

Curriculum for a Cause: An Examination of the *Brothers as Allies* Pilot Project and its Impact on Attitudes and Behaviors Associated with Sexual Violence Perpetration and Prevention

Honors Thesis

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ABSTRACT

Sexual violence is a widespread public health problem that disproportionately affects youth and young adults. While most research has focused on adult perpetrators and college students, studies indicate that tendencies to commit acts of sexual violence originate in childhood and adolescence. In light of this information, many agencies have articulated an interest in evaluating and implementing upstream interventions to prevent sexual violence at its source. Given its sociocultural roots and mechanisms of perpetuation, namely socially-destructive hegemonic masculine ideals internalized by boys and young men throughout development, implementing a male engagement curriculum called *Brothers as Allies* (BAA) for boys and young men has become of great interest. BAA was created to promote healthy masculine development and prosocial relationships among boys, their peers, and adults, but because it is a new curriculum, no study to date has evaluated its impact on sexual violence and its associated attitudes and behaviors. This study uses pilot data from a larger randomized waitlist design study to examine the preliminary impact of BAA participation on attitudes and behaviors associated with sexual violence perpetration and prevention, namely adolescent masculine ideology in relationships and bystander efficacy among adolescent boys aged 12-15, as well as their self-reported incidence of sexual harassment and sexual violence. Results indicated that BAA had minimal, insignificant effects for both the control and intervention groups, with some results reflecting unexpected, socially-adverse changes. While these findings may be concerning, they reflect the unpredictability of pilot studies, challenges in evaluation research, limitations of statistical analyses, and the need for further research to fully realize and holistically assess the impact of BAA and other interventions on risk and protective factors for sexual violence among adolescent youth.

ACKNOWLEDGEMENTS

~What we achieve inwardly will change outer reality~

-Plutarch

(from J.K. Rowling's 2008 Commencement Speech at Harvard University)

I was forever changed when I watched a video of J.K. Rowling's 2008 commencement address at Harvard University. It was by far the most reflective yet forward-thinking, inspiring, and memorable acts of verbal artistry I had the privilege of experiencing. Maybe it had to do with the many references to Harry Potter or her jokes about parenting. Perhaps it was the raw and down-to-earth delivery of her life story or all of the above. But one remarkable moment that stood out was her message to recognize our innate value, channel our inner magic and power to imagine a better world, and change outer reality. It was my first memory of philosophical and spiritual transformation, which had a tremendous impact on my adolescent essence and present self to say the least.

Driven by greater purpose, I began searching for and developing connections between my personal interests, academic undertakings, and professional aspirations, excited to challenge myself and discover endless possibilities for impact. Upon arriving at Cornell, I was embraced by the kindest and most welcoming family of friends, scholars, and mentors I could have asked for. They provided endless opportunities for academic, social, and spiritual growth during my time as a student that allowed me to learn and achieve, but most importantly, envision a better world and future for myself and those around me. My Cornell experience has not been far off from a kid's in a candy store, and as this 4-year sugar-high begins to subside (or so I think), I

have many people I want to thank for their impact on me, my inward achievement, and the outer reality that has shaped both me and others.

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experiences we've shared throughout life. Ada, I am so proud of the strong, independent scholar, athlete, and humanitarian you've become, and Daniel, I am always so amazed and touched by your tremendous artistry and how selfless and sensitive you are to everyone around you.

Although we may be separated in age by a year or ten, in reality, we are very much in the present together. I am so excited to witness what you two achieve in the future and will be supporting you every step of the way.

To my mom and dad, to whom I owe my existence and everything I've achieved, thank you: for instilling me with enthusiasm, a love for learning, an inquisitive mind at birth, and for everything else you've done to raise me. I know that I would not be anything if it weren't for you, so I dedicate this thesis to you and thank you for being my 妈妈 and 爸爸 for 22 years and forevermore. I am proud that you are my parents and that I am your son.

Finally, I'd like to say thank you to every single individual who has impacted me in any way, shape, or form in my 22 years of life. I am a strong believer that there is inherent value and truth to be learned from every experience: from good to bad, informal to formal, and big to small. I have, in one way or another, as a student of life, learned from and been touched by every interaction and moment I've shared with each and every one of you, and I am nothing but grateful for that. It is every single interaction, moment, and memory that has allowed me to experience my internal metamorphosis and live an enlightened existence that I look forward to further exploring and developing in future years. It has been a true privilege and pleasure, and I can only hope that I will make as great of a difference in the lives of others as you have in mine.

“We do not need magic to change the world, we carry all the power we need inside ourselves
already: we have the power to imagine better.”

~J.K. Rowling

INTRODUCTION

Sexual Violence

Sexual violence is a widespread public health problem that affects many women and men at some point in their lives. It is defined as a sexual act that is committed or attempted by another person without consent given by the victim or against someone who is unable to consent or refuse (Breiding & Centers for Disease Control [CDC], 2014). At least 1 in 5 women (~20%) and 1 in 60 men (~2%) experience rape or attempted rape at some point in their lives, while over 40% of women and 23% of men experience other forms of sexual violence in their lifetimes, including unwanted sexual contact and sexual coercion (Breiding & Centers for Disease Control [CDC], 2014).

Sexual violence can have lasting physical, emotional, and psychological effects on victims. Victims are prone to conditions ranging from depression and self-harming behaviors to post-traumatic stress disorder and suicide, among others (National Sexual Violence Resource Center [NSVRC], 2016). Additionally, sexual violence does not only affect those directly involved in the assault. As parents, friends, partners, children, spouses, and/or coworkers of the victim try to make sense of what happened, they may feel fear, guilt, anger, and/or self-blame (NSVRC, 2016). Sexual violence also has an impact on communities and society as a whole. In addition to the fear, anger, or disbelief that schools, workplaces, neighborhoods, campuses, and religious/cultural communities may feel in response to the assault, costs that communities face in light of these events include medical services, criminal justice expenses, crisis and mental health service fees, and the lost contributions of the victims due to their time off, diminished performance, job loss, and/or inability to work (NSVRC, 2016). These lost contributions due to sexual violence are a significant cost to society. The 1995 U.S. Merit Systems Protection Board

stated that sexual harassment alone cost the federal government \$327 million in losses associated with job turnover, sick leave, and individual and group productivity among federal employees (Erdeich, Slavet, & Amador, 1995). Moreover, sexual violence threatens the fabric of society by instilling a climate of violence and resulting fear (NSVRC, 2016).

Like with many other forms of violence, there are disparities in the prevalence of sexual violence among different populations. Beyond its disproportionate prevalence among women compared to men, multiracial and American Indian/Alaska Native women are more likely to experience rape or attempted rape in their lifetimes compared to women of other racial and ethnic backgrounds (Breiding & Centers for Disease Control [CDC], 2014). Similarly, sexual violence disproportionately burdens individuals who identify as gay, lesbian, bisexual, and transgender (Breiding & Centers for Disease Control [CDC], 2014). Finally, youth and young adults are disproportionately affected by sexual violence, with 80% of female victims reporting their first rapes before the age of 25 (Breiding & Centers for Disease Control [CDC], 2014).

Sexual Violence Perpetration and Hegemonic Masculinity

Perpetrators of sexual violence often know their victims. Among juvenile victims, 93% reported that they knew their perpetrator (Rape, Abuse, & Incest National Network [RAINN], n.d.). With regard to ethnicity, a majority of sexual violence is carried out by those identifying as white (57%) or black (27%). About 8% of perpetrators are of unknown ethnicity, 6% identify as 'other', and 1% identify as 'mixed' (RAINN, n.d). Perpetrators of sexual violence also often have criminal histories or a prior conviction, and a majority of released prisoners are rearrested for a new crime within 3 years (RAINN, n.d). With regard to gender and age, a majority of perpetrators are men, and about 50% of perpetrators are 30 or older, 25% are 21-29, 9% are 18-20, and 15% are 17 or younger (RAINN, n.d). These statistics reveal that while a majority of

sexual violence perpetration is carried out by adult males with tendencies to commit crimes, a sizeable proportion of perpetrators exists among the youth population.

Although much of sexual violence research has focused on adult male perpetrators, several retrospective studies have indicated that sexual violence commonly originates in adolescence and that the seriousness of sexual offenses progresses with age, as acts become increasingly violent and aggressive (Borowsky, Hogan, & Ireland, 1997). Additionally, research has indicated that sexual aggression and violence among youth is commonly associated with, but not limited to the following risk factors: a history of sexual or physical abuse, exposure to family violence, substance use/abuse during childhood, delinquency/antisocial behavior, general aggression, personal attitudes condoning violence, gang involvement and other negative peer influences, deviant sexual fantasies, and exposure to sexually explicit media. With regard to protective factors, studies have indicated that greater family, school, and community connectedness, academic achievement, empathy and social responsibility, emotional health and connectedness, and appropriate parental reasoning in family conflict resolution are a few protective factors among others that help mitigate against sexual violence perpetration (Borowski et al., 1997; Hunter, Figueredo, Malamuth, & Becker, 2004; CDC, 2018; Tharp-Matjasko, 2013).

As previously indicated, the prevalence of sexual violence throughout society is mediated by many influences, and there is no straightforward way to ameliorate the problem given its deep sociocultural roots. More specifically, sexual violence can be considered a symptom of a systemic problem embedded in the sociocultural fabric of society, namely the maladaptive internalization and actualization of socially-destructive hegemonic masculine ideals by boys and young men. In order to conform to traditional hegemonic views of masculinity, which have been associated with serious risky behaviors such as reckless driving, violence, and suicide (Sabo &

Gordon, 1995), boys and men are taught to suppress their emotions and feelings in order to achieve an ideal sense of manliness (Kilmartin, 2005). For example, boys and men are encouraged and expected to be aggressive, competitive, in control, tough, and successful (Kivel, 2007). With these expectations comes pressure: those who step outside the ideal masculine box (“act-like-a-man” box; Kivel, 2007) are often verbally insulted or physically abused. According to the social learning theories, boys are rewarded in society for complying to male gender-specific behavior expectations (Kilmartin, 2005) and punished for cross-gender behavior that lies outside the five gender norms for men: the antifeminine element (stifling openness or vulnerability), the success element (proving masculinity at work and in sport), the aggressive element (using force in interpersonal interactions), the sexual element (initiating and controlling all sexual relations), and the self-reliant element (staying cool and stable) (Brannon, 1976; Doyle 1985). Three studies found that in a variety of situations, scenarios that simulated or depicted men violating one or more of these gender norms were consistently associated with disdain and poorer ratings among study participants (Costrich, Feinstein, Kidder, Marecek, & Pascale, 1975). Moreover, when these expectations and norms conflict with the attitudinal and behavioral tendencies of a boy or man, he experiences gender role strain, which can lead to the onset of negative emotions, stress, or unhealthy coping behaviors such as substance abuse or aggression (O’Niel, Helms, Gable, David, & Wrightsman, 1986). As a result, many boys and young men experience serious levels of adversity that are manifested in bullying, violence, crime, school dropout rates, learning disabilities, injuries from accidents, and binge drinking (Park, Paul, Irwin, & Brindis, 2005). Recent studies have also shown that boys have fared poorly in areas of education, mental health, access to health care, bullying, violence, and substance abuse (Hossfeld, Gibraltarik, Bowers, & Taormina, 2012), reflecting the overarching gender-specific

health disparities inflicted by expectations for boys and young men to adhere to traditional masculine norms.

