

A Model of Intention to Provide Mental Health First Aid in College Students

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Abstract

Background: Psychologically distressed college students' peers are often the first line of mental health support. Mental health first aid (MHFA) focuses on the quality of early intervention provided by peers to those in psychological distress but has neglected what motivates college students to provide MHFA.

Aims: The current study used the MHFA framework and bystander theory as a foundation to examine factors influencing college students' intention to provide MHFA.

Methods: Participants were 778 U.S. college students from a larger group of college students ($N = 29,765$) from the 2015-2016 Healthy Minds Study archival data set. Secondary data analysis using path analysis modeling was used to test for both direct and indirect effects.

Results: The specified path analysis model demonstrated exact fit to the data, $\chi^2(67) 82.359, p = .098$. Personal stigma decreased MHFA intention, whereas both perceived MHFA efficacy and personal responsibility increased MHFA intention. Of note, perceiving campus climate as supportive of helping others indirectly increased MHFA intention.

Conclusions: The current study supports a theory-driven framework rooted in the MHFA and bystander theory literature that could facilitate targeted interventions aimed at improving mental health prevention via college student prosocial behavior.

Keywords: mental health first aid; bystander theory; informal support; help-seeking; college health

A Model of Intention to Provide Mental Health First Aid in College Students

Over one 12-month period, approximately 1 in 3 college students met the criteria for a mental health disorder (Bruffaerts et al., 2018). Only 20-35% of these students receive professional psychological treatment (Hunt & Eisenberg, 2010). Left untreated, mental health symptoms can lead to impaired academic and social functioning (Bruffaerts et al., 2018). The reluctance of college students to seek professional psychological help, combined with the negative outcomes associated with untreated mental health disorders, has encouraged researchers to identify alternative methods of increasing college student help-seeking.

One way to increase help seeking is to leverage informal sources (e.g., friends, peers) of help. When college students receive psychological support from informal sources, this can increase their chances of seeking subsequent professional psychological help (Rickwood, Deane, Wilson, & Ciarrochi, 2005). Reaching out for informal support requires distressed students to recognize their symptoms and be comfortable disclosing this distress to others but many are not (Denmark, Hess, & Becker, 2012). Such students must rely on friends or peers to recognize their distress and then intervene. Unfortunately, informal support networks often lack the knowledge and skills to intervene (Kitchener & Jorm, 2002). Furthermore, social psychological theories (i.e., bystander theory) suggest that, when someone is visibly in distress, individuals often expect others to step in and intervene (Fischer et al., 2011). In other words, friends and peers need more than mental health knowledge; they need to be motivated to help those in distress. Research on Mental Health First Aid (MHFA) or, “the help provided to a person developing a mental health problem or in a mental health crisis” (Kitchener & Jorm, 2008, p. 55), has attempted to address this gap in the literature.

Mental Health First Aid

Many colleges in the United States have implemented primary prevention programs (i.e., mental health gatekeeper programs) that aim to increase knowledge of mental disorders so that students can intervene appropriately when a peer is in psychological distress (Lipson, 2014). MHFA training programs cover the knowledge and skills necessary to aid individuals during a mental health crisis (Kitchener & Jorm, 2002). The primary concern of MHFA training programs is to improve the quality of informal help that lay people provide to those in psychological distress so appropriate professional help is sought (Kitchener & Jorm, 2006).

The available research on MHFA has focused on the effectiveness of MHFA programs (Hadlaczky, Hökby, Mkrtchian, Carli, & Wasserman, 2014). MHFA programs aim to reduce personal stigma (i.e., one's negative perceptions of those with a mental disorder; Eisenberg, Downs, Golberstein, & Zivin, 2009), and to increase mental health knowledge (i.e., one's perceived general knowledge of mental disorders), perceived MHFA efficacy (i.e., perceived ability to intervene with someone with a mental disorder; Hadlaczky et al., 2014), mental health recognition (i.e., perceived ability to recognize when an individual is in psychological distress; Kitchener & Jorm, 2002), and MHFA intention (i.e., how much effort one plans to exert to help an individual in psychological distress). MHFA programs have demonstrated efficacy in achieving these objectives (Hadlaczky et al., 2014). However, the MHFA literature has been subject to several limitations.

