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Abstract

Mental health concerns are highly prevalent in the college student population, yet only a small percentage of students seek help. Given the negative consequences associated with untreated mental health problems, it is essential to identify effective interventions to increase psychological help-seeking. This study investigated the efficacy of a brief social norms intervention (SNI) on changing students’ help-seeking attitudes and behavior by comparing a social norms approach to a more standard provision of campus psychological resources information intervention (PRI) and a no-intervention control (NIC) group. One hundred fifty-six college students were randomly assigned to one of the three conditions: SNI, PRI and NIC. Participants’ help-seeking attitudes were assessed pre-intervention, post-intervention and 2-weeks post-intervention using the Beliefs About Psychological Services Scale (BAPS; Ægisdóttir & Gerstein, 2009). Between subjects ANOVAs showed main effects for condition immediately post-intervention, \( p < .01 \), and at 2-weeks post-intervention, \( p < .01 \). At post-intervention and at 2-week follow-up, participants in the SNI and in the PRI conditions showed more positive attitudes toward help seeking as compared to participants in the NIC condition but did not differ from each other. Results indicated the SNI and PRI were both effective in improving help-seeking attitudes. Future research should focus on identifying which normative beliefs should be targeted within a social norms approach to maximize help-seeking attitudes and behavior.
Mental Health and Help-Seeking Among College Students

Mental health concerns are highly prevalent in the college student population (ACHA, 2015; Han Chen, Hwang, & Wei, 2006; Hunt & Eisenberg, 2010; Zivin, Eisenberg, Gollust, & Golberstein, 2009). The nature of such concerns include a full range of disorders (ACHA, 2015), with depression and anxiety being two of the most commonly experienced (ACHA, 2015; Hunt & Eisenberg, 2010; Zivin et al., 2009). To illustrate, the most recent American College Health Association-National College Health Assessment II (NCHA II) collected data from 74,438 undergraduate students at 108 schools and found that 35% reported that at some point in the past year they had found it difficult to function due to depression and nearly 58% reported having felt overwhelmed by anxiety (ACHA, 2015).

Despite the high prevalence of psychological issues, only a small percentage of students seek help (Eisenberg, Hunt, Speer & Zivin, 2011; Han et al., 2006; Hunt & Eisenberg, 2010; Kessler, McGonagle, Zhao, Nelson, Hughes, Eshleman, & et al., 1994; Rimmer, Halikas, & Schuckit, 1982; Zivin et al., 2009). In fact, estimates suggest that fewer than half of students endorsing symptoms of major depression or anxiety receive treatment (Hunt & Eisenberg, 2010) and fewer than one-third of students with any apparent mental health problem receive treatment (Andrews, Issakidis, & Carter, 2001; Eisenberg, Hunt et al., 2011). Low rates of help seeking among college students has held consistent for decades (Eisenberg et al., 2011; Rimmer et al., 1982). Even when students realize or acknowledge the need for help, low rates of help-seeking persist. In a 2 year longitudinal study, only 20% of students who had a mental health problem at baseline
engaged in treatment before the 2 year follow-up, despite the fact that 80% of the students perceived the need for help (Zivin et al., 2009). Such findings give rise to the question of why such low-help seeking rates persist.

**Barriers to Treatment**

Limited awareness regarding mental health services, skepticism regarding the effectiveness of psychological treatment and lack of perceived need for help, have repeatedly emerged as barriers to treatment (Bayer & Peay, 1997; Eisenberg et al., 2009; Vogel, Wester, and Larson, 2007). However, one of the most highly cited barriers to treatment is stigma (Corrigan & O’Shaughnessy, 2007; Eisenberg et al., 2009; Han, Chen, Hwang, & Wei, 2006; Vogel, Wade, & Hackler, 2007). Specifically, both perceived stigma (e.g., beliefs that others hold negative opinions regarding treatment or an individual receiving treatment) and self-stigma (e.g., personal negative beliefs about requiring treatment) have emerged as robust and significant barriers to psychological help seeking (Chen, Romero, & Karver, 2015; Corrigan & O’Shaughnessy, 2007; Han et al., 2006; Vogel, Wade, & Hackler, 2007). In a large scale review of 119 studies, Vogel, Wester and Larson (2007) examined perceived stigma, attitudes toward help-seeking, and intention to seek help and found that perceived stigma was predictive of both attitudes towards help-seeking and intention to seek help. An illustrative, moderate size study of 680 primarily first and second year college students concluded that self-stigma showed a significant, negative, relation to both help-seeking attitudes and help-seeking willingness (Vogel, Wade & Hackler, 2007). Given such findings, there appears to be considerable wisdom in targeting stigma as a way to improve help-seeking attitudes, which, in turn, should facilitate help-seeking behavior.
Within the larger constellation of barriers to treatment, gender has emerged as an important determinant in help-seeking (Good & Wood, 1995; Schomerus, Matschinger, & Angermeyer, 2009; Ting, 2011). A repeated finding investigating help-seeking attitudes and behavior in the college population have found that women hold more positive attitudes toward help-seeking than do men (Conley, 2011; Ting, 2011; Vogel, Wade, and Hackler, 2007); in turn, women are more likely to seek help than men (Schomerus et al., 2009), especially for less severe diagnoses (e.g., less severe depressive symptoms) (Good & Wood, 1995). Although the underlying mechanism for the observed sex difference has not been definitively identified, endorsing traditional--specifically masculine--gender roles has been offered as an explanation for the differences between men and women’s help-seeking attitudes and behavior as higher endorsement of traditional masculine roles is related to less favorable attitudes toward help-seeking and lower rates of help-seeking behavior (Good & Wood, 1995; Mahalik & Rochlen, 2006; Vogel, Wester, Hammer, & Downing-Matibag, 2013; Yousaf, Popat & Hunter, 2015). Given this pattern, interventions that target the perceived acceptability of help-seeking might be particularly useful in closing the help-seeking gender gap.

