

**SupportMe: A Potential Platform for Mental Health  
Stigma Reduction in a Fraternity Setting**

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## ***Abstract***

***Objectives:*** As the unmet need for mental healthcare in the collegiate population, and the effects of stigma as a barrier to mental health treatment have become better understood, efforts to combat these issues have gained traction. The first goal of this article is to elucidate the need for an intervention and its potential effectiveness within a collegiate population. Secondly, this article aims to propose a plan for a peer-support focused intervention meant to target stigma reduction and encourage help-seeking behavior - rooted within the existing literature on these subjects – and implement this plan within a college fraternity, an organization at the epicenter of both mental health stigma and the unmet need for mental health treatment. Finally, this article seeks to confirm a proof of concept for a means of evaluation of this intervention, by confirming sufficient similarity between the organization's to be used as the experimental and control groups, so that in the future this intervention can be implemented and its success can be measured.

***Methods:*** This article reviews the existing literature regarding mental health stigma - self-stigma, public-stigma, and label avoidance - and investigates which populations, if any, could be best benefitted by intervention. After identifying that collegiate males are a population in which stigma and barriers to help-seeking for mental health illnesses is particularly high, this article discusses a structure of intervention that could best promote help-seeking behavior and destigmatization of mental illness. Next, this article discusses a potential methodology for measuring the effectiveness of this intervention, using a survey including the Patient Health Questionnaire-9 (henceforth, PHQ9) and questions meant to compare the levels of stigma in members of multiple fraternities. Initial deployment of this survey allowed for comparison between the organizations to confirm that they are sufficiently similar, and permit comparison to subsequent survey results following implementation of the intervention.

***Results:*** Findings of the initial survey suggest that the control and experimental groups bear some similarities, with response-rates serving as a significant barrier to more robust data collection. The organizations surveyed varied significantly in response-rate with the highest rate not exceeding 45%, and only 60 of the possible 266 potential respondents answering the survey. Despite this hurdle, the groups were found to be similar in proportional representation of grade levels and new members who answered the survey. The average PHQ9 scores among those who were likely depressed, and those who were likely not depressed were also quite similar between the groups. While the proportion of respondents who scored at least 10 points on the PHQ9 (indicating a probable diagnosis of depression) varied significantly between organizations, the proportion of these individuals comprising each grade level was moderately consistent, suggesting a representative cross section of the chapter, at least in regards to response-rate of depressed individuals per grade level. Additionally, the average scores for stigma did not significantly correlate with PHQ9 scores, while they were quite consistent across groups for those respondents with no direct personal or familial exposure to mental health treatment. This pattern did not hold between the organizations for those who did have contact with mental health treatment.

***Conclusions:*** The collegiate institution offers a unique opportunity for interventions to benefit this high-risk population of college-aged males in a concentrated, easily accessible location.

With this population identified, the article then lays out the fortunes and follies of past interventions before describing a niche not yet occupied by stigma reduction interventions; the peer-support-based stigma reduction intervention among ‘peers’ as individuals in this age group would actually define them. Rather than focusing solely on other people with mental illness, this proposed intervention seeks to break the cycle of stigma by involving members of a fraternity – a group of college-aged males – to gather and discuss mental health within a structured program that is described in the *Methods* section. After outlining the potential intervention, this article describes an attempt at initial data capture for a proof-of-concept for the program, the evaluation of which is outlined in detail. Initial results of the survey conducted suggest sufficient similarities between the groups being evaluated to allow for moderately effective evaluation, however, suggestions to improve the intervention and its evaluation are laid out in the *Limitations and Conclusions* section. While the current methodology would allow some useful data collection, successful implementation and evaluation in the future would necessitate a refinement of the survey methods, and incentivization to overcome the troublesome barrier of low response-rates.

## Introduction

### *Need for Intervention*

In all facets of healthcare, a plethora of barriers exist between the potential patient and providers. From a lack of access to health information to an inability to pay for services, there are many factors that can prevent people from getting the care they need. However, of all the various forms of treatment, nearly no other field carries with it such obstinate, complex barriers as those found in mental healthcare. In addition to all of the pragmatic, systemic barriers shared between traditional medical disease and mental illness, an insidious barrier is heavily entrenched in the minds of the general public, and even the perceptions of patients themselves; namely, stigma.