First, the MHFA research has focused on the quality of help provided rather than what motivates individuals to provide help (e.g., Bond, Jorm, Kitchener, & Reavley, 2015). For example, Rossetto and colleagues (2014) examined predictors of "MHFA intention" but operationalized the construct as one's ability to follow the correct steps in a mental health emergency. An individual with no intention to help could score high on this "intention" measure,

whereas an individual with strong intention to help could score low. This problematic operationalization of intention does not allow for examination of the factors that motivate people to provide help. Second, there are significant methodological concerns with how items measuring MHFA intention and behavior have been worded. To assess MHFA intention/behavior in college students, many studies use a vignette of a person displaying mental health symptoms and ask an open-ended question such as, “If Mark/Emily was your friend, what would you do (if anything) to help him/her?” (Davies, Wardlaw, Morriss, & Glazebrook, 2016). The underlying assumption here is that students are willing to provide help when they may not.

Third, most MHFA research has used pre/post-test designs to determine if MHFA interventions improve outcomes (Hadlaczky et al., 2014). This study methodology has not facilitated the identification of which variables (i.e., perceived MHFA efficacy, perceived mental health knowledge, mental health recognition) are the best predictors of MHFA intention. This identification is essential, as it can help professionals develop MHFA programs that specifically target those factors shown to enhance intention to provide help. Lastly, the MHFA literature has not yet incorporated the extensive knowledge gained from the bystander theory literature. Bystander theory scholars have conducted extensive research into college students’ willingness to provide help in crises situations (e.g., sexual assault prevention) and identified important variables not yet included in the MHFA literature (Banyard & Moynihan, 2011).

Bystander Theory and MHFA

Individuals are less likely to intervene in emergency situations when in the presence of others, given the diffusion of responsibility that can occur (Darley & Latane, 1968). The sexual assault prevention literature has applied bystander theory to better understand why individuals do not intervene in situations where sexual assault risk is high (Banyard, 2011). Similar to the

MHFA literature, the bystander sexual assault literature has found that individuals do not intervene if they lack knowledge of sexual assault or possess stigmatizing beliefs about survivors of sexual assault (i.e., rape myths; Franiuk, Seefeldt, & Vandello, 2008). Darley & Latane (1968) delineated sequential steps in the decision to intervene that overlaps partially with the outcomes of interest in the MHFA literature: (1) noticing a problem has occurred (i.e., mental health recognition, perceived mental health knowledge), (2) assuming responsibility to intervene (i.e., personal responsibility), (3) beliefs about ability to help (i.e., perceived MHFA efficacy), and (4) deciding to provide help (i.e., MHFA intention). Personal responsibility, in particular, has been found to be the strongest predictor of bystander intervention in the sexual assault prevention literature (Banyard & Moynihan, 2011). Surprisingly, no empirical study has examined the role of personal responsibility in MHFA intention, even though qualitative data suggests MHFA program participants gained a greater sense of responsibility to intervene (Lucksted, Mendenhall, Frauenholtz, & Aakre, 2015). The reviewed literature suggests that the role of personal responsibility in MHFA intention should be empirically investigated.

Much of the MHFA and sexual assault bystander literature has focused on changing intrapersonal factors (e.g., personal stigma, rape myths). The bystander theory literature suggests that both peers norms and community context can also impact individuals' decisions to intervene (Banyard, 2011). For instance, a greater sense of trust and connection among community members can promote peer intervention (Banyard, 2008). Two variables of potential interest that have not yet received attention in the MHFA literature are campus climate (i.e., perception that campus community is supportive of helping others) and perceived stigma (i.e., perception of others negative beliefs about those with mental illness; Eisenberg et al., 2009). The MHFA literature acknowledges MHFA programs are designed to change community beliefs and the

norms of a group should be understood before implementing these programs (Jorm, 2012). However, what is less understood is how campus climate and perceived stigma influence proximal (i.e., variables closest to MHFA intention) MHFA constructs (e.g., mental health recognition) that in turn may influence MHFA intention. Feeling more connected to one's campus and perceiving that others are willing to help can promote sexual assault bystander intervention (Bennett, Banyard, & Garnhart, 2014) which suggests that peer norms and community beliefs could also indirectly influence MHFA intention through more proximal MHFA constructs.

Present Study

The current study extended the MHFA literature by focusing on what motivates students to provide MHFA rather than the quality of help provided. Drawing upon scholarship in MHFA and bystander theory, this study was the first to test an empirical model of key factors that may predict who does and who does not intend to provide MHFA to their fellow psychologically distressed college peers. Results could offer guidance to college mental health prevention researchers, practitioners, and stakeholders seeking to increase the provision of informal psychological support and referral on college campuses.

Hypotheses

Personal responsibility, perceived MHFA efficacy, and mental health recognition, will exhibit a positive direct effect on MHFA intention, and personal stigma will demonstrate a negative direct effect on MHFA intention (Hadlaczky et al., 2014). Campus climate will demonstrate a positive direct effect on personal responsibility, perceived MHFA efficacy, mental health recognition, a negative direct effect on personal stigma, and a positive indirect effect on MHFA intention. This is expected, as the bystander theory literature indicates that perceiving a

community as supportive of helping increases individuals' willingness to intervene (Bennett et al., 2014). Perceived stigma will exhibit a positive direct effect on personal stigma (Vogel, Bitman, Hammer, & Wade, 2013), a negative direct effect on perceived MHFA efficacy, and a negative indirect effect on MHFA intention, as individuals high in perceived stigma may perceive less peer support for helping others in psychological distress. Perceived mental health knowledge will demonstrate a positive direct effect with the more proximal MHFA variables (e.g., personal stigma) and a positive indirect effect on MHFA intention, as the goal of MHFA programs is to increase knowledge and skills that subsequently lead to a greater willingness to intervene when a person is in distress (Jorm, 2012). To control for gender, past gatekeeper training, and past MHFA behavior, bivariate correlation analyses were examined among the endogenous variables and the three control variables. Significant associations were controlled by specifying these associations in the path model.

Method

Participants and Procedure

Given that each institution chose which elective modules their students would see, participants for the current study were selected based upon their completion of the variables of interest. Because the primary outcome of interest was MHFA intention, we retained those participants ($n = 1430$) who were presented with that item. Of those participants, 652 were missing more than 35% of the total items. Results of the MCAR test suggested that these were not missing completely at random, $\chi^2(85) 359.951, p < .001$, indicating that these participants had not been presented with all items and were removed from further analysis (post-hoc testing indicated that retention vs. exclusion of these 652 cases did not alter our results). Participants were 778 college students (age $M = 20.72, SD = 2.97$) from approximately 24 colleges and

universities across the United States (see Table 1 for demographics) as part of the 2015-16 Healthy Minds Study (total $N = 29,765$), a web-based survey that examines health and help-seeking within a national U.S college sample (Healthy Minds Network, 2018). The authors received a de-identified archival dataset from the Healthy Minds Survey creators, thus IRB approval was not required to obtain and use the data for this study. The University of Michigan Health and Behavioral Sciences IRB (HUM00100169) provided approval for collection of the Healthy Minds archival dataset. Both graduate and undergraduate students were eligible to participate if they were at least 18 years of age and degree-seeking. Participants in the study provided consent for their data to be used in research. Approximately 29% of the sample indicated they had provided support to someone in emotional distress during the past 12 months.

Measures

For the following variables (i.e., excluding the dichotomous items), higher scores indicated more of that construct. See Table 2 for descriptive statistics and correlations.

Mental Health First Aid Intention. MHFA intention was measured with an item used in prior research examining individuals' intention to provide mental health support (Eisenberg, Hunt, & Speer, 2011). The item stated, "If I saw someone was experiencing significant emotional distress or thoughts of suicide, I would intervene (by trying to help)" and was rated from (1) *strongly disagree* to (6) *strongly agree*.

Personal responsibility. Personal responsibility was measured with a 2-item instrument (e.g., "I am responsible to help if a friend is struggling" and "I am responsible to help if a classmate is struggling.;" rated from (1) *strongly disagree* to (6) *strongly agree*) created by the Health Minds Network survey developers (Healthy Minds Network, 2018). The internal consistency of this instrument was found to be .67 [95% CI of .616, .710] in the current sample.

Perceived MHFA Efficacy. Perceived MHFA efficacy was measured with an item used in prior MHFA research (e.g., Kitchener & Jorm, 2002). The item stated, “I feel confident in helping someone with a mental health problem” and was rated from (1) *strongly disagree* to (6) *strongly agree*.

Perceived Mental Health Knowledge. Perceived mental health knowledge was measured with an item used in prior research (e.g., Lipson, Speer, Brunwasser, Hahn, & Eisenberg, 2014). The item stated, “Relative to the average person, how knowledgeable are you about mental illnesses (such as depression and anxiety disorders) and their treatments?” and was rated from (1) *well below average* to (5) *well above average*.

Mental Health Recognition. Individuals’ perceived ability to recognize mental health symptoms in a peer was measured with an item used in previous MHFA research (e.g., Lipson et al., 2014). The item stated, “I have a good idea of how to recognize that someone is in emotional or mental distress” and was rated from (1) *strongly disagree* to (6) *strongly agree*.

Stigma. Both perceived public stigma of seeking help and personal stigma of seeking help were measured with items adapted from the Devaluation-Discrimination Scale (Link et al., 1989) and used in prior research (e.g., Eisenberg, Downs, Golberstein, & Zivin, 2009). Personal stigma of seeking help was measured by the item “I would think less of a person who has received mental health treatment” whereas perceived public stigma of seeking help was measured with the item “Most people think less of a person who has received mental health treatment.” Both were rated from (1) *strongly disagree* to (6) *strongly agree*.

Campus Climate. Perception of campus climate was rated by a single item adapted from the Healthy Minds Study (Healthy Minds Network, 2018). The item stated, “At my school, we

are a campus where we look out for each other” and was rated from (1) *strongly disagree* to (6) *strongly agree*.

Gender. Gender was measured by a dichotomous item rated as (0) *male* or (1) *female*. No participants identified with a non-binary gender identity (e.g., genderqueer).

Mental Health Gatekeeper Training. Participation in mental health gatekeeper training was measured with a single item “Have you ever participated in a mental health gatekeeper-training program?” rated as (0) *no* or (1) *yes*. Answering yes did not indicate participation in MHFA training as mental health gatekeeper training involves various programs.

Past MHFA Behavior. Participants answered, “In the past year, I have intervened (by trying to help) in the following situations on my campus: Someone was experiencing significant emotional distress or thoughts of suicide.” as (0) *no* or (1) *yes*.

Results

Data Preparation and Analysis Plan

No variables exceeded the cutoffs of 3 and 10 for high univariate skewness and kurtosis values, respectively (Weston & Gore, 2006). Collinearity statistics (VIFs < 1.7) indicated no issues with multicollinearity. We used Mplus’ (version 6.11; Muthén & Muthén, 1998-2012) Full Information Maximum Likelihood (FIML) method to handle missing data. The data was missing at random, $\chi^2(67) 82.359, p = .098$, thus allowing us to employ FIML. Missing data ranged from a low of 0% for many items to a high of 12.4% on the past intervention item (covariance coverage .874 to 1.000). We used the maximum likelihood estimation with robust standard errors (MLR) option to estimate the scaled χ^2 test statistic to protect against deviations from multivariate normality.

The scaled chi-square statistic (scaled χ^2), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and standardized root mean square residual (SRMR) were used to assess the exact and approximate fit of the path analysis model. If the scaled χ^2 was non-significant, then the model demonstrated exact fit (Asparouhov & Muthén, 2018). In the case of a significant scaled χ^2 the following approximate fit criteria were used: RMSEA \leq .06, CFI \geq .95, TLI \geq .95, and SRMR \leq .08 (Hu & Bentler, 1999).

Path Analysis Model

The path analysis model demonstrated exact fit to the data, $\chi^2(10, N = 778) = 17.18, p = .072$; RMSEA = .030 [90% CI of .000, .054]; CFI = .992; TLI = .970; SRMR = .013.

Standardized parameter estimates for the path analysis model are presented in Figure 1. All parameter estimates were congruent with our hypotheses except for mental health recognition not predicting MHFA intention, and campus climate's positive association with personal stigma. The path analysis model accounted for 24.8% of the variance in MHFA intention, 15.4% of variance in MHFA efficacy, 19.9% in mental health recognition, 11.8% of the variance in personal responsibility, and 17.5% of the variance in personal stigma. To test for indirect effects, one thousand bootstrap draws of the data were used to obtain bias-corrected bootstrap confidence intervals. Nine indirect effects were tested and seven were significant (see Table 3). Contrary to our hypotheses, campus climate demonstrated a negative indirect effect with MHFA intention through increased personal stigma.