Sexual Violence Prevention

Although research about sexual violence prevention is expanding, especially in response to events in the news and the public's cry for action, there is still limited information about primary prevention for sexual violence, especially regarding perpetration. Much of the knowledge generated about sexual violence among young people has been focused on college individuals (Lisak & Miller, 2002; Coker, Cook-Craig, & Williams, 2011; Coker, Fisher, & Bush, 2014; CDC, 2014; Elias-Lambert & Black, 2015; Cares-Stapleton, 2014; Orchowski, Berkowitz, Boggis, & Oesterle, 2015; Saling Unitted & Dulaney, 2015; Gardella, 2014). This is partly due to the increased social and political awareness of college individuals, the disproportionately high burden of sexual violence on college campuses, convenience in studying this population, and Title IX mandates and state policies urging for increases in prevention education ("State of New York Senate Bill S5965", 2015; "Not Alone: The First Report of the White House Task Force to Protect Students from Sexual Assault", 2014; "It's On Us", 2014). For example, after a nationwide call for prevention education across college campuses, Cornell University and several other higher education institutions established residential programs dedicated to educating first-year students and upperclassmen on the culture surrounding sexual misconduct, the legal consequences and implications of assault, the traumatic effects of assault on victims, and ways to intervene and best support victims. This was a notable effort to improve sexual assault awareness, but focused on an older, more mature demographic of interest.

While much activism against sexual assault has and continues to occur on college campuses, it is also crucial that sexual violence prevention efforts target younger individuals,

especially young males, in their earlier developmental life stages. This is because boys are becoming increasingly exposed to the media and are presented with many models of what masculinity means during some of their most formative years of life. This wealth of information available can pose conflicting messages to this demographic, so serving boys and young men, particularly adolescent, middle school aged youth, is of utmost importance. By providing reliable, evidence-based curricula and models of masculinity to refer to, researchers and community practitioners can have a potentially significant impact on this demographic's risk for sexual violence perpetration later in life.

In light of the need for upstream interventions to address the complex etiology of sexual violence perpetration, the CDC has expressed an interest in understanding and assessing shared risk and protective factors for multiple types of violence, particularly with relation to how existing programs and initiatives may impact rates of sexual violence. More specifically, in 2015, the CDC released a request for proposals focused on the evaluation of upstream interventions targeting sexual violence perpetration, rather than victimization, reflecting a desire to inhibit sexual violence at its source or root cause (Wilkins et al., 2014; DeGue, Massetti, & Holt, 2012). Cornell University, in collaboration with the New York State Department of Health (NYSDOH), received one of five grants aimed at testing the efficacy of promising upstream approaches for preventing sexual violence. The current study is a collaboration between the NYSDOH and Cornell University researchers to evaluate a curriculum called *Brothers as Allies* (BAA).

Brothers as Allies

Brothers as Allies is a male engagement curriculum developed by the One Circle Foundation (OCF), a youth development-based education organization with a suite of programs for boys and young men, as well as girls and young women, that have been implemented by

hundreds of agencies nationwide. OCF's programs for boys and young men are especially popular in social services or juvenile justice settings ("Council of Boys and Young Men: Participating Organizations", 2016).

BAA is based on two existing OCF curricula and includes additional content intended to enhance sexual violence awareness and, more specifically, use strengths-based techniques to empower boys and young men ages 12-15 to challenge unhealthy gender norms and further their emotional, social, and cultural literacy. BAA is designed to acknowledge and build upon boys' strengths and capabilities while simultaneously challenging stereotypes, questioning unsafe attitudes about masculinity, and encouraging solidarity through personal and collective responsibility (Hossfeld, et al., 2012). Curriculum activities engage participants to challenge myths about how to be a 'real boy' or 'real man' while promoting valuable relationships with peers and adult facilitators through activities, dialogue, and self-expression (Hossfeld, et al., 2012). BAA ultimately posits that facilitating the development of positive relationships, prosocial values, and healthy masculinity will reduce engagement in sexual aggression and violence (Hossfeld, et al., 2012; One Circle Foundation, n.d.).

BAA is based on a foundation of theoretical principles, one of which is the Relational-Cultural Theory (RCT), which suggests that individuals grow toward and through relationships. RCT also acknowledges the influence of cultural experiences on relationships, particularly for historically-marginalized demographics like women and men of color (Gray, Braun, & Galvez, 2008; Comstock, Hammer, Strentzsch, Cannon, & Parsons, 2008; Jean Baker Miller Training Institute, n.d.). BAA particularly recognizes the importance of mutual empathy and empowerment and uses a mentorship model to promote these values (One Circle Foundation, n.d.). The intended BAA result is a reciprocal relationship founded upon respect between the

program facilitators and the boys, which then serves as a model for future positive relationships with both peers and adults.

BAA is also based on a positive psychology model framework, which is considered a best practice in the field of social work. It encourages program facilitators to identify, promote, and reinforce natural strengths, assets, and positive behaviors of their program participants (Hossfeld et al., 2012; Kobau-Thompson, 2011; Tweed-Viljoen, 2011; Saleebey, 1996). Furthermore, BAA is informed by principles of resiliency, masculine identity formation theory, adolescent brain development, trauma responsiveness, and cross-cultural traditions/rites of passage approaches for developing males. Given the health disparities many boys and young men face from the pressure to conform to hegemonic masculine ideals and their likelihood to act as perpetrators of sexual violence throughout life, BAA ultimately intends to alleviate boys' increased rates of violent crime, bullying, substance abuse, and risky sexual behaviors, while enhancing their autonomy in responding to social, emotional, cultural, and economic conditions that may impact their lives (Hossfeld, et al., 2012) and those of others.

Each session of the curriculum is designed to be taught in approximately 1.5-hour sessions for 10 consecutive weeks by facilitators, who are trained beforehand by program personnel to deliver the curriculum in a standardized manner. In order to strengthen and stabilize relationships across the timespan of the curriculum, BAA is delivered in groups of no more than 10 boys each. Each meeting includes an opening ritual, warm-up, check-in activity, focused activity (e.g. group challenge), opportunity for reflection, and closing ritual. The opening ritual marks the beginning of the gathering and invites the boys into 'council time' while also setting a strong positive tone for the session. For example, each boy may ring a bell or engage in a special handshake with a pledge before joining the council. The facilitator will then introduce the group

to the chosen theme of the week by providing a short description of the meeting agenda. The warm-up that follows is a brief activity that allows the boys to connect and interact physically to cultivate an atmosphere of teamwork and collaboration. Afterward, the check-in allows the boys to express whatever they wish to say about their lives and/or the activity. At this point, the purposeful activity is introduced and implemented as the main component of the group session. Each purposeful activity is intended to engage the boys' awareness and skill-building in a safe, protective environment without the danger of losing connection with others. One example of a purposeful activity is the session seven focus on "Gender Roles and Expectations". During the "Gender Box Search", the boys use cutouts from magazines to visualize the portrayal of gender roles and are prompted to discuss how these messages and rigidly-defined roles and expectations impact the way men act among each other and toward women and LGBTQ individuals. After the purposeful activity, the council reconvenes to allow time for personal reflection. For example, following the "Gender Box Search", boys are encouraged to reflect on the differences and similarities between men and women, portrayed gender roles, their feelings about gender roles, and ways to show respect toward girls, women, and LGBTQ individuals in their lives. A competent facilitator will carefully and successfully encourage boys to share responses and feelings so that they can explore commonalities, interpret themes from the curriculum, and connect what they've learned to their experiences in real life. The goal is not to tell them the "right" answer, but to provoke reflection and authentic sharing with the aim of expanding the boundaries of possibility and understanding. The weekly session ends with a ritual that brings closure to the experience and sends the boys out into the world with a positive tone, gratitude, and respect. This closing ritual, which remains unchanged throughout all group sessions, is

similar to the opening ritual in that it unites the council for a final moment to cultivate the group's spirit (Mankowski-Gray, 2008; One Circle Foundation, n.d.).

The Need and Call for BAA Evaluation

Despite its basis in extant OCF curricula, some of which are currently being used in studies examining other outcomes such as academic performance, BAA itself has not been implemented or evaluated before. In addition, the need for further evaluation research on the impact of male engagement programs in reducing problematic attitudes and behaviors later in life, such as a sexual aggression, is paramount.

Previous studies of OCF curricula have indicated an increase in school engagement related to attendance and positive behavior in school among curriculum participants (Gray et al., 2008; Mankowski et al., 2011), with positive school engagement, as shown before, serving as an important protective factor against youth sexual violence perpetration (Wilkins et al., 2014; DeGue et al., 2012; Tharp-Matjasko, 2013). Another study in 2012 examined the relationship between OCF curricula and adherence to traditional masculine norms and found that participants were slower to adapt to traditional masculine ideology than their control peers (Gray, Mankowski, & Anderson-Nathe, 2012). However, few studies have examined or evaluated the effects of OCF curricula from a trifocal perspective: monitoring its effects on attitudinal and behavioral predictors and mitigators of sexual violence as well as its effects on the actual incidence of sexual violence perpetration among program participants.

Additionally, previous studies of OCF curricula have had notable limitations; many utilized a simple pre-post design with no comparison group or have used non-equivalent control groups. Two studies also stated that program fidelity was not assessed during the evaluation process; for instance, one study did not formally train their facilitators (Gray et al., 2008;

Mankowski et al., 2011). These limitations, along with the aforementioned societal need for young male engagement, provided the foundation upon which Cornell was selected by the CDC to evaluate BAA in collaboration with the NYSDOH.

Study Aims and Hypotheses

This preliminary study expands upon evaluation research for sexual violence prevention programming by implementing a waitlist design utilizing equivalent intervention and control groups. Using pilot data collected at baseline and at the program's conclusion, this study assesses: 1) whether receiving the *Brothers as Allies* program is effective in positively changing attitudes related to masculine identity and ideology within relationships, 2) whether receiving the *Brothers as Allies* program is effective in reducing incidence of sexual harassment and sexual violence, and 3) whether receiving the *Brothers as Allies* program is effective in positively influencing bystander efficacy, which is defined as a bystander's level of confidence in his/her/their ability, skills, and capacity to effectively intervene to help prevent or stop an act of harassment or violence (Pradipto, Prayoga, & Pea, 2016).

