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TakeCARE, a Video to Promote Bystander Behavior on College Campuses: Replication and Extension

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Abstract

Previous research has demonstrated that college students who view TakeCARE, a video bystander program designed to encourage students to take action to prevent sexual and relationship violence (i.e., bystander behavior), display more bystander behavior relative to students who view a control video. The current study aimed to replicate and extend these findings by testing two different methods of administering TakeCARE and examining moderators of TakeCARE's effects on bystander behavior. Students at four universities ($n = 557$) were randomly assigned to one of three conditions: (a) view TakeCARE in a monitored computer lab, (b) view TakeCARE at their own convenience after receiving an email link to the video, or (c) view a video about study skills (control group). Participants completed measures of bystander behavior at baseline and at a 1-month follow-up. Participants in both TakeCARE conditions reported more bystander behavior at follow-up assessments, compared with participants in the control condition. The beneficial effect of TakeCARE did not differ significantly across administration methods. However, the effects of TakeCARE on bystander behavior were moderated by students' perceptions of campus responsiveness to sexual violence, with more potent effects when students perceived their institution as responsive to reports of sexual violence.

Keywords bystander behavior, sexual violence, college students, prevention, randomized controlled trial

Sexual violence is a widespread problem on college campuses. In fact, women are more likely to experience sexual violence during their college years than during any other time in their lives ([Krebs, Lindquist, Warner, Fisher, & Martin, 2009](#)). The majority of college-campus sexual violence prevention strategies have demonstrated limited effectiveness in reducing such violence ([DeGue et al., 2014](#)). However, there is promising evidence that bystander education programs result in a greater willingness of bystanders (witnesses, as opposed to the perpetrators or victims, of the acts) to do something to attempt to prevent sexual and relationship violence from occurring, and to support victims of the violence (e.g., [Coker et al., 2016](#); [Moynihan, Banyard, Arnold, Eckstein, & Stapleton, 2010](#)). As a result, U.S. colleges have been urged to implement bystander education programs ([Campus Sexual Violence Elimination Act, 2013](#)).

Most bystander education programs have a common goal of motivating students to participate in a community-wide effort to prevent both sexual and relationship violence. This includes countering social norms that support violence (e.g., opposing a friend who is bragging about sexual conquests or acts of relationship violence), interrupting situations that could lead to violence (e.g., stopping someone from escorting an intoxicated person to a bedroom at a party for sexual purposes; interrupting a heated argument between a friend and a partner), and providing assistance to those who have experienced violence (e.g., offering help to accompany a friend to report an incident of sexual assault or relationship violence). Collectively, these actions are referred to as bystander behavior. According to a meta-analytic review of college-campus bystander education programs ([Katz & Moore, 2013](#)), the programs have moderate effects in altering college students' self-reports of efficacy and intentions to help others at risk, but smaller effects on self-reports of bystander behavior.

Since this initial meta-analytic review, there has been an increase in the number of bystander education programs that attempt to overcome the practical limitations of broadly implementing the early bystander education programs. Most of the early bystander education programs required trained staff to administer the

program, and the programs were delivered to students in a small-group format (e.g., [Banyard, Moynihan, & Plante, 2007](#); [Foubert, 2000](#)). Although these early programs showed promise in influencing students' attitudes and increasing bystander behavior, the delivery format made them expensive for universities to distribute widely to students. Furthermore, similar to many empirically supported therapeutic interventions, most of the early bystander education programs carried a risk of reduced fidelity when disseminated broadly ([Karlin & Cross, 2014](#)). That is, the program that is implemented may be dissimilar in important ways from the program that was subjected to the evaluation. To offer widespread, cost-effective distribution, without reducing fidelity, some of the newer bystander education programs use video and online formats (e.g., [Jouriles, Rosenfield, Yule, Sargent, & McDonald, 2016](#); [Salazar, Vivolo-Kantor, Hardin, & Berkowitz, 2014](#)).

TakeCARE: A Video Bystander Program

TakeCARE is a brief (approximately 24 min) video program developed to address the need for an efficacious, easy-to-implement and disseminate bystander education program for college students ([Jouriles, McDonald et al., 2016](#); [Kleinsasser, Jouriles, McDonald, & Rosenfield, 2014](#)). The video format allows it to be disseminated to students online, which obviates the need for trained staff for administration purposes, and eliminates the potential for low fidelity during its implementation (the program distributed to students is the exact same program that was evaluated). TakeCARE focuses on bystander behavior directed at friends. The "friends taking care of friends" approach is driven by developmental theory and empirical research indicating that friendships influence a variety of health behaviors during adolescence ([Cullum, O'Grady, Sandoval, Armeli, & Tennan, 2013](#); [Fitzgerald, Fitzgerald, & Aherne, 2012](#)), including greater likelihood of engaging in bystander intervention when a friend is perceived as at risk ([Levine, Prosser, Evans, & Reicher, 2005](#)).

TakeCARE attempts to increase bystander behavior by increasing students' efficacy for engaging in it, which is consistent with theory and research showing that efficacy is a key element for being a responsive bystander ([Banyard, Moynihan, Cares, & Warner, 2014](#); [Burn, 2009](#)). TakeCARE also aims to increase knowledge about sexual consent, with the idea that increased knowledge is good, in and of itself, and can prompt awareness and action, which ultimately leads to the prevention of violence. Specifically, bystanders are unlikely to respond to high-risk situations if they do not recognize that a situation poses risk ([Burn, 2009](#); [Latané & Darley, 1970](#)).