**Help-Seeking Interventions**

Untreated mental health concerns can negatively impact students’ academic performance, physical well-being, and are associated with co-morbid mental health disorders such as substance abuse and increased risk of suicide (Andrews & Titov, 2007; Alloy & Abramson 2007; Hunt & Eisenberg, 2010). Given the negative consequences associated with untreated mental health concerns and the existence of many effective psychological treatments, much energy has been directed toward identifying interventions
that can effectively reduce barriers and improve help-seeking (Corrigan & O'Shaughnessy, 2007; Costin, Mackinnon, Griffiths, Batterham, Bennett, Bennett & et al., 2009; Garlow, Rosenberg, Moore, Haas, Koestner, Hendin, & et al., 2008; Goldstein & Rosselli, 2003; Gonzalez, Tinsley, & Kreuder, 2002; Gulliver, Griffiths, Christensen, & Brewer, 2009; Han et al., 2006; Hunt & Eisenberg, 2010; Sharp Hargrove, Johnson, & Deal, 2006; Wood & Wahl, 2006).

Interventions under investigation have included large-scale, national programs – e.g., a web-based suicide prevention program sponsored by the American Foundation for Suicide Prevention (Garlow, Rosenberg, Moore, Haas, Koestner, Hendin, & et al., 2008); a network of collaborative programs sponsored by the National College Depression Partnership (Hunt & Eisenberg, 2010); and psychoeducational interventions sponsored by the National Alliance for Mental Illness (Corrigan & O'Shaughnessy, 2007)–as well as small-scale studies, often involving the delivery of various forms of psychoeducation (Goldstein & Roselli, 2003; Gonzalez et al. 2002; Gulliver et al., 2009; Han et al., 2006; Sharp et al., 2006). Although not designed to directly alter underlying cognitive schemas about help-seeking, many of the interventions studied have demonstrated some success in producing attitudinal change and shifting opinions about help-seeking in a positive direction. The content of the psychoeducation interventions has varied but typically includes information regarding mental health disorders, information regarding how and where to find help (Gulliver et al., 2009); some have included contact with consumers of mental health services as a way to increase identification and reduce social distance (Gulliver et al., 2009). Although individual studies have shown positive outcomes, most are judged against baseline levels of help-seeking and limited comparative studies have
occurred. This limitation was underscored in a recent systematic review of help-seeking interventions by Gulliver et al. (2009) who found that many interventions under investigation have involved a combination of content and that very few, if any, studies directly compared interventions of varying content, making it difficult to determine if one type of intervention is more effective than others. Further adding to the difficulty in determining what approach may be most effective is that the majority of studies investigating the effectiveness of help-seeking interventions have assessed self-reported willingness to seek help but have rarely focused on directly assessing help-seeking behavior (Gulliver et al., 2009).

Social Norms Theory and Approach

Given the possibly prepotent role of stigma in help-seeking, interventions that explicitly view the individual as existing and operating within a larger interpersonal context may be particularly effective. To this end, social norms theory may provide a particularly useful theoretical frame. Social norms theory emerged from social science research investigating the relation between attitudes and behavior (Acock & DeFleur, 1972). Social norms theory posits that individuals use internalized beliefs about the attitudes and behaviors of their peers to guide their own decision making and behavior. Although this can be a highly adaptive process that promotes social cohesion and functioning, individuals’ internalized beliefs can be erroneous and based on misperceptions about the attitudes and behaviors of their peers. When this occurs, such misperceptions can serve to encourage individuals to behave in unhealthy ways (e.g., binge drink), or not behave in healthy ways (e.g., fail to seek psychological treatment when distressed), if they perceive such actions as consistent with the social norm
(Berkowitz, 2005). This also suggests that interventions may be most effective if they focus less on attempting to establish a community norm in a top down fashion – e.g., administrators and university personnel promoting safe drinking – and more on unmasking or making manifest actual behaviors.

**Social Norms Intervention**

The social norms intervention approach aims to shift manifest social norms by correcting misperceptions through providing information on actual normative beliefs/behaviors; as such, the social norms intervention approach has the goal of reducing unhealthy or risky behaviors and encouraging healthy or protective behaviors by promoting accurate peer modeling. This approach was largely pioneered by substance abuse researchers and numerous studies document the success of social norms campaigns targeting alcohol use/abuse on campuses (Haines & Spear, 1996; Labrie, Hummer, Huchting, & Neighbors, 2009; Perkins, 2007; Reilly & Wood, 2008; Turner, Perkins, & Bauerle, 2008). In addition to campus-wide social norms interventions, targeted social norms interventions have also documented success in reducing alcohol misuse in a variety of subpopulations, such as students in the Greek system (Carter & Kahnweiler, 2000), student athletes (Labrie et al., 2009), and first year students (Reilly & Wood, 2008). In sum, investigations into the active elements of social norms interventions have shown that they alter beliefs about standard and expected behavior, that these changes in beliefs are sustained over time (Labrie et al., 2009), and are associated with actual behavioral change (Haines & Spear, 1996; Turner et al., 2008).