Discussion

The present study is the first to integrate the MHFA and bystander theory literature to develop a model explaining college students' intention to provide MHFA. Our findings highlight the utility of bystander theory variables in explaining students' willingness to help a

peer in psychological distress. The results highlight the important role of personal responsibility. Greater perceived personal responsibility to help was associated with increased MHFA intention. Whereas self-efficacy to provide help and personal stigma are often variables of interest in the MHFA literature (e.g., Bond et al., 2015), our results indicate that personal responsibility is more strongly linked with MHFA intention than all other variables in the model. This may be partially explained by the concept of diffusion of responsibility (i.e., assumption that others are responsible to help) in bystander theory (Darley & Latane, 1968). College students can possess the skills and perceived confidence to help, but these skills will be of no use if they expect others to help. In summary, future MHFA research and programming should consider an enhanced focus on how to increase personal responsibility.

The current study also sought to understand the role peer norms (i.e., perceived stigma) and community context (i.e., campus climate) may play in MHFA intention. This is an important addition to the literature, as an overarching goal of MHFA programs is to change public knowledge and attitudes toward mental health (Jorm, 2012), yet MHFA studies often only examine intrapersonal variables (e.g., Burns et al., 2017). Congruent with our hypotheses, students who viewed their campus as supportive of helping others felt more capable of recognizing mental health concerns, reported more personal responsibility, and perceived more confidence to engage in MHFA. One potential explanation for this finding is the role of peer norms and evaluation apprehension (i.e., fear of embarrassment; Darley & Latane, 1968). In other words, if a student believes others would help in their situation, then they may feel less concerned about the social consequences of helping. In fact, the sexual assault bystander literature has found that people are more willing to intervene when they perceive social norms as supportive of helping (Mudde, Hoefnagls, VanWignen, & Kremers, 2007), and our results

further support this assertion in the context of mental health support. Perceptions of social norms around helping were also indirectly associated with MHFA intention through increased personal responsibility and MHFA efficacy. When implementing MHFA programs on college campuses, practitioners and researchers should consider tracking perception of campus climate because seeing other students engage in these programs can create a sense that others are willing to help. Interestingly, campus demonstrated an unexpected weak, positive direct effect on personal stigma. This result goes against research indicating that perceived campus support for helping can reduce barriers and should be investigated further in future MHFA research testing this model (Bennett et al., 2014).

Perceived stigma played an important role in the model. Congruent with past research, students who viewed peers as endorsing more negative attitudes toward people with mental illness (i.e., perceived stigma) also tended to themselves endorse more negative attitudes toward those with mental illness (i.e., personal stigma; Vogel et al., 2013). Bond and colleagues (2015), seeking to explain why a MHFA intervention did not reduce perceived stigma, argued that MHFA interventions are not meant to change the perception of what others think. However, our results argue for the inclusion of perceived stigma in future MHFA research as it is tied to increased personal stigma and exhibited a negative indirect effect on MHFA intention. Again, MHFA program developers need to be tracking the extent to which their interventions dispel stigma regarding mental health on campus. MHFA interventions must be created and implemented with an understanding of the norms and beliefs of the group who receives the intervention (Jorm, 2012). In our sample of college students, perceptions of norms surrounding mental illness were very important, given their indirect links with students' intention to provide MHFA.