There have been three randomized controlled evaluations of TakeCARE in college-student samples ([Jouriles, McDonald, et al., 2016](#), presents two evaluations; [Kleinsasser et al., 2014](#)). In each of these evaluations, college students completed baseline questionnaires, and then were randomly assigned to view either the TakeCARE video or a control video. Afterward, students viewed the video they were assigned in the monitored computer lab. They completed follow-up questionnaires on their bystander behavior during the 1- to 2-month period following the viewing of the video. In all three evaluations, students who viewed TakeCARE, compared with those who viewed a control video, reported engaging in more bystander behavior to protect their friends from violence during the follow-up period.

These findings are encouraging and provide empirical evidence for TakeCARE's potential value. However, because of the administration method used in these three studies—having students view the video in a monitored computer lab—questions remain about TakeCARE's likely effects in a widespread dissemination effort. Specifically, a potential advantage of a brief video program, such as TakeCARE, is that it can be disseminated widely across a college campus by sending students a link to the video and allowing them to view it at their own convenience. There is evidence that other bystander education programs delivered online can have positive effects on bystander behavior ([Salazar et al., 2014](#)). However, TakeCARE's effects using this method of administration—sending students a link they can access online—have not yet been evaluated, and it is possible that TakeCARE's effects might depend, in part, on the method of administration.

TakeCARE's effects also might be influenced by the broader college-campus community in which students exist. This broader community includes campus norms and attitudes about sexual assault and relationship violence ([Banyard, 2011](#); [McMahon, 2015](#)). Students derive perceptions of their college's responsiveness to campus violence from university policies and procedures and from how other students respond to violence. When students trust that their campus leadership is committed to preventing relationship violence, they are more willing to report threats of violence ([Sulkowski, 2011](#)); therefore, the effects of bystander education programs may also be affected by students' perceptions of their college's responsiveness to campus violence. Unfortunately, this question has not yet been explored in the empirical literature. If students perceive that their university is serious about investigating reported incidents of sexual and relationship violence and supporting victims of violence, this might bolster students' resolve to protect fellow students and may potentiate bystander program effects. On the other hand, if students perceive their university to be insufficiently responsive, this might undermine the effects of a bystander program.

Present Research

In the present research, we attempt to replicate prior findings of TakeCARE's effects on bystander behavior using two different methods of administering the video. Specifically, students were randomly assigned to one of three conditions, in which they either (a) viewed TakeCARE in a monitored computer lab; (b) were sent a link to the TakeCARE video, instructed to view it within 24 hours, and viewed it at their own convenience; or (c) viewed a control video in a lab. We hypothesize that students assigned to the two TakeCARE conditions, compared with those assigned to the control condition, will report more bystander behavior at a 1-month follow-up assessment (Hypothesis 1).

We also evaluate the effects of the two different administration methods against each other. It is possible that students will not view the entire video when watching it on their own, or they may not watch it very carefully. In other research evaluating videos and online educational programs, the dosage of the program students receive relates to outcomes addressed by the program ([Abrams, Kolligian, Mills, & DeJong, 2011](#); [Mokruue, Elias, & Bry, 2005](#)). Thus, if students do not view the entire video when they are instructed to view it at their own convenience or do not watch it as carefully, effects of TakeCARE may be diminished, compared with when students view the video in a monitored setting. We hypothesize that students who view TakeCARE in a monitored computer lab, as compared with students who view TakeCARE at their own convenience, will report more bystander behavior at a 1-month follow-up assessment (Hypothesis 2).

Another aim of this research is to examine how students' perceptions of their college's responsiveness to sexual assault may affect the impact of a bystander education program. Student willingness to report threats of campus violence is positively influenced by their trust in campus leaders to take action when violence occurs ([Sulkowski, 2011](#)). If students do not believe that their university will take corrective actions against violent offenders or support victims of campus violence, such beliefs might negate the effects of bystander education programming. We hypothesize students' perceptions that their university is responsive to reports of sexual violence will moderate TakeCARE's effects on bystander behavior, so that TakeCARE is more effective when students perceive their university as more responsive (Hypothesis 3).

Method

Participants

Participants were recruited at the beginning of the 2015 spring semester from four U.S. universities (two private, two public). The private universities were located in the southwest (Pr_1) and midwest (Pr_2), and the public universities were both in the northeast (Pu_1 and Pu_2). All of the universities had existing campus activities that addressed the topic of sexual violence (e.g., social media campaigns; one-time campus events during sexual

assault awareness week), but none had implemented campus-wide bystander programs. At each university, students were recruited from undergraduate psychology classes, which attracted a fairly broad cross-section of students (courses that could be used to satisfy university general educational requirements). Thus, students who go on to declare majors in many different areas enroll in these psychology classes. At each of the universities, students received extra course credit for their participation.

The sample of 557 students who completed the baseline assessment was predominantly female ($n = 431$; 77.4%) and was racially and ethnically diverse; 59.6% were White ($n = 332$), 22.6% Asian ($n = 126$), 7.9% Black ($n = 44$), 2.7% biracial or multiracial ($n = 15$), 0.2% American Indian/Alaska Native ($n = 1$), 0.4% Native Hawaiian/Pacific Islander ($n = 2$), and 6.3% were another ethnicity ($n = 35$). Seventy-one (12.7%) indicated that they were Hispanic. This racial and ethnic diversity approximates the diversity among psychology students collectively at the four participating universities, as well as the diversity reflected in U.S. national rates of postsecondary minority enrollment ([National Center for Education Statistics, 2013](#)). The average participant age was 20.15 years ($SD = 2.98$).

Procedures

All participants completed questionnaires in a research lab at baseline and then were randomly assigned to one of three conditions: (a) TakeCARE video in-the-lab ($n = 188$), (b) TakeCARE video on-their-own ($n = 177$), or (c) study skills video in-the-lab (control condition; $n = 192$). Randomization occurred within each university using a random numbers table. Students in the TakeCARE in-the-lab and control conditions viewed their video immediately after completing the baseline questionnaires. In these two conditions, students viewed their video at an individual terminal (at some sites the terminal was in a carrel) with headphones. Students' seats were spread out, so that students were not seated directly next to other students when viewing the videos, and there was a research assistant monitoring the viewing. Students in the TakeCARE on-their-own condition were excused from the lab after completing the baseline questionnaires, and emailed a link to view TakeCARE. Students in this condition were instructed to view TakeCARE within 24 hours of receiving the link, and most viewed the video that same day: number of days between the baseline assessment and the viewing of TakeCARE ($M = 1.02$ days; $SD = 2.98$; median = 0.00 days).

In the lab, TakeCARE was played using Quicktime software; TakeCARE for the on-their-own condition was played using Wistia video, which provides the capacity to track the percentage of total video played. The same TakeCARE video was used in both TakeCARE conditions (i.e., the video itself did not differ across the conditions). In each of the three conditions, immediately after viewing the video, students were asked to complete a brief questionnaire on knowledge of sexual consent (described below), which was administered for the purpose of helping to determine whether students in the two TakeCARE conditions had paid attention to the content of the video.

Students in each of the three conditions were sent a link to complete an additional questionnaire approximately 1 month after the baseline assessment (follow-up assessment). The average number of days between the initial lab visit and completion of the follow-up assessment was 30.54 ($SD = 6.24$; median = 29.00) and did not differ across conditions ($p = .39$). [Figure 1](#) displays the flow of participants through the study. Sample retention was very high: Of the 557 students who completed the baseline assessment, 26 did not complete the 1-month follow-up assessment, resulting in a sample of 531 students (95.3% retention) with complete data. There was no differential attrition across conditions, and completers did not differ from noncompleters on any of the baseline study variables ($ps > .259$) or demographic variables ($ps > .232$) except that minority students were less likely to complete the study (92.4% of minorities were completers) than White students (97.3% were completers), Fisher's Exact Test $p = .012$. The original sample size and sample retention rate at each of the universities was as follows: $Pr_1n = 126$, 95.2%; $Pr_2n = 138$, 96.4%; $Pu_1n = 208$, 94.2%; $Pu_2n = 85$, 96.5%.

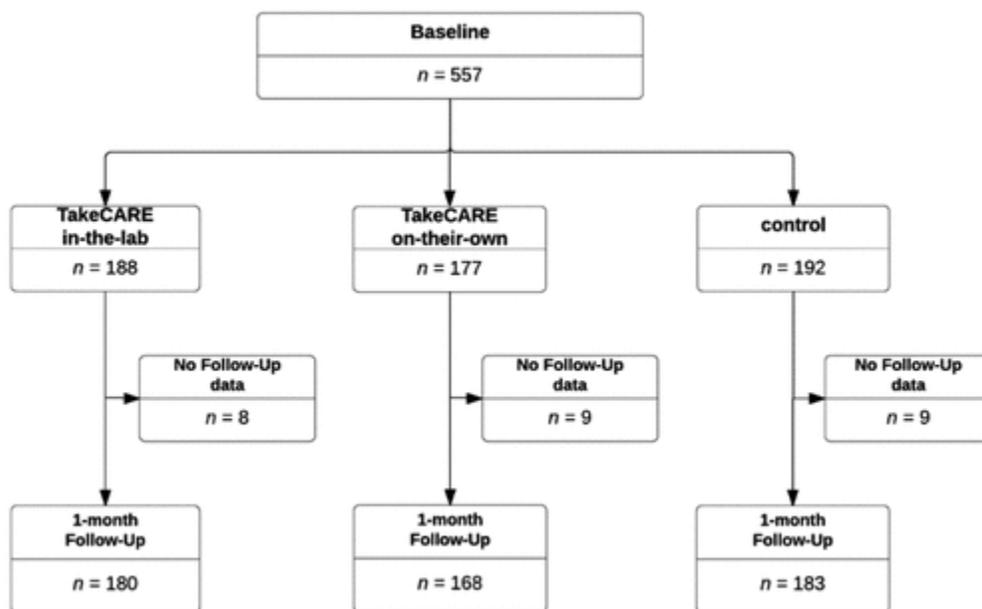


Figure 1. Participant flow and retention at baseline and follow-up assessments.

Video Programs

TakeCARE

TakeCARE describes the problem of sexual violence and how the viewer can help “take care” of friends to help prevent sexual violence, relationship violence, and assist friends who may have experienced such violence. This is done through a series of brief vignettes and the presentation of information. TakeCARE begins by acknowledging the variety of demands placed on students, as well as unique college opportunities to make new friendships, followed by a brief definition of what a helpful bystander is—someone who takes care of their friends. Next, the first vignette depicts two intoxicated friends headed to a back bedroom, illustrating a situation in which there is risk of sexual assault. The video shows one helpful way to interrupt the situation, and asks viewers to consider what they might do in similar situations before offering several alternative helpful bystander responses. The next vignette shows two partners receiving advice from friends following a drunken night of possible sexual activity. At this point, TakeCARE presents information on sexual coercion and what “consent” for sexual behavior entails, provides contact information for appropriate resources at each university campus, and offers examples of helpful bystander responses to such a situation. The third vignette depicts dating partners in a heated argument involving insults and physical aggression, followed by effective bystander responses to interrupt such violence. TakeCARE then offers more information on relationship and dating violence, including how to support friends who may be involved in abusive relationships.

In each vignette, the actors demonstrate examples of effective bystander responses that (a) prevent an implied sexual assault, (b) prevent partner violence from continuing or escalating, or (c) provide support for a friend after a sexual assault may have taken place. The phrase “TakeCARE” is used throughout the program, emphasizing “CARE” as an acronym to summarize principles of successful bystander behavior. Specifically, viewers are reminded to be: C—*Confident* in helping friends avoid risky situations, A—*Aware* that friends could get hurt, R—*Responsible* for helping, and E—*Effective* in how they help. Further description of TakeCARE is provided in other publications (e.g., [Jouriles, McDonald, et al., 2016](#); [Kleinsasser et al., 2014](#)). The TakeCARE video is 24 min long.

Control program

The control program presents material on effective study skills for college. Videos were taken from the Samford University Office of Marketing and Communication program entitled “How to Get the Most Out of Studying” and combined with slides with information about note-taking, common cognitive errors, and efficient study skills. In structure, the control program resembles the TakeCARE program in that it features videos with college students, including narration to provide study skills information, and supplementing video vignettes with written text. The control program video is 20 min long.

Measures

Study measures were embedded in a broader assessment, which included measures of school performance and motivation to study, to minimize expectancy effects.

Bystander behavior

Students completed the 49-item *Bystander Behavior (Friends) Scale* ([Banyard et al., 2014](#)) at the baseline and follow-up assessments. This scale examines a variety of bystander behaviors, such as interrupting situations in which risk of sexual or relationship abuse seemed to be escalating, accessing resources and calling for professional help, proactive behavior (e.g., seeking information about campus violence), and behaviors for staying safe when going to parties. Students reported whether or not they had engaged in each behavior in the past month; prior research indicates a 1-month period offers ample opportunity for college students to engage in bystander behavior on a college campus ([Jouriles, McDonald, et al., 2016](#)). The proportion of “yes” responses was used to provide an index of bystander behavior. Past research has found scores from this scale to be related to theorized determinants of bystander behavior, such as efficacy for engaging in bystander behavior ([Banyard et al., 2014](#); [Jouriles, Rosenfield, et al., 2016](#)). Internal consistency for our total sample was $\alpha = .94$ at baseline, and $\alpha = .96$ at follow-up for this measure. One-month test-retest reliability, measured from baseline to follow-up in the control group, was $r(182) = .64$.

Campus responsiveness to reports of sexual violence

At baseline, students rated how likely their university would be to respond in certain ways if a sexual assault were reported to a campus authority. Ratings were made for each of five items on a 4-point scale (1 = *Not at all likely*, 2 = *Slightly likely*, 3 = *Moderately likely*, 4 = *Very likely*). The items were as follows: (a) The university would support the person making the report; (b) The university would take corrective action against the offender; (c) The university would appropriately balance the needs and perspectives of both the victim and accused offender; (d) The university might offer support, but really act to protect its own interests (reverse scored); and (e) Students would support the person making the report. These items were developed for this study based on campus climate surveys from the [National Center for Campus Public Safety \(2014\)](#). Items were scored and summed. Coefficient alpha for the total sample was .79.

Knowledge of sexual consent

Students reported on knowledge of sexual consent at baseline and immediately post-video primarily for the purpose of helping us determine whether students were paying attention to the content of the TakeCARE video. They reported knowledge on a scale developed for this study, which was based on the content of the video as well as the *Knowledge of Sexual Consent* scale ([Humphreys, 2000](#)). Students indicated whether they agreed or disagreed with five statements: (a) A woman who is drinking heavily can still give legal consent to sexual activity; (b) The more alcohol a person has consumed, the less able he or she is to consent to sexual activity; (c) It is enough to ask for consent at the beginning of a sexual encounter, you don’t need to ask at every step of the way; (d) If a couple has a long history of consenting sexual activity from each other, they no longer need to ask for consent during each sexual encounter; and (e) Sexual consent should always be obtained BEFORE the start of any sexual activity. The proportion of correct responses on these five items (agreement with a true statement or

disagreement with a false statement) was used as the measure of knowledge of sexual consent. A higher proportion indicated greater knowledge of sexual consent.

Data Analysis

We conducted an ANCOVA to test the first two hypotheses: (1) students assigned to the two TakeCARE conditions, compared with those assigned to the control condition, would report more helpful bystander behavior at a 1-month follow-up assessment; and (2) students who viewed TakeCARE in a monitored computer lab, as compared with students who viewed TakeCARE at their own convenience, would report more helpful bystander behavior at a 1-month follow-up assessment. Bystander behavior at the 1-month follow-up was the dependent variable, and bystander behavior at baseline was the covariate. The three groups were coded as two dummy-variable contrasts: one comparing the two TakeCARE groups with the control group, and the other comparing the two TakeCARE groups with one another (Helmert contrasts). ANCOVA is the recommended analysis for pre–post data because it is not biased by regression to the mean, and it has less error than other approaches (e.g., analyses of change scores; [Tabachnick & Fidell, 2013](#)).

In the context of evaluating these two hypotheses, we explored site (university) as a possible moderator, by testing the Site \times Condition interactions. We chose to consider site as a possible moderator of TakeCARE effects, rather than using it as a clustering variable in a multilevel analysis, because this allows us to directly test the effects of site, and because clustering is not recommended with fewer than 10 clusters ([Snijders & Bosker, 2012](#)).

To test the third hypothesis, that students' perceptions that their university is responsive to reports of sexual violence will moderate TakeCARE's effects on bystander behavior, we added students' perceptions of their university's response to sexual violence as a moderator of the two dummy variables coding the Helmert contrasts between the treatment condition. Thus, we added responsiveness, Responsiveness \times Condition Helmert contrast 1 (TakeCARE vs. Control), and Responsiveness \times Condition Helmert contrast 2 (TakeCARE in-the-lab vs. Take on-their-own) to our model testing Hypotheses 1 and 2.

A post hoc power analysis using G*Power 3.1 showed that with a sample size of 557 students, the study was sufficiently powered (greater than .80 power) to detect an effect size as small as $f = .119$ in all of our analyses ($f = .25$ is considered a medium effect size).

Results

Initial Analyses

The overall mean for the *Bystander Behavior (Friends) Scale* at baseline was 26.26 ($SD = 20.93$), and the distribution of the bystander behavior scores was skewed (skewness = 1.27); 5.2% of the sample reported no bystander behavior at baseline, but more than half (51.9%) reported more than 10 acts of bystander behavior. Scores ranged from 0 to 49. Bystander behavior scores were log-transformed to reduce skewness. Analyses were performed using the transformed scores, but means were converted back to the original scale for presentation.

At baseline, the three groups, TakeCARE on-their-own ($n = 177$), TakeCARE in-the-lab ($n = 188$), and control ($n = 192$), did not differ on measured demographic variables (sex, age, or race/ethnicity, $ps > .06$) or bystander behavior ($p > .15$). Sample demographics and descriptive data on bystander behavior are presented in [Tables 1](#) and [2](#), respectively. Mean bystander behavior scores suggest that students had many opportunities to engage in bystander behavior during the 1-month assessment periods (month before baseline, month between baseline and follow-up). Bystander behavior did not vary by site at baseline, $ps > .161$.

Table 1. Demographic Characteristics Across the Four Sites.

Variable	Pr ₁ (n = 126)	Pr ₂ (n = 138)	Pu ₁ (n = 208)	Pu ₂ (n = 85)
Sex (% male)	15.9	29.0	24.5	16.5
Race (% of sample)				
American Indian/ Alaska Native	0.8	0.0	0.0	0.0
Asian	12.7	8.0	42.8	11.8
Biracial or multiracial	0.0	3.6	2.4	5.9
Black	5.6	3.6	10.6	11.8
Native Hawaiian/ Pacific Islander	0.0	0.7	0.0	1.2
White	75.4	80.4	37.5	56.5
Hispanic ethnicity (% of sample)	17.5	7.2	8.7	24.7
<i>M (SD)</i>		<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	20.34 (2.38)	19.39 (1.10)	20.17 (2.54)	21.01 (5.54)

Note. Due to rounding errors, race does not add up to 100% for each of the sites.

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Asian	12.7	8.0	42.8	11.8
Biracial or multiracial	0.0	3.6	2.4	5.9
Black	5.6	3.6	10.6	11.8
Native Hawaiian/ Pacific Islander	0.0	0.7	0.0	1.2
White	75.4	80.4	37.5	56.5
Hispanic ethnicity (% of sample)	17.5	7.2	8.7	24.7
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Age	20.34 (2.38)	19.39 (1.10)	20.17 (2.54)	21.01 (5.54)

Note. Due to rounding errors, race does not add up to 100% for each of the sites.

Table 2. Bystander Behavior Scores at Baseline and Follow-Up by Condition.

	Control		TakeCARE in-the-Lab		TakeCARE on-Their-Own	
Variable	Baseline	Follow-Up	Baseline	Follow-Up	Baseline	Follow-Up
Bystander behavior	24.80 (18.71)	21.23 (20.81)	25.80 (22.41)	24.89 (25.97)	28.30 (21.59)	27.48 (26.87)

Note. Bystander behavior scores represent the percentage of the 49 bystander situations in which the student intervened; higher scores indicate more self-reported responsive bystander behaviors. Numbers in parentheses for the bystander behavior score is the standard deviation.

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Note. Bystander behavior scores represent the percentage of the 49 bystander situations in which the student intervened; higher scores indicate more self-reported responsive bystander behaviors. Numbers in parentheses for the bystander behavior score is the standard deviation.

To help us determine whether students were paying attention to the content of the TakeCARE video, we assessed for pre–post changes on the knowledge of sexual consent scale. A $4 \times 3 \times 2$ repeated measures ANOVA (four sites \times three treatment conditions \times two time points [pre- and post-video]) showed a significant treatment condition \times time interaction, $F(2, 181) = 13.94, p < .001$, partial $\eta^2 = .05$. Those in the control condition showed no change in knowledge of sexual consent between baseline (83% correct) and post-video (83% correct), while those who viewed the video in the lab and those who viewed it on their own showed significant increases in their knowledge of sexual consent (in the lab: 92% correct at post vs. 83% at baseline, $F(1, 172) = 37.15, p < .001$, partial $\eta^2 = .17$; on their own: 90% correct at post vs. 83% at baseline, $F(1, 184) = 23.03, p < .001$, partial $\eta^2 = .12$).

TakeCARE Effects on Bystander Behavior

The ANCOVA examining TakeCARE’s effects on bystander behavior at follow-up, controlling for bystander behavior at baseline, indicated an overall group main effect, $F(2, 517) = 3.36, p = .036$, partial $\eta^2 = .013$, verifying that the groups differed at follow-up. A priori Helmert contrasts showed that, consistent with Hypothesis 1, participants in the two TakeCARE conditions reported more bystander behavior than those in the control condition at the 1-month follow-up assessment, controlling for baseline bystander behavior ($p = .015, d = .21$; [Table 2](#)). These Helmert contrasts also showed that bystander behavior was not greater in TakeCARE in-the-lab compared with TakeCARE on-their-own ($p = .340$) at the 1-month follow-up assessment, failing to support our second hypothesis. There were no significant differences across sites (i.e., both the Site \times Group interaction and the site main effect were unrelated to bystander behavior at the 1-month follow-up assessment, $p = .770$ and $p = .380$, respectively).

Repeated measures ANCOVAs examining the change in bystander behavior from baseline to follow-up indicated that although bystander behavior decreased from baseline to follow-up in the TakeCARE groups, $t(353) = 2.90, p = .004, d = .31$ and in the control group, $t(184) = 4.83, p < .001, d = .71$, the decrease in the TakeCARE groups was significantly smaller than in the control group, $t(536) = 2.05, p = .041, d = .18$.

Campus Responsiveness as a Moderator of TakeCARE's Effects

To test Hypothesis 3, we added responsiveness and Responsiveness \times Condition to the ANCOVA model predicting bystander behavior at the 1-month follow-up assessment, controlling for baseline bystander behavior. Consistent with this hypothesis, campus responsiveness moderated the effect of TakeCARE on bystander behavior. In particular, there was a significant interaction between campus responsiveness and the Helmert contrast comparing the two TakeCARE groups with the control group, $b = .19$, $t(517) = 2.02$, $p = .043$, $d = .17$. This interaction indicated that the benefit of TakeCARE over control was greater for participants who perceived that their campus was more responsive to reports of sexual violence.

We used the [Aiken and West \(1991\)](#) method to estimate the effect of TakeCARE versus control for different levels of campus responsiveness. This method uses the entire sample to estimate the expected between condition differences in bystander behavior for specific levels of campus responsiveness. We found that for those who perceived their campus to be more responsive to reports of sexual violence (i.e., 1 *SD* above the mean; mean item score on a scale of 1-4 = 2.93, $SD = .64$), those in the TakeCARE conditions reported more bystander behavior ($M = 32.2$) than those in the control condition ($M = 21.4$), $b = .26$, $t(517) = 3.00$, $p = .003$, $d = .27$. In other words, for students who viewed their campus to be between “moderately” and “very” likely to be responsive to reports of sexual violence, TakeCARE had a positive effect on bystander behavior.

However, for those students who perceived their campus to be less responsive to reports of sexual violence (i.e., 1 *SD* below the mean of campus responsiveness or “slightly” likely to be responsive to reports of sexual violence), there was no significant difference in bystander behavior between participants in the TakeCARE conditions ($M = 27.9$) and those in the control condition ($M = 27.3$) $b = .02$, $t(517) = .20$, $p = .839$. Follow-up analyses indicated that bystander behavior was greater in the TakeCARE conditions than in the control condition when the average campus responsiveness item score exceeded 2.75 (an item score of 3 is “moderately” likely to be responsive to reports of sexual violence).

Exploratory Analyses

Those viewing TakeCARE on their own played an average of 72.7% ($SD = 38.7\%$) of the video, compared with those viewing it in the lab, who almost by definition (i.e., because they were being monitored while the video played) viewed 100% of the video. Sixty-two percent of the participants viewing TakeCARE on their own played over 90% of the video, but 15% played less than 10% of the video. We examined whether “percent of video played” in the TakeCARE on-their-own group was related to knowledge of sexual consent immediately post-video and bystander behavior at the 1-month follow-up. Results indicated that the percentage of the video played was associated with knowledge of sexual consent, $r = .29$, $p < .001$, but it was not associated with bystander behavior, $p = .638$ (this finding was consistent whether or not we controlled for baseline levels of bystander behavior). Further examination of the scatterplot between percent of video played and bystander behavior at follow-up showed no apparent relation between the two.

Student sex, age, race, and ethnicity were examined as possible moderators of TakeCARE effects on bystander behavior by adding their interactions with treatment condition to the regression model predicting bystander behavior at the 1-month follow-up assessment. Each moderator was tested in a separate analysis. Results indicated no moderator effects; $p = .682$ for sex, $p = .722$ for age, $p = .442$ for ethnicity, and $p = .489$ for race.

Discussion

This study evaluated TakeCARE, a video designed to promote bystander behavior. Students in the two TakeCARE conditions (viewed in-the-lab and viewed on-their-own) reported higher levels of bystander behavior 1 month later, compared with students in the control condition. This finding replicates those of prior evaluations of TakeCARE ([Jouriles, McDonald, et al., 2016](#); [Kleinsasser et al., 2014](#)) with a large sample of students ($n = 557$)

recruited across four U.S. college campuses, and with two different methods of administering TakeCARE. Effects of TakeCARE on bystander behavior did not differ significantly for students who watched the video on their own versus in a monitored computer lab. This latter finding was not consistent with our hypothesis, but it is encouraging because sending students a link to view the video on their own is an especially easy and inexpensive method for college campuses to implement a bystander education program.

This was the first study to examine whether students' perceptions of their universities' responsiveness to reports of sexual violence moderated the impact of a bystander education program. Our findings showed that TakeCARE positively influenced bystander behavior among students who perceived their institution to be at least moderately responsive to reports of sexual violence. That is, the campus would be at least moderately likely to support assault victims, support individuals reporting violence, and take corrective actions against perpetrators. However, TakeCARE did not influence the bystander behavior of those students who reported their institution would only be slightly responsive to reports of sexual violence. This pattern of findings speaks to the impact of the larger campus context on specific prevention efforts. When students perceive that their university takes seriously the problem of sexual assault and responds appropriately to incidents of assault, the students themselves are more willing to intervene in situations that they see as potentially dangerous. It suggests that universities will need to go beyond merely implementing bystander programs for such programs to be effective.

The present research was not designed to evaluate why students' perceptions of campus responsiveness to sexual assault interacted with TakeCARE in predicting bystander behavior 1 month later, but we offer a couple of hypotheses. It may suggest that students do not perceive bystander behavior as sufficient to effectively mitigate the consequences of sexual violence. That is, there may be a belief that supporting a friend during/after an experience of sexual violence is pointless in the context of a university campus unwilling or unable to adequately address the concern. Similarly, there may be reluctance to involve oneself as a bystander in situations of sexual violence for fear of negative repercussions from campus authorities or other students. For example, a campus perceived as less responsive to sexual violence may also be perceived as threatening to those students willing to bring attention to the problem of sexual violence by stepping in and trying to prevent it.

Although this study did not measure campus responsiveness to sexual violence directly, it is plausible to infer that one way to improve students' perceptions that their university is committed to stopping sexual violence is for campuses to be highly responsive to such violence and undertake efforts to publicize its actions. That is, campuses need to consistently investigate reports of sexual violence and take necessary disciplinary and/or legal actions against violent offenders and support victims of violence. Ideas about what campuses might do to improve student perceptions of campus responsiveness include providing clarity to students about the reporting process and potential outcomes (e.g., seeking criminal charges, stay-away letters as informal restraining orders, etc.), and having this information plainly accessible to students online or via campus media. In addition, publicizing campus programs and efforts to combat the problem of sexual violence may help bolster the impression that the campus community in general does not tolerate it. Campus norms related to sexual assault also involves attitudes expressed by other students, and an important next step for understanding contextual effects on bystander behavior is to investigate how students' perceptions of their peers' beliefs around the topic of sexual assault may influence the impact of prevention efforts.

Findings pertaining to the amount of time the TakeCARE video was played by students in the condition in which they viewed it on their own are interesting to consider. Specifically, students as a group played *less* of the TakeCARE video when watching it on their own, as compared with when watching it in a monitored computer lab. Indeed, on average, 72% of the video was played when students were instructed to view the video on their own. It should also be recognized that playing the video is not the same as watching the video, and it is likely that some students played, but did not fully attend, while the video was playing. Exploratory analyses indicated

that the amount of time the video was played correlated positively with knowledge of sexual consent immediately post-video, which might be interpreted as an indicator of how much students paid attention to the video. However, the amount of time the video was played did not relate to bystander behavior at the 1-month follow-up. Nor did students assigned to watch the video on their own versus those assigned to watch it in a monitored computer lab differ on bystander behavior at the 1-month follow-up.

Although it seems problematic that some students assigned to watch the video on their own did not view it (in the present research 15% of the students played 10% of the video or less), it is possible that the core message of TakeCARE—friends taking care of friends—is conveyed sufficiently well early enough in the video, that this alone might have some influence on bystander behavior. However, it is also possible that a substantial proportion of those students who did not play the entire video had already received bystander training, and did not feel a need to view it. If universities plan to educate students about the topics of sexual and relationship violence and bystander intervention by using online training methods in which students view materials at their own convenience, there needs to be a better understanding of factors that influence whether or not a student views the materials.

A few additional observations from this study are noteworthy. First, there was a decline in reported bystander behavior from baseline to follow-up in the two TakeCARE groups and the control group, but the decline in the TakeCARE groups was significantly smaller than the decline in the control group. Although other studies evaluating bystander behavior on college campuses over time have also reported declines (e.g., [Gidycz, Orchowski, & Berkowitz, 2011](#); [Jouriles, McDonald, et al., 2016](#), Study 1; [Kleinsasser et al., 2014](#); [Moynihan et al., 2015](#)), some studies report increases in student bystander behavior after receiving bystander training (e.g., [Borsky, McDonnell, Rimal, & Turner, 2016](#); [Jouriles, McDonald, et al., 2016](#), Study 2; [McMahon, Winter et al., 2015](#)). Similarly, some studies report stability in levels of bystander behavior over time for students in control conditions who do not receive bystander training (e.g., [Elias-Lambert & Black, 2016](#); [Gidycz et al., 2011](#); [Jouriles, McDonald, et al., 2016](#), Study 2). The reasons for the decline in bystander behavior in this particular study are not clear. One possibility is that the baseline assessment occurred toward the beginning of the spring semester, and the time frame for the baseline assessment may have included more parties, alcohol consumption, and opportunities to engage in bystander behavior to prevent sexual and relationship violence, as compared with the time frame for the follow-up assessment ([Del Boca, Darkes, Greenbaum, & Goldman, 2004](#); [Tremblay et al., 2010](#)). Another possibility is that the 1-month time frame for the assessment of bystander behavior in the present study might be especially sensitive to short-term fluctuations in bystander behavior, which may occur over the course of a year.

Second, the current study is the fourth randomized controlled trial of TakeCARE demonstrating positive effects on bystander behavior in a college-student sample, relative to a control group. Thus, the positive effects of TakeCARE appear to be robust. However, they also tend to be small in magnitude. Arguably, bystander education programs that yield small effects can still have a substantive impact if they are distributed widely throughout a large campus community. For example, a bystander program that results in one additional bystander behavior for one out of every five students, disseminated to 10,000 students, means that the program yields 2,000 more bystander behaviors than would have otherwise been performed.

Third, there were not significant differences in TakeCARE effects across the four different college campuses that participated in this research. In addition, there were not significant differences in TakeCARE effects for males and females, and for students of different ages and races/ethnicities. This reflects well on the potential generalizability of TakeCARE's effects for other campuses and on various subgroups of college students. However, caution needs to be exercised in generalizing the present findings. Even though conducting the present study at four different universities is a notable strength of the present research, four universities still represent only a tiny sample of all U.S. universities. In addition, this study recruited students from

undergraduate psychology classes during the spring semester. It is not clear how representative such students are of the entire campus community, and findings for bystander programs may differ across the fall and spring semesters (see [Jouriles, McDonald, et al., 2016](#)). Related to the latter point, college females appear to be at greatest risk of sexual victimization during the fall semester of their first year ([Carey, Durney, Shepardson, & Carey, 2015](#); [Kimble, Neacsiu, Flack, & Horner, 2008](#)). In short, it will be important for future research to continue to evaluate the generalizability of effects of TakeCARE and bystander programs in general.

Some other limitations of the present research should also be acknowledged. First, it is meaningful that a short video produces detectable effects 1 month after it is viewed. However, it would be desirable to know how long such effects are maintained and the extent to which changes in bystander behavior actually coincide with changes in rates of campus violence. Second, TakeCARE effects emerged using an established measure of bystander behavior, but the assessment of bystander behavior was limited to a single, self-report questionnaire. Although mono-method questionnaire assessments of bystander behavior are the state-of-the-science in evaluation research on bystander programs currently, they are nevertheless potentially vulnerable to biases, such as demand characteristics. In addition, the measure of bystander behavior used in this research was limited to reports of bystander behavior toward friends, and did not measure opportunities to intervene. Future studies would benefit from a multimethod assessment of bystander behavior that includes other types of behavioral data ([Jouriles, Rosenfield, et al., 2016](#)), and a more extensive assessment of bystander behavior that includes helping acquaintances and strangers, as well as opportunities for intervening ([McMahon, Palmer, Banyard, Murphy, & Gidycz, 2015](#); [Sargent, Jouriles, Rosenfield, & McDonald, 2017](#)).

Caution also needs to be exercised in interpreting what viewing the video “on-their-own” really signifies. In the current study, students received email reminders to watch the video, and may have felt compelled to watch it because they were receiving credit for participating in a study. It seems certain that universities interested in disseminating a video bystander program, such as TakeCARE, would need to implement some procedures beyond simply sending a request to students to watch the video. This might include daily or weekly reminders to view the video, incentives for viewing it, or disincentives for not viewing it.

In conclusion, this research provides additional evidence for the efficacy of TakeCARE by replicating prior findings with a large sample recruited across four universities, and using two different methods of administering TakeCARE. This research also identified an important moderator of TakeCARE’s effects—students’ perceptions about their campus’ responsiveness to reports of sexual violence. The problem of campus sexual assault is both serious and complex, and the present research suggests that a brief video program has the potential to help combat this problem.

Authors’ Note

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