Though many other forms of disease, to varying extents, carry their own level of stigma, even the leper has experienced more acceptance into society than the sufferer of mental illness. This stigma permeates society and those who suffer from mental illness feel ostracized and do not receive the treatment they need, damaging large swaths of the population; those demographics especially affected include undergraduates (Stein et al., 2016), and more specifically, undergraduate aged males (Byrne, 2000; Eisenberg, Downs, Golberstein, & Zivin, 2009; Golberstein, Eisenberg, & Gollust, 2008; Leong & Zachar, 1999; Link, 1987; Mackenzie, Gekoski, & Knox, 2006; Nam et al., 2010). Since undergraduate-aged males are disproportionately affected by all forms of stigma, and this age group is quite likely to develop mental illness regardless of gender, this population has an extremely high rate of being diagnosed with mental illness.

These disorders often come at a heavy price. According to the American Counseling Association, “among college students, suicide is the third leading cause of death” (“The Effectiveness of and Need for Professional Counseling Services March 2011,” 2011). Mental illness also has less dire consequences. It has been found that depression is tied to lowered exam scores (Andrews & Wilding, 2004), while social anxiety can be a strong motivator for heavy drinking (Gilles, Turk, & Fresco, 2006) a ubiquitous problem on campuses. In order to minimize the damage done by mental illness in this most turbulent of times, within a group that is heavily

affected by stigma, interventions targeting college-aged males have the potential to pinpoint an effort's resources such that any possible benefits reach a population that needs them most.

Though many attempts at stigma reduction have been made (P. Corrigan, 2004; Eisenberg et al., 2009; Mackenzie et al., 2006; Mahlke, Krämer, Becker, & Bock, 2014; Mohr, Weingardt, Reddy, & Schueller, 2017; Weiss, Gross, & Moncrief, 2016; Yanos, Lucksted, Drapalski, Roe, & Lysaker, 2015), a gap between potential patients and caregivers persists, begging the development of an intervention to help reduce stigma and increase help-seeking behavior. An intervention focused specifically on collegiate males has the potential to target a population that is in most desperate need of mental health services and destigmatization. The following article is an attempt to lay out the need for this intervention, and designing one to succeed.

### ***Stigma: A Many-Headed Monster***

Stigma's role as a barrier to mental health care utilization is well-documented, and is understood to take various and distinct forms (P. Corrigan & Watson, 2002). Stigma has the capacity to maliciously affect those placed under its pall, manifesting in stereotypes (such as thoughts that "all people with mental illness are dangerous"), prejudices, or generally accepted attitudes of fear towards the mentally ill, and discrimination, or decisions not to hire, rent to, or otherwise affiliate with sufferers of mental illness. The terminology coined by Patrick Corrigan and others codifies a more nuanced understanding of stigma, teasing apart the fibers that keep potential patients from their potential caregivers. The phrases commonly accepted on the topic of stigma separate self-stigma from public-stigma, while also placing significant importance on the issue of label avoidance (P. Corrigan, 2004). Each of these forms of stigma carries its respective issues and strategies for intervention must take these into account.

The first, most intuitively understood and well-documented form of stigma is referred to as public-stigma. When citing Corrigan, this form of stigma is defined by Eisenberg et al. as "negative stereotypes and prejudice about mental illness (such as 'people with mental illness are dangerous and unreliable') held collectively by people in a society or community" (Eisenberg et al., 2009). This set of negative beliefs are held by a "naive public," manifesting themselves in a dynamic of discrimination against and avoidance of what is perceived as an out-group, due to what is "fundamentally a cognitive and affective response" of aversion to a group that is perceived as an 'other' (P. Corrigan, 2004). Members of the in-group, people not suffering from mental illness, and even mental health professionals (P. W. Corrigan, 2002), can ascribe to damaging stereotypes about mental illness, which has led to "increasing barriers for health care and poor treatment outcomes" (Weiss et al., 2016). This means that those with mental illness are even stigmatized when seeking healthcare outside the realms of psychiatry or psychology. This natural human reaction against that which is not understood causes untold damage to sufferers of mental illness from the outside, but when it becomes internalized, stigma has the power to cause even more damage.