The success of the social norm intervention approach in reducing alcohol use/abuse on college campuses has not been lost on those interested in increasing help-
seeking behavior. As noted, stigma may be the prepotent barrier to treatment. Studies examining the relations between perceived stigma and self-stigma have found that these are related but not fully overlapping constructs as they show differential relations with help-seeking behavior and may operate in a particular sequence. Specifically, self-stigma has shown the strongest proximal influence on help-seeking; however, perceived stigma has emerged as highly associated with self-stigma (Chen et al., 2015; Eisenberg et al., 2009; Vogel et al., 2007) and is likely a key factor in the development of self-stigma. For example, students who endorse higher levels of self-stigma also report higher perceived public stigma, suggesting beliefs about public attitudes shape personal attitudes (Eisenberg et al., 2009; Chen et al., 2015). Compounding the influence of public attitudes on the development of self-stigma is the well documented finding that students tend to overestimate perceived public stigma and hold misperceptions regarding the actual level of public stigma associated with psychological help-seeking (Conley, 2011; Haigh, 2013; Lally, Conghalie, Quigley, Bainbridge & McDonald, 2013). In effect, students decide how personally acceptable it is for them to seek help by looking at others to assess the general acceptability of help-seeking; when the acceptability is perceived as low (high stigma), it leads students to denigrate their perceived need for treatment (self-stigma) and they fail to pursue needed treatment. This hypothesized web of relations has led to multiple calls to create and assess programs designed to reduce perceived public stigma and, specifically, to build interventions that target social norms (Eisenberg et al., 2009; Kulesza, Pedersen, Corrigan, & Marshall, 2015; Pisani, Schmeelk-Cone, Gunzler, Petrova, Goldston, Tu, & et al., 2012). The goal of a social norms theory based
intervention to improve help-seeking would be to reduce beliefs that could potentiate self-stigma and reluctance to seek treatment (Conley, 2011).

One key element in effective SNI is the perceived relevance of the normative group. To be effective, the normative behavior/beliefs must be understood as belonging to peers or an esteemed group to which the individual would like to belong. Receiving group-specific normative feedback has been theorized to be especially effective because students more closely identify with the sub-group than the general population and, thus, may more readily change their perceptions and subsequent behavior (Carter & Kahnweiler, 2000; Labrie et al., 2009; McAlaney, Bewick, & Hughes, 2011; Reilly & Wood, 2008).

A social norms intervention targeting misperceptions regarding peers’ opinions of the acceptability of help-seeking and negative misperceptions about normative beliefs would seek to replace false beliefs with accurate information. Replacing beliefs about the negative social consequences of help-seeking with beliefs about the acceptability of treatment could prove to be a very powerful intervention as research has suggested perceptions of others’ support (e.g., a positive perceived norm) can function as a strong predictor of seeking mental health treatment (Barksdale & Molock, 2008; Rickwood & Braithwaite, 1994; Vogel et al., 2007). Of course, this requires that actual and perceived beliefs and attitudes about help-seeking diverge. Encouragingly, investigations on the feasibility and appropriateness of using a social norms approach for help-seeking have identified the presence of misperceptions between students’ perceptions of others’ beliefs and their personal beliefs, with students holding much more supportive beliefs and
attitudes than what they believe are held by their peers (Conley, 2011; Haigh, 2013; Lally, Conghalie, Quigley, Bainbridge & McDonald, 2013).

**Current Study**

The current study sought to investigate the efficacy of a brief social norms intervention (SNI) on changing help-seeking attitudes and behaviors. To provide a rigorous test of the SNI approach, it was compared not only to a time-matched no-intervention control (NIC) but also to a time-matched version of the current “gold standard” help-seeking intervention--providing information about university and community psychological resources (PRI). This approach allows for evaluation of both the absolute and relative efficacy of the SNI program. The social norms intervention designed for and investigated in this study included two primary components: 1) review and discussion of discrepancies between individuals’ self-reported beliefs and their perceptions of others’ beliefs and 2) review and discussion of self-reported incidence and estimated prevalence of psychological concerns in the normative sample. To ensure relevant normative data, the normative sample included 395 undergraduate students from the university at which the present investigation was conducted; this meant that students in the present study could closely identify with the normative sample. The SNI used the normative data to illustrate that concerns about being stigmatized for seeking mental health treatment are largely baseless and to normalize mental health problems as both types of information have been identified as effective strategies to lessen stigma and facilitate help-seeking (Clement, Schauman, Graham, Maggioni, Evans-Lacko, Bezborodovs, & et al., 2015).
Two primary hypotheses were tested. One, it was hypothesized participants’ attitudes toward help-seeking would significantly differ across the treatment groups immediately following intervention. Specifically, it was hypothesized that those in the SNI condition would report more positive attitudes than those in the PRI and NIC conditions, given that the SNI addresses stigma, which may be the prepotent barrier to treatment. Based on prior research, it was also anticipated that the PRI condition would show some treatment effects and attitudes would be more favorable than in the NIC condition. Two, it was hypothesized that at 2-weeks post-intervention differences in attitudes across treatment groups would demonstrate short-term stability, maintaining the same pattern of SNI >PRI >NIC. Additionally, two exploratory hypotheses were investigated. It was predicted that differences in attitudes across treatment groups would persist over time and at 8-weeks post-intervention the same pattern of SNI>PRI>NIC would continue. It was also predicted that at 8-weeks post-intervention the degree of help-seeking behavior would differ between treatment groups and match the predicted attitudes (SNI>PRI>NIC), with a greater proportion of students in the SNI reporting help-seeking behavior than in the PRI and NIC conditions.

**Method**

**Participants**

The final sample included 156 college students who provided complete data. The sample was drawn from a mid-size Midwestern Liberal Arts University. Participants were recruited through the School of Psychology participant pool and offered research credit in exchange for their participation. An inclusion criterion was age 18 – 25 years; participants <17 years old were excluded to eliminate the need for parental permission
and participants >26 years old were excluded as their peers were not captured by the normative data referenced in the social norms intervention.

The primary investigator enrolled a total of 178 college students to participate in the present study. An 88% retention rate occurred from intervention to 2-week follow-up, with 157 students completing the study. One participant was excluded from data analyses because of age > 26 years old.