I hypothesize that through prosocial shifts in perceptions of masculinity as a result of BAA, BAA participants will more frequently report statements reflecting healthy masculine ideology compared to their non-BAA counterparts. Given these anticipated ideological differences, I also hypothesize that BAA participants will report fewer instances of sexual harassment behavior, both physical and verbal/non-physical (indicated by several proxies, such as making unwanted sexual remarks or soliciting sexual photos) compared to their non-BAA counterparts. Finally, based on literature suggesting that bystander efficacy and willingness to intervene plays a crucial role in preventing sexual violence (Banyard, Moynihan, & Plante, 2007; Banyard, Plante, & Moynihan, 2005; Banyard, 2011), I hypothesize that BAA participants will

report higher scores of bystander efficacy at the end of the program compared to their non-BAA counterparts. Because the analysis for this study utilizes pilot data collected from a small sample of participants, I anticipate that any changes in the aforementioned measures among BAA participants and non-BAA participants will not be sizeable or significant, as a larger study would be needed to fully realize and holistically assess the curriculum's impact.

METHODS

Design

The aims of the overarching BAA study are to assess whether the curriculum is effective in reducing sexual violence perpetration and developing attitudinal and behavioral protective factors for sexual violence prevention among middle school aged boys.

The BAA curriculum is usually implemented in a series of sessions that are delivered over a 5-10 week period (if delivered twice a week, it is a five week program, and if delivered once a week, it is a ten week program). However, given the time requirements, the curriculum does not comfortably fit into most school day settings. To circumnavigate these constraints imposed by working in the field and in school settings, BAA was implemented twice a week to shorten the curriculum's length to five weeks, and with community partners through daytime summer programs for middle school boys in Rochester to avoid potential time conflicts with participant schedules.

In this rolling recruitment, quasi-experimental pilot study, two participating summer programs, not individual boys themselves, were randomly designated as either the intervention or control group as they entered the study. Boys in the control group continued their usual daytime activities for the duration of the study, while boys in the program designated as the intervention group participated in the *Brothers as Allies* curriculum in place of their regular program activities for two days per week (total = 45; intervention = 28; control = 17). Each BAA session lasted between one to two hours, and the study extended from July to August of 2017.

All study-related activities were approved by the Cornell Institutional Review Board for Human Participants and the Buffalo Public School District before curriculum implementation and data collection.

Participants

Demographic characteristics. Age, ethnicity, and sexual orientation were documented for each participant. Ethnicity measures were derived from the National Census and conglomerated into three broad categories: “African/African American”, “Hispanic”, and “Other”.

Participants in this preliminary study consisted of 77 middle school aged boys between the ages of 12 and 15. Participants that did not identify as “male” and/or “middle school aged” were excluded from the study. The average ages of participants were as follows: intervention = 13.39 years (N = 28); control = 13.29 years (N = 17). Participants were largely designated as African/African American (intervention = 63%, N = 17; control = 56%, N = 9), while a minority were designated as Hispanic (intervention = 11%, N = 3; control = 25%, N = 4) or another ethnicity (‘Other’) (intervention = 26%, N = 7; control = 19%, N = 3). All respondents identified as heterosexual. **Figures 2 and 3** depict the distributions of participant age and ethnicity, respectively.

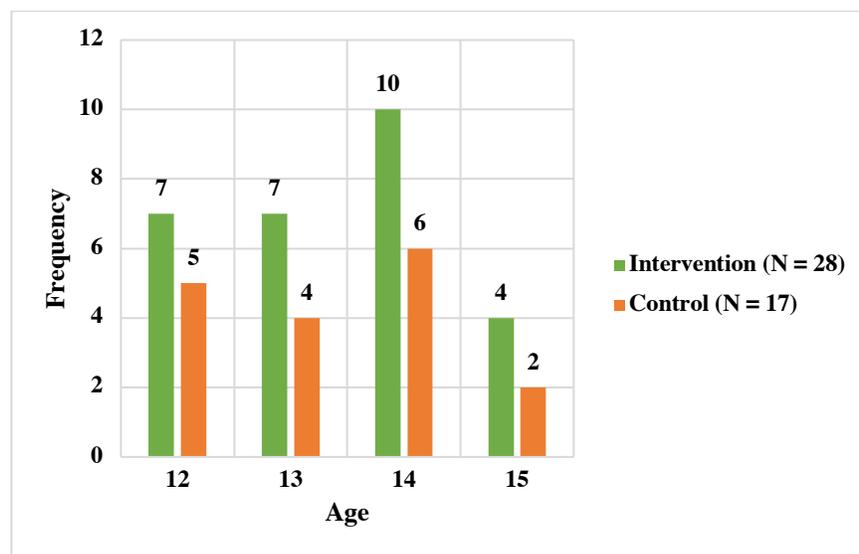


Figure 2. Participant Age Distribution.

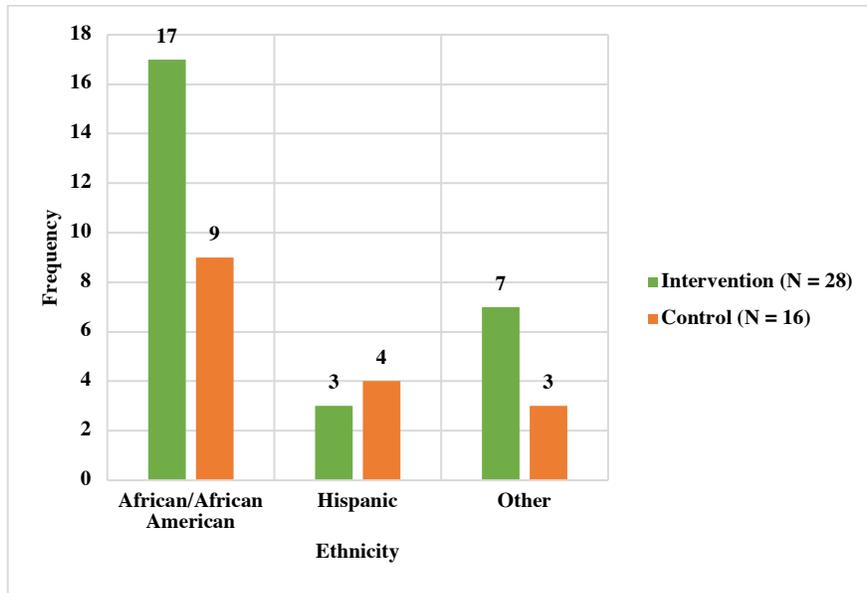


Figure 3. Participant Ethnicity Distribution.

Data Collection

While all participants resided in Rochester, shared similar demographic characteristics, and participated in similar afterschool/summer programs, selected program sites were in separate locations and communities, so physical distance between sites made the risk for contamination quite low. Additionally, randomization occurred between, and not within, sites to help reduce this risk. While data collection for the larger study will occur at baseline, immediately following the intervention, three months following the intervention, and six months following the intervention, this pilot study only analyzed data collected at baseline (Time 1) and immediately post-intervention (Time 2).

All data were collected by trained staff members recruited for the study. The 77 participants were initially approached, recited an assent script, and given the option to opt out of the study; none of the participants opted out. In addition to documenting active assent statements from participants, the participation agreement also requested two means of contacting each

participant's parents. The Institutional Review Board of Cornell University deemed this study 'low-risk' for participants, so guardians were notified about the study through these two means and given a week to alert study personnel if they did not consent to have their child participate. Each consenting participant was then assigned a unique identifier encoded on a tablet. During the administration of the pre- and post-intervention surveys, data collectors were available to clarify ambiguities for students. Research assistants returned to schools to administer makeup surveys to students who absent on days of survey administration.

Each survey took about 30-40 minutes to complete. In exchange for their time and involvement in the study, participants were awarded cash or a gift certificate each time they successfully completed a survey. Forty-five participants were included in the analysis for this study upon completing both baseline and post-intervention surveys. The other thirty-two participants were excluded because they failed to complete the post-intervention survey.

Figure 1 depicts the stages of study participation from recruitment through data collection.

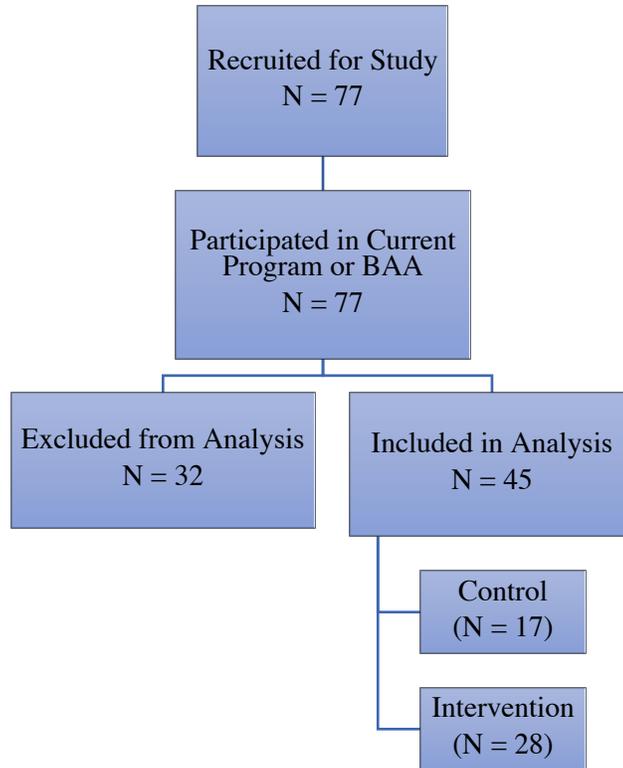


Figure 1. Flow Diagram of Study Participation Stages.

Measures

Three primary outcomes were analyzed in this preliminary study: sexual harassment behavior (physical and verbal/non-physical aggression), adolescent masculine ideology in relationships, and bystander efficacy. Other measures used to examine mediating and moderating effects of outcomes, such as social connectedness and facilitator competency, were not analyzed. Questions and response options for the scales were modified before administration to accommodate a middle school comprehension level if deemed necessary.

Additional information on each of the modified scales and measures used for analysis in this study follows. For copies of the original scales, refer to **Appendices A-D**.

Sexual harassment. One act that is highly indicative of current or future sexual violence perpetration is sexual harassment, which commonly refers to engaging in repeated and unwanted touching, comments, and perverse behavior directed toward another individual. More specifically, given that physical contact is not required to classify an act of sexual harassment as opposed to sexual violence, it is likely that sexual harassment will be more prevalent compared to sexual violence among adolescent youth (NSVRC, 2016).

