroom engagement and therefore participation in the intervention (Devries et al., 2014). This is consistent with evidence on the influence of GBV on child hope among girls. A study among conflict-affected populations in the DRC found that the interaction between exposure to violence and attitudes toward intimate partner violence (IPV) magnified the association between violence exposure and lower CHS for physical violence, unwanted touching, and forced sex among girls aged 10–14 years (Stark et al., 2017).

A recent prevalence study in conflict settings in South Sudan found that adolescent girls living in conflict experience high levels of GBV, with 26.5% experiencing non-partner sexual violence and 43.1% of partnered respondents experiencing IPV (Murphy et al., 2019). In addition, qualitative data from the study demonstrated that gender discrimination and unequal power dynamics within the home are underlying causes of violence against girls even in conflict settings, with bride price driving child and forced marriage, abduction, and other forms of GBV against women and girls (Ellsberg et al., 2021; Murphy et al., 2019). These external factors can permeate the school environment for girls, especially in education systems that prioritize performance and hierarchy, and enforce those priorities through corporal punishment (Vanner, 2018). This hypothesis is supported by reports from IRC staff who emphasized the role that early and forced marriage plays on the hope and wellbeing of girls who feel they have no agency to stay in school and pursue their education, and who worry about their safety within and traveling to and from school. More research is needed to understand the effect of gender discrimination in school on outcomes of wellbeing and self-efficacy for girls.

4.4. Limitations

The findings from this study should be interpreted with limitations in mind. Firstly, responses are self-reported by students during surveys that were conducted within or near the schools, and social desirability bias may influence the responses of participants to sensitive questions on violence and discrimination. While many measures were in place to protect the confidentiality and privacy of respondents, it is highly likely that children may not feel comfortable to talk freely and honestly about their experiences of violent discipline or other abuse or discrimination within the school environment for fear of retaliation if teachers or other school personnel identified their responses. Secondly, conducting the surveys in schools may inherently result in sampling bias, as those students who are more vulnerable to poverty, violence, or discrimination are more likely to stop attending school and therefore might be missed in the sample (Morrow and Singh, 2014). This could be a particular issue for girls, as girls are more likely to drop out of school due to stigma around menstruation and other gender-based discrimination, sexual and other forms of GBV, and harmful attitudes and practices such as early and forced marriage (Smiley et al., 2021). This sampling bias could have led to an underrepresentation of students experiencing violence and discrimination, thereby minimizing the true relationship that was observed in the study findings.

Finally, hope is a complex construct to measure, particularly in a conflict setting where youth are vulnerable to violence and economic

and physical insecurity. Using a single indicator that comprises multiple facets of wellbeing may not be the best way to assess this concept. In addition, the cross-sectional nature of these analyses limits ability to confirm temporal associations. The direction of the association between the variables examined may not be in the direction of the hypothesized pathway. Nonetheless, other studies have validated and explored the use of child hope in humanitarian settings, including South Sudan, and found it to be useful for understanding the health and social and emotional development of children affected by conflict, as well as for understanding the effectiveness of interventions that aim to strengthen the hope and resilience of youth (Metzler et al., 2022). More work is needed to determine the usefulness of hope as an indicator of wellbeing and as a predictor of other lifelong outcomes for students.

5. Conclusions

The study found that child hope is influenced by experiences within and outside of school, including perception of safety in school, experiences of violence in school, and mental health problems. Girls may also be particularly influenced by external factors outside of school including experiences of GBV and broader community manifestations of gender inequalities that lower their sense of hope. Nevertheless, resilience built up in response to the recurring experience of violence may reduce the influence of corporal violence on child hope. This emphasizes the need to address deeper norms and attitudes around use of violence as a disciplinary and corrective measure to promote education and behavior outcomes in schools and communities in order to improve children's wellbeing overall.

Funding source

This research was funded by the Global Partnership to End Violence Against Children (End Violence) through its Safe to Learn initiative. Funding from the Global Partnership to End Violence Against Children does not constitute endorsement.

CRediT authorship contribution statement

Alexandra Blackwell: Conceptualization, Methodology, Formal analysis, Writing – original draft, Writing – review & editing**. Gunnar Colleen**: Formal analysis, Visualization, Writing – original draft **Jodi Scharf**: Formal analysis, Writing – original draft**. Thomas Hussein**: Conceptualization, Methodology, Validation, Writing – review & editing**. Ambaku Peter Lomena**: Validation, Data curation, Project administration, Writing – review & editing**. Cosmas Ayella**: Validation, Project administration, Writing – review & editing. **Anywar Sam Okot**: Validation, Project administration. **Eleonora Mansi**: Validation, Writing – review & editing**. Kedir Ahmed Yimam**: Conceptualization, Validation, Writing – review & editing. **Kathryn Falb**: Supervision, Conceptualization, Methodology, Writing – review & editing.

Acknowledgements

The research team extends sincere gratitude to the girls, boys, teachers, school personnel, and communities who took part in the research and made this study possible. We would also like to acknowledge the IRC South Sudan teams in Juba, Nyal, and Ganyliel who were instrumental in supporting the research design, data collection, and analysis, including: Anywar Sam Okot, Dawa Agnes Fastino, Peter Mayiey Riet, William Nyuong John, and Jeremiah Gatchang; as well as the data collectors: Mading Andrew Machuol, Veronica Nyachang G. Keal, Stephen Gai Mead, Puol Wicyiey Michael, Angelina Nyanath John, Martha Nyakhor Jacob, Nyachang Pham Diew, Gatkuoth Peter, Elizabeth Nyamal Makun, Peter Malieth Mathiang, Dak Diop Phar, Hon Machak Kulang, Sunday Gatluak Lam, Tabitha Nyanath Puok, Riek Malieth Liep, Tereza Nyanyang Machak, David Lok Koung, Michael Puoy Wictuor, Nyachang Nyak Dahiar, Nyakoang Pajuol Gai, Nyakuma Gatluak Doar, and Nyataba Gatluak Koah.

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