Self-stigma is a phenomenon whereby "an individual identifies himself with the stigmatized group [...] and applies corresponding stereotypes and prejudices to the self" (Eisenberg et al., 2009). This insidious form of stigma stems from the public's stereotyped view of mental illness, and citizens of a society that tacitly accepts these views causes sufferers to internalize them, harming their self-esteem and hopes for the future, believing "that they are less valued because of their psychiatric disorder" (Eisenberg et al., 2009). This phenomenon also

causes corresponding decreases in self-efficacy, and a lowered propensity for seeking better employment and living conditions (Link, 1987). The theoretical model explaining self-stigma's link to mental health treatment is succinctly explained by Yanos et al., as "individuals with self-stigma are more likely to demonstrate poorer insight regarding the benefits of participation in psychosocial intervention. Reduced insight into these benefits can then lead to less readiness to change, which, in turn, leads to less treatment participation" (Yanos et al., 2015). This unfortunate chain of events caused by self-stigma is not inevitable, however.

Somewhat paradoxically, the effects of self-stigma can be twofold; on one hand, this internalization of a negative narrative can cause some to be less likely to seek help or follow through with treatment, while for others, self-stigma can cause people to become righteously angry in response to the condemnation they feel. For this subset of sufferers, self-stigma "empowers people to change their roles in the mental health system, becoming more active participants in their treatment plan and often pushing for improvements in the quality of services" (P. Corrigan & Watson, 2002). Interventions seeking to improve the negative impacts of self-stigma must mind this double-edged sword, and harness the ability of some to use stigma to drive success. By reframing the negative self-perception imposed by society and sometimes internalized by sufferers of mental illness, a subset of stigmatized individuals can feel empowered to improve and fight back against these stereotypes. Interventions seeking to improve help-seeking and reduce stigma will do well to mind this lesson. While changing the public's perception of mental illness is a difficult endeavor, the resulting self-stigma can be turned into a force for good, banding sufferers of mental illness together against the opprobrium of the general population. Though self-stigma is – when it doesn't motivate positive change - damaging, there is still another facet of stigma yet to be examined.

Label avoidance is another way the stigma of mental illness does harm. According to Corrigan in his article entitled *How Stigma Interferes with Mental Health Care*, "label avoidance is perhaps the most significant way in which stigma impedes care seeking" (P. Corrigan, 2004). Due to the generally accepted stereotypes, prejudices and discrimination against those with mental illness, many who would benefit from mental health treatment seek to entirely deny their membership to a group that they perceive as unsavory. The conflagration of publicly propagated and self-inflicted stigma causes a desire in many to opt out of the status of being diagnosed as mentally ill, an understandable reaction given the social circumstances in which they find themselves, and one that has been repeatedly demonstrated to cause harm. Many studies have shown a decreased likelihood of people to seek care for themselves in the face of stigma, and a negative correlation has been found between following through on treatment upon diagnosis (Cooper, Corrigan, & Watson, 2003; Leaf, Bruce, Tischler, & Holzer, 1987). Label avoidance is a product of the compounding factors of public-stigma and self-stigma, compelling those languishing under oftentimes debilitating mental illnesses to continue suffering alone, rather than pursuing the support they so desperately need.

The crushing social forces of generally accepted stereotypes, prejudice and discrimination are collectively aimed at sufferers of mental illness externally in the form of public-stigma. These forces culminate in the internalization of these negative attitudes for sufferers themselves, detrimentally transforming what would be unfortunate misconceptions into the phenomenologically realized self-perceptions of people already struggling; public-stigma begetting self-stigma. These influences coalesce in a drive for many to avoid being labelled as mentally ill at all costs, shunning the help they need in spite of themselves. It is this triple threat

- public-stigma, self-stigma and label avoidance - that must be dealt with by interventions that aim to reduce stigma; a many-headed beast that must be attacked from all sides in order to dismantle the miasma of misbeliefs that surround the sufferer of mental illness. Due to the complexity of the misguided social apparatus seeking to separate professional caregivers from those they are trained to help, it is pragmatic for interventions to be focused on the populations where they can have the most profound impact.

### ***The Epicenters of Mental Illness and Stigma***

In addition to the effects of stigma, the age, gender, and social surroundings of a population can have significant effects on the likelihood of developing mental illness. As interventions are, by their nature, limited in their breadth and benefits, to maximize their potential to improve mental health outcomes, they must be focused on populations where these disorders are most prevalent and stigma can be reduced most effectively. Luckily, due to most mental illnesses being diagnosed in late adolescence, interventions centralized with the college-age population have the potential to aid those who need it most. Moreover, efforts to increase help-seