



## Research article

## Safe schools for teens: preventing sexual abuse of urban poor teens, proof-of-concept study - Improving teachers' and students' knowledge, skills and attitudes

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## ABSTRACT

Child sexual abuse (CSA) is a difficult form of abuse to detect, with the peak age of reports from 13 to 15 years old. The recent revision of the Philippine school curriculum provided an opportunity to incorporate an educational intervention for prevention of CSA. This study aimed to improve the teachers' and students' knowledge, skills and attitudes on disclosure, identification, and reporting of CSA. This research is a two-phase proof-of-concept cross-sectional study of 237 teachers and 1,458 Grade 7 students from 2 public high schools in metro Manila over a two-year period. Phase 1 involved in-service training curriculum for all teachers on the recognizing, recording, reporting, and referral (4R's) of child abuse and establishment of a referral and support system. Outcome measures included pre- and post-tests and number of CSA reports. Phase 2 involved implementation of eight student modules through the Health and Values Education subjects of the curriculum. Outcome measures were pre- and post-intervention measurement of abuse and module content. Training of teachers resulted in an increase in confidence for identifying CSA from 25% to 57%, and a decrease in apprehension of reporting CSA from 40% to 33%. The Safe Schools for Teens intervention significantly improved self-reported knowledge on abuse, dating violence, and how to help friends as well as on adolescent's impulse control and emotional clarity. There was a significant decline from pre- to post-intervention in self-reported experiences of dating violence which includes physical, sexual and emotional violence,  $t(793) = 3.363, p = .001$  as well as a significant decline in self-reported experiences of emotional abuse from a dating partner,  $t(837) = 2.693, p = 0.008$ . The Safe Schools for Teens intervention increases awareness and reporting of child sexual abuse. The intervention also reduces dating violence highlighting that the mindfulness focused approach in connection with systems strengthening is useful for addressing adolescent violence.

## 1. Introduction

Children who have been sexually abused are at risk for various medical, psychological, behavioral and social problems that can result in school failure, drug and alcohol abuse, and conflicts with the law (Fry et al., 2012; Fry and Blight, 2016). The results of the Metro Manila Adverse Childhood Experiences (ACE) Study in 2010 showed that a sexually abused child is more likely to engage in early sex, experience teenage pregnancy, and attempt suicide and effects can manifest as

chronic illnesses in adulthood (Ramiro et al., 2010). The tremendous societal cost of sexual victimization also underscores the urgent need for prevention of abuse (Fang et al., 2015). For example, a regional study estimated that violence against children costs the region 2% of its annual GDP, and that sexual violence alone costs US\$39.9 billion a year, a total that reflects only those costs related to health and health risk behaviour outcomes (Fry and Blight, 2016).

The Child Protection Unit of the Philippine General Hospital (CPU-PGH) was established in 1997 to provide comprehensive medical and

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psychosocial services to abused children and their families. Through the years, the number of abused children referred to CPU-PGH has increased (CPNF, 2014). One out of 4 children came from the urban poor communities of the City of Manila. The 84 Women and Child Protection Units (WCPUs) in cities and municipalities throughout the Philippines have similarly received increasing referrals for abused children. Majority (64%) of these referrals were child sexual abuse (CSA) cases. The peak age of the sexually abused children evaluated at the WCPUs was between 13 to 15 years old (CPNF, 2015).

A baseline study on violence against children in public schools in 9 provinces, including Manila, was conducted in 2009. Findings of sexual violence in this study showed that verbal harassment was experienced by 36.5% of Grade 4 to 6 respondents and 42.9% of High School respondents; 12.0% of Grades 1 to 6 students and 17.6% of High School students were touched inappropriately. Among the High School students, 2.4% were forced to have sex. Majority of the perpetrators in this study were peers (Philippine Women's University School of Social Work, 2009).

The first national study on Violence Against Children (VAC) in the Philippines conducted in 2015 by the Council for the Welfare of Children (CWC) & UNICEF revealed that three out of 5 Filipino children were physically abused (66.3%), psychologically abused (62.8%), and bullied (65%). Almost 1 in 5 children experienced being sexually violated (21.5%). Among the different settings, sexual violence was highest during dating (14.1%), home (13.7%) and in the community (7.8%). The perpetrators at home were family members while those during dating were peers (CWC & UNICEF, 2016). This is congruent with CPU-PGH data where neighbors, boyfriends, acquaintances, and relatives are the most common perpetrators of sexual abuse.

Among the many forms of child abuse, CSA is the most difficult to detect. Children rarely disclose that they have been sexually abused. Similar to other countries, the Philippines has a culture of silence that keeps domestic violence, child abuse, and other gender-based violence a private matter. Cultural beliefs, negative stigma, and fear of reporting due to threats from the offender make it difficult for the victims to report and disclose (UP Manila, UoE, CPNF, & UNICEF, 2016). Children whose caretakers were "supportive" disclosed at a rate of 3.5 times greater (63%) than those whose caretakers were "non-supportive" (17%) (Paine and Hansen, 2002). Results of the national study on VAC in the Philippines showed that among children and young people who experienced any form of sexual abuse 11.9% disclosed to someone (CWC & UNICEF, 2016). The majority of the disclosures were made to friends while 10%–20% of disclosures were made to mothers (CWC & UNICEF, 2016). Very few (less than 1%) ever reported to authorities. The VAC study also showed that teachers and guidance counselors were the most common professionals that children disclosed to (CWC & UNICEF, 2016).

There is significant evidence that many professionals who are mandated to report abuse often fail to recognize maltreatment or report their suspicions (Paine and Hansen, 2002; Goebbels et al., 2008). Failure to report was highest in day-care centers (88%) and schools (76%; Paine and Hansen, 2002). The level of organizational support (including school leadership), supportive structures, and availability and participation in child protection training for all school staff are essential as research shows that knowledge of abuse alone is not enough to make a teacher report (Laskey, 2004). Furthermore, the method of handling the teacher's report, the outcome of the child victim, and knowledge of the way child protection works are all important in increasing the confidence of teachers in identifying and reporting cases of child abuse (Laskey, 2004; Goebbels et al., 2008). A five-year review of cases reported to CPU-PGH showed that no teacher from a public school has reported a case of child abuse.

Globally, many primary prevention programs for CSA using educational interventions exist. Recent reviews of school-based CSA prevention programs reported positive outcomes for children, including increases in self-protective skills, disclosure of abuse, increased understanding of sexual abuse (such as appropriate and inappropriate touch), and emotional gains like increased self-esteem (Fry, 2015; Walsh et al.,

2015). The majority of these interventions include training teachers to deliver CSA prevention programs to their students, which involves training before implementation and support throughout. However, these recent reviews also stressed the importance of tailoring CSA prevention programs to suit the context, and highlights that many of the evaluated programs are from high-income countries (Fry, 2015; Mikton and Butchart, 2009; WHO et al., 2016; Walsh et al., 2015).

Increased risk-taking behavior during adolescence such as driving under the influence of alcohol, having unprotected sex and binge drinking lead to increased morbidity and mortality for this age group compared to younger years (Steinberg, 2008; Spear, 2013; Casey and Caudle, 2013; Smith et al., 2013). Heightened reactivity to emotions paired with an immature emotional regulatory capacity and susceptibility to peer influence have all been cited as causing adolescent behavior problems (Pfeifer et al., 2011; Botdorf et al., 2017). It seems that integrating emotion regulation skills training with educational components might bring about more effective prevention of sexual abuse (Walsh; DiLillo et al., 2012a). In a study of college students, Walsh and colleagues found that those with poor emotional regulation, (meaning they have difficulty acknowledging and accepting emotional states), may also have difficulty recognizing feelings of discomfort, fear, or distress. Because of this, it is likely that they miss out on an internal signal that there is a need to escape a risk situation. Likewise, a study of dating violence perpetrators among college students (Shorey et al., 2011) found that male perpetrators who exhibited sexual aggression, had more difficulties in impulse control, and had less access to emotion regulation strategies, compared to non-perpetrators. Female perpetrators of physical aggression were also found to have more difficulties in emotion regulation overall compared to non-perpetrators.

This perhaps suggests that education might involve learning to recognize and acknowledge emotion responses (Jones, 2018). One of the benefits would be that children would be able to recognize internal signals that give early warning signals of the need to escape from likelihood of abuse.

Emotion regulation is a key target of mindfulness practice, and there are two ways by which mindfulness may regulate emotions (Guendelman et al., 2017). One is by recognizing, acknowledging, and accepting emotions by naming it. The other way is by noticing how it is experienced in the body. Mindfulness thereafter helps with emotion regulation by focusing on the breath, and by knowing that emotions come and go. By focusing on the breath, the agitation brought about by strong emotions are pacified, so that one may think clearly rather than acting impulsively.

Schools appear to be appropriate settings in which Mindfulness-based Interventions (MBIs) can be efficiently implemented, for many reasons (Weare and Nind, 2011). Children already spend a lot of time in schools, and thus programs in this context provide easier access for a greater number of children in need of interventions. In addition, interventions can be implemented at lower costs by utilizing the resources already available in schools. These school-based MBIs have shown significant reductions in depression (Raes et al., 2014); increases in teacher-reported classroom behaviors such as paying attention, practicing self-control, participation, and caring for others (Mindful Schools curriculum, Black and Fernando, 2014); lower levels of stress and psychosomatic complaints and gains in emotion regulation skills (Learning to BREATHE program, Metz et al., 2013); decreases in rumination, intrusive thoughts, and emotional arousal (mindfulness with yoga, Mendelson et al., 2010).

Fewer studies have explored using mindfulness interventions for the prevention of any type of violence against children including child sexual abuse (Brown, 2016). Successful interventions working with child sexual abuse survivors have utilized mindfulness as a therapeutic intervention for working with both individuals and also families (Earley et al., 2014; Kimbrough et al., 2010; Cameron et al., 2018; Dempsey et al., 2014). Despite these emerging positive findings, the authors were unable to find any evaluations of mindfulness school-based interventions for adolescents to prevent CSA and no studies of such programs in low-and middle-income countries, an evidence gap which this study seeks to address.

Putting together the findings of the different studies especially the results of the Philippine VACS and the experience of the Child Protection Units across the country led to this pilot study, which is comprised of two phases: 1) Reporting of child abuse by teachers, and 2) Prevention of peer-to-peer dating violence through mindfulness training and by imparting knowledge of healthy dating relationships.

### 1.1. Phase 1

Reporting of child abuse involved creating a training curriculum for teachers in order to be able to recognize, record, report and refer cases of child abuse (4Rs Training on Child Abuse) and equip the School Child Protection Committee (CPC) to perform their functions as mandated by the Department of Education (DepEd) Child Protection Policy. The training of the CPC included linking the school with CPU-PGH and the external agencies mandated to respond to child abuse cases such as the local Department of Social Welfare and Development (DSWD) and the Philippine National Police Women and Child Protection Desk (PNP-WCPD).

### 1.2. Phase 2

Prevention of peer-to-peer dating violence through mindfulness training and by imparting knowledge of healthy dating relationships focused on delivery of classroom modules to students before they reach 13–15 years, the peak age of reported child sexual abuse cases. On the one hand, students were informed about what may constitute loving relationships and were given the skills to report abuse or help their peers who may have disclosed to them that they are experiencing abuse in any setting.

The use of mindfulness and dating modules on the other hand were intended to help the adolescents recognize and acknowledge their emotions, have strategies to regulate those emotions, handle peer pressure and decrease their impulsivity thereby avoiding risk scenarios where date rape may occur. It was hoped that the modules would result to a decrease in both victimization and offending behavior among peers.

To date, it seems there is still no known mindfulness modules for children that is specifically intended to prevent sexual abuse. Thus, a pilot run of the modules was necessary to determine reactions of students and teachers to mindfulness training that is targeted mainly toward prevention of CSA.

## 2. Objectives

This pilot study is a two-phase proof-of-concept study of educational intervention for the reporting and prevention of sexual abuse and dating violence among adolescent school children with the following objectives;

- 1) Phase 1 of the study aimed to improve reporting of CSA by
  - a. Increasing teachers' knowledge of child abuse and the reporting processes
  - b. Increasing the number of actual reports of CSA to the School CPC or to authorities identified by the Child Protection Policy of the Department of Education (DepEd).
- 2) Phase 2 of the study aimed to prevent peer dating abuse through mindfulness training in the classroom and to improve awareness of abuse and encourage reporting of abuse among students.

### 2.1. The mindfulness in dating context aimed to help in

- a. Improving emotion regulation among students
- b. Decreasing peer dating violence
- c. Engaging students in discussion on dating and ways to prevent dating violence.

### 2.2. By imparting knowledge of healthy dating relationships, the goal was to

- a. improve student awareness of what constitutes sexual abuse
- b. increase reporting of abuse among students

## 3. Methods

### 3.1. Study design

A mixed methods design was employed for this study. This included quantitative (pre- and post-test surveys) and qualitative approaches (interviews and focus group discussions) to understanding student engagement in mindfulness training. Crowther and Lancaster (2012) asserts that a qualitative paradigm proposes to gather non-numerical data in a descriptive form and these approaches are good for exploring in-depth perceptions data (Cohen et al., 2013). Bryman (1988) highlight that quantitative research is associated with the collection of numerical data which is seen as reliable and consistent and that outline clear quantities of individuals who have an overall practice, belief or view on a topic (McCusker and Guanaydin, 2014).

For Phase 1, quantitative methods were used to determine improvement in teachers' knowledge of CSA after the teacher training. To determine any change in number of actual cases of abuse reported to CPC or to authorities identified by the Child Protection Policy of DepEd, frequency count was employed.

For Phase 2, paired samples t test was used to determine changes in emotion regulation among students. Independent sample t-tests was used to examine changes in dating violence. Wilcoxon signed-rank test was used to examine improved awareness of healthy relationships, and t-test was used to determine changes in reporting of sexual violence overall. To determine student and teacher engagement to mindfulness in dating context, a focus group discussion (FGD) was conducted and thematic analysis was used to extract main themes from the discussion.

#### 3.1.1. Study site

Two public high schools in the City of Manila were selected through convenient sampling as representative of urban high schools. The schools were chosen based on the following criteria: 1) they were identified as catchment area of the CPU-PGH; 2) the schools were accessible to the researchers; 3) the student population size was more than a thousand; and 4) the schools catered to the urban poor of Manila.

### 3.2. Participants

#### 3.2.1. Teachers

The entire population of 237 teachers from the two schools were included in Phase I of this study. There were no exclusions since all teachers and school officials had the duty to report suspected cases of child abuse according to the Implementing Rules and Regulations of Republic Act No. 7610.

#### 3.2.2. Students

The entire student population of 1,458 Grade 7 students (school year June 2015–March 2016) who later moved to Grade 8 (school year June 2016–March 2017) of the 2 schools were invited to participate in Phase 2 of the study.

### 3.3. Measures

The measures used in this study are described in the next paragraphs. The questions for focus group discussion are listed in the last paragraph of this section.

**Teacher Reporting Attitudes Scale for Child Sexual Abuse or TRAS – CSA, English version (Walsh et al., 2010)** was used in Phase I to measure teachers' knowledge of child abuse reporting processes,

knowledge of their duty to report, and attitudes toward reporting. It measures the factors that affect teachers' decisions to not report cases of child abuse. This tool has been validated in both Australian and Malaysian contexts ( $\alpha = 0.761$ ; Choo et al., 2013; Walsh et al., 2010; Walsh and Rassafiani et al., 2012b). Developed by Australian researchers through a systematic literature review, a 5-point validation and testing process (Walsh et al., 2010), the 21-item scale includes items that assesses teachers' concerns about reporting consequences and knowledge of their duty to report CSA according to educational authority policy or formal school policy, including reporting mechanisms at their school, and whether they had ever reported CSA. Sample item would be "Teachers who report child sexual abuse that is unsubstantiated can get into trouble" and "I lack confidence in the authorities to respond effectively to reports of child sexual abuse". It is the only validated measure globally of teacher's attitudes towards reporting child sexual abuse. The overall Chronbach's alpha for internal consistency of the TRAS-CSA in this study was  $\alpha = 0.57-0.86$ .

**Actual number of reports on CSA** was based on the number of reports of potential and actual CSA cases reported by the teachers to the School CPC and CPU-PGH.

**Quizzes** to test knowledge about helping friends who disclose abuse and what constitutes a healthy, loving relationship were also included. The quiz was designed by one of the researchers to determine improvement in understanding of healthy relationships in dating context. The quizzes had 10 items for helping friends, with questions such as "As a friend, which of the following should you tell a person who is a victim of abuse?" and 10 items for healthy loving relationships, such as "Which statement is true about dating abuse?".

**The Filipino version of the Emotion Regulation Scale** (Gill and Lopez, 2018) was adapted and translated for children from the Difficulties in Emotion Regulation Scale or DERS (Gratz and Roemer, 2004). After translation of the original DERS, only 22 items were retained after exploring the validity and reliability of the translated version (Gill and Lopez, 2018). All items rated on a scale of 1 (Never) to 5 (Always). Each factor was measured by 3–4 items with overall Cronbach's alpha of 0.85 at pre-test.

Similar to the original DERS, the Filipino version for children also had 6 factors. The first factor *Impulse control* was measured by items such as "When I'm upset, I have difficulty controlling my behavior". *Non-acceptance of emotions* included items such as "When I'm upset, I feel guilty for feeling that way". *Difficulties in goal-directed behavior* had items such as "When I'm upset, I have difficulty getting work done". An example of *Emotion awareness* was "When I'm upset, I acknowledge my emotions". And finally, *Limited access to emotion regulation strategies* had items such as "When I'm upset, it takes me a long time to feel better".

All scores for negatively worded items were reverse scored so that higher scores indicated better emotion regulation.

**Survey on Health, Behavior, and Adverse Experiences of Students (SHBAES)** measured experiences of abuse from adults and peers in the home, community and school, as well as offending behavior against peers. It contains questions in two domains including health and well-being, violence (including victimization and perpetration). The violence questions in this survey, which this paper is focused on, are part of the Philippines validation of the ICAST-Trial Teen tool (in Filipino), a new instrument developed by the CAMEO group (Child Abuse Measures for Evaluation and Observation). This instrument is based on the validated ICAST-child questionnaire (Zolotor et al., 2009). The ICAST-Trial Teen tool aims to include violence questions where change can be measured over shorter time periods. The overall Chronbach's alpha for internal consistency of the ICAST-Teen Trial tool in this study was  $\alpha = 0.69-0.84$ .

The sub-sections on 'bullying', 'other experiences in school', 'dating experiences' and 'services' are from the Philippines' VAC Questionnaire which has been used to conduct a nationally representative study on

child abuse and neglect. These questions (and their translations) have been tested and adapted to Philippine context.

Sample items on sexual abuse during dating include "Have you ever experienced any attempt by anyone of your partners to have sex with you without your consent, while you were dating? Sample items on other experiences of sexual abuse such as in the home or in school include "In the past month, how often did anyone make you upset by speaking to you or texting you in a sexual way or writing sexual things about you that you did not want?" and "Have you ever experienced being sexually harassed by your teacher or anyone of the adults in your school?" Children answer on frequency of occurrence in the last month using a Likert scale from "never" to "twice a week". The responses were then recoded to combine all those who answer one or more times into 'any' experiences of the violence variable.

### 3.3.1. Questions for FGD among teachers to determine student reactions to mindfulness modules

There were three guide questions asked as follows: (a) What were the best/most meaningful exercises or sessions for the children? (b) What exercises or sessions do you think were not meaningful for the children? and (c) What exercises or sessions were challenging to teach?

### 3.4. Ethical considerations

The study protocol, with registration number 2015-252-01, was approved by the University of the Philippines Manila Research Ethics Board (UPMREB). Informed consent was obtained for all the key informant interviews. Parental consent was also secured for the students' participation in the Survey on Health, Behavior and Adverse Experiences of Students (SHBAES). Assent from the students was not sought, based on UPMREB Memorandum 2014-01 on informed consent for questionnaires, which is based on the National Ethical Guidelines for Health Research 2011. But student respondents were informed that they can stop participating in the survey anytime, without needing to provide the researchers with an explanation. Informed consent was not sought for the teachers' and students' participation in the modules because these are enhancements of regular DepEd activities. No identifying marks were allowed by the Ethics Board for strict confidentiality and privacy.

The participants were informed that they could request private sessions with the study investigators if they decide to disclose personal experiences that they would want to keep private from the other participants. Participants who disclosed any information that warranted intervention were assessed by an in-house psychologist of the CPU-PGH who has extensive experience in handling such cases. An expert team within CPU-PGH was dedicated to the management of cases reported in this study. To ensure that the identified cases of abuse receive proper management, the existing agreed protocol among different agencies involved in managing child abuse cases was followed.

Immediately after the teachers' and students' completion of the questionnaires, the forms were kept in individually sealed envelopes before being transported to the Child Protection Network Foundation's (CPNF) office. The questionnaires were then placed in a locked storage pending data analysis. Long-term storage was facilitated through a secure facility. Data would be stored securely for two years after the completion of the study as per standard procedures. After this time, the data will be destroyed.

No remuneration was given to the study participants. However, all referred cases to the CPU-PGH received services free of charge.

### 3.5. Procedure

#### 3.5.1. Phase 1: Reporting of child sexual abuse

Phase 1 of the study involved (1) development of a curriculum for teacher training on CSA, (2) actual 2-day teacher training on the 4R's

recognition, recording, reporting, and referral of child abuse cases, (3) establishment of the school referral system for CSA, and (4) a 2 ½ day training for the School CPCs on how to handle reports of CSA.

**3.5.1.1. Curriculum development.** An in-service training curriculum for all teachers on the 4R's of recognition, recording, reporting, referral of child abuse cases, as well as a resource packet related to case management for the School CPCs were developed through the assistance of DepEd. The training curriculum and resource packet content were identified through a systematic search of the literature, researches and cases seen at the Child Protection Unit, and key informant interviews with teachers and members of the School CPC who gave their inputs on risk assessment of the school environment, appropriateness of the training content, best time to do the training, best presentation of materials, and the type of support needed by teachers and the CPC.

**3.5.1.2. Teachers' training.** After the development of the training curriculum, a two-day training for all teachers on the 4R's of Child Abuse was conducted (Table 1). Teachers were also given case examples in the form of vignettes and asked what they would do if they encountered that situation.

**3.5.1.3. Establishment of the child abuse referral and support system.** The research team, in coordination with the school, operationalized the School CPC as described in the DepEd child protection policy and the signed memorandum of agreement.

Teachers were required to report all cases to the guidance counselor. The guidance counselor then elevated the matter to the school principal, who is the chair of the School CPC. This activated the algorithm of reporting and referral that was part of the training.

The guidance counselor, with the principal's approval, was responsible for informing the Manila Social Welfare Offices of Districts 5 and 6 and the CPU-PGH. The CPU-PGH coordinated with the School CPCs of the two schools with regards the management of all referred cases. All cases were handled with strict confidentiality.

Reports of incident cases were monitored. The cases were referred to the CPU-PGH and a social worker was assigned as a case manager. The case manager ensured that services were accessed and monitored the progress of the patient.

**3.5.1.4. School CPC training on how to handle reports of CSA.** A 2 ½-day training on case management of child abuse cases was conducted for the School CPC. The CPU-PGH coordinated with the School CPCs of the two schools with regards the management of all referred cases.

**3.5.2. Phase 2: Prevention of dating violence through mindfulness training and a healthy dating relationships intervention**

Phase 2 of the study involved (1) mapping out entry points in school curriculum where the modules would be taught, (2) development of the mindfulness modules for children that would help prevent peer-to-peer dating violence, (3) development of the modules on healthy dating relationships, (4) training the teachers on delivering the modules, and then (5) giving self-administered questionnaire to the children, and pilot run of the modules with the children.

**3.5.2.1. Mapping out entry points in school curriculum where modules would be taught.** Activities undertaken in the preparation phase focused on brainstorming sessions and consultation meetings with experts and review of literature on effective interventions in the field. The DepEd K-12 Curriculum was also reviewed in order to map out possible entry points or learning competencies that are aligned with the identified topics in the review for Grade 7 and 8. It was determined that the best entry points in the existing curriculum was under Health Education and Values Education content. Based on this, modules were developed and different activities implemented for Health Education and Values Education in both grade 7 and grade 8.

**3.5.2.2. Development of the modules for the children.** The Values Education modules for Grade 7 were adapted from the Kamalayan Program for Children, which was a Mindfulness-Based Therapy for Filipino public school children (Alampay et al., 2019). Kamalayan is a Filipino developed intervention and one of the first known mindfulness school-based program administered in a non-Western and low- and middle-income country. Values Education modules included practice of breath awareness, awareness of emotions, body, thoughts, and impulses (parsing), and a story on how difficult emotions come and go. The modules also included the practice of calming breaths (5 counts inhale, 7 counts exhale). The Grade 8 modules included practice of mindfulness techniques in imagined dating scenarios and a situation where there was a possible risk of abuse. Students parsed their emotions, thoughts, body sensations, and impulses during dating moments, and practiced breath exercises to regulate impulsivity and strong emotions. There was also cognitive rehearsal of what one can say or do to prevent possible sexual abuse (Table 2).

The Health Education modules were adapted from the evaluated intervention 'Safe Dates' which has been shown to be successful at reducing intimate partner violence among adolescents in the United States (Foshee et al., 2004). The content was adapted for the Filipino dating context. Stress Buster Friends was the supplementary module

**Table 1.** Training for teachers on the 4Rs of child abuse.

Recognize cases of child abuse in the classroom	To discuss the burden of child abuse & neglect Define child abuse according to the Child Abuse law in the Philippines Discuss the different forms of child abuse Correct the misconceptions on child sexual abuse Recognize the important signs of physical abuse, sexual abuse, psychological abuse, cybersex, and neglect. Identify the strategy that the student is using to communicate what happened
Record cases of child abuse	Discuss the Department of Education Child Protection Policy Handling disclosures of abuse
Report cases of child abuse	Discuss the 4Ws of reporting: Who, what, where, why Describe the steps involved in reporting Apply the protocol of the Department of Education in reporting and referring cases of child abuse
Refer Cases of Child Abuse	Discuss the role of key members of the school in the management of cases of child abuse Discuss trauma and the effects of trauma Discuss how to help traumatized youth in the classroom Discuss how to work with child protection agencies

Table 2. Student modules.

Grade 7 Modules		Grade 8 Modules	
Module Title	Learning Objectives	Module Title	Learning Objectives
Health Education Stress Buster Friends Stress Buster Friends (Session 1–60 min) (Session 2–60 min)	To learn what upstanding is, and how to help friends in stressful or unhealthy situations.	Loving Relationships (60 min)	To know what dating abuse is, recognize its signs, and prevent victimization and perpetration of harmful behaviors in relationships.
Values Education The Connection between Emotions, Body Sensations, and Thoughts (60 min)	To understand mind-body connection and learn how to self-regulate.	Conflicting Emotions (60 min)	To understand that one can feel both positive and negative emotions simultaneously, learn to acknowledge and name emotions, then regulate them, so as to be able to think clearly
Staying with difficult thoughts and emotions (60 min)	To learn how to pause and focus on the breath during stressful moments or when feeling intense emotions.	Dating and Gender Roles (60 min)	To identify scripts or storylines that they have learned growing up and examine if there are storylines and positions that can lead to abuse or violence. To develop personal scripts to deal with and resist peer pressure while maintaining healthy friendships and relationships.
		Sex and Dating (60 min)	To change storylines and positions that lead to sexual abuse through a process of re-scripting or re-positioning.

developed for Grade 7 Health Education. This two-session module explores the topic of stress management through healthy relationships and how friends become protective factors in times of distress. It encourages teens to develop meaningful friendships and be upstanders for friends in unhealthy situations. It also introduces young people to the red flags of abuse and concept of power and gender norms in relationships.

Grade 8 Health Education module Loving Relationships focuses on dating abuse. It helps teens understand abuse in romantic relationships and recognize its signs. It also teaches them how to prevent being a victim or perpetrator of harmful behaviors in a relationship.

**3.5.2.3. Teacher training on module delivery.** A mindfulness workshop was first conducted for Grade 7 and 8 teachers. Additional workshops on the teaching and delivery of the modules was thereafter conducted for all Health Education and Values Education teachers. The study team observed and videotaped the delivery of the modules by each teacher at least once when they delivered the modules to the students.

**3.5.2.4. Giving self-administered questionnaires and pilot run of the modules with children.** Before the pilot run, Grade 7 students were asked to answer two questionnaires. The first questionnaire was the Survey on Health, Behavior and Adverse Experiences of Students (SHBAES) which measured changes in the students' health and well-being, experiences of bullying, dating experiences, perpetration behavior, and reports of any form of abuse. It was administered to students who had obtained parental consent. The questionnaires were self-administered, anonymous, with no marks to identify the student, as recommended by the Ethics Committee. The student could choose to answer or not answer any of the questions. One month after the Grade 8 modules were delivered to the students, those who had parental consent again answered the SHBAES.

The second questionnaire was the Filipino version of the Emotion Regulation Scale (Gill and Lopez, 2018) adapted from DERS (Grazt and Roemer, 2004). Students were asked to write their names and class section on the covering page of the questionnaire. But they were also assured that all responses would be kept in confidence. Two months after the Grade 7 modules were delivered, the students were again asked to answer the Filipino version of the Emotion Regulation Scale (Gill and Lopez, 2018) indicating their names and class section on the covering page of the questionnaire.

The quizzes for healthy dating relationships were given before and after delivering the modules for Grade 7 Helping Friends, and Grade 8 Loving Relationships.

A focus group discussion was thereafter conducted with the teachers to determine children's reception to the modules, as well as their own reaction to teaching the modules.

**3.6. Data analysis**

Statistical analyses were performed for pre and post questionnaire responses on the TRAS-CSA, the Filipino version of Emotion Regulation Scale, the quizzes for healthy, loving relationships, and the SHBAES. These are described in the following paragraphs below. Thematic analysis was used to analyze FGD results as described at the end of this section.

TRAS-CSA was administered to all teachers who were trained on the 4R's of Child Abuse, right before and immediately after training. The change in the test scores before and after the training program was determined and compared using paired t-tests.

The Filipino version of the Emotion Regulation Scale (Gill and Lopez, 2018) responses for pretest (time 1, before Grade 7 modules) and posttest (time 2, 2 months after Grade 7 module) were encoded on SPSS v20 and then matched by names. All scores for negatively worded items were reverse scored so that higher scores indicated better emotion regulation. Mean score for each factor were obtained for both time periods, and then paired samples t-test was performed to determine significant changes from time 1 to time 2.

**Table 3.** Significant changes in attitudes towards duty to report child sexual abuse.

Attitude	Strongly Agree/Agree with statement prior to training	Strongly Agree/Agree with statement after training
I would be apprehensive to report child sexual abuse for fear of family/community retaliation	40% (n = 76)	33% (n = 58)
Teachers who report child sexual abuse that is unsubstantiated can get into trouble.	51% (n = 98)	24% (n = 42)
I lack confidence in the authorities to respond effectively to reports of child sexual abuse.	22% (n = 43)	10% (n = 18)
I would find it difficult to report child sexual abuse because it is hard to gather enough evidence.	45% (n = 86)	19% (n = 35)

For the quizzes on healthy loving relationships, actual scores in the pretest before the module and post-test after the module were compared using Wilcoxon signed-rank test, where the median score at pretest was compared with the median score at post-test.

SHBAES responses from students with parental consent did not have names due to sensitivity of the questions and ethical considerations. Therefore, frequencies of each type of violence behaviors were calculated at each time point separately. Comparisons of pre-test at Grade 7 and posttest a month after Grade 8 on key outcome variables were calculated by gender using independent samples t-tests.

For the focus group discussion (FGD), data was examined using thematic content analysis as outlined by Braun and Clarke (2006).

**4. Results**

**4.1. Phase 1. Reporting of child abuse**

**4.1.1. Impact of training on teachers' knowledge of child abuse and the reporting processes**

A total of 219 teachers participated in the 4R's training during phase 1 of the study. Eighteen teachers did not participate because some reported sick or had prior engagements. All 219 teachers answered the pre-test and post-test questionnaires. Of the 219 teachers, 33 were male (15%) and 186 were female (85%). Their ages ranged from 20 to 64 years old

with a mean age of 37. Majority of teachers were married or cohabiting (57.5%) and have children (70.2%). Majority are high school teachers (89.1%) who have between 1 month to 40 years of teaching experience. Majority of the study participants have bachelor's degrees (69.3%), while 21% have master's degrees. Almost all of the teachers have received no previous training on child sexual abuse or child abuse in general. Most fear retaliation or law suits from parents and said that they did not know whether there is sufficient evidence to report or how to report.

Comparing pre-test and post-test results, significant changes were noted in the teachers' attitudes towards their duty to report CSA. There was a general decrease in the teachers' apprehension and fear of getting into trouble for reporting CSA cases after the training. The training also increased the confidence of teachers in identifying CSA. Prior to the training, only 25% of the teachers reported being confident about identifying CSA. This increased to 57% after the training. Table 3 shows the number of teachers who agreed with statements pertaining to apprehension and lack of confidence in CSA identification and reporting before and after training (with 45% reporting that before training they would find it difficult to report child sexual abuse compared to 19% of teachers post-training).

Data from the paired t-tests also highlighted that knowledge about potential indicators of CSA also significantly improved. Less than a third of the teachers (31%) felt that they were knowledgeable about potential signs of CSA prior to training. After training, over two-thirds (69%) of the

**Table 4.** Referrals from schools.

Month/Year	School	No. of referrals	Gender	Age	Type of Abuse	Alleged perpetrator/s	Type of disclosure
Aug-15	School A	1	M	19	cyberbullying	classmates	emailed complaint
	School B	0					
Sep-15	School A	0					
	School B	1	M	19	physical abuse	father	direct: teacher
Oct-15	School A	0					
	School B	1	F	13	sexual abuse	stepbrother/cousin	indirect: journal
Nov-15	School A	0					
	School B	4	F	15	sexual abuse	neighbor	direct: mother
			F	13	sexual abuse	mother's partner	direct: mother
			F	15	sexual abuse	non-family member	direct: teacher
F	15	sexual abuse	mother's partner	direct: teacher			
Dec-15	School A	0					
	School B	1	F	14	sexual abuse	Boyfriend (BF)/chatmate	indirect: chat
Jan-16	School A	0					
	School B	0					
Feb-16	School A	1	F	13	sexual abuse	friends	indirect: friend
	School B	1	F	15	sexual abuse	neighbor	direct: mother
Mar-16	School A	0					
	School B	0					
Apr-16	School A	1	F	14	cyberbullying	classmates	direct: teacher
	School B	1	M	16	bullying	classmates	indirect: mother
Feb-17	School A	1	F	15	sexual abuse	adult BF (neighbor)	direct: mother
Jun-17	School B	1	F	14	sexual abuse	stepfather	indirect: teacher

**Table 5.** Emotion Regulation by factor, Paired Samples T-Test.

Emotion Regulation Factors	Pre-test (T1)	Post-test (T2)	Mean diff	t
Impulse Control	3.58 (.93)	3.76 (.91)	-.178 (1.10)	4.11**
Clarity of Emotion	3.38 (.91)	3.48 (.86)	-.102 (1.05)	2.50*
Emotion Acceptance	3.60 (.91)	3.68 (.89)	-.079 (1.06)	1.92
Emotion Awareness	3.64 (.80)	3.61 (.77)	.036 (.94)	.98
Regulation Strategies	3.33 (.92)	3.34 (.81)	-.009 (1.08)	.20
Goal Directed Behavior	3.10 (.88)	3.13 (.84)	-.024 (1.04)	.58
Total	3.44 (.49)	3.50 (.50)	-.059 (.55)	2.77**

\*p < .05, \*\*p < .01.

N = 663 Grade 7 students.

**Table 6.** Knowledge of helping friends & healthy relationships.

Grade level		N	Mean	SD	Median	Min	Max
7	Pre	996	4.31	2.01	4	0	10
	Post	996	5.98	3.14	6	0	10
8	Pre	1013	3.40	1.98	3	0	10
	Post	1013	6.36	2.52	7	0	10
Total	Pre	2009	3.85	2.05	4	0	10
	Post	2009	6.17	2.85	7	0	10

teachers said that they were knowledgeable. The percentage of teachers who stated that they were familiar with the procedure for reporting CSA also increased from 45% to 75%.

#### 4.1.2. Actual reports of child abuse

From August 2015–June 2017, there were 3 referrals from School A (1 sexual abuse and 2 cyberbullying) and 11 referrals from School B (9 sexual abuse, 1 physical abuse and 1 bullying). Prior to the conduct of the trainings, there were no reports made to CPU-PGH or mandated authorities in the last 5 years.

The majority of reported cases was because of disclosure of the student to the teacher or to her mother (Table 4). All reported child sexual abuse cases had female victims with various perpetrators (both familial and non-familial), none of whom were peers. Peers were the alleged perpetrators in the bullying cases that were reported. All the reported cases received full evaluation and services at the Child Protection Unit of the Philippine General Hospital. There was no recurrence of abuse after 1 year of follow-up. Except for 1 student who was placed on home study, all reported students remained in school.

#### 4.2. Phase 2. Prevention of peer-to-peer dating violence through mindfulness training and a healthy dating relationships intervention

##### 4.2.1. Impact of mindfulness training on emotion regulation among students

There was a total of 1,111 Grade 7 students who completed the pretest prior the Grade 7 mindfulness session (Time 1). Of these students, only 663 were able to take the posttest (Time 2). Paired samples t-test for Grade 7 students showed that there was a significant improvement in Emotion Regulation from T1 before Grade 7 modules (M 3.44, SD .49) to T2 after Grade 7 modules (M 3.50, SD .50), with  $t = 2.77$  and  $p = .006$ . Among the six factors, the largest improvement was in Impulse Control followed by Emotional Clarity, both showing significant improvement at T2 (see Table 5).

There was also a significant increase in knowledge on abuse, dating violence, and how to help friends and be upstanders shown by Grade 7 and Grade 8 students immediately after completing the Health Modules (Table 6) as shown by the results of the pre- and post-tests ( $p < .001$ ).

Using Wilcoxon signed-rank test, the results suggest that there were statistically significant increases in scores from pre-test to post-test for both modules given to Grades 7 and 8 with  $p$ -values < .001. A score of 10 is the highest score for the Grade 7 module on how to help friends and it

shows that the student knows how to help a friend who discloses abuse and to advice how to seek help. Grade 7 median score of 4 at baseline increased to median of 6 in post-test. The highest score for Grade 8 is 10 and it shows that the student is able to recognize signs of abuse in a relationship especially sexual abuse. Grade 8 median score of 3 at baseline increased to median of 7 in post-test.

##### 4.2.2. Impact on peer dating violence

A total of 773 students took the Survey on Health, Behavior and Adverse Experiences of Students (SHBAES) pre-test. The response rate of School A was 29.52% (111 out of 376) and School B response rate was 68.67% (662 out of 964).

SHBAES post-test had 975 respondents. School A's response rate was 68.43% (284 out of 415) and School B had a response rate of 72.97% (691 out of 947).

There was a significant decline from pre-intervention to post-intervention in self-reported ever experiencing dating violence which includes physical, sexual and emotional violence,  $t(793) = 3.363$ ,  $p = .001$  as well as a significant decline in self-reported experiences of emotional abuse from a dating partner,  $t(837) = 2.693$ ,  $p = 0.008$ . Whereas, there was a significant self-report increase (above the mean) for attempted unwanted sex after the intervention,  $t(803) = -3.023$ ,  $p = 0.003$ . Increases at post-test was found for several sexual violence variables and resonates with existing literature that there might actually be spikes in reporting sexual abuse after focused interventions because of increased understanding of the behaviours that constitute sexual abuse and less taboo around sexual abuse disclosure (See Table 7 which includes both frequency of self-reports on dating violence disaggregated by gender and also the independent t-test measure of difference between pre- and post-test for the whole cohort).

##### 4.2.3. Impact on sexual abuse reporting

There was a significant increase in the post-test survey reporting of all forms of non-contact sexual abuse, including unwanted exposure to sexual videos and pictures, unwanted sexual talk and messages, sexual harassment by teacher or adult in school and being made to look at someone's private parts or them wanting to look at yours when you did not want them to,  $t(1426) = -2.279$ ,  $p = 0.023$ . There was also an increase in self-reported perpetration of sexual abuse,  $t(1666) = -2.539$ ,  $p = 0.011$  (Table 8). While there was an increase in percentage of self-reporting of contact sexual abuse as well, this was not statistically



**Table 7.** Dating violence frequency disaggregated by gender and independent samples t-test for changes before and after intervention for the whole cohort.

Dating Violence	Pre-test survey % (n = 773)	Post-test survey % (n = 975)	value for comparison between pre- and post-test for entire sample	Degrees of freedom (df)	P value
Any dating violence					
Males	42.9%	32.2%	3.363	793	0.001
Females	31.6%	16.2%			
Dating Attempted Unwanted Sex					
Male	5.5%	10.4%	-3.023	803	0.003
Female	2.6%	4.8%			
Emotional abuse from dating partner					
Males	35.8%	28.9%	2.693	837	0.008
Females	29.8%	15.8%			

significant. This is not an unusual finding for sexual abuse interventions which often see spikes in self-reported disclosures (both in surveys and to informal and formal sources) after the intervention (Fenton et al., 2016). The most common form of sexual abuse reported by the students is non-contact sexual abuse, specifically unwanted sexual talk. All aggregate measures of sexual abuse were more frequently reported among males than females, which is also supported by a nationally representative prevalence study (CWC; UNICEF, 2016). See Table 8 below which includes frequency of experiences of various types of sexual abuse disaggregated by gender and also the independent t-test measure of difference between pre- and post-test for the whole cohort.

#### 4.2.4. Teachers' feedback on student modules

There was a total of 32 teachers who attended two focus group discussion at the end of the program. Only a summary of the FGD is provided in this paper. The FGD with Grade 7 and Grade 8 teachers were conducted to determine their observations of the students and the challenges they met when delivering the modules. At the time the FGD was conducted, the teachers and the FGD facilitators did not yet know of the statistical results of the study. Teachers reported that students were receptive to the modules and showed constant interest, openness, and active engagement throughout the conduct of the modules. They were especially active during discussions on courtship and dating, risks of irresponsible and impulsive actions during intimate moments with a partner, consequences of early pregnancy, and the use of smart lines to say to a partner who insists or forces sexual intimacy. The students were also keen on practicing Mindfulness exercises like the calming breath. The teachers noticed positive changes in the students' behavior towards their peers and observed less fights between students. All teachers recommended that the activities be maintained and the modules be given longer time allotment. They recommend that the modules be taught during different semesters of the school year or also taught in higher grade levels so the students could better retain the learnings.

## 5. Discussion

This pilot study, as a whole, showed encouraging results. Teacher training raised confidence of teachers to report, reduced their fears in reporting, and improved their knowledge of CSA and the reporting process. There was also an increase in the number of actual reports of CSA to the School CPC or to authorities identified by the DepEd Child Protection Policy. The increase in reports could mean that the training was successful but it could also mean that there is an actual increase in the incidence of child abuse. Since the study is short-term, we cannot actually determine what the actual cause is. However, the results of the teacher training that showed increase in knowledge of the process of reporting and a change in attitude towards reporting could point to the successful attainment of the training goal to increase reporting.

Teachers and school personnel play crucial first-line roles in the prevention and identification of CSA since students spend a lot of time in school. In addition, the Philippine VACS showed that among all authority figures, children disclosed the most to teachers and guidance counselors. Despite the fact that teachers have the duty to report cases of abuse according to the child protection law of the Philippines and the Department of Education Child Protection Policy, there are very few reports from schools received by the WCPUs and CPU-PGH. Undergoing a short workshop greatly increased the teachers' knowledge and confidence in identifying and reporting CSA. Allowing teachers to understand fully the procedure in handling CSA dispelled their uncertainties and fear of repercussion, thus enabling them to perform their role in safeguarding the welfare of the children.

Aside from the training of teachers, this study illustrates the importance of establishing a solid referral structure between the school and agencies involved in protecting children from abuse. The response to the reports of the teachers by the guidance counselors and the school principal who are the co-chair and chair respectively of the School Child Protection Committee as well as by the external agencies tasked with handling cases of abuse are just as important as the training of the

**Table 8.** Sexual abuse frequency disaggregated by gender and independent samples t-test for changes before and after intervention for the whole cohort.

Form of Abuse	Pre-test survey % (n = 773)	Post-test survey % (n = 975)	value for comparison between pre- and post-test for entire sample	Degrees of freedom (df)	p value
Ever non-contact sexual abuse					
Male	33.0%	37.4%	-2.279	1426	0.023
Female	20.4%	25.4%			
Being sexually harassed by teacher or adults in school					
Male	8.3%	10.4%	-3.688	1257	0.000
Female	2.6%	5.8%			
Ever contact sexual abuse					
Male	13.5%	17.4%	-0.928	1648	0.353
Female	12.9%	13.9%			
Ever perpetrated sexual abuse					
Male	1.5%	3.2%	-2.539	1666	0.011
Female	0.0%	2.5%			

teachers in determining whether the teacher reports her suspicions of abuse. It is worrisome that there are public schools without registered guidance counselors. Guidance counselors are critical in making the DepEd Child Protection Policy and the prevention program work.

Results also showed that there was improved student awareness of what constitutes sexual abuse as shown by significant improvement in the quizzes. Notably there was an increase reporting of abuse overall among students. Many of the children and youth did not know whether relationships were abusive or not (CWC & UNICEF, 2016; Crisma et al., 2004). It might be inferred that knowledge of what constitutes abuse or non-healthy non-loving relationships contributed to recognition of different forms of abuse, and thus higher reporting of incidents in the SHBAES. This has been found through an international review of campus based sexual abuse prevention initiatives which found that an increase in confidence to report may readily lead to a corresponding increase – rather than decrease – in institution-level measures of reported violence, regardless of whether incidence is in itself declining (Fenton et al., 2016). Further research is also needed as to whether this also applies to increases in self-reported disclosures within post-test surveys.

The Philippine VACS (CWC & UNICEF, 2016) showed that majority of the children and youth who disclose did so to their peers followed by their mothers. The reported cases in this study showed that most of the youth disclosed to their teachers followed by their mothers. This validates further the results of the training of the teachers and emphasizes the important role of the teacher in helping children disclose and seek help. All of the reported cases of sexual abuse had female victims even though the results of the SHBAES showed more males experiencing sexual abuse than females. Again, this is consistent with the situation in the Philippines where the VACS showed significantly more males were sexually abused than females but the majority of reported cases to the police and the Child Protection Units are female. While most child sexual abuse prevalence studies show that more females are victims of sexual abuse than males (Stoltenborgh et al., 2011; Pereda et al., 2009; Barth et al., 2012), research emerging in Southeast Asia (Chiang et al., 2016; Choo et al., 2011) are showing more male sexual victimization. A critical interpretative synthesis of male sexual victimization by Depraetere and colleagues (2018) showed that prevalence rates of male sexual victimization vary considerably with up to 65% of men reporting sexual victimization. There were many reasons cited for the variations in prevalence such as time period, the way sexual victimization was defined, the manner in which the questions were presented to the respondents. The studies reporting high male victimization rates used behaviorally specific questions and included acts like kissing, touching, oral/anal sex. Rape myths that men cannot be raped or that strong men can defend themselves and cannot be forced to have sex against their will can prevent male victims from reporting or even acknowledging that they have been abused (Depraetere et al., 2018; Peterson et al., 2011; Walfield, 2018). It has also been found that boys are less likely to disclose at the time of sexual abuse and that most boys disclose when they are adults (O'Leary and Barber, 2008; Gagnier, Collin-Vezina, 2016).

The modules in Health on how to help friends and healthy relationships provide the students awareness that they are not alone in their plight, and that in our society, many children unfortunately become victims. It also increases the awareness on where and how to receive help. This releases the emotional burden of fear and isolation commonly found among CSA victims. A classroom discussion on CSA breaks the culture of silence that is prevalent in Filipino society. The study results showed a significant increase in reporting of CSA by students before and after the modules were administered. This is a very important outcome measure, since CSA is very difficult to identify (Hinkelman and Bruno, 2008). Majority of CSA cases occur in the homes, and physical, emotional and behavioral signs of CSA are very subtle and often confused with pubertal development (Trickett et al., 2011). Thus, any intervention to prevent and help CSA victims can only succeed if there is an increase in

the disclosure of children and there is a proper response to this disclosure.

Lastly, the results did show that there was an improvement in emotion regulation among students, and a decrease in peer dating violence. There could be many reasons for the decrease in peer dating violence, such as decrease in impulse control, improved emotion regulation, mindfulness training, mindful dating modules and perhaps also the knowledge of loving relationships. In future studies, it might be worthwhile to investigate the causal relationship of the various interventions on the decrease on dating violence to ascertain what aspects could have contributed to it.

There were also some incidental findings in the study which would be important to highlight, and which perhaps may be investigated in more detail in a future study. The modules resulted in a significant decrease in bullying, dating violence and physical violence at home. While the intervention was not aimed at preventing these types of violence, the prevalence of self-reported bullying victimisation decreased significantly after the intervention (ever bullying including physical, emotional, verbal and exclusionary behaviours),  $t(1603) = 5.579, p = 0.000$ . The most common form of bullying was emotional bullying for both males and females, which included verbal abuse such as belittling, calling names or humiliating, being laughed at, exclusionary behaviours, being treated as if you did not exist, avoidance and imitating moves or appearances). In addition to overall bullying experiences, significant decreases from pre-test to post-test prevalence were found for being physically harmed when bullied,  $t(1587) = 3.361, p = 0.001$ ; being shoved or grabbed by teachers or adults in the school,  $t(1499) = 2.381, p = 0.017$ ; and being verbally abused when bullied  $t(1669) = 4.156, p = 0.000$ . The module specific pre- and post-test data showed that the mindfulness modules taught the students to identify emotions and deal with negative thoughts and feelings resulting in a decrease in impulsivity and better emotion regulation, all of which could explain the decrease in wider peer-to-peer violence in the form of bullying.

The teachers also noted in their feedback that the students who underwent the mindfulness modules were, in their experience, the best-behaved students that they have handled. At the same time the teachers who were trained to deliver the mindfulness modules also noted that they themselves were helped by the modules and this could have resulted in an improved relationship with their students. It is plausible that the presence of study investigators and knowledge that a research on abuse was ongoing caused the students' parents and peers to be on their best behavior; however, regular and widespread administration of these modules can be a strategy to sustain good behavior.

Another incidental finding found that similar to physical violence at school, physical violence at home showed significant decreases from pre- to post- intervention,  $t(1622) = 2.114, p = 0.035$ . This indicates that the mindfulness behaviours may also influence adolescent's behaviours with their parents, a topic which could be explored with further research.

What the study has also shown is that knowing or suspecting that a child may be sexually abused may not be enough to lead to reporting. The attitudes and the prevailing cultural beliefs on sexual abuse as well as having the structure and support to deal with the reported case are critical in changing behavior. Disclosure of abuse by the child is a complex process affected by the whole socio-ecological environment around the child; individual, family, school, community and cultural and societal attitudes (Alaggia, 2010; Thulin et al., 2019). Interventions, therefore, need to address the whole social ecology and should be coordinated and complementary.

One of the limitations of this study is the short interval between the pre- and post-test surveys of just 6 months. This makes it difficult to measure changes in less prevalent forms of violence and to evaluate sustainability of the changes. This shorter follow-up period also means that we are uncertain if the potential spikes in self-reporting of child sexual abuse, as seen in this study and hypothesized to be a result of

increased awareness of sexual abuse, would eventually decline as a result of the intervention. In addition, it is impossible to ascertain if the positive outcomes are sustained and if there will be a continued increase of actual reports of CSA to authorities. This study should be replicated with a longer follow-up period.

Another limitation is that this study was unable to match students directly from pre- to post-test due to privacy and confidentiality issues. Instead, the study utilized and analyzed means among the groups of pupils. There may be students who left the school after the pre-test and students who entered before the post-test which could have affected the study results. Additionally, more students were surveyed at follow-up because of multiple visits to the schools which may have impacted the differences between pre- and post-tests. Receiving parental consent forms resulted in lower (but still normal according to the schools based on their experiences) response rates. The school with the lower response rate also was in the middle of administrative changes which could have affected the study. Future studies need to take this into consideration when dealing with the program and structure of the school system. Conducting a future matched outcomes evaluation is important for understanding the changes due to the intervention over time. Having the support of the Department of Education was critical in the implementation of the study. Despite these limitations, the findings from this proof-of-concept study highlight the potential of this mindfulness-based school intervention connected with systems strengthening to address a range of violence against children.

## 6. Conclusion

The Safe Schools for Teens intervention significantly raised the awareness and increased the reporting of child sexual abuse. The training of teachers was effective in improving the 4R's of CSA: recognition, recording, reporting and referring cases of child abuse. Adolescents can develop the skills to help their peers and to prevent sexual abuse. The use of mindfulness and the modules on healthy relationships are effective in reducing peer-to-peer violence, specifically bullying and dating violence. The teachers noted positive changes in the students' behavior as a result of the intervention. A follow-up study is needed to determine if the incidence of sexual abuse actually declines as a result of the intervention. The next step is to see whether the intervention works with additional public schools in the more rural areas of the country. The challenge is in scaling up to reach the more than 700,000 public school teachers in the country. Web-based learning may be a cost-effective way to reach more teachers with less resources needed. Transforming the 4Rs training to online training modules is presently underway. It is also important to note that the intervention goes beyond the training of teachers and students but also touches on the child protection system around the school such as the Child Protection Unit (health), social welfare and law enforcement. Furthermore, consistent with the data gathered in the national study on VAC, the results of this study showed that males are frequent victims of CSA. This is contrary to the prevailing societal notion that females are the more common victims of CSA. More research needs to be done on the different services needed by both male and female victims. This data can help lawmakers and school authorities amend laws and policies regarding child abuse and safety in order to ensure the safety of all children, males and females alike.

## Declarations

### Author contribution statement

B. J. Madrid: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Wrote the paper.

L. F. Dans, D. A Fry: Conceived and designed the experiments; Analyzed and interpreted the data; Wrote the paper.

G. F. H. Duka-Pante: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data.

G. D. Lopez: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed materials, analysis tools or data; Wrote the paper.

A. T. Muyot: Conceived and designed the experiments; Performed the experiments.

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### Competing interest statement

The authors declare no conflict of interest.

### Additional information

No additional information is available for this paper.

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