Finally, our findings highlighted the important role of both perceived mental health knowledge and personal stigma. First, personal stigma accounted for the second-most variance in MHFA intention. Students who held more positive beliefs about individuals with mental illness were more likely to help. This is consistent with social psychological research establishing that people are more willing to help those they view as part of their in-group (Levine, Cassidy, Brazier, & Reicher, 2002). Additionally, greater perceived mental health knowledge was associated with a reduction in personal stigma, greater perceived confidence to engage in MHFA, increased personal responsibility, and increased mental health recognition. A priority of MHFA interventions is to increase peoples' knowledge of mental health (Kitchener & Jorm, 2002). These findings argue for the importance of outreach programs, such as MHFA, that educate college students about mental health. Surprisingly, mental health recognition demonstrated no effect on MHFA intention when controlling for other variables. This makes sense as recognizing mental health symptoms is only the first step in the bystander intervention process (Darley & Latane 1968) and someone's decision to help is ultimately decided by their perceived confidence to help and by the recognition that it is their responsibility to help. Future MHFA research should seek to replicate these findings, but it suggests that mental health recognition may be necessary but insufficient for students' motivation to help those in psychological distress.

Limitation and Future Directions

Limitations of the present study highlight avenues for future research. First, actual helping behavior was not examined and future studies should use longitudinal designs. Second, the current study consisted predominantly of White, female, college-educated students. Caution must be taken in generalizing these finding as women are more likely to provide peer support

(Banyard, 2008). Third, not all potential participants in our study had the variables of interest displayed thus leading to significant missing data. We cannot account for how the results would have been affected if the students completed all variables. Fourth our instruments had several limitations. Many constructs were measured with single-item instruments, and we may not have measured the constructs to the same level of fidelity as multi-item instruments. For example, our measure of campus climate may not have captured all aspects of a campus environment that is relevant to students. The self-report nature of our instruments also precluded us from measuring students' actual knowledge or actual ability to recognize mental health symptoms. Students may hypothetically feel confident intervening until they are actually confronted with someone in distress. However, our use of these items is supported by prior studies (e.g., Lipson et al., 2014), and these variables have been identified as relevant to understanding a person's intention to provide MHFA. Fifth, we did not specify the helping behavior in which the student would engage. Students may be more or less likely to help depending upon how the person in distress presents. Despite the above limitations, the current model offers a theory-and data-driven framework to facilitate mental health prevention and early intervention via increased informal support.

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Appendix

Table 1

Demographic Characteristics of College Student Sample

HMS Sample	
(n = 778)	
Gender	
Female	64%
Male	36%
Race	
White or Caucasian	88%
Asian American/Pacific Islander	10%
Latino/a	4%
African American/Black	4%
American Indian	2%
Middle Eastern/Arab	.8%
Other	1%
Sexual Orientation	
Heterosexual	89%
Bisexual	4%
Gay/Lesbian	2%
Questioning	1%
Other	3%
Relationship Status	
Single	56%
Committed Relationship	38%
Married/Engaged	4%
Divorced/Separated	.3%
Other	1%
Year in School	
First	30%
Second	22%
Third	21%
Fourth	24%
Fifth	2%
Sixth	.5%
Residence	
Off-campus/non-university housing	48%
On-campus residence hall	42%
With parents/relatives	3%
On-campus housing/apartment	2%
On/off campus cooperative housing	2%
Fraternity/sorority house	2%
Other	.4%
Gatekeeper Training	
No	87%
Yes	12%
Past MHFA Behavior (12 months)	
No	58%
Yes	29%

Table 2

Means, Standard Deviations, and Intercorrelations among measures (N=778)

Variables	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1. MHFA Intention	5.24	0.80	-										
2. Personal Responsibility	4.60	0.80	.36**	-									
3. Perceived MHFA Efficacy	4.04	1.16	.28**	.27**	-								
4. Personal Stigma	1.83	0.98	-.28**	-.14**	-.06	-							
5. MH Recognition	4.57	0.95	.22**	.19**	.59**	-.10**	-						
6. Campus Climate	3.58	1.34	.13**	.28**	.24**	.09*	.10**	-					
7. Perceived Stigma	3.21	1.22	-.12**	-.01	-.05	.33**	-.09	-.14**	-				
8. Perceived MH Knowledge	3.53	0.81	.20**	.11**	.28**	-.21**	.41**	-.04	-.08*	-			
9. Gatekeeper Training	N/A	N/A	.04	.05	.11**	-.07	.13**	.08*	-.06	.11**	-		
10. Gender	N/A	N/A	.09**	.08*	-.02	-.13**	.07	.01	-.08*	.07	.02	-	
11. Past MHFA Behavior	N/A	N/A	.24**	.13**	.13**	-.11**	.17**	-.11**	.03	.18**	.04	.07	-

