

A 6-Week School Curriculum Improves Boys' Attitudes and Behaviors Related to Gender-Based Violence in Kenya

Journal of Interpersonal Violence

1-23

© The Author(s) 2015

Reprints and permissions:

sagepub.com/journalsPermissions.nav

DOI: 10.1177/0886260515586367

jiv.sagepub.com



Jennifer Keller, PhD,¹ Benjamin O. Mboya, MS²
Jake Sinclair, MD,² Oscar W. Githua, PhD,³
Munyae Mulinge, PhD,³ Lou Bergholz, BS⁴
Lee Paiva,⁵ Neville H. Golden, MD,¹
and Cynthia Kappahn, MD, MPH¹

Abstract

This study investigated the effects of a gender-based violence (GBV) educational curriculum on improving male attitudes toward women and increasing the likelihood of intervention if witnessing GBV, among adolescent boys in Nairobi, Kenya. In total, 1,543 adolescents participated in this comparison intervention study: 1,250 boys received six 2-hr sessions of the “Your Moment of Truth” (YMOT) intervention, and 293 boys comprised the standard of care (SOC) group. Data on attitudes toward women were collected anonymously at baseline and 9 months after intervention.

¹Stanford University School of Medicine, CA, USA

²Ujamaa-Africa, Nairobi, Kenya

³United States International University, Nairobi, Kenya

⁴Edgework Consulting, Boston, MA, USA

⁵No Means No Worldwide, San Francisco, CA, USA

Corresponding Author:

Jennifer Keller, Clinical Associate Professor, Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, 401 Quarry Road, Stanford, CA 94305-5723, USA.

Email: jkeller@stanford.edu

At follow-up, boys were also asked whether they encountered situations involving GBV and whether they successfully intervened. Compared with baseline, YMOT participants had significantly higher positive attitudes toward women at follow-up, whereas scores for SOC participants declined. At follow-up, the percentage of boys who witnessed GBV was similar for the two groups, except for physical threats, where the intervention group reported witnessing more episodes. The percentage of boys in the intervention group who successfully intervened when witnessing violence was 78% for verbal harassment, 75% for physical threat, and 74% for physical or sexual assault. The percentage of boys in the SOC group who successfully intervened was 38% for verbal harassment, 33% for physical threat, and 26% for physical or sexual assault. Results from the logistic regression demonstrate that more positive attitudes toward women predicted whether boys in the intervention group would intervene successfully when witnessing violence. This standardized 6-week GBV training program is highly effective in improving attitudes toward women and increasing the likelihood of successful intervention when witnessing GBV.

Keywords

gender-based violence, sexual violence prevention, sexual assault, adolescent boys

Introduction

Gender-based violence (GBV), including rape and sexual assault, is a worldwide public health issue spanning a spectrum of cultures, ages, and socioeconomic levels. The numerous negative physical and psychological sequelae of sexual violence have been well documented (Banyard & Williams, 2007; Banyard, Williams, & Siegel, 2004; Bonomi et al., 2009; Briere & Jordan, 2004; Danielson & Holmes, 2004; Kilonzo et al., 2008; Ulirsch et al., 2014). In addition to the short- and long-term effects on the individual, societal costs are huge and include negative impacts on school attendance and achievement, employment, and lifetime productivity (Rivera-Rivera, Allen-Leigh, Rodriguez-Ortega, Chavez-Ayala, & Lazcano-Ponce, 2007; Tjaden & Thoennes, 2006).

The World Health Organization (WHO, London School of Hygiene and Tropical Medicine, & South African Medical Research Council & Medicine, 2013) has found that one in three women worldwide experience sexual violence. In Kenya, a national survey found that 29% of female respondents experienced sexual violence in the preceding year and 43% experienced

some form of GBV between the ages of 15 and 49 (Population Council, 2008). While these statistics represent the most accurate data available, sexual violence is vastly underreported in Kenya, as it is elsewhere. It is estimated that only 23% of women in Kenya ever tell anyone about an experience of coerced sex (Tavrow, Withers, Obbuyi, Omollo, & Wu, 2013); nondisclosure is a barrier to receiving medical attention and appropriate services.

Sexual assault and other GBV reflect the complex interaction of various individual, situational, societal, and cultural elements (Casey & Lindhorst, 2009; Dahlberg & Krug, 2002). Interventions have focused primarily on aftercare for victims, with little funding for the prevention of GBV. While girls' empowerment programs have been developed to combat GBV and have been shown to be effective (Sarnquist et al., 2014; Sinclair et al., 2013), GBV needs to be addressed simultaneously with boys, targeting the knowledge, attitudes, and social norms that contribute to sexual violence. GBV often occurs in the context of male peers who demonstrate negative attitudes toward women (McMahon, 2010; Miller et al., 2012; Verma et al., 2006). Perceived peer tolerance for GBV may reduce the boys' comfort with intervening and thus reduce their effectiveness in intervening when witnessing GBV (Miller et al., 2012). Thus, teaching individuals to be proactive when faced with their peers' GBV behaviors, rather than being apathetic and tolerant, could be quite powerful in engaging boys to intervene (Banyard, 2008; Foubert & Perry, 2007).

Although the number of research studies that examine the effect of violence prevention programs on attitudes, behaviors, or violence among either boys or girls is growing, recent reviews note that many studies lack scientific rigor and that large gaps remain in our understanding of effective interventions (De Koker, Mathews, Zuch, Bastien, & Mason-Jones, 2014). In their recent review of intimate partner and sexual violence among adolescents, Lundgren and Amin (2015) conclude that school-based dating violence interventions show great promise. They note, though, that these interventions have been implemented primarily in high-income countries, and cite a need for adapting and evaluating school-based sexual violence prevention programs in low- and middle-income countries (Lundgren & Amin, 2015).

Several components are believed to be important when developing GBV prevention programs for males. One is to promote more gender equitable relationships between men and women (Barker, Ricardo, Nascimento, Olukoya, & Santos, 2010), and another is to target boys at a younger age, before they develop strong, negative attitudes that support GBV (Ricardo, Eads, & Barker, 2011). Another aspect is defining consent and helping boys recognize when consent for sexual contact has or has not been given. Several interventions associated with positive outcomes have incorporated bystander

intervention into their curriculums (Gidycz, Orchowski, & Berkowitz, 2011; Miller et al., 2014). These interventions have primarily taken place on college campuses, in higher income countries (Cook-Craig et al., 2014). In promoting bystander intervention, it is imperative to also address false beliefs about rape, because endorsement of rape myths is negatively associated with students' intention to intervene as bystanders (McMahon, 2010). Furthermore, endorsement of rape myths is a risk factor that predisposes individuals to both sexual coercion and sexual aggression (DeGue, DiLillo, & Scalora, 2010). Finally, perception of social norms is important in determining whether bystanders will intervene. For example, researchers have found that college men who believed their peers held less supportive attitudes toward sexual aggression reported being more likely to intervene in sexually aggressive situations (Brown & Messman-Moore, 2010).