A measure of sexual harassment used in this study is a truncated version of the Sexual Harassment Scale (SHS), which was originally created by the American Association of University Women as part of a 10-year research program to examine the effect of school climate on girls and boys (Bryant, 1993). The full SHS assesses sexual harassment occurring during school-related times such as traveling to and from school, in classrooms and hallways, on school grounds during the day and after school, and on school trips (Bryant, 1993). It defines sexual harassment as “unwanted and unwelcome sexual behavior that interfered with the student’s life”, not behaviors the student liked and explicitly approved of (Bryant, 1993). The original questionnaire asks about 14 forms of sexual harassment ranging from less invasive to highly invasive (e.g. “I touched, grabbed, or pinched someone in a sexual way without them wanting me to” vs. “I forced someone to have sexual intercourse with me when they did not want to.”) It includes both physical and verbal subscales (Bryant, 1993).

This study used four of the physical harassment items and three of the verbal/non-physical harassment items. These are shown in **Tables 1** and **2**, respectively. In accordance with scale directions, items were summed and scored such that higher scores reflected higher levels of harassment. Response options were slightly modified.

Table 1. Modified Physical Harassment Subscale - Sexual Harassment Survey.

Statement	Response Options
“I showed, gave, or left someone sexual pictures, drawings, messages, or notes.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I forced someone to kiss me.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I forced someone to do something sexual, other than kissing.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I forced someone to have sexual intercourse with me when they did not want to.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>

Table 2. Modified Verbal/Non-Physical Harassment Subscale - Sexual Harassment Survey.

Statement	Response Options
“I wrote sexual messages or graffiti about someone on bathroom walls or public places.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I spread sexual rumors about someone.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I made sexual comments, jokes, gestures, or stares.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>

Along similar lines, the Sexual Experiences Survey – Long Form Perpetration (SES-LFP), originally developed in the 1970s, has been widely used to measure sexual aggression among male sex offenders and their victims (Koss, Abbey, Campbell, Norris, Testa, & White, 2006). More specifically, it attempts to identify factors linked to any degree of sexual violence perpetration (Koss et al., 2006). The survey contains 20 statements pertaining to various degrees of assault like coercion, threat, and force, with mutually exclusive categories for each level of assault (Koss et al., 2006). These include non-perpetrator, sexual coercion, sexual contact, attempted rape, and rape (Koss et al., 2006). To capture elements of harassment not well captured in the SHS, three SES items were used to supplement the SHS in this study, shown in **Table 3**. Response options were also modified, and items were summed and scored such that higher scores reflected higher levels of perpetration.

Table 3. Modified Sexual Experiences Survey – Long Form Perpetration.

Statement	Response Options
“I looked at or took photos of someone while they were undressing, nude, or having sex, without them knowing.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I looked or stared at someone in a sexual way after they had asked me to stop.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>
“I teased someone about sex or their body even though they had asked me to stop.”	0) <i>Never</i> 1) <i>Once</i> 2) <i>Twice</i> 3) <i>Three or more times</i> 10) <i>Not in the last year/30 days but before that</i> 98) <i>Not sure</i>

Adolescent Masculine Ideology in Relationships. Because BAA also intends to address the root causes of sexual violence, examining the origin of perpetration behaviors is also important. Because sexual violence perpetration often stems from the internalization of hegemonic masculine ideals, measuring levels of these beliefs within a relationship context can possibly indicate risk for current or future sexual violence perpetration among adolescent, middle school aged boys.

The Adolescent Masculine Ideology in Relationships Scale (AMIRS) was developed under the belief that while different societies exhibit different forms and degrees of masculinity, it is within and through relationships that adolescent males are socialized to accept and embody certain masculine norms within their respective societies that affects their relationships with peers (Chu, Porche, & Tolman, 2005). Through the correlation and regression analyses carried out by Chu, Porsche, and Tolman (2005), a negative association between the AMIRS and self-esteem was deduced, thereby indicating the double-edged nature of hegemonic masculinity. Despite the advantage of exerting status through embodying hegemonic masculine beliefs, aligning with these beliefs hinders adolescent boys' psychological health by limiting their ability to express themselves and engage in their interpersonal relationships, both platonic and romantic.

The scale frames masculine ideology within a relational paradigm and explores how adolescent boys resist and conform to male norms that manifest specifically within the more immediate contexts of interpersonal relationships (Chu et al., 2005). Using a list of theoretical statements, the scale measures their attitudes and beliefs about what constitutes appropriate masculine behavior within the contexts of their interpersonal relationships, and therefore the extent to which they internalize hegemonic masculine behaviors (Chu et al., 2005).

This study in particular used a truncated version of the AMIRS with eight of the twelve items from the original survey. Response options were modified as well. Higher scores on the AMIRS indicates a more socially desirable masculine identity. During psychometric testing of the pilot data, only four of the eight items loaded cleanly on one factor for both time points while the remaining four did not. Therefore, these items were dropped from the analysis. The final items are in **Table 4**. Cronbach's alpha for the final scale was acceptable at 0.779. Mean scores were used in the data analysis. The displayed response options in **Table 4** were reverse-coded so that higher scores would reflect greater frequencies of socially-favorable masculine statements.

Table 4. Modified Adolescent Masculine Ideology in Relationships Scale.

Statement	Response Options
"It is important for a guy to act like nothing is wrong, even when something is bothering him."	1) <i>No, I definitely do not agree</i> 2) <i>I don't really agree</i> 3) <i>I mostly agree</i> 4) <i>I definitely agree</i>
"In a good dating relationship, the guy gets his way most of the time."	1) <i>No, I definitely do not agree</i> 2) <i>I don't really agree</i> 3) <i>I mostly agree</i> 4) <i>I definitely agree</i>
"If a guy tells people about his worries, he will look weak."	1) <i>No, I definitely do not agree</i> 2) <i>I don't really agree</i> 3) <i>I mostly agree</i> 4) <i>I definitely agree</i>
"It is embarrassing for a guy when he needs to ask for help."	1) <i>No, I definitely do not agree</i> 2) <i>I don't really agree</i>

	<p>3) <i>I mostly agree</i></p> <p>4) <i>I definitely agree</i></p>
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Bystander Efficacy. Because BAA aims to teach and encourage prosocial behaviors and skills to its participants, measured levels of social autonomy may also partially reflect a participant's potential for long-term personal change, decreased likelihood of sexual violence perpetration, and future activism. One measure of this social autonomy is bystander intervention: the willingness to intervene or take action (as a third party) in assisting a victim of a perceived, ongoing, or completed sexual assault (Banyard, 2011). The primary goal of bystander intervention is to prevent sexual victimization before it happens, thereby exemplifying the proactive, upstream approach BAA strives for in preventing sexual violence (Banyard, 2011).

Confidence to intervene can be assessed by the Bystander Efficacy Scale (BES). The BES asks participants to indicate their confidence in performing 14 different bystander behaviors (e.g. calling 911 if someone is yelling for help, helping a friend who is getting beat up, asking to walk friends and strangers home from a party, intervening in cases of sexual assault, etc.) (Banyard, Moynihan, & Plante, 2007; Banyard, Plante, & Moynihan, 2005; Banyard, 2011). In this study, a shortened version of BES with nine of the fourteen items were administered. Response options were also modified. In the pilot data, psychometric testing revealed that 8 of the 9 items loaded cleanly on one factor for both time points so these were the items for analysis. The final items are shown in **Table 5**. Cronbach's alpha for the final scale was acceptable at 0.899. Mean scores were used in the data analysis; higher scores indicated higher bystander efficacy.

Table 5. Modified Bystander Efficacy Scale.

Statement	Response Options
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“How confident are you to tell a peer to stop if they are joking about someone else’s body?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to call for help (call 911) if you hear someone is yelling for help?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to talk to a friend who is getting beat up or hurt?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to ask a friend if they need to be walked home from a party?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to ask a stranger if they need to be walked home from a party?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to stop people from sexually touching someone who is passed out?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to do something if you see someone surrounded by a group of guys who are scaring him or her?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>
“How confident are you to tell an adult about someone you know who is being sexually hurt even if other friends don’t want you to?”	0	1	2	3	4	5	6	7	8	9	10
	<i>NOT confident..I can't do this</i>										<i>TOTALLY confident..I can definitely do this</i>

Analytical Approach

The primary aim of this preliminary study was to evaluate the effects of the *Brothers as Allies* curriculum by looking at intervention group differences for the five key outcome scales described above, while controlling for other possible demographic influences such as age. Ethnicity was ultimately not included in the model since there was little variation among participants. All outcome variables were measured at baseline prior to the intervention and shortly after program conclusion. A two-by-two repeated-measures (treatment by time) mixed model design comprised the core of the statistical models for evaluation. Statistical tests of treatment-by-time interaction were central to determining whether the BAA intervention had an effect on participants. The model for each outcome included a treatment designation (control, treatment/intervention) and time designation (baseline, follow-up) as fixed classification factors, as well as the interaction of 2 variables: 1) age as a covariate and 2) individuals as levels of a random classification factor. Analysis was by general linear mixed models with unstructured error assumption for the two scales in means form (Adolescent Masculine Ideology in Relationships Scale and Bystander Efficacy Scale) and by generalized linear mixed models with Poisson error and log link function for the three scales in sum form (Physical Harassment Subscale – Sexual Harassment Survey, Verbal/Non-Physical Harassment Subscale – Sexual Harassment Survey, and the Sexual Experiences Survey – Long Form Perpetration). Degrees of freedom were computed using the Kenward-Roger method.

RESULTS

There were no significant differences in conditions by demographic characteristics. Age, ethnicity, and sexual orientation, all of which had little variation, were therefore controlled for or excluded, for all statistical models. **Table 6** depicts the results of the Treatment by Time test. Item-level comparisons between intervention and control groups at both Time 1 and Time 2 are included in **Appendices E-I**. Item-level results of the Treatment by Time test are shown in **Appendix J**.

Table 6. Treatment by Time Mixed Model.

	Time 1	Time 2	
	Mean (SE)	Mean (SE)	P-value*
Adolescent Masculine Ideology in Relationships Scale**			
Control	3.21 (.16)	3.37 (.16)	.65
Treatment/Intervention	3.08 (.13)	3.12 (.13)	
Bystander Efficacy Scale**			
Control	6.48 (.64)	6.05 (.64)	.62
Treatment/Intervention	6.99 (.51)	6.07 (.50)	
Physical Harassment – Sexual Harassment Survey			
Control	.21 (.12)	.66 (.32)	.15
Treatment/Intervention	.17 (.08)	.22 (.10)	
Verbal or Non-Physical Harassment – Sexual Harassment Survey			
Control	.77 (.24)	1.33 (.34)	.44
Treatment/Intervention	.57 (.16)	1.39 (.28)	
Sexual Experiences Survey			
Control	.18 (.11)	.30 (.17)	.05
Treatment/Intervention	.22 (.11)	.11 (.06)	

*The P-values in the cells that are the intersections of (Treatment-Control) and (Time 2-Time 1) refer to the Treatment*Time interaction test. $\alpha = 0.05$.