*Note: * $p < .05$, ** $p < .01$*

Table 3

Bootstrap Analysis of Magnitude and Statistical Significance of Indirect Effects for the Path Analysis Model

Predictor	Mediator	Criterion	Standardized indirect effect		Bootstrap estimate		95% CI (unstandardized)	
			β	<i>SE</i>	<i>B</i>	<i>SE</i>	Lower bound	Upper bound
Campus Climate	Personal Responsibility	MHFA Intention	.079	.014	.047	.009	.033	.068
Campus Climate	Perceived MHFA Efficacy	MHFA Intention	.041	.012	.024	.007	.011	.042
Campus Climate	Personal Stigma	MHFA Intention	-.026	.009	-.015	.005	-.027	-.007
Campus Climate	Mental Health Recognition	MHFA Intention	.004	.005	.002	.003	-.003	.010
Perceived Stigma	Personal Stigma	MHFA Intention	-.068	.015	-.045	.010	-.065	-.027
Perceived Mental Health Knowledge	Perceived MHFA Efficacy	MHFA Intention	.043	.013	.042	.013	.020	.071
Perceived Mental Health Knowledge	Personal Responsibility	MHFA Intention	.023	.009	.023	.009	.006	.044
Perceived Mental Health Knowledge	Personal Stigma	MHFA Intention	.032	.009	.032	.009	.016	.052
Perceived Mental Health Knowledge	Mental Health Recognition	MHFA Intention	.013	.016	.012	.016	-.017	.044

Note. Indirect path is significant if the 95% confidence interval (CI) does not include 0. **Bold** paths are significant. MHFA = Mental Health First Aid.

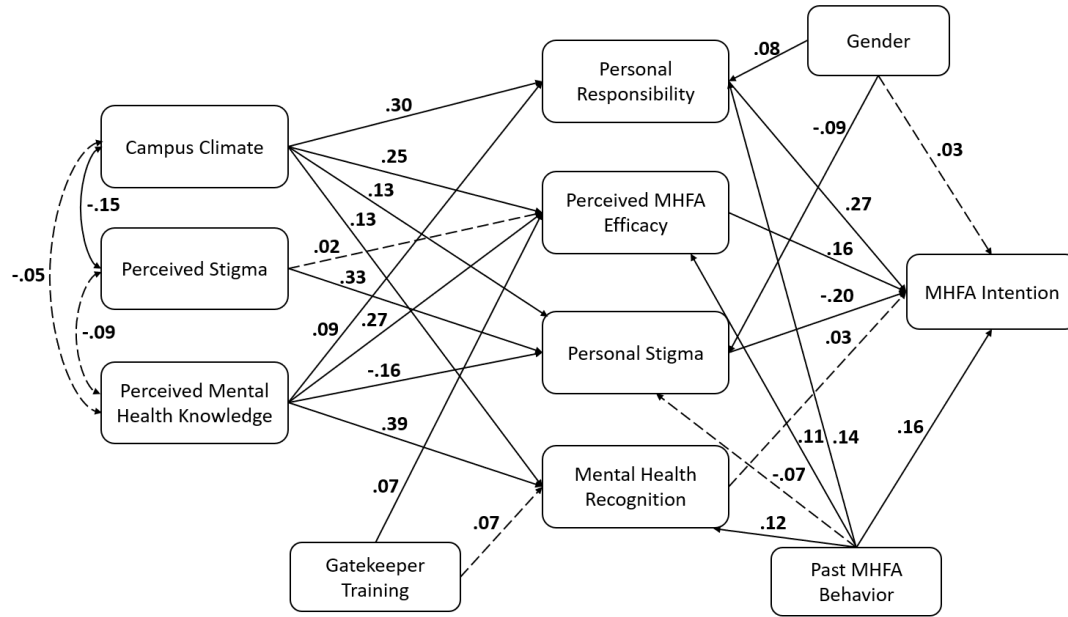


Figure 1. The path analysis. Parameter estimates represent standardized regression coefficients. Dashed lines indicate nonsignificant direct relations and full lines indicate significant direct relations at $p < .05$. Error terms are omitted for visual clarity. Correlations among gender, gatekeeper training, and past MHFA behavior are also omitted for visual clarity.