The aim of the present study was to examine the impact of a GBV prevention program on male attitudes and intervention behaviors related to GBV, in adolescent boys in Nairobi, Kenya. The boys' program was designed to complement a girls' empowerment program that was found to be effective in reducing rates of sexual assault in Nairobi slums (Sarnquist et al., 2014; Sinclair et al., 2013). It was hypothesized that the boys who participated in the "Your Moment of Truth" (YMOT) prevention program would develop more positive attitudes toward women and that these more positive attitudes would be related to the boys' successful intervention when witnessing GBV.

Method

Study Participants

There are 44 secondary schools located in or bordering the six largest slums in Nairobi. All 44 of these schools were approached to participate in this study. Three of the schools declined because their schedule could not accommodate the 6-week curriculum. Five of the schools were "girls only," and thus, they were automatically excluded. The remaining 36 schools were divided into two geographically distinct areas, to prevent any cross contamination between sites during the study period. One group consisted of 29 high schools in the areas immediately surrounding the Dandora, Kibera, Huruma/Mathare, and Mukuru areas of Nairobi. A smaller group consisted of 7 different high schools in the Makadara and Kawangware areas of Nairobi. From data previously collected by Ujamaa-Africa (Sarnquist et al., 2014), all of the schools were drawn from neighborhoods that did not differ on various WHO indices related to poverty and insecurity, including items such as home building materials used, running water available in the home, and monthly income.

The lifetime incidence of rape in their school communities was also similar, at 16.7% for high school girls in the intervention schools and 15.9% for high school girls in the control schools.

The larger group of geographically isolated but demographically similar schools received the intervention and the smaller group received the control (standard of care [SOC]) intervention. This decision was made primarily for ethical reasons. The amount of violence the boys in these neighborhoods witness is very high. Anecdotally, the intervention was useful, and this study design allowed the largest number of boys to receive the intervention, while still assuring adequate numbers in the control group.

All boys in Form 1 to 4 grades (freshmen to seniors) who attended the control and intervention schools were recruited. A total of 1,543 boys ages 15 to 22 participated in the study. In the intervention (YMOT) group, 1,250 boys completed the baseline survey, and 1,086 completed the 9-month, postintervention follow-up survey. Mean age (and standard deviation) at baseline was 17.96 (1.4), range 15 to 22 years. In the SOC group, 293 boys completed baseline surveys, and 239 completed the 9-month follow-up assessment. Mean age at baseline was 16.99 (1.5), range 15 to 22 years. The intervention and SOC groups differed in age, $t(1541) = 10.53$, $p < .0001$, with the intervention group being older.

Procedure

The YMOT GBV curriculum was developed over 2 years and focused on the unique needs of high school boys living in Nairobi. The curriculum was developed by two authors (L.P. and L.B.) in collaboration with the Kenyan staff working in these neighborhoods in Nairobi. An extensive literature review was undertaken to determine what training existed, and although it focused on Africa, other global violence prevention programs were reviewed. Several focus groups and then pilot programs were conducted. Approximately one dozen facilitated pilot classes with boys of the intended age participated in the curriculum development. Their opinions on relevant topics, such as gender, relationships, personal risks, violence, and so on, were obtained. As research shows that attitudes toward women can be an important barrier to intervening in situations involving GBV, the YMOT curriculum was designed to address this issue. Other key components of the program included promoting gender equality, development of positive masculinity, and teaching boys how to safely and effectively intervene in GBV (see Table 1). All instructors were males from the local region and ranged in age from 20 to 34 years; all had 2 years of experience as advocates to reduce GBV. Their training involved a minimum of 250 hr of instruction by expert facilitators, and participation in

Table 1. Key Features of the No Means No Worldwide, “YMOT” Program.**Article I. Session I: Introduction to the curriculum, YMOT.**

Define “YMOT”

Hear personal stories from trainers about important MOTs in their lives

Develop awareness about the important moments of truth the boys face in their young lives

Session II: Skills to prepare for YMOT

Learn skills of *awareness* and how to identify *red flags* in potential assault situations

Discuss how courage is required to deal with MOTs Hear personal stories from trainers about women in their lives that they care deeply about and explore why *courage* is so important in facing MOTs

Learn assertive body language and verbal response

Learn to deter physical assaults using role-plays

Session III: Intervention

Define intervention

Creating opportunities for students to practice key *intervention skills*

Practice intervention, specifically stepping up to try to resolve a conflict

Session IV: Sexual consent

Define and understand sexual consent

How to know valid consent

Explore causes of and myths about rape

Learn basic de-escalation and negotiation techniques

Session V: Responsibility for one’s self

Discuss what it means to be responsible for one’s actions and behaviors

Practice utilizing intervention skills

Session VI: Review of skills and content

Reviewing key concepts

Reinforcing skills through practice role-plays

Getting public commitments to utilize their new skills and to face their moments of truth

Note. The program focuses on education about gender equality and violence, positive masculine development, and safe intervention. YMOT = Your Moment of Truth.

mock interviews and field training exercises conducted outside of the study area.

The study was approved by the Kenya National Council for Science and Technology, the institutional board designated to review and approve research studies in Kenya. All students gave verbal consent before participating. The consent form was read to all participants in Kiswahili/Sheng (the local youth

dialect). After the consent was read, the instructors answered questions and reinforced that participation was optional. The research proceeded once the instructor felt certain that all students understood and had given verbal consent. Direct parental consent was not obtained, as approved by the review board. The curriculum was reviewed and approved by the Ministry of Education in Kenya. As the program was provided to all within the school and answers were anonymous, it was viewed as a school program evaluation.

Students were assigned to the intervention or SOC depending on their school. The YMOT intervention consisted of six 2-hr sessions of the “No Means No Worldwide YMOT” program (Pavia & Bergholz, 2013). Sessions were held weekly for 6 weeks immediately after school, between January and February 2013. Two-hour refresher courses were held at 4.5 and 9 months postintervention. Average instructor to student ratio was 1:18.