The final sample ($N = 156$) reflected the gender, racial and ethnic composition of the university at large (Xavier University, 2012) and included 70% ($n = 109$) women and was 83% White/Non-Hispanic ($n = 129$). The age of participants ranged from 18 to 22 ($M = 20.02$). Participants were stratified across year in school: 14% first years ($n = 22$); 35% sophomores ($n = 54$); 28% juniors ($n = 44$); and 22% seniors ($n = 35$). See Table 1.

**Treatment Groups**

**Social Norms Intervention (SNI).** The SNI is a brief, group based intervention. It is designed to be interactive in nature and to challenge misperceptions about the beliefs and attitudes of others. It utilizes normative data to illustrate that individuals’ perceptions of how people think and act varies from how people report they actually think and act. The SNI was built using data obtained from the administration of the Normative Data Survey (NDS; Haigh, 2013) to 395 undergraduate students (Appendices A – D from proposal document contain a detailed description of the development and nature of the NDS, the full NDS, text and tabular results from the NDS and IRB approval to collect the NDS). The SNI is about 20-25 minutes in duration and is presented using Power Point software. It has two primary components: 1) review and discussion of discrepancies between individual’s self-reported beliefs and their perceptions of others’ beliefs and 2)
review and discussion of self-reported incidence and estimated prevalence of psychological concerns in the normative sample. Appendix H contains the full SNI.

**Psychological Resources Intervention (PRI).** The psychological resources intervention is a relatively brief, 15 to 20 minute, overview of university and community psychological and associated resources, presented via Power Point software in a small group format. The PRI was designed to largely mirror the standard method used by schools to promote mental health service utilization. The PRI includes providing a description and contact information for mental health and associated support services available to students and a brief description of the types of concerns most appropriately addressed by each resource. Appendix I contains the full PRI.

**No intervention Control (NIC).** A no-intervention control condition was included. Participants in this condition watched a 15-minute Youtube.com video of a classic psychology experiment conducted at Yale University in 1948 on motivation and reward in learning, and involved an operant conditioning paradigm with rats (Quitney, 2013). This condition was included to allow for tests of both the relative and absolute effects of the SNI and PRI.

**Measures**

**Beliefs About Psychological Services Scale.** The Beliefs About Psychological Services Scale (BAPS; Ægisdóttir & Gerstein, 2009) was used to measure attitudes about seeking psychological services. The BAPS assesses attitudes toward psychological help-seeking.

The BAPS includes 18 items. Each is rated on a 6-point Likert-type scale (1 = *strongly disagree*, 6 = *strongly agree*); 7 items are reverse scored to reduce response bias.
The BAPS provides scores both for a Full Scale (containing all 18 items) and for three subscales: Intent (containing 6 items; a sample item is “Seeing a mental health counselor is helpful when you are going through a difficult time in your life”); Stigma Tolerance (containing 8 items; a sample item is “I would feel uneasy going to a mental health counselor because of what people might think”) and Expertness (containing 4 items; a sample item is “Because of their training, mental health counselors can help you find solutions to your problems”).

Summary scores for both the full BAPS and each subscale can range from 1 to 6, with higher scores reflecting more willingness to seek help. Each scale is calculated by summing all items contained within the scale/subscale and dividing by the number of items. In the present study, the total BAPS score, containing all 18 items, was used. The BAPS demonstrated good internal consistency reliability at the three collection time points: pre-intervention $\alpha = .86$; post-intervention $\alpha = .90$; 2-week post-intervention $\alpha = .89$. Appendix E contains the full BAPS.

**Demographic and Help-Seeking Behavior (DHSB: Haigh, 2013).** The Demographic and Help-Seeking Behavior (DHSB) collected participants’ demographic information (age, sex, grade, race/ethnicity) and information about recent involvement with mental health services. Specifically, participants answered the questions: “During last semester did you seek services from a mental health professional?” and “During last semester did you recommend a friend or family member seek services from a mental health professional?” Appendix F contains the full DHSB.

**Behavioral Outcome Measure (BOM: Haigh, 2013):** The Behavioral Outcome Measure (BOM) is a two-item self-report measure designed to capture help-seeking
behavior over the prior 8 weeks. Participants indicated if they had personally used or referred another to mental health services. Those who had either personally used or referred another to mental health services were considered to have engaged in help-seeking behavior. Appendix G contains the full BOM.

Procedure

Prior to data collection, human subjects approval was obtained from the sponsoring university’s Institutional Review Board. After expressing interest in the study, participants were randomly assigned to one of the three conditions: SNI, PRI and NIC. The interventions were provided in a small group format. Upon arrival to the designated intervention site, participants completed an informed consent process. Next, participants completed the BAPS and DHSB. After this participants received the SNI, the PRI or watched the NIC video. Following the intervention or video, participants again completed the BAPS and were scheduled to return in 2 weeks. At 2-week follow-up, participants in all conditions returned and completed the BAPS. Finally, participants were offered the opportunity to volunteer for an online follow-up 8-weeks post intervention. At the 8-week follow-up, participants were asked to complete the BAPS and BOM in order to assess help-seeking attitudes and behavior.

Results

Preliminary Analyses

Prior to testing the formal hypotheses, a series of preliminary analyses were conducted to determine the comparability of conditions and to identify possible covariates. First, the effectiveness of randomization was assessed and the demographic composition of each treatment condition was evaluated. Results indicated randomization
was successful and that participant demographics did not vary across the three conditions: SNI, PRI or NIC. Notably, although there were more males in the SNI ($n = 21$) compared to the other two conditions: PRI ($n = 11$) and NIC ($n = 15$), a two-way contingency table analysis evaluating whether the treatment groups (SNI; PRI; NIC) differed in relation to sex revealed no difference between groups, $\chi^2 (2, N = 156) = 4.63$, $p = .10$, Cramèr’s $V = .17$. See Table 2.

Second, univariate tests of the relations between demographic variables and outcome (BAPS score) at each time point were conducted. The only demographic variable found to be significantly related to attitudes toward help seeking was sex. At baseline, sex was found to have a small association to BAPS total score, $r = .26$, $p = .10$, with females demonstrating more positive attitudes toward help-seeking ($M = 4.53$, $SD = .77$) than males ($M = 4.23$, $SD = .61$). At immediate post intervention sex was found to have a strong association to BAPS total score, $r = .45$ $p < .01$, with females demonstrating more positive attitudes toward help-seeking ($M = 4.72$, $SD = .62$) than males ($M = 4.36$, $SD = .89$). Finally, at 2 weeks post intervention sex was found to have a moderate association to BAPS total score, $r = .28$ $p = .04$, again with females demonstrating more positive attitudes toward help-seeking ($M = 4.73$, $SD = .60$) than males ($M = 4.47$, $SD = .80$). Given these significant results, secondary analyses (below) were conducted to assess the impact of sex on help-seeking attitudes.

Third, recent help-seeking behavior was examined. Results indicated that 40% of the final sample reported having engaged in help-seeking behavior during the prior semester. Specifically, 12% ($n = 19$) had sought help from a mental health professional and 33% ($n = 52$) had recommended a friend or family member seek services from a
mental health professional. A two-way contingency table analysis was conducted to evaluate whether at baseline the treatment groups (SNI; PRI; NIC) differed in recent help-seeking behavior. Results revealed no difference between patterns of recent help-seeking behavior between groups at baseline, Pearson $\chi^2 (2, N = 294) = .20, p = .91$, Cramér’s $V = .03$.

Fourth, a between subjects analysis of variance (ANOVA) was conducted to test if the three conditions held comparable baseline help-seeking beliefs. The grouping variable was intervention type and had three levels: SNI, PRI and NIC. The dependent variable (DV) was baseline BAPS total score. Results indicated randomization was successful as participants in all three conditions reported comparable baseline psychological help-seeking attitudes, $F (2, 153) = 1.14, p = .32$. Table 3 displays baseline BAPS scores.

Finally, possible practice effects of taking the BAPS three times were assessed using a 3x3 mixed model ANOVA. The within-subjects factor was time (practice): BAPS scores at baseline, immediate post-intervention and 2-weeks post-intervention and the between subjects factor was treatment condition: SNI, PRI and NIC. Results revealed main effects for time (practice), $F(1,153) = 34.99, p < .01$, partial $\eta^2 = .19$ and for condition, $F(2,153) = 4.92, p = .01$, partial $\eta^2 = .06$, as well as a significant interaction, $F(2,153) = 4.92, p = .01$, partial $\eta^2 = .06$. Analyses showed that the BAPS scores for the entire sample increased over time; however, as Figure 1 illustrates, BAPS scores increased immediately post-intervention and 2-weeks post intervention from baseline for participants in the SNI and PRI conditions but not for participants in the NIC condition.
Results of the mixed model suggest that practice effects did not fully account for changes in participants’ BAPS scores.¹

**Primary Hypotheses**

**Hypothesis 1.** It was hypothesized that participants who received the SNI would report significantly more positive attitudes toward help seeking immediately post-intervention as compared to participants in the PRI and NIC conditions and that participants in the PRI condition would show more positive attitudes toward help seeking as compared to those in the NIC condition. This was tested using a 1x3 between subjects ANOVA; treatment group was the grouping variable and had three levels: SNI, PRI and NIC. The post-intervention BAPS total score was the DV. The hypothesis was partially supported as a significant effect for group emerged, $F(2, 153) = 7.39, p = .001$, partial $\eta^2 = .09$. Post-hoc Tukey tests of pairwise differences indicated that participants who received the SNI and PRI reported significantly more positive attitudes toward help seeking than NIC participants ($p = .006$ and $p = .002$, respectively); however, contrary to prediction, no significant differences emerged between the SNI and PRI conditions. Figure 2 illustrates immediate post-intervention differences in attitudes toward help-seeking between treatment groups.

**Hypotheses 2.** It was hypothesized that at 2-week follow-up, participants who received the SNI would report significantly more positive attitudes toward help seeking as compared to participants in the PRI and NIC conditions and that participants in the PRI condition would show more positive attitudes toward help seeking as compared to those in the NIC condition. Again, the hypothesis was partially supported. Similar to the

¹ This 3x3 mixed model analyses contains information that answers primary hypotheses; however, as the findings do not differ between the analyses, results are being reported in the way that was specified in the proposal.
pattern found for post-intervention attitudes, the SNI and PRI groups were comparable and both had higher BAPS scores than the NIC condition. A 1x3 (condition: SNI, PRI, NIC) between subjects ANOVA revealed a significant effect for group on post-intervention BAP score, $F(2, 153) = 6.77, p = .002$, partial $\eta^2 = .08$.

Follow-up Tukey tests to determine pairwise differences revealed that participants in the SNI and PRI conditions reported significantly more positive attitudes toward help seeking than participants in the NIC condition ($p = .002$ and $p = .019$, respectively). Although non-significant, participants who received the SNI reported the most positive attitudes 2-weeks post intervention ($M = 4.83, SD = .64$) compared to participants who received the PRI ($M = 4.73, SD = .63$) or NIC ($M = 4.38, SD = .67$) suggesting the SNI may produce greater change over time. Figure 3 illustrates differences in attitudes toward help-seeking between treatment groups 2 weeks post interventions or video.

**Exploratory Analyses.** Given the significant relation between sex and outcome, additional analyses were conducted. Specifically, a 2 (sex: male and female) x 3 (condition: SNI, PRI, NIC) fully crossed, between subjects ANOVA was conducted to evaluate the effects of sex and treatment condition on help-seeking attitudes (BAPS score) at each of the significant collection periods: immediately post intervention and at 2-weeks post intervention.

Differences emerged across the two time periods. The ANOVA assessing the effects of sex and treatment condition on post-intervention BAPS revealed main effects for sex $F(1,150) = 8.11, p = .01$, partial $\eta^2 = .05$. and condition $F(2,150) = 9.75, p < .01$, partial $\eta^2 = .12$, but did not reveal a significant interaction between sex and treatment condition, $F(2, 150) = 1.87, p = .16$, partial $\eta^2 = .02$; however, the ANOVA assessing the
effects of sex and treatment condition 2-weeks post-intervention showed main effects for sex $F (1, 150) = 5.08, p = .03$, partial $\eta^2 = .03$ and condition $F (2,150) = 9.50, p < .01$, partial $\eta^2 = .11$ and a significant interaction between sex and condition, $F (2, 150) = 3.66, p = .03$, partial $\eta^2 = .05$. Figure 4 depicts the interaction between sex and treatment condition at 2-week follow-up, with males demonstrating more positive attitudes in the PRI condition ($M = 4.88, SD = .76$) than in the SNI or NIC conditions ($M = 4.57, SD = .72$ or $M = 4.02, SD = .75$, respectively) and females demonstrating more positive attitudes in the SNI condition ($M = 5.01, SD = .53$) than in the PRI or NIC conditions ($M = 4.69, SD = .59$ or $M = 4.53, SD = .58$, respectively). This observed interaction at 2-weeks post intervention was also observed at baseline where a 2x3 fully crossed, between subjects ANOVA was conducted to evaluate the relationship between sex and treatment condition and baseline help-seeking attitudes, revealing a significant interaction between sex and treatment condition, $F (2, 150) = 3.63, p = .03$. Given that the same interaction was present at baseline (pre-intervention) and 2-weeks post intervention, it is likely that this interaction is reflective of the characteristics of the present sample and not reflective of a true interaction between sex and condition. Figure 4 depicts the interaction between sex and treatment condition at baseline.

**Exploratory Hypotheses**

At the 8-week follow-up, 43% ($n = 67$) of the sample provided outcome data. It was hypothesized that at 8-week follow-up, participants who received the SNI would report significantly more positive attitudes toward help seeking as compared to participants in the PRI and NIC conditions and that participants in the PRI condition would show more positive attitudes toward help seeking as compared to those in the NIC
condition. A 1x3 between subjects ANOVA assessing attitudes toward help-seeking between treatment groups was not significant at 8-week follow-up, 
\[ F(2, 64) = 2.62, p = .08, \text{ partial } \eta^2 = .08. \] However, descriptive statistics identified a trend consistent with the present study’s hypothesis: participants who received the SNI reported more positive attitudes toward help seeking (\(M = 4.79, SD = .72\)) as compared to participants in the PRI (\(M = 4.63, SD = .62\)) and NIC (\(M = 4.36, SD = .56\)) conditions and participants in the PRI condition showed more positive attitudes toward help seeking as compared to those in the NIC condition.

**Discussion**

This study sought to investigate the efficacy of a brief social norms intervention (SNI) on changing college student attitudes and behaviors about psychological help-seeking by comparing the social norms approach to a more standard provision of campus psychological resources information intervention (PRI) and to a no-intervention control (NIC) group. Including all three conditions allowed for assessment of both the absolute and relative efficacy of the social norms intervention as compared to one common form of psychoeducation–information about resources. Attitudes about help-seeking were assessed at baseline, immediately post-intervention and at 2-weeks post-intervention. It was predicted that participants’ attitudes toward help-seeking would significantly differ across treatment conditions at both post-intervention assessments and show the following order: SNI condition attitudes > PRI condition attitudes > NIC condition attitudes.

The prediction was only partially supported. At both post-intervention and 2-week follow-up, both the SNI and the PRI conditions showed more positive attitudes toward help seeking as compared to the NIC but did not differ from each other. Although a non-
significant trend emerged at the 2-week follow-up, with participants who received the SNI reporting more positive attitudes than those in the PRI condition, overall the results indicate that the SNI and PRI were equally effective interventions and both increased attitudes toward help seeking. As such, the choice of which intervention to use should be made due to factors other than efficacy. Different institutions will have different levels of resources and different goals concerning how they wish to impact their student body. The university where the study was conducted is very psychological-resource rich. It has two psychological/counseling centers, with staffing equivalent to approximately 11 full time therapists, in addition to a team of 5-6 sexual assault advocates and a 24-hour on-call psychologist serving an undergraduate population of approximately 3800 students. This may have made the PRI particularly effective as students were provided with a multitude of on-campus and not community based resources.

Many factors likely contributed to the success of the social norms intervention, including the fact that a social norms intervention addresses one of the most highly cited barriers to treatment: stigma (Corrigan & O'Shaughnessy, 2007; Eisenberg et al., 2009; Han et al., 2006; Vogel et al., 2007). The SNI intervention used in this study was based on recent calls to harness the power of social norms to improve help-seeking (Eisenberg et al., 2009; Kulesza et al., 2015; Pisiani et al., 2012). Prior investigations into the appropriateness of using a social norms approach identified the presence of discrepancies between students’ perceptions of others’ beliefs and their personal beliefs (Conley, 2011) finding replicated in the normative data used as the basis of the present study’s intervention (Haigh, 2015).
The social norms intervention developed for this study was based on normative data originating from the sample’s peer reference group (Haigh, 2015), which may have contributed to its observed effectiveness. Past research investigating social norms interventions for other behaviors (i.e., reducing alcohol misuse) has suggested the reference group is an important component to success and have emphasized the importance that the perceptions of approval come from an individuals’ peer group (Labrie et al., 2009; McAlaney et al., 2011). Similar to stigma, lack of knowledge regarding mental health services has also been cited as a barrier to treatment (Ting, 2011). Ting (2011) identified that 15% of students reported that they were unaware of where to go, or how to find help. Given this commonly identified barrier, it is not surprising that interventions have often focused on delivering information about mental health resources (Sharp et al., 2006) or that the PRI in the present study had a positive impact on participants’ help-seeking attitudes. Of note, the ACHA-NCHA II found that nearly half of all college students reported not receiving any information regarding symptoms of mental health disorders or how and where to seek treatment for anxiety or depression (ACHA, 2013), implying a continued need for the use of interventions that include providing information regarding mental health resources. Given the psychological-resource rich environment where the present study was conducted, the multitude of on-campus resources provided in the PRI likely enhanced its effectiveness.

The present study also examined whether participant demographics influenced attitudes toward help-seeking. As predicted, results found an association between sex and help-seeking beliefs, with men reporting less favorable attitudes toward help seeking than women across all conditions. This finding has received consistent support in the
literature and several factors have been suggested to account for these observed sex differences, including the role of traditional male gender roles (Mahalik & Rochlen, 2006; Vogel et al., 2013). This gives rise to the question: might men be particularly swayed by one form of intervention over another? The current study is unclear on this question. Although an interaction between sex and condition was seen at 2-weeks post-intervention—with men responding more strongly to the PRI (2-week $M = 4.88$) than the SNI (2-week $M = 4.57$) and women responding more strongly to the SNI (2-week $M = 5.01$) than the PRI (2-week $M = 4.69$)—it was not observed immediately post-intervention, but was observed at baseline. This suggests that the interaction is best understood as an artifact of this particular sample and not related to condition. However, although baseline analyses indicated the difference did not reach significance ($p = .10$), there were almost twice ($n = 21$) as many men in the SNI as compared to the PRI ($n = 11$). As such, the good results obtained by the SNI suggest promise of the SNI’s ability to facilitate positive attitudes in men, as well as women, an important attribute, given the repeated finding of men holding generally more negative attitudes toward help-seeking.

In addition to the assessment of participants’ attitudes immediately post intervention and at 2-weeks post-intervention, this study also assessed participants’ attitudes at 8-weeks post-intervention. It was hypothesized that differences in attitudes across groups would persist over time and that at 8-weeks post-intervention, participants who received the SNI would report significantly more positive attitudes toward help seeking as compared to participants in the PRI and NIC conditions and that participants in the PRI condition would show more positive attitudes toward help seeking compared to those in the NIC condition. Although the differences were no longer significant, the 8-
week follow-up results showed the same pattern as was observed at 2-weeks post-intervention, with participants who received the SNI reporting the most positive attitudes. It is important to note that in the present study there was a large drop in retention of participants from 2-weeks post-intervention to 8-weeks post intervention as this portion of the study was purely voluntary and not associated with research credit; as a result, only 43% of the sample participated in 8-week follow-up, resulting in much lower power. Had a higher retention rate been preserved, resulting in a larger $N$, the hypotheses may have been supported, especially as examination of the attitude scores showed limited decline from 2-week follow-up, especially for the SNI (SNI: 2-week $M = 4.83$ vs 8-week $M = 4.79$; PRI: 2-week $M = 4.73$ vs 8-week $M = 4.62$; NIC: 2-week $M = 4.34$ vs 8-week $M = 4.36$) and the effect size ($\eta^2 = .08$) remained medium. That the SNI may have a lasting effect would be consistent with prior research that found a social norms intervention for reducing alcohol misuse demonstrated an enduring impact at both 1 and 2 month follow-ups (Labrie et al., 2009).

Contrary to prediction, recent engagement in help-seeking behavior measured at 8-week follow up did not differ across condition and all three conditions showed virtually identical levels of help seeking. It had been hypothesized that at 8-week follow-up, more participants who had received the SNI would report help-seeking behavior – defined as either seeking personal help or recommending that a friend/family member seek help – as compared to the other conditions. In general, help seeking behavior tends to be a more challenging construct to accurately assess and has often been left uninvestigated by studies exploring the effectiveness of help-seeking interventions (Gulliver, et al., 2012). In the present study, 8 weeks may not have been a sufficient amount of time to accurately
assess behavioral change. One study that demonstrated successful behavioral change related to a social norms intervention for alcohol misuse had a much longer follow-up: 2 years (Turner et al., 2008). However, 43% of the total retained sample at 8-weeks did report help-seeking, suggesting that help-seeking is not a rare event and did occur with some frequency within the 2-month window.

An additional difficulty when considering the functional meaning of the improved help-seeking attitudes seen in the present study is the ongoing debate over whether attitudes consistently predict behavior. Ajzen’s (1991) frequently cited theory of planned behavior predicts a link between beliefs and behavior and defines behavior as a result of attitudes, perceived behavioral control and subjective norms. Thus, the argument for attitudes leading to behavioral change is that by reducing attitudinal barriers, such as misperceptions and stigma, the likelihood of positive help-seeking behavior should increase. However, as noted, previous help-seeking intervention research has only rarely investigated true behavioral change, and most studies have attempted instead to demonstrate improved willingness and intention to seek help in the future (Gulliver, et al., 2012). Although behavioral differences were not observed in the present study, help-seeking attitudes were improved in the SNI condition in the present study. Thus, it remains reasonable to propose that a social norms intervention could serve as a catalyst for positive help-seeking behavior.

Another issue to consider in regards to these findings is that, in general, the full sample held very positive attitudes toward help-seeking (SNI: baseline $M = 4.51$; PRI: baseline $M = 4.48$; NIC: baseline $M = 4.33$). Therefore, the extent of measurable improvement in attitudes was limited. Future research with samples that show a wider
range of attitudes may result greater attitudinal change and the SNI approach may be particularly effective for groups which harbor more negative attitudes at baseline.