**Higher scores indicate more socially-favorable masculine identity and higher levels of bystander efficacy.

Intervention Effects on Adolescent Masculine Ideology in Relationships

The first hypothesis, that BAA participation would increase positive masculine ideology, was ultimately not supported. Members of the intervention group reported higher mean scores than their control counterparts, on average, and their mean scores also increased by a greater amount (0.16) compared to the control group (0.04). However, the increase for the intervention group was not significantly higher than that for the control group ($p = 0.65$).

Intervention Effects on Bystander Efficacy

The hypothesis that BAA participation will increase bystander efficacy was not supported. The intervention group exhibited higher bystander efficacy scores, on average, compared to the control group at both Time 1 and Time 2. However, average bystander efficacy scores decreased for both the control and intervention group between Time 1 and Time 2, with the decrease for the intervention group (0.92) being larger than that for the control group (0.43). However, the decrease in the mean bystander efficacy score for the intervention group was not significant compared to that of the control group ($p = 0.62$).

Intervention Effects on Physical Harassment of the Sexual Harassment Scale

The hypothesis that BAA participation would reduce instances of physical sexual harassment was not supported. While the intervention group, on average, had lower harassment levels than the control group at both Time 1 and Time 2, both groups actually exhibited an increase in their mean harassment scores for Time 2 compared to Time 1. While the increase in mean score was greater for the control group (0.45) compared to the intervention group (0.05), there was no significant difference in the score changes between the two groups ($p = 0.15$).

Intervention Effects on Verbal/Non-Physical Harassment of the Sexual Harassment Scale

The hypothesis that BAA participation would reduce instances of verbal or non-physical sexual harassment was also not supported in this preliminary study. Both the intervention and

control groups exhibited increases in their verbal harassment scores. While the mean score for the intervention group was initially lower than that for the control group, the intervention group ultimately exhibited a higher increase in its mean verbal harassment score (0.82) than the control group (0.56). The difference between each group's change in mean score over time was not significant, however ($p = 0.44$).

Intervention Effects on Indicators of the Sexual Experiences Survey

Participants in the control group experienced an increase in the survey's indicated harassment behaviors, while participants in the intervention group experienced a decrease in these behaviors. The magnitude of change between Time 1 and Time 2 was approximately the same for both the intervention and control groups (intervention = 0.11; control = 0.12), and the temporal comparison of mean scores between the two groups was nearly, but not quite significant ($p = 0.05$). These results also discredit the hypothesis that the pilot BAA implementation reduces instances of sexual harassment/violence behaviors.

DISCUSSION

Despite the demand and promise for programs, curriculums, and other upstream interventions to reduce immediate and future risk for sexual violence, relatively little is known about the impact of these interventions, particularly for middle school aged youth in their formative adolescent years. This preliminary study, based on pilot data collected on the newly-created *Brothers as Allies* curriculum, evaluated the curriculum's approximately one-month impact on a group of middle school aged boys in a summer school program and compared these effects to an equivalent control group that continued participating in their original summer school program without BAA. More specifically, the study analyzed the curriculum's effects on sexual harassment (physical and verbal/non-physical), bystander efficacy, and adolescent masculine ideology in relationships.

As indicated in the results, BAA did not exhibit its anticipated effects. Indeed, most measures, besides adolescent masculine ideology in relationships and the sexual violence indicators of the Sexual Experiences Survey, worsened for both intervention and control groups over time. Participants in only the intervention group showed a decrease in sexual violence perpetration indicators of the Sexual Experiences Survey, but the finding was not statistically significant. These results ultimately did not support the hypotheses that BAA participants would report fewer instances of sexual harassment behavior (both physical and verbal/non-physical) and higher scores for bystander efficacy, on average, compared to non-BAA participants. Both intervention and control groups showed slight improvements in masculine ideology between Time 1 and Time 2, and the improvement in the intervention group was marginally better than that in the control group, thereby reflecting that BAA participants would more frequently report statements reflecting healthy masculine ideology, on average, compared to their non-BAA

counterparts. However, there was also a lack of statistical significance for this result. Ultimately, given the fact that all treatment*time interactions between the intervention and control groups for each measure lacked statistical significance, all results obtained from this preliminary study are null.

There could be many reasons for the oddity of this study's results. One factor could be the potential flaws in the original and modified scales. While all four of the original scales (see **Appendices A-D**) were validated, each scale's items were rephrased ("modified") to accommodate the reading levels of middle school aged boys and truncated for data analysis. These modifications could have, in turn, modified the scales' validity. Additionally, certain items in each original scale were omitted or excluded from the modified versions during survey creation or data analysis, thereby further modifying the structure, and possibly validity, of these scales. One study also found that the original Sexual Experiences Survey, in particular, lacked precision in measuring sexual violence perpetration (Anderson, Cahill, & Delahanty, 2018). More specifically, researchers noticed an order effect in the survey's measurement of perpetration and realized that in comparison with the Revised Conflicts Tactics Scales – Sexual Coercion subscale (CTS2-SC), the SES identified fewer cases of sexual violence, when it should have identified more (Anderson et al., 2018). This goes to show that particular structural flaws in the surveys administered and analyzed could have contributed to the unexpected results.

It is also possible that in examining BAA's preliminary effects, the analyses were not focused on investigating the most appropriate measures or outcomes, given the study's time frame. Because BAA is primarily dedicated to fostering social connectedness and developing avenues of informal social support for adolescent boys, it is possible that the measures of sexual harassment, adolescent masculine ideology, and bystander efficacy were too distal from the

intended effects of the curriculum to measure over the course of a month. Changes in more upstream and ideological measures often take a longer time to develop, and while certain conscious actions are more easily modifiable within a short period of time, changing more deeply-rooted attitudes and behaviors that are instinctual or subconscious requires additional effort and persistence if the effects are to last.

Another challenge inherent to evaluation research that presented itself during this study was the difficulty in recruiting enough participants, leading to a small sample size. Because the number of boys in the summer programs at baseline was already very limited, sites for this preliminary study were saturated with all possible program participants that were considered eligible (middle school aged boys between 12-15 years old). However, the initial sample size for the study was 77 participants, a size still too small to conduct a power analysis for. It would take around 500-700 participants to conduct a power analysis on sexual harassment measures in particular, since these incidents are deemed rarer than others among boys of this age.

Additionally, the final sample size for the analysis was narrowed down to 45 participants, nearly half of the original pilot group's size, since 32 of the original participants did not complete the post-intervention survey. Given these structural limitations, the study was not sufficiently powered, statistically speaking. However, it was an extremely useful "trial run" to practice implementing the BAA curriculum for a group of boys and allowed the Cornell research team to collect preliminary data gleaned information on potential outcomes from participating in BAA. Additionally, this study served as a feasibility assessment through which the Cornell research team was able to collect various amount of qualitative information (e.g. survey language comprehension among the boys and facilitator experiences in implementing the program) to inform and improve the broader, overarching BAA evaluation (i.e. its timeline, protocols,

surveys, other materials, etc.). Given additional time, funding, and resources, conducting multiple efficacy trials could have been even more beneficial and informative.

Because this preliminary study was a “trial run” for the overarching BAA study, there were imperfections in the curriculum’s implementation, which represented some other inherent challenges common to program evaluation research. Each study site was managed by multiple people including site coordinators, program facilitators, data collectors, and research assistants, so the process of providing the curriculum and fielding participant survey responses was not a seamless process; it required a lot of coordination between multiple entities. As a result of human error in some cases, it was not possible to collect information for all study variables at each site.

An issue of compliance also presented itself when many participants left several items blank throughout both pre- and post-intervention surveys, or presumably answered some insincerely or without fully understanding the questions, thereby possibly biasing the study’s results. It is also possible that because survey administration only happened twice (pre- and post-intervention) instead of regularly after each program session, study participants were not able to contribute evidence of weekly reflection in the form of survey data; this could have led to the great disparities apparent between the two time points of the study. Essentially, recall bias between the two survey time points was probably a culprit given the lengthy amount of time between survey administrations and the stigma and possible discomfort associated with answering personal questions about sensitive topics (a risk factor commonly associated with recall bias) like sexual harassment.

Despite the pessimistic focus of these discussion points, there is a silver lining to every cloud. It is possible that although survey responses and study results were prone to recall and mono-informant biases given that outcomes were self-reported through surveys, the unexpected

results from this study could also reflect an increased sensitivity to the constellation of behaviors assessed between Time 1 and Time 2, which would explain why the intervention group exhibited worsening scores over time. Since the curriculum dedicated ample time to discuss and reflect on many personal and serious topics, BAA might have been successful in raising greater awareness for the issue of sexual violence and its associated issues among its participants, thereby improving their awareness and recognition of past and current actions and increasing their likelihood of reporting them. However, it is unclear why scores worsened over time in the control group as well. One possible explanation is that extraneous factors were at play in the community and not controlled for analytically. For example, a far-reaching, thought-provoking article or case in the news or community affecting most residents in the area could have potentially notable effects on non-BAA participant awareness for the issue of sexual violence. In scenarios of increased awareness, each additional incident, thought, or behavior recognized, remembered, and reported would artificially inflate trends given this study's small sample size for each measure, especially for relatively underreported events like sexual harassment.

Ultimately, this preliminary study yielded unexpected results, but given its structural limitations and the lack of experience implementing this curriculum, there is still hope that *Brothers as Allies* does have a significant and positive impact on risk and protective factors related to sexual violence perpetration and prevention. More specifically, if the results of this study did indeed result from synergistic interactions between structural and statistical limitations coupled with external influences in the community and society at large, there is even greater optimism that BAA is able to raise awareness for and combat the issue of sexual violence and its associated sociocultural issues. After all, according to author, teacher, and spiritual leader Eckhart Tolle, "Awareness is the greatest agent for change." In the future, further research

studies analyzing a variety of measures and multiple, larger samples should be conducted to fully and accurately elucidate and evaluate the effectiveness of *Brothers as Allies* and other upstream interventions in preventing sexual violence.

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APPENDICES

Appendix A

Original AAUW Sexual Harassment Survey (SHS)

6. During the last year, how often, if at all, have YOU done the following things to someone (this includes students, teachers, other school employees, or anyone else) during school-related times *when that person did not want you to?*

Again, school-related times include when you are on your way to or home from school, when you are on school grounds, including before, during, or after school hours, and when you're on a school trip.

	Never	1-2 Times	3-5 Times	6+ Times	Not Sure
a. Made sexual comments, jokes, gestures, or looks.	a	b	c	d	e
b. Showed, gave, or left someone sexual pictures, photographs, illustrations, messages, or notes.	a	b	c	d	e
c. Wrote sexual messages/graffiti about someone on bathroom walls, in locker rooms, etc.	a	b	c	d	e
d. Spread sexual rumors about someone.	a	b	c	d	e
e. Said someone was gay or lesbian.	a	b	c	d	e
f. Spied on someone as they dressed or showered at school.	a	b	c	d	e
g. Flashed or "mooned" someone.	a	b	c	d	e
h. Touched, grabbed, or pinched someone in a sexual way.	a	b	c	d	e
i. Pulled at someone's clothing in a sexual way.	a	b	c	d	e
j. Intentionally brushed against someone in a sexual way.	a	b	c	d	e
k. Pulled someone's clothing off or down.	a	b	c	d	e
l. Blocked someone's way or cornered someone in a sexual way.	a	b	c	d	e
m. Forced someone to kiss you.	a	b	c	d	e
n. Forced someone to do something sexual, other than kissing.	a	b	c	d	e

Appendix B

Original Sexual Experiences Survey – Long Form Perpetration (SES-LFP)

The following questions concern sexual experiences. We know these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope this helps you to feel comfortable answering each question honestly. Place a check mark in the box showing the number of times each experience has happened. If several experiences occurred on the same occasion--for example, if one night you told some lies and had sex with someone who was drunk, you would check both boxes a and c. The past 12 months refers to the past year going back from today. Since age 14 refers to your life starting on your 14th birthday and stopping one year ago from today.

		How many times in the past 12 months	How many times since age 14
1.	I stared at someone in a sexual way or looked at the sexual parts of their body after they had asked me to stop.	0 1 2 3+	0 1 2 3+
2.	I made teasing comments of a sexual nature about someone's body or appearance after they had asked me to stop.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3.	I sent someone sexual or obscene materials such as pictures, jokes, or stories in the mail or over the Internet, after they had asked me to stop.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
4.	I showed someone pornographic pictures when they had not agreed to look at them.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5.	I made sexual or obscene phone calls to someone when they had not agreed to talk with me.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6.	I watched someone while they were undressing, were nude, or were having sex, without their consent.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7.	I took photos or videotapes of someone while they were undressing, were nude, or were having sex, without their consent.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
8.	I showed someone the private areas of my body (ex. butt, penis, or breasts) without their consent.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9.	I made sexual motions to someone, <i>such as</i> grabbing my crotch, pretending to masturbate, or imitating oral sex without their consent.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
10.	I masturbated in front of someone without their consent.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Appendix C**Original Adolescent Masculine Ideology in Relationships Scale (AMIRS)**

1. It's important for a guy to act like nothing is wrong, even when something is bothering him.
2. In a good dating relationship, the guy gets his way most of the time.
3. I can respect a guy who backs down from a fight.^a
4. It's ok for a guy to say no to sex.^a
5. Guys should not let it show when their feelings are hurt.
6. A guy never needs to hit another guy to get respect.^a
7. If a guy tells people his worries, he will look weak.
8. I think it's important for a guy to go after what he wants, even if it means hurting other people's feelings.
9. I think it is important for a guy to act like he is sexually active even if he is not.
10. I would be friends with a guy who is gay.^a
11. It's embarrassing for a guy when he needs to ask for help.
12. I think it's important for a guy to talk about his feelings, even if people might laugh at him.^a

NOTE: Range for each item is 1 (*disagree a lot*) to 4 (*agree a lot*)

a. Item is reversed for scoring.

Appendix D

Original Bystander Efficacy Scale (BES)

Please read each of the following behaviors. Indicate in the column *Confidence* how confident you are that you could do them. Rate your degree of confidence by recording a number from 0 to 100 using the scale given below:

0	10	20	30	40	50	60	70	80	90	100
can't do	quite uncertain				moderately certain					very certain

	Confidence
1. Express my discomfort if someone makes a joke about a woman's body.	_____%
2. Express my discomfort if someone says that rape victims are to blame for being raped.	_____%
3. Call for help (i.e. call 911) if I hear someone in my dorm yelling "help."	_____%
4. Talk to a friend who I suspect is in an abusive relationship.	_____%
5. Get help and resources for a friend who tells me they have been raped.	_____%
6. Able to ask a stranger who looks very upset at a party if they are ok or need help.	_____%
7. Ask a friend if they need to be walked home from a party.	_____%
8. Ask a stranger if they need to be walked home from a party.	_____%
9. Speak up in class if a professor is providing misinformation about sexual assault.	_____%
10. Criticize a friend who tells me that they had sex with someone who was passed out or who didn't give consent.	_____%
11. Do something to help a very drunk person who is being brought upstairs to a bedroom by a group of people at a party.	_____%
12. Do something if I see a woman surrounded by a group of men at a party who looks very uncomfortable.	_____%
13. Get help if I hear of an abusive relationship in my dorm or apartment	_____%
14. Tell an RA or other campus authority about information I have that might help in a sexual assault case even if pressured by my peers to stay silent.	_____%

Appendix E

Physical Harassment Subscale –Item-Level Comparisons at Time 1 and Time 2

Table 7. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Sexual Pictures, Drawings, Messages, or Notes.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“I showed, gave, or left someone sexual pictures, drawings, messages, or notes.”	Time 1	Control	15	.07	.258	.067					
		Intervention	26	.19	.567	.111					
“I showed, gave, or left someone sexual pictures, drawings, messages, or notes.”	Time 2	Control	14	.14	.535	.143					
		Intervention	26	.19	.491	.096					
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means						
										95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper
“I showed, gave, or left someone sexual pictures, drawings, messages, or notes.”	Time 1	Equal variances assumed	3.015	.090	-.808	39	.424	-.126	.156	-.440	.189
		Equal variances not assumed			-.969	37.540	.339	-.126	.130	-.388	.137
“I showed, gave, or left someone sexual	Time 2	Equal variances assumed	.208	.651	-.294	38	.770	-.049	.168	-.389	.291

pictures, drawings, messages, or notes.”		Equal variances not assumed			-.287	24.851	.777	-.049	.172	-.404	.306
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Table 8. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Forced Kissing.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“I forced someone to kiss me.”	Time 1	Control	14	5.79	.579	.155					
		Intervention	27	5.96	.192	.037					
“I forced someone to kiss me.”	Time 2	Control	16	2.69	.793	.198					
		Intervention	27	2.89	.424	.082					
Independent Samples Test		Levene’s Test for Equality of Variances		t-test for Equality of Means							
										95% CI of the Diff.	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“I forced someone to kiss me.”	Time 1	Equal variances assumed	9.566	.004	-1.457	39	.153	-.177	.122	-.423	.069
		Equal variances not assumed			-1.114	14.509	.283	-.177	.159	-.517	.163
“I forced someone to kiss me.”	Time 2	Equal variances assumed	4.254	.046	-1.088	41	.283	-.201	.185	-.575	.172

		Equal variances not assumed			-.939	20.168	.359	-.201	.214	-.648	.246
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Table 9. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Other Forced Sexual Activity.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“I forced someone to do something sexual, other than kissing.”	Time 1	Control	14	.07	.267	.071					
		Intervention	26	.04	.196	.038					
“I forced someone to do something sexual, other than kissing.”	Time 2	Control	17	.41	.939	.228					
		Intervention	26	.08	.392	.077					
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means						
										95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper
“I forced someone to do something sexual, other than kissing.”	Time 1	Equal variances assumed	.793	.379	.446	38	.658	.033	.074	-.117	.183
		Equal variances not assumed			.406	20.725	.689	.033	.081	-.136	.202
“I forced someone to do something sexual,	Time 2	Equal variances assumed	12.376	.001	1.622	41	.113	.335	.206	-.082	.752

other than kissing.”		Equal variances not assumed			1.393	19.692	.179	.335	.240	-.167	.837
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Table 10. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Forced Sex.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“I forced someone to have sexual intercourse with me when they did not want to.”	Time 1	Control	14	.07	.267	.071					
		Intervention	27	.04	.192	.037					
“I forced someone to have sexual intercourse with me when they did not want to.”	Time 2	Control	16	.19	.544	.136					
		Intervention	26	.08	.392	.077					
Independent Samples Test		Levene’s Test for Equality of Variances		t-test for Equality of Means							
										95% CI of the Diff.	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“I forced someone to have sexual intercourse with me when they did not want to.”	Time 1	Equal variances assumed	.897	.349	.474	39	.638	.034	.073	-.112	.181
		Equal variances not assumed			.427	20.200	.674	.034	.080	-.133	.202
“I forced someone to have sexual intercourse with me	Time 2	Equal variances assumed	2.147	.151	.765	40	.449	.111	.145	-.182	.403

when they did not want to.”		Equal variances not assumed			.708	24.624	.486	.111	.156	-.211	.433
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Appendix F

Verbal/Non-Physical Harassment Subscale – Item-Level Comparisons at Time 1 and Time 2

Table 11. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Sexual Messages and Graffiti Written in Public.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“I wrote sexual messages or graffiti about someone on bathroom walls or public places.”	Time 1	Control	14	.07	.267	.071						
		Intervention	25	.00	.000	.000						
“I wrote sexual messages or graffiti about someone on bathroom walls or public places.”	Time 2	Control	15	.20	.414	.107						
		Intervention	27	.11	.424	.082						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“I wrote sexual messages or graffiti about someone on bathroom walls or public places.”	Time 1	Equal variances assumed	8.565	.006	1.351	37	.185	.071	.053	-.036	.179	
		Equal variances not assumed			1.000	13.000	.336	.071	.071	-.083	.226	
“I wrote sexual messages or graffiti about	Time 2	Equal variances assumed	1.147	.291	.657	40	.515	.089	.135	-.185	.362	

someone on bathroom walls or public places.”		Equal variances not assumed			.661	29.626	.514	.089	.134	-.186	.364
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Table 12. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Sexual Rumors.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“I spread sexual rumors about someone.”	Time 1	Control	12	.08	.289	.083						
		Intervention	24	.00	.000	.000						
“I spread sexual rumors about someone.”	Time 2	Control	15	.20	.775	.200						
		Intervention	27	.19	.681	.131						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“I spread sexual rumors about someone.”	Time 1	Equal variances assumed	9.973	.003	1.435	34	.160	.083	.058	-.035	.201	
		Equal variances not assumed			1.000	11.000	.339	.083	.083	-.100	.267	
“I spread sexual rumors about someone.”	Time 2	Equal variances assumed	.023	.879	.064	40	.949	.015	.230	-.451	.480	

		Equal variances not assumed			.062	26.036	.951	.015	.239	-.477	.506
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Table 13. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Sexual Comments, Jokes, Gestures, and Stares.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“I made sexual comments, jokes, gestures, or stares.”	Time 1	Control	12	1.00	.953	.275						
		Intervention	23	.70	.876	.183						
“I made sexual comments, jokes, gestures, or stares.”	Time 2	Control	14	1.29	1.326	.354						
		Intervention	25	1.36	1.150	.230						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“I made sexual comments, jokes, gestures, or stares.”	Time 1	Equal variances assumed	.133	.718	.947	33	.350	.304	.321	-.349	.958	
		Equal variances not assumed			.921	20.798	.367	.304	.330	-.383	.992	