The boys in the SOC group received the SOC, which is a one time, 2-hr life skills class that is sanctioned by the Kenyan government. This class covers a wide range of topics, including sex education, positive gender roles, basic sanitation, food safety, and personal rights. Typically, all school-aged boys who attend school regularly receive this curriculum. The boys in the intervention group did not receive this SOC curriculum, as it was taught at the same time that the intervention curriculum was presented.

Survey

Survey administration was staggered. Surveys were administered to the intervention group at baseline (Week 0), immediately after YMOT program completion (Week 6), and at 4.5 and 9 months postintervention. Surveys were administered to the SOC group at Week 6 (which was considered the SOC baseline and was at the end of the YMOT intervention) and then 9 months later. Equivalent time intervals were used for both groups, for reporting whether individuals had witnessed any GBV episodes and successfully intervened. The YMOT intervention group reported on episodes that occurred in the 9 months after completing the YMOT classes, and the SOC group reported on episodes that occurred during the 9 months after baseline assessment. Change in attitudes was analyzed by comparing baseline data for each group with data for that group’s 9-month follow-up assessment.

Survey Development

No validated questionnaires to assess attitudes toward women and endorsement of rape myths were available in Swahili. Thus, similar questionnaires from other studies were utilized and adapted for the appropriate age and

cultural context of the study population. First, a battery of 25 questions were developed which were thought to assess these attitudes in similar settings (Tavrow et al., 2013). Two separate focus groups of 8 to 14 high school boys were then conducted at two different schools, one of which was included in the intervention arm. Questionnaires were distributed to each participant, and a member of the research team read the questions in Swahili and English. Boys were asked whether they understood each question and asked to identify when words or phrases were challenging or ambiguous. The boys suggested alternative wording until all members agreed that the questions were clearly stated. Boys then responded to the questions, and those questions with the highest percent of boys endorsing them were adopted as the questions for the present study. The final survey questions are similar to questions on validated rape myth scales, such as the Illinois Rape Myth Survey (Payne, Lonsway, & Fitzgerald, 1999), that are used extensively in the United States.

Survey Constructs

Three main constructs were assessed in the survey. The first construct reflected attitudes toward women and endorsement of rape myths. A positive women composite (PWC) score was computed by summing the responses from seven individual items on the survey which assessed attitude toward women and endorsement of rape myths (see Table 2). Responses used a 5-point Likert-type scale, with responses ranging from *strongly agree* to *strongly disagree*. Items were recoded such that a larger number indicates a more positive view of women/less endorsement of rape myths. The PWC was computed separately at baseline and postintervention. Cronbach's alpha for this composite scale was .659, demonstrating acceptable internal consistency.

The second two constructs assessed were only queried on the postintervention surveys. First, the boys were asked about witnessing violence. Specifically, they were asked whether, since taking the YMOT sessions or since baseline surveys, they had been in situations where someone was "verbally harassing," "physically threatening," or "physically hurting or sexually assaulting" a girl or woman. Next, they were queried about whether when they witnessed such behavior they had "successfully intervened," which was defined as having stopped the harassment or threat.

Survey Administration

The survey was administered by staff experienced in demographic health survey interviews. The enumerators received a 1-week intensive training by the study investigators on questionnaire administration and data collection, followed by a second week of group practice. Participants completed the

Table 2. Survey Items Which Assessed Attitudes Toward Women and Endorsement of Rape Myths.

	YMOT Intervention Baseline n = 1,250	YMOT Intervention 9-Month Follow- Up n = 1,086	Baseline-Post Comparison Intervention Group: Effect Size d = Cohen's D	SOC Control Group Baseline n = 293	SOC Control Group 9-Month Follow-Up n = 239	Baseline-Post Comparison for the SOC Group: Effect Size
All women should be treated with respect. (1 = false, 2 = sometimes, 3 = true)	2.27 (0.71)	2.72 (0.49)	t(2345) = 17.71, p < .0001; d = 0.73	2.53 (0.57)	2.41 (0.62)	t(523) = 2.50, p < .02; d = -0.20
After a woman has agreed to have sex, she has a right to change her mind, even after the man already has an erection ^a	2.65 (1.4)	3.58 (1.4)	t(2358) = 16.11, p < .0001; d = 0.85	2.80 (1.5)	2.55 (1.5)	t(522) = 1.90, p = .0582; d = -0.17
Many women pretend they do not want to have sex because they do not want to appear "loose" ^b	2.29 (1.2)	3.08 (1.5)	t(2347) = 14.15, p < .0001; d = 0.58	2.71 (1.4)	2.94 (1.4)	t(526) = 1.88, p = .0608; d = 0.16
If a woman dresses in a sexy dress, she is giving men permission to have sex with her ^b	2.42 (1.3)	3.87 (1.4)	t(2341) = 25.99, p < .0001; d = 1.08	3.04 (1.5)	2.80 (1.5)	t(527) = 1.83, p = .0676; d = -0.16
If a man takes a woman out on an expensive date, he has a right to expect sex ^b	2.47 (1.4)	4.06 (1.2)	t(2354) = 29.46, p < .0001; d = 1.22	3.36 (1.4)	2.92 (1.5)	t(524) = 3.47, p = .0006; d = -0.30
When a woman says "NO" to sex what she really means is "MAYBE" ^b	2.65 (1.5)	3.62 (1.4)	t(2364) = 16.21, p < .0001; d = 0.67	3.22 (1.4)	3.15 (1.3)	t(525) = 0.59, p = .553, ns; d = -0.05
Once a man is very sexually aroused, it is necessary for him to have sex with someone to cool down ^b	3.06 (1.5)	4.06 (1.3)	t(2350) = 17.20, p < .0001; d = 0.71	3.63 (1.4)	3.38 (1.5)	t(527) = 1.97, p = .0483; d = -0.17
Positive women composite score	17.78 (4.0)	25.05 (5.0)	t(2226) = 38.02, p < .0001; d = 1.61	21.34 (4.9)	20.21 (4.7)	t(506) = 2.64, p = .0086; d = -0.23

Note. Samples sizes vary slightly as some participants did not respond to all questions. YMOT = Your Moment of Truth; SOC = standard of care.

a) 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

b) 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree, 5 = strongly disagree.

questionnaire during the school day. Data collection was performed using the ballot box method (BBM). This method ensures anonymity and has been shown in other studies conducted in Africa to elicit higher response rates in reporting sensitive issues such as those in GBV studies (Gregson, Zhuwau, Ndlovu, & Nyamukapa, 2002).