**Strengths and Limitations**

This study contained numerous strengths. One strength of the present study was the fact that participants were stratified across years in school. This diversity of year in school is important for two reasons. For one, the few studies that have sought to investigate the relation between class standing and help-seeking have produced inconclusive results as the samples have not included proportional representation across class years (Ting, 2011; Vogel et al., 2007). This study’s stratified sample contributes to the literature by indicating that year in school does not appear to be significantly associated with beliefs about help-seeking. Secondly, the fact that the sample was stratified across years in school boosts the potential that the present findings will generalize to the entire undergraduate student population. Including three conditions was another strength of this study, allowing for assessment of not only the absolute but also the relative efficacy of the social norms intervention, by comparing it to a common form of intervention -- information about psychological resources. An additional strength of the present study is that the social norms intervention was developed using this sample’s peer reference group, as a close association between an individual and the reference group has been argued as central to the effectiveness of a social norms approach (McAlaney et al., 2011).

The findings presented should be considered in the context of this study’s limitations. One limitation of the present study was the drop in retention from week 1 to week 8, which severely curtailed the power to detect lasting effects over time. Other
weaknesses in the present study include the disproportionate number of women vs. men and the limited diversity in terms of race/ethnicity. Although limited in racial/ethnic diversity, the sample did match the overall racial/ethnic make-up of the university where it was conducted. Therefore, participants who received the social norms intervention were presented with information from their peer reference group; however, the impact of a similar SNI in a more diverse group might be quite different, particularly a group that holds less positive baseline help-seeking attitudes. Finally, another weakness of the present study was the relatively brief follow-up period to capture help-seeking behavior.

**Implications and Future Directions**

The SNI used in the present study differed from many social norms interventions in that it used a brief, interactive, small group format. Most of the social norms interventions studied have targeted attitudes and behaviors using campus-wide campaigns (Haines & Spear, 1996; Turner et al., 2008); the effectiveness of a campus wide approach using social norms aimed at improving help seeking could be studied to determine if the format used to disseminate the social norms information influences the effectiveness of the information. The present study’s social norms intervention required a trained facilitator and took 20-25 minutes to administer. Therefore, it may be valuable to identify a less taxing and time intensive approach that could potentially reach a larger proportion of the student body. For example, one approach could involve identifying just the most impactful misperceptions and disseminating these in a campus wide campaign. In Hamilton’s (2013) study exploring the appropriateness of using a social norms approach to improve help-seeking among military personnel, he identified which statements military service members found most striking and referred to these statements as *key*
misperceptions. He also suggested that future social norms interventions could consider identifying the key misperceptions present for the focal group and tailor interventions to focus on just those beliefs. Notably, campus wide social norms interventions may reach those students reporting not having received information regarding mental health or mental health resources; for example, in a study of social norms interventions aimed at reducing alcohol misuse at four universities, Turner et al. (2008) reported that 89% to 97% of first year students recalled seeing the social norms information on two or more occasions.

The present study contains important implications for the college student population. College students tend to have a high incidence of mental health concerns (ACHA, 2015; Han et al., 2006; Hunt & Eisenberg, 2010; Zivin et al., 2009), yet rarely seek treatment (Han et al., 2006; Hunt & Eisenberg, 2010; Zivin et al., 2009). This study’s findings suggest that a social norms intervention is an effective intervention for improving help-seeking attitudes. Notably, the provision of psychological resources in an interactive small group format also demonstrated positive improvement in help-seeking attitudes. Given that the social norms intervention and the provision of psychological resources resulted in more positive help-seeking attitudes, a combination intervention should be investigated as the effects of the two approaches may summate and have a greater effect on help-seeking. Future research is encouraged to continue exploring the effectiveness of different types of social norms interventions on improving attitudes and behavior toward help-seeking, and to identify the most effective help-seeking interventions for college students, a population who experiences high rates of mental health concerns, yet underutilize effective treatment.


Clement, S., Schauman, O., Graham, T., Maggiano, F., S. Evans-Lacko, N. Bezborodovs,


Masculinity, 16, 234-237. doi:10.1037/a0036241


Table 1

Demographic Characteristics of Final Sample ($N = 156$)

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<th>Variable</th>
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Table 2

Demographic Characteristics by Treatment Condition

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<th>NIC (n = 52)</th>
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Note: *p < .05
Table 3

*Attitudes Toward Help-Seeking at Baseline*

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<th>Variable</th>
<th>SNI</th>
<th>PRI</th>
<th>NIC</th>
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<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
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<tr>
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Note: * p < .05
Figure 1. Significant Interaction between time and treatment condition
Figure 2. Attitudes Toward Help-Seeking Post-Intervention

- Social Norms Intervention (SNI) (M = 4.74, SD = .67)
- Psychological Resources Intervention (PRI) (M = 4.78, SD = .68)
- No Intervention Control (NIC) (M = 4.30, SD = .74)

Note: Means presented are average BAPS score (1 = strongly disagree, 6 = strongly agree).
Figure 3. Attitudes Toward Help-Seeking 2 weeks Post-Intervention

<table>
<thead>
<tr>
<th>Intervention</th>
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<td>.63</td>
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<td>No Intervention Control (NIC)</td>
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<td>.67</td>
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</table>

Note: Means presented are average BAPS score (1 = strongly disagree, 6 = strongly agree).
Figure 4. Interaction of Sex and Treatment Condition

Interaction of Sex and Treatment Condition at Baseline

Interaction of Sex and Treatment Condition 2-Weeks Post-Intervention
Appendix A

January 28, 2014

Elizabeth Haigh
1040 Barry Lane
Cincinnati, OH 45229

Dear Ms. Haigh:


If you wish to modify your study, including any changes to the approved Informed Consent form, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

We wish you success with your research!

Sincerely,

![Signature]

Morell E. Mullins, Jr., Ph.D.
Chair, Institutional Review Board
Xavier University

MEM/ab

c: Susan Kenford, Advisor

enclosure: stamped informed consent