“I made sexual comments, jokes, gestures, or stares.”	Time 2	Equal variances assumed	1.026	.318	-.183	37	.856	-.074	.406	-.896	.747
		Equal variances not assumed			-.176	23.962	.862	-.074	.423	-.946	.798

Appendix G

Modified Sexual Experiences Survey – Item-Level Comparisons at Time 1 and Time 2

Table 14. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Subtle Looks and Secret Photos.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“I looked at or took photos of someone while they were undressing, nude, or having sex, without them knowing.”	Time 1	Control	14	.14	.535	.143					
		Intervention	27	.26	.813	.156					
“I looked at or took photos of someone while they were undressing, nude, or having sex, without them knowing.”	Time 2	Control	16	.31	.873	.218					
		Intervention	27	.07	.385	.074					
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means						
										95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper
“I looked at or took photos of someone while they were undressing, nude, or having sex, without them knowing.”	Time 1	Equal variances assumed	.970	.331	-.483	39	.632	-.116	.241	-.604	.371
		Equal variances not assumed			-.549	36.578	.586	-.116	.212	-.546	.313
“I looked at or took photos of someone while they	Time 2	Equal variances assumed	6.761	.013	1.238	41	.223	.238	.193	-.151	.628

were undressing, nude, or having sex, without them knowing.”		Equal variances not assumed			1.034	18.511	.314	.238	.231	-.245	.722
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Table 15. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Persistent Looks and Stares.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“I looked or stared at someone in a sexual way after they had asked me to stop.”	Time 1	Control	14	.14	.535	.143						
		Intervention	28	.14	.591	.112						
“I looked or stared at someone in a sexual way after they had asked me to stop.”	Time 2	Control	16	.25	.775	.194						
		Intervention	27	.22	.698	.134						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“I looked or stared at someone in a sexual way after they had asked me to stop.”	Time 1	Equal variances assumed	.000	1.000	.000	40	1.000	.000	.188	-.379	.379	
		Equal variances not assumed			.000	28.601	1.000	.000	.181	-.371	.371	

"I looked or stared at someone in a sexual way after they had asked me to stop."	Time 2	Equal variances assumed	.052	.822	.121	41	.904	.028	.229	-.435	.491
		Equal variances not assumed			.118	29.030	.907	.028	.236	-.454	.510

Table 16. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Persistent Teasing.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
"I teased someone about sex or their body even though they had asked me to stop."	Time 1	Control	13	.31	.751	.208					
		Intervention	27	.26	.813	.156					
"I teased someone about sex or their body even though they had asked me to stop."	Time 2	Control	16	.31	.873	.218					
		Intervention	27	.04	.192	.037					
Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means							
				95% CI of the Diff.							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
"I teased someone about sex or their body even though they had asked me to stop."	Time 1	Equal variances assumed	.081	.777	.181	38	.858	.048	.268	-.494	.591
		Equal variances not assumed			.186	25.599	.854	.048	.261	-.487	.584

“I teased someone about sex or their body even though they had asked me to stop.”	Time 2	Equal variances assumed	12.457	.001	1.588	41	.120	.275	.174	-.075	.626
		Equal variances not assumed			1.244	15.868	.232	.275	.221	-.194	.745

Appendix H

Modified Adolescent Masculine Ideology in Relationships Scale - Item-Level Comparisons
at Time 1 and Time 2

Table 17. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Acting Like Nothing is Wrong.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“It is important for a guy to act like nothing is wrong, even when something is bothering him.”	Time 1	Control	17	3.06	1.029	.250					
		Intervention	28	2.75	.844	.160					
“It is important for a guy to act like nothing is wrong, even when something is bothering him.”	Time 2	Control	17	3.24	.752	.182					
		Intervention	28	3.18	.819	.155					
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means						
										95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper
“It is important for a guy to act like nothing is wrong, even when something is bothering him.”	Time 1	Equal variances assumed	.552	.462	1.095	43	.280	.309	.282	-.260	.878
		Equal variances not assumed			1.043	28.895	.306	.309	.296	-.297	.915
“It is important for a guy to act like nothing is	Time 2	Equal variances assumed	.013	.911	.232	43	.818	.057	.244	-.436	.550

wrong, even when something is bothering him.”		Equal variances not assumed			.237	36.195	.814	.057	.239	-.428	.542
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Table 18. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Always Getting Your Way in Relationships.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“In a good dating relationship, the guy gets his way most of the time.”	Time 1	Control	17	3.06	.899	.218						
		Intervention	28	3.32	.723	.137						
“In a good dating relationship, the guy gets his way most of the time.”	Time 2	Control	16	3.44	.629	.157						
		Intervention	28	3.14	.932	.176						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“In a good dating relationship, the guy gets his way most of the time.”	Time 1	Equal variances assumed	.063	.802	-1.077	43	.288	-.263	.244	-.754	.229	
		Equal variances not assumed			-1.020	28.421	.316	-.263	.257	-.789	.264	
“In a good dating relationship, the guy gets his way most of the time.”	Time 2	Equal variances assumed	1.380	.247	1.124	42	.267	.295	.262	-.234	.823	

his way most of the time.”		Equal variances not assumed			1.248	40.666	.219	.295	.236	-.182	.772
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Table 19. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Expressing Worries and Looking Weak.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“If a guy tells people about his worries, he will look weak.”	Time 1	Control	17	3.29	1.047	.254						
		Intervention	28	3.04	.881	.167						
“If a guy tells people about his worries, he will look weak.”	Time 2	Control	17	3.35	.702	.170						
		Intervention	28	3.11	.786	.149						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
										95% CI of the Diff.		
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“If a guy tells people about his worries, he will look weak.”	Time 1	Equal variances assumed	1.259	.268	.888	43	.379	.258	.291	-.328	.845	
		Equal variances not assumed			.851	29.495	.402	.258	.304	-.362	.879	
“If a guy tells people about his worries,	Time 2	Equal variances assumed	.062	.805	1.058	43	.296	.246	.232	-.223	.714	

he will look weak.”		Equal variances not assumed			1.088	36.946	.284	.246	.226	-.212	.704
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Table 20. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Embarrassment in Asking for Help.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“It is embarrassing for a guy when he needs to ask for help.”	Time 1	Control	17	3.41	1.004	.243						
		Intervention	28	3.21	.995	.188						
“It is embarrassing for a guy when he needs to ask for help.”	Time 2	Control	17	3.53	.800	.194						
		Intervention	28	3.07	.979	.185						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“It is embarrassing for a guy when he needs to ask for help.”	Time 1	Equal variances assumed	.017	.896	.644	43	.523	.197	.307	-.421	.816	
		Equal variances not assumed			.642	33.676	.525	.197	.308	-.428	.823	
“It is embarrassing for a guy when he	Time 2	Equal variances assumed	.141	.709	1.626	43	.111	.458	.282	-.110	1.026	

needs to ask for help.”		Equal variances not assumed			1.709	39.141	.095	.458	.268	-.084	1.000
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Appendix I

Modified Bystander Efficacy Scale - Item-Level Comparisons at Time 1 and Time 2

Table 21. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Stop Joking About Someone’s Body.

T-Test		Group Statistics									
		Intervention or Control Group?	N	Mean	SD	SE Mean					
“How confident are you to tell a peer to stop if they are joking about someone else’s body?”	Time 1	Control	17	7.12	3.935	.954					
		Intervention	26	7.35	2.952	.579					
“How confident are you to tell a peer to stop if they are joking about someone else’s body?”	Time 2	Control	17	6.06	3.596	.872					
		Intervention	28	5.43	3.785	.715					
Independent Samples Test			Levene’s Test for Equality of Variances		T-test for Equality of Means						
										95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper
“How confident are you to tell a peer to stop if they are joking about someone else’s body?”	Time 1	Equal variances assumed	4.762	.035	-.217	41	.829	-.229	1.051	-2.351	1.894
		Equal variances not assumed			-.205	27.554	.839	-.229	1.116	-2.517	2.060
“How confident are you to tell a peer to stop if	Time 2	Equal variances assumed	.373	.545	.552	43	.584	.630	1.143	-1.674	2.934

they are joking about someone else's body?		Equal variances not assumed			.559	35.298	.580	.630	1.128	-1.659	2.920
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Table 22. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Calling 911 in Response to Cry for Help.

T-Test		Group Statistics									
		Intervention or Control group?	N	Mean	SD	SE Mean					
“How confident are you to call for help (call 911) if you hear someone is yelling for help?”	Time 1	Control	16	6.56	4.098	1.025					
		Intervention	26	6.92	3.610	.708					
“How confident are you to call for help (call 911) if you hear someone is yelling for help?”	Time 2	Control	17	6.71	3.636	.882					
		Intervention	28	6.39	3.881	.733					
Independent Samples Test			Levene's Test for Equality of Variances		t-test for Equality of Means						
										95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper
“How confident are you to call for help (call 911) if you hear someone is yelling for help?”	Time 1	Equal variances assumed	.485	.490	-.299	40	.767	-.361	1.208	-2.801	2.080
		Equal variances not assumed			-.290	28.806	.774	-.361	1.245	-2.908	2.187
“How confident are you to call for help (call	Time 2	Equal variances assumed	.179	.674	.268	43	.790	.313	1.166	-2.038	2.664

911) if you hear someone is yelling for help?"		Equal variances not assumed			.273	35.675	.786	.313	1.147	-2.014	2.640
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Table 23. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Talk to Friend Getting Beat up or Hurt.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“How confident are you to talk to a friend who is getting beat up or hurt?”	Time 1	Control	16	7.13	3.828	.957						
		Intervention	26	8.38	2.547	.499						
“How confident are you to talk to a friend who is getting beat up or hurt?”	Time 2	Control	17	7.41	3.743	.908						
		Intervention	27	6.85	4.026	.775						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“How confident are you to talk to a friend who is getting beat up or hurt?”	Time 1	Equal variances assumed	5.226	.028	-1.283	40	.207	-1.260	.982	-3.244	.725	
		Equal variances not assumed			-1.167	23.252	.255	-1.260	1.079	-3.491	.972	
“How confident are you to talk to a friend who	Time 2	Equal variances assumed	2.104	.154	.461	42	.647	.560	1.214	-1.890	3.009	

is getting beat up or hurt?"		Equal variances not assumed			.469	36.036	.642	.560	1.193	-1.860	2.980
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Table 24. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Asking Friend to be Walked Home.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“How confident are you to ask a friend if they need to be walked home from a party?”	Time 1	Control	16	7.63	3.631	.908						
		Intervention	26	7.73	2.864	.562						
“How confident are you to ask a friend if they need to be walked home from a party?”	Time 2	Control	17	7.18	3.450	.837						
		Intervention	28	7.04	3.873	.732						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“How confident are you to ask a friend if they need to be walked home from a party?”	Time 1	Equal variances assumed	.496	.485	-.105	40	.917	-.106	1.008	-2.144	1.932	
		Equal variances not assumed			-.099	26.369	.922	-.106	1.067	-2.299	2.087	
“How confident are you to ask a friend if	Time 2	Equal variances assumed	.621	.435	.123	43	.903	.141	1.144	-2.167	2.448	

they need to be walked home from a party?"		Equal variances not assumed			.127	37.008	.900	.141	1.112	-2.112	2.393
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Table 25. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Asking Stranger to be Walked Home.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“How confident are you to ask a stranger if they need to be walked home from a party?”	Time 1	Control	17	2.65	3.807	.923						
		Intervention	26	2.81	3.371	.661						
“How confident are you to ask a stranger if they need to be walked home from a party?”	Time 2	Control	17	3.76	3.492	.847						
		Intervention	28	2.96	4.069	.769						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“How confident are you to ask a stranger if they need to be walked home from a party?”	Time 1	Equal variances assumed	.699	.408	-.145	41	.885	-.161	1.106	-2.395	2.074	
		Equal variances not assumed			-.141	31.337	.888	-.161	1.136	-2.476	2.154	
“How confident are you to ask a stranger if	Time 2	Equal variances assumed	1.193	.281	.674	43	.504	.800	1.188	-1.596	3.196	

they need to be walked home from a party?"		Equal variances not assumed			.700	37.965	.488	.800	1.144	-1.515	3.116
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Table 26. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Stopping Sexual Touching.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“How confident are you to stop people from sexually touching someone who is passed out?”	Time 1	Control	17	7.41	4.048	.982						
		Intervention	25	8.00	3.136	.627						
“How confident are you to stop people from sexually touching someone who is passed out?”	Time 2	Control	17	6.59	4.244	1.029						
		Intervention	28	7.25	3.797	.718						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“How confident are you to stop people from sexually touching someone who is passed out?”	Time 1	Equal variances assumed	2.201	.146	-.530	40	.599	-.588	1.109	-2.830	1.654	
		Equal variances not assumed			-.505	28.555	.617	-.588	1.165	-2.972	1.796	
“How confident are you to stop people from	Time 2	Equal variances assumed	.815	.372	-.542	43	.590	-.662	1.220	-3.123	1.799	

sexually touching someone who is passed out?"		Equal variances not assumed			-.527	30.995	.602	-.662	1.255	-3.221	1.897
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Table 27. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Intervening when Guys are Scaring Someone.

T-Test		Group Statistics										
		Intervention or Control group?	N	Mean	SD	SE Mean						
“How confident are you to do something if you see someone surrounded by a group of guys who are scaring him or her?”	Time 1	Control	17	6.76	4.131	1.002						
		Intervention	25	7.72	2.923	.585						
“How confident are you to do something if you see someone surrounded by a group of guys who are scaring him or her?”	Time 2	Control	17	6.94	4.038	.979						
		Intervention	28	6.71	3.848	.727						
Independent Samples Test			Levene’s Test for Equality of Variances		t-test for Equality of Means							
											95% CI of the Diff.	
			F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper	
“How confident are you to do something if you see someone surrounded by a group of guys who are scaring him or her?”	Time 1	Equal variances assumed	4.034	.051	-.879	40	.385	-.955	1.087	-3.152	1.241	
		Equal variances not assumed			-.824	26.686	.418	-.955	1.160	-3.337	1.426	

“How confident are you to do something if you see someone surrounded by a group of guys who are scaring him or her?”	Time 2	Equal variances assumed	.159	.692	-.641	43	.525	-.773	1.205	-3.204	1.657
		Equal variances not assumed			-.634	32.624	.531	-.773	1.220	-3.256	1.710

Table 28. Differences in Intervention and Control Groups at Time 1 and Differences in Intervention and Control Groups at Time 2 – Telling an Adult about a Sexual Violence Victim.

T-Test		Group Statistics								
		Intervention or Control group?	N	Mean	SD	SE Mean				
“How confident are you to tell an adult about someone you know who is being sexually hurt even if other friends don’t want you to?”	Time 1	Control	17	6.94	4.007	.972				
		Intervention	24	8.25	2.212	.451				
“How confident are you to tell an adult about someone you know who is being sexually hurt even if other friends don’t want you to?”	Time 2	Control	17	6.06	3.665	.889				
		Intervention	28	6.93	3.741	.707				
Independent Samples Test		Levene’s Test for Equality of Variances		t-test for Equality of Means						
									95% CI of the Diff.	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	SE Diff.	Lower	Upper

“How confident are you to tell an adult about someone you know who is being sexually hurt even if other friends don’t want you to?”	Time 1	Equal variances assumed	9.434	.004	-1.341	39	.188	-1.309	.976	-3.282	.665
		Equal variances not assumed			-1.221	22.907	.234	-1.309	1.072	-3.526	.909
“How confident are you to tell an adult about someone you know who is being sexually hurt even if other friends don’t want you to?”	Time 2	Equal variances assumed	.118	.733	-.762	43	.450	-.870	1.142	-3.172	1.433
		Equal variances not assumed			-.766	34.469	.449	-.870	1.136	-3.177	1.437

Appendix J

Item-Level Treatment by Time Interactions

Table 29. Treatment by Time Mixed Model - Item-Level.

	Time 1	Time 2	
	Mean (SE)	Mean (SE)	P-value*
Adolescent Masculine Ideology in Relationships Scale**			
<i>“It is important for a guy to act like nothing is wrong, even when something is bothering him.”</i>			
Control	3.06 (.21)	3.23 (.21)	.51
Treatment/Intervention	2.75 (.16)	3.18 (.16)	
<i>“In a good dating relationship, the guy gets his way most of the time.”</i>			
Control	3.06 (.20)	3.46 (.20)	.07
Treatment/Intervention	3.32 (.16)	3.14 (.16)	
<i>“If a guy tells people about his worries, he will look weak.”</i>			
Control	3.30 (.21)	3.36 (.21)	.97
Treatment/Intervention	3.03 (.16)	3.10 (.16)	
<i>“It is embarrassing for a guy when he needs to ask for help.”</i>			
Control	3.42 (.23)	3.53 (.23)	.51
Treatment/Intervention	3.21 (.18)	3.07 (.18)	
Bystander Efficacy Scale**			
<i>“How confident are you to tell a peer to stop if they are joking about someone else’s body?”</i>			
Control	2.09 (.77)	3.27 (.77)	.15
Treatment/Intervention	3.67 (.62)	3.38 (.60)	
<i>“How confident are you to call for help (call 911) if you hear someone is yelling for help?”</i>			
Control	2.97 (.84)	2.80 (.82)	.64
Treatment/Intervention	2.87 (.66)	3.33 (.64)	
<i>“How confident are you to talk to a friend who is getting beat up or hurt?”</i>			
Control	2.34 (.82)	2.94 (.80)	.34
Treatment/Intervention	2.87 (.65)	2.25 (.64)	
<i>“How confident are you to ask a friend if they need to be walked home from a party?”</i>			
Control	2.83 (.83)	2.71 (.81)	.66
Treatment/Intervention	3.29 (.65)	2.62 (.63)	
<i>“How confident are you to ask a stranger if they need to be walked home from a party?”</i>			
Control	2.09 (.72)	3.21 (.72)	.10
Treatment/Intervention	2.02 (.58)	1.60 (.56)	

<i>“How confident are you to stop people from sexually touching someone who is passed out?”</i>			
Control	1.82 (.75)	1.56 (.75)	.54
Treatment/Intervention	2.30 (.61)	2.84 (.58)	
<i>“How confident are you to do something if you see someone surrounded by a group of guys who are scaring him or her?”</i>			
Control	2.85 (.88)	3.14 (.88)	.92
Treatment/Intervention	3.48 (.72)	3.67 (.69)	
<i>“How confident are you to tell an adult about someone you know who is being sexually hurt even if other friends don’t want you to?”</i>			
Control	2.47 (.82)	3.27 (.82)	.43
Treatment/Intervention	3.46 (.69)	3.20 (.64)	
Physical Harassment – Sexual Harassment Survey			
<i>“I showed, gave, or left someone sexual pictures, drawings, messages, or notes.”</i>			
Control	.06 (.11)	.15 (.11)	.67
Treatment/Intervention	.18 (.09)	.18 (.09)	
<i>“I forced someone to kiss me.”</i>			
Control	.18 (.11)	.32 (.11)	.72
Treatment/Intervention	.04 (.09)	.11 (.09)	
<i>“I forced someone to do something sexual, other than kissing.”</i>			
Control	.06 (.12)	.41 (.12)	.12
Treatment/Intervention	.05 (.09)	.07 (.09)	
<i>“I forced someone to have sexual intercourse with me when they did not want to.”</i>			
Control	.06 (.08)	.18 (.08)	.51
Treatment/Intervention	.05 (.07)	.07 (.07)	
Verbal or Non-Physical Harassment – Sexual Harassment Survey			
<i>“I wrote sexual messages or graffiti about someone on bathroom walls or public places.”</i>			
Control	.06 (.08)	.18 (.08)	.74
Treatment/Intervention	.04 (.06)	.11 (.06)	
<i>“I spread sexual rumors about someone.”</i>			
Control	.09 (.12)	.23 (.12)	.95
Treatment/Intervention	.02 (.10)	.18 (.10)	
<i>“I made sexual comments, jokes, gestures, or stares.”</i>			
Control	.71 (.26)	1.06 (.26)	.46
Treatment/Intervention	.57 (.20)	1.23 (.20)	

Sexual Experiences Survey			
<i>“I looked at or took photos of someone while they were undressing, nude, or having sex, without them knowing.”</i>			
Control	.12 (.16)	.29 (.16)	.20
Treatment/Intervention	.27 (.12)	.07 (.12)	
<i>“I looked or stared at someone in a sexual way after they had asked me to stop.”</i>			
Control	.11 (.15)	.23 (.15)	.83
Treatment/Intervention	.15 (.12)	.22 (.12)	
<i>“I teased someone about sex or their body even though they had asked me to stop.”</i>			
Control	.26 (.16)	.29 (.16)	.40
Treatment/Intervention	.25 (.12)	.04 (.12)	

*The P-values in the cells that are the intersections of (Treatment-Control) and (Time 2-Time 1) refer to the Treatment*Time interaction test. $\alpha = 0.05$.

**Higher scores indicate more socially-favorable masculine identity and higher levels of bystander efficacy.