Data Analyses

First, the seven individual items which assessed the attitudes toward women/rape myths beliefs were examined using independent *t* tests. The mean post-intervention for each item was compared with the baseline mean, separately for each group. Next, the PWC score at baseline and postintervention were compared separately for each group. Between-group differences at baseline and postintervention on the PWC were also examined.

Witnessing and intervening in GBV situations was assessed using data from the 9-month postintervention surveys. Chi-square analyses examined the between-group differences in witnessing the three separate types of violence and whether the percent of those who successfully intervened differed between the YMOT and SOC groups.

Finally, the relationship between attitudes toward women (PWC score) and successful intervention was assessed. Binary logistic regressions were run for each group, for each of the three types of GBV queried (verbal harassment, physical threats, and physically hurting or sexually assaulting). The dependent variable was whether the boys successfully intervened, and the PWC score was the predictor. Only boys who reported witnessing each type of violence were included in the analyses.

Results

Attitudes Toward Women and Belief in Rape Myths

At baseline, both the YMOT and the SOC groups endorsed negative attitudes toward women and myths about sexual assault. At follow-up, boys from the YMOT program reported more positive attitudes toward women and were less likely to endorse myths about sexual assault. All *p* values of the pre- to postchange for the intervention group were $p < .0001$ and were in the positive direction (see Table 2). Over this same time period, the SOC group's attitudes and myth beliefs were unchanged or became more negative (*p* values range from $p < .02$ to *ns*). For most of the individual items, there were medium to large effect sizes for the YMOT group (ranging from $d = 0.58$ to 1.22) and small effect sizes for the SOC group (ranging from $d = 0.13$ to $-.30$, with the negative values indicating beliefs became more negative).

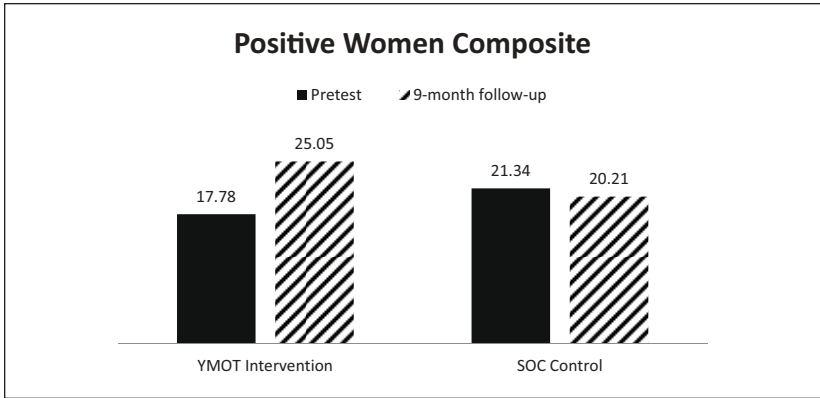


Figure 1. Positive women composite mean score at baseline and at 9-month follow-up, for each the intervention and SOC group.

Note. YMOT = Your Moment of Truth; SOC = standard of care.

PWC

For the YMOT group, the PWC score increased from 17.78 at baseline to 25.05 at 9-month postintervention ($p < .0001$, Table 2). In contrast, the SOC group began numerically higher at baseline, 21.34, but decreased to 20.21 at 9-month follow-up ($p < .009$). This was a large effect size for the PWC difference in the YMOT group, $d = 1.61$, and a small, negative effect size in the SOC group, $d = -0.23$.

When comparing the two groups' PWC scores at baseline, the SOC group scored significantly higher than the YMOT group, $t(1426) = 12.68$, $p < .0001$ (Figure 1). Conversely, at the follow-up, the YMOT group scored significantly higher than the SOC group, $t(1306) = 13.51$, $p < .0001$. Overall, the YMOT group's attitudes toward women and beliefs in rape myths improved on follow-up, while the SOC group's attitudes had a slight, statistically significant change in the negative direction.

Effect durability. Only the YMOT group participated in the surveys immediately postintervention and at 4.5 months follow-up. PWC increased immediately postclass, and this effect was maintained at 4.5- and 9-month follow-up (Figure 2). Compared with baseline, there was a significant positive change in attitudes toward women immediately postintervention, $t(2183) = 43.36$, $p < .0001$, which remained stable and significant at 4.5 months, $t(1996) = 39.61$, $p < .0001$, and at 9 months postintervention, $t(2226) = 38.46$, $p < .0001$. None of the pairwise comparisons of the postintervention time points

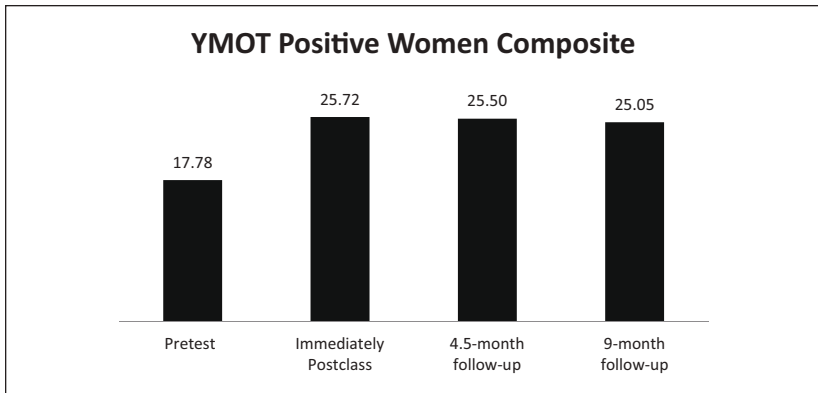


Figure 2. Positive women composite score over time for the intervention group.
Note. YMOT = Your Moment of Truth.

differed, all p s > .32. This demonstrates that the changes in attitudes and decrease in the endorsement of rape myths occurred during the intervention period, and these gains were maintained during follow-up.

Witnessing Verbal Harassment, Physical Threats, and Physical or Sexual Assaults

Boys in the intervention group endorsed witnessing violence against a girl or woman in the 9 months since completion of the intervention program: 52% witnessed verbal harassment, 48% witnessed physical threats, and 30% witnessed physically hurting or sexually assaulting behavior. Boys in the SOC group also endorsed witnessing GBV in the time since completing baseline questionnaires: 49% witnessed verbal harassment, 25% witnessed physical threats, and 27% witnessed physical or sexual assault behavior. The YMOT group reported witnessing more physical threats than those in the SOC group, $\chi^2(1) = 39.85, p < .0001$. However, there was no difference in the percentage in each group who endorsed witnessing verbal harassment, $\chi^2(1) = 0.35, p = .56$, or physically hurting or sexually assaulting behavior, $\chi^2(1) = 0.55, p = .46$.

Intervening When Witnessing Verbal Harassment, Physical Threats, and Physical or Sexual Assaults

Of those who witnessed verbal harassment, 76% of the YMOT and 38% of the SOC boys reported successfully intervening, $\chi^2(1) = 64.91, p < .0001$. Of

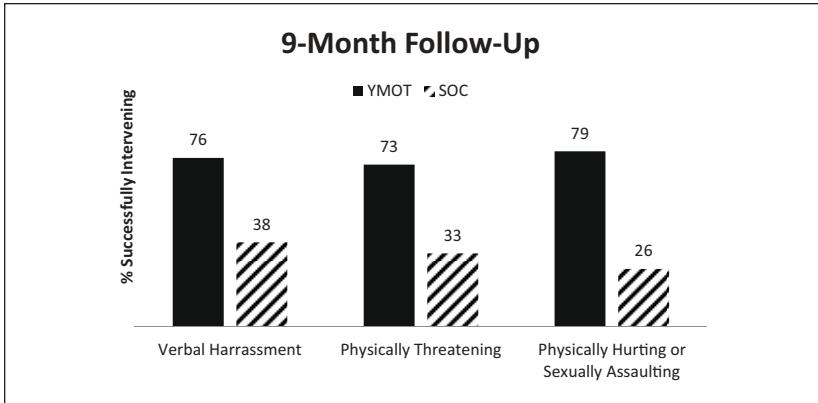


Figure 3. Percentage of boys in each condition who reported successfully intervening when they witnessed verbal harassment, physical threats, and physically hurting or sexually assaulting.

Note. For each type of GBV, the YMOT versus SOC comparisons, $p < .0001$. YMOT = Your Moment of Truth; SOC = standard of care; GBV = gender-based violence.

those who witnessed physically threatening behaviors, significantly more boys who participated in the intervention (73%) compared with the SOC (33%) successfully intervened, $\chi^2(1) = 71.84, p < .0001$. Similarly, a greater percentage of the intervention boys (79%) compared with the SOC group (26%) successfully intervened when they witnessed physical or sexually assaultive behavior, $\chi^2(1) = 70.32, p < .0001$ (Figure 3). Thus, for all types of harassment and assaultive behavior, at 9-month follow-up, the intervention group was more likely than the control group to successfully intervene when they witnessed GBV.

Logistic regression was used to determine whether PWC predicted who was likely to successfully intervene. In the YMOT group, the PWC score predicted successful intervention with verbal harassment, $\chi^2(1) = 15.56, p < .001$. This index correctly classified 76.2% of the sample, and the odds of successful intervention were .927 higher for participants with more positive attitudes toward women (95% confidence interval [CI] = [.892, -.963]). This pattern was not found in the SOC group, $\chi^2(1) = 1.13, p = .288$.

In the YMOT group, PWC significantly predicted who successfully intervened when witnessing physical threats to a girl or woman, $\chi^2(1) = 11.90, p = .001$. This index correctly classified 74.0% of the intervention group, and the odds of successful intervention were .935 higher for participants with more positive attitudes toward women (95% CI = [.900, -.972]). The trend for the control group did not reach significance, $\chi^2(1) = 3.23, p = .072$.

In the YMOT group, the PWC trend toward predicting who intervened in physical and sexually assaultive situations did not reach significance, $\chi^2(1) = 2.96, p = .085$. No trend was noted in the SOC group, $\chi^2(1) = 0.55, p = .46$.

Discussion

The YMOT curriculum was developed in response to the extremely high rates of sexual assault (upward of 25% annually) in impoverished areas of Nairobi, Kenya (Population Council, 2008; Sinclair et al., 2013). There are several important findings from this study. First, the intervention group demonstrated significant positive changes in attitudes toward women immediately postprogram, which was sustained at multiple follow-up assessments. In contrast, the control groups' attitudes became slightly more negative, suggesting that adolescents may be more likely to endorse rape myths over time, in the absence of intervention. These findings suggest that adolescence may be an opportune time to intervene in the attitudes and behaviors that contribute to sexual violence. Indeed, others have suggested that adolescent boys are more open to changing their view of masculinity and GBV than adult men (Bott, Morrison, & Ellsberg, 2005). Lundgren and Amin (2015) note that as gender role differentiation intensifies and boys and girls explore new thoughts and behaviors regarding intimate relationships during adolescence, this presents unique opportunities to intervene to prevent intimate partner and sexual violence over a lifetime.

Another important finding is that boys in the intervention group were significantly more likely than boys in the control group to successfully intervene when they witnessed interpersonal violence. This finding held true for verbal harassment, physical threats, and physical and sexual assaults. Given the wording of the intervention questions (i.e., "successfully intervene"), it is unclear whether the boys in the intervention group were more likely to intervene, were more successful when they did, or both. The end result for girls and women was positive in any case. Future research should examine in greater detail the factors that contributed to the boys' decision to intervene and to the success of their interventions.

Importantly, attitudes toward women predicted successful intervention. However, this was true only for the intervention group. Several factors may have contributed to this effect in the YMOT group. The YMOT intervention focused on heightening boys' sense of responsibility to act in situations involving GBV and deconstructing the negative social structure that allows GBV to thrive. Intervention techniques and role-playing experiences allowed boys to practice acting responsibly in the face of social conventions. Thus, the program empowered boys with tools to be proactive and intervene on

behalf of the girls in their communities, while the comparison group did not receive such training. The YMOT intervention was associated with an improvement in individual attitudes toward women and the likelihood of successful intervention, but it is also possible that the program resulted in changes in the school environment that promoted greater social responsibility. Future research should consider examining the relationship of attitudes, behaviors, and environment on one's willingness to intervene in GBV situations and the success of these attempts at intervention.

There were several surprising findings in the data analyses. First, the control group had higher baseline PWC scores. One possible reason for this is the boys' age. Boys in the control group were on average 1 year younger than in the intervention group. Indeed, for all boys in the study, there was a significant negative correlation between age and baseline PWC scores ($r = -.142$, $p < .001$). Thus, the younger boys had more positive attitudes about women at baseline. Knowing when and how these attitudes change may be important, as research has demonstrated that targeting boys at a younger age, before they develop strong, negative gender-based attitudes, is more effective in stopping GBV (Ricardo et al., 2011). Many programs, particularly those in the United States, target college-aged men; however, it may be more effective to start prevention programs at a younger age.

Another surprising finding was that almost twice as many boys in the intervention group (48% vs. 25%) recognized behaviors that were physically threatening. Although preintervention levels of recognition are not available, these findings suggest that recognition of abusive behavior may be one of the positive effects of this program. The YMOT intervention program directly teaches about what constitutes abusive behavior and warning signs of violence that could potentially escalate. Boys who received the intervention may have become more skilled at identifying behaviors along the continuum that could progress to physical assault or sexual violence. Future studies examining the recognition of abusive behavior and likelihood of successful intervention are warranted.

A major strength of this study is the large sample size of high school boys in a region where there is a high rate of GBV. Focus groups helped to highlight the rape myths and negative attitudes that were prevalent within the local community, and the trainers were from similar communities, allowing the intervention to be more effectively adapted to the local cultural context. In addition, the BBM facilitated anonymous collection of sensitive information, increasing the likelihood that the boys would respond honestly. Survey questions were both written and read aloud in the two primary languages used in the region, thus ensuring that even students with limited literacy could understand and participate in the surveys.

One of the main limitations is that this anonymous format did not allow linking subjects at baseline and follow-up. This means that it is not possible to determine within-subject change over time. Although the percentage of students completing the survey at baseline and 9-month follow-up were similar across groups (87% for YMOT and 81% of SOC), the reasons why various students did not participate in follow-up are unknown. Another limitation of this study is that the sample distribution was not equal between the groups. Statistically, this could lead to outliers having a greater effect, particularly in the control group, and a greater likelihood of higher variance. The intervention program was longer than the SOC program, thus raising the possibility that part of the program's effectiveness may have been from the additional time and attention the boys received from the trainers. Although the study design does not allow determination of which particular elements of the intervention were most effective, it does seem clear that the program had a more favorable effect on boys' attitudes and likelihood of intervention, when compared with the current SOC in Kenya.

Although this program was specifically developed for Kenyan boys, the concepts taught in this class are relevant and transferable to most other settings and cultures. GBV remains a serious issue in developed and developing countries alike (WHO, London School of Hygiene and Tropical Medicine, & South African Medical Research Council & Medicine, 2013). It is encouraging that this intervention demonstrates effectiveness in creating durable changes in attitudes among boys living in an impoverished area with high GBV prevalence. The attitudes assessed in this study are similar to the rape myth attitudes assessed and endorsed in studies in the United States (McMahon, 2010; Payne et al., 1999). Furthermore, the finding that attitudes predict one's likelihood of intervening is similar to that noted in other countries (Banyard, 2008). The results of this study need to be replicated in other populations, in Kenya as well as in other countries. Future research would benefit from more detailed assessment not only of attitudes about GBV but also of the behaviors used to intervene, including attempts that were successful and unsuccessful. In addition, data on boys' own perpetration of GBV is important, and future research should incorporate measures of specific GBV behaviors.

In summary, this study demonstrates that a standardized 6-week GBV prevention program for males is effective in reducing negative attitudes about women and false beliefs regarding rape. These more positive attitudes toward women predicted the boys' ability to successfully intervene when witnessing GBV. If replicated, this program has the potential to reduce the morbidity and mortality associated with GBV.

Appendix

Sample of the questions used in the surveys for this study.

Please DO NOT write your name on this survey

DATE: _____ NAME OF SCHOOL: _____

Boys 4.5-Month Follow-Up Survey

This survey is about your views on health-related issues. Try to be as honest as you can. The information you give will be used for research purposes only, the answers you give will be kept private. No one will know how you answer. Completing the survey is voluntary, if you do not want to answer any question, you may leave the room.

Your grade or mark in this school will not be affected by whether or how you answer the questions.

For these questions, please choose **the appropriate response**. Circle the letter before your answer, e.g., (A) YES B. NO

1. Have you taken **NO Means NO Boys classes** before today?
A. YES B. NO
2. **All women** should be treated with respect.
A. True _____ B. False _____ C. Sometimes _____ D. It depends _____
3. After a woman has already agreed to have sex, she has a right to change her mind even after, the man already has an erection.
Strongly Disagree Disagree Neutral Agree
Strongly Agree
4. Many women pretend they don't want to have sex because they don't want to appear "loose."
Strongly Disagree Disagree Neutral Agree
Strongly Agree
5. Once a man is very sexually aroused it is necessary for him to have sex with someone to cool down.
Strongly Disagree Disagree Neutral Agree
Strongly Agree
6. When a woman says "**NO**" to sex what she really means is "**MAYBE**."
Strongly Disagree Disagree Neutral Agree
Strongly Agree
7. If a man takes a woman out on an expensive date, he has a right to expect sex.
Strongly Disagree Disagree Neutral Agree
Strongly Agree

8. Alcohol and Drug affect my ability to make decisions about sex.
Strongly Disagree Disagree Neutral Agree
Strongly Agree
9. If a woman dresses in a sexy dress she is giving permission for men to have sex with her.
Strongly Disagree Disagree Neutral Agree
Strongly Agree
10. Protecting the women in my life is part of my job as a man.
True False Sometimes It depends
11. Since you took the YMOT classes, have you found yourself in any situations where someone was **verbally harassing** a girl or woman?
A. Yes B. No C. Not applicable, wasn't in a situation
If yes, how many times? 1 2 3 4 5
12. Did you successfully **intervene** in any situations where someone was **verbally harassing** a girl or woman to stop the harassment?
A. Yes B. No C. Not applicable wasn't in a situation
If yes, how many times? 1 2 3 4 5
13. Since you took the YMOT classes, have you found yourself in any situations where someone was **physically threatening** a girl or woman?
A. Yes B. No C. Not applicable, wasn't in a situation
If yes, how many times? 1 2 3 4 5
14. Did you successfully **intervene** in any situations where someone was **physically threatening** a girl or woman to stop the threats?
A. Yes B. No C. Not applicable, wasn't in a situation
If yes, how many times? 1 2 3 4 5
15. Since you took the YMOT classes, have you found yourself in any situations where someone was **physically hurting or sexually assaulting** a girl or woman?
A. Yes B. No C. Not applicable, wasn't in a situation
If yes, how many times? 1 2 3 4 5
16. Did you **intervene** successfully in any situations where someone was physically **hurting or sexually assaulting** a girl or woman?
A. Yes B. No C. Not applicable, wasn't in a situation
If yes, how many times? 1 2 3 4 5

Acknowledgment

The authors thank Nickson Langat who was instrumental in coordinating data collection for the study and Bonnie Halpern-Felsher for her critical review of the article.

Authors' Note

For information on the Your Moment of Truth (YMOT) intervention used in this study, please contact No Means No Worldwide (nomeansnoworldwide.org).

Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Jake Sinclair, MD, and Lee Paiva are donors to the nonprofit, nongovernmental organizations (NGOs) Ujamaa-Africa and No Means No Worldwide. Jake Sinclair and Lee Paiva are the founders of Ujamaa-Africa and No Means No Worldwide. Jake Sinclair was the chairman of the Board of Directors at Ujamaa-Africa and the interim executive director when data were collected; he currently serves as a voluntary board member and remains the interim executive director. Lee Sinclair is the chairman of the Board of Directors of No Means No Worldwide. Both serve on a voluntary basis. Jennifer Keller is a volunteer Board Member of No Means No Worldwide. Dr. Keller became a board member after the program was implemented and data collected. Benjamin Omondi Mboya is an employee of Ujamaa-Africa.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The data collection and entry were funded by the nonprofit nongovernmental organization (NGO) Ujamaa-Africa. Lou Bergholz was compensated in part by No Means No Worldwide for his work in developing the Your Moment of Truth (YMOT) curriculum.

References

- Banyard, V. L. (2008). Measurement and correlates of prosocial bystander behavior: The case of interpersonal violence. *Violence and Victims, 23*, 83-97.
- Banyard, V. L., & Williams, L. M. (2007). Women's voices on recovery: A multi-method study of the complexity of recovery from child sexual abuse. *Child Abuse & Neglect, 31*, 275-290. doi:10.1016/j.chiabu.2006.02.016
- Banyard, V. L., Williams, L. M., & Siegel, J. A. (2004). Childhood sexual abuse: A gender perspective on context and consequences. *Child Maltreatment, 9*, 223-238. doi:10.1177/107755904266914
- Barker, G., Ricardo, C., Nascimento, M., Olukoya, A., & Santos, C. (2010). Questioning gender norms with men to improve health outcomes: Evidence of impact. *Global Public Health, 5*, 539-553. doi:10.1080/17441690902942464

- Bonomi, A. E., Anderson, M. L., Reid, R. J., Rivara, F. P., Carrell, D., & Thompson, R. S. (2009). Medical and psychosocial diagnoses in women with a history of intimate partner violence. *Archives of Internal Medicine, 169*, 1692-1697. doi:10.1001/archinternmed.2009.292
- Bott, S., Morrison, A., & Ellsberg, M. (2005). *Preventing and responding to gender-based violence in middle and low-income countries: A global review and analysis* (World Bank Working Paper Series, No. 3618). Washington, DC: The World Bank.
- Briere, J., & Jordan, C. E. (2004). Violence against women: Outcome complexity and implications for assessment and treatment. *Journal of Interpersonal Violence, 19*, 1252-1276. doi:10.1177/0886260504269682
- Brown, A. L., & Messman-Moore, T. L. (2010). Personal and perceived peer attitudes supporting sexual aggression as predictors of male college students' willingness to intervene against sexual aggression. *Journal of Interpersonal Violence, 25*, 503-517. doi:10.1177/0886260509334400
- Casey, E. A., & Lindhorst, T. P. (2009). Toward a multi-level, ecological approach to the primary prevention of sexual assault: Prevention in peer and community contexts. *Trauma Violence Abuse, 10*, 91-114. doi:10.1177/1524838009334129
- Cook-Craig, P. G., Millspaugh, P. H., Recktenwald, E. A., Kelly, N. C., Hegge, L. M., Coker, A. L., & Pletcher, T. S. (2014). From empower to Green Dot: Successful strategies and lessons learned in developing comprehensive sexual violence primary prevention programming. *Violence Against Women, 20*, 1162-1178. doi:10.1177/1077801214551286
- Dahlberg, L. L., & Krug, E. G. (2002). Violence: A global public health problem. In E. G. Krug, L. L. Dahlberg, J. A. Mercy, A. B. Zwi, & R. Lozano (Eds.), *World report on violence and health* (pp. 1-56). Geneva, Switzerland: World Health Organization.
- Danielson, C. K., & Holmes, M. M. (2004). Adolescent sexual assault: An update of the literature. *Current Opinion in Obstetrics and Gynecology, 16*, 383-388.
- DeGue, S., DiLillo, D., & Scalora, M. (2010). Are all perpetrators alike? Comparing risk factors for sexual coercion and aggression. *Sexual Abuse, 22*, 402-426. doi:10.1177/1079063210372140
- De Koker, P., Mathews, C., Zuch, M., Bastien, S., & Mason-Jones, A. J. (2014). A systematic review of interventions for preventing adolescent intimate partner violence. *Journal of Adolescent Health, 54*, 3-13. doi:10.1016/j.jado-health.2013.08.008
- Foubert, J. D., & Perry, B. C. (2007). Creating lasting attitude and behavior change in fraternity members and male student athletes: The qualitative impact of an empathy-based rape prevention program. *Violence Against Women, 13*, 70-86. doi:10.1177/1077801206295125
- Gidycz, C. A., Orchowski, L. M., & Berkowitz, A. D. (2011). Preventing sexual aggression among college men: An evaluation of a social norms and bystander intervention program. *Violence Against Women, 17*, 720-742. doi:10.1177/1077801211409727

- Gregson, S., Zhuwau, T., Ndlovu, J., & Nyamukapa, C. A. (2002). Methods to reduce social desirability bias in sex surveys in low-development settings: Experience in Zimbabwe. *Sexually Transmitted Diseases, 29*, 568-575.
- Kilonzo, N., Taegtmeier, M., Molyneux, C., Kibaru, J., Kimonji, V., & Theobald, S. (2008). Engendering health sector responses to sexual violence and HIV in Kenya: Results of a qualitative study. *AIDS Care, 20*, 188-190. doi:10.1080/09540120701473849
- Lundgren, R., & Amin, A. (2015). Addressing intimate partner violence and sexual violence among adolescents: Emerging evidence of effectiveness. *Journal of Adolescent Health, 56*(1 Suppl.), S42-S50. doi:10.1016/j.jadohealth.2014.08.012
- McMahon, S. (2010). Rape myth beliefs and bystander attitudes among incoming college students. *Journal of American College Health, 59*, 3-11. doi:10.1080/07448481.2010.483715
- Miller, E., Das, M., Tancredi, D. J., McCauley, H. L., Virata, M. C., Nettiksimmons, J., O'Conner, B., Ghosh, S., & Verma, R. (2014). Evaluation of a gender-based violence prevention program for student athletes in Mumbai, India. *Journal of Interpersonal Violence, 29*, 758-778. doi:10.1177/0886260513505205
- Miller, E., Tancredi, D. J., McCauley, H. L., Decker, M. R., Virata, M. C., Anderson, H. A., Stetkevich, N., Brown, E.W., Moideen, F., & Silverman, J. G. (2012). "Coaching boys into men": A cluster-randomized controlled trial of a dating violence prevention program. *Journal of Adolescent Health, 51*, 431-438. doi:10.1016/j.jadohealth.2012.01.018
- Pavia, L. S., & Bergholz, L. (2013). *Your moment of truth curriculum manual*. Unpublished manuscript.
- Payne, D. L., Lonsway, K. A., & Fitzgerald, L. F. (1999). Rape myth acceptance: Exploration of its structure and its measurement using the Illinois Rape Myth Acceptance Scale. *Journal of Research in Personality, 33*, 27-68.
- Population Council. (2008). *Sexual violence and gender based violence in Africa*. New Delhi, India: Author.
- Ricardo, C., Eads, M., & Barker, G. (2011). *Engaging boys and men in the prevention of sexual violence*. Pretoria, South Africa: Sexual Violence Research Initiative.
- Rivera-Rivera, L., Allen-Leigh, B., Rodriguez-Ortega, G., Chavez-Ayala, R., & Lazcano-Ponce, E. (2007). Prevalence and correlates of adolescent dating violence: Baseline study of a cohort of 7,960 male and female Mexican public school students. *Preventive Medicine, 44*, 477-484. doi:10.1016/j.ypmed.2007.02.020
- Sarnquist, C., Omondi, B., Sinclair, J., Gitau, C., Paiva, L., Mulinge, M., Cornfield, D., & Maldonado, Y. (2014). Rape prevention through empowerment of adolescent girls. *Pediatrics, 133*(5), e1226-e1232. doi:10.1542/peds.2013-3414
- Sinclair, J., Sinclair, L., Otieno, E., Mulinge, M., Kapphahn, C., & Golden, N. H. (2013). A self-defense program reduces the incidence of sexual assault in Kenyan adolescent girls. *Journal of Adolescent Health, 53*, 374-380. doi:10.1016/j.jadohealth.2013.04.008
- Tavrow, P., Withers, M., Obbuyi, A., Omollo, V., & Wu, E. (2013). Rape myth attitudes in rural Kenya: Toward the development of a culturally relevant attitude

- scale and “blame index.” *Journal of Interpersonal Violence*, 28, 2156-2178. doi:10.1177/0886260512471086
- Tjaden, P., & Thoennes, N. (2006). *Extent, nature, and consequences of rape victimization: Findings from the national violence against women survey*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.
- Ulirsch, J. C., Ballina, L. E., Soward, A. C., Rossi, C., Hauda, W., Holbrook, D., . . . McLean, S. A. (2014). Pain and somatic symptoms are sequelae of sexual assault: Results of a prospective longitudinal study. *European Journal of Pain*, 18, 559-566. doi:10.1002/j.1532-2149.2013.00395.x
- Verma, R. K., Pulerwitz, J., Mahendra, V., Khandekar, S., Barker, G., Fulpagare, P., & Singh, S. K. (2006). Challenging and changing gender attitudes among young men in Mumbai, India. *Reproductive Health Matters*, 14(28), 135-143. doi:10.1016/S0968-8080(06)28261-2
- World Health Organization, London School of Hygiene and Tropical Medicine, & South African Medical Research Council & Medicine. (2013). *Global and regional estimates of violence against women*. Geneva, Switzerland: World Health Organization.

Author Biographies

Jennifer Keller, PhD, is a clinical associate professor and senior research scholar in the Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine. Her research includes the prevention and intervention of interpersonal violence, and she is particularly interested in empowerment models.

Benjamin O. Mboya, MS is employed by Ujamaa-Africa and is working to prevent violence against women and girls particularly in informal urban settlements of Kenya and Malawi.

Jake Sinclair, MD, is the founder of Ujamaa-Africa and is a San Francisco/Nairobi-based pediatrician. His research interests include economic empowerment for women survivors of intimate partner violence and the prevention of violence and sexual assault against children and adolescents.

Oscar W. Githua, PhD, is an assistant professor of psychology at the United States International University-Africa in Kenya. His interests include working with youth from at-risk and low-income populations in preventing violence, including violence against women and girls.

Munyae Mulinge, PhD, is a professor of sociology at the United States International University-Africa. His interests include job satisfaction and organizational attachment, higher education (with an emphasis on leadership/governance and the quality of postgraduate training), and social problems, including ethnicity and HIV/AIDS.

Lou Bergholz, BS, is the founder of Edgework Consulting. His areas of interest include the following: postemergency and postconflict program design, trauma-sensitive curriculum, sports-based youth development, and adolescent decision making.

Lee Paiva is the founder and director of No Means No Worldwide. She is working to build a global network of training hubs for young women and men interested in teaching violence prevention and intervention strategies to women and children in extreme risk areas.

Neville H. Golden, MD, is the chief of adolescent medicine and the Marron and Mary Elizabeth Kendrick professor in pediatrics at Stanford University School of Medicine. His research interests include gender-based violence, reproductive health in teens, and the medical complications of adolescent with eating disorders.

Cynthia Kappahn, MD, MPH, is a clinical professor of adolescent medicine, at Stanford University School of Medicine. Her research interests include the prevention of interpersonal violence, and adolescents' access to care for reproductive and mental health concerns, including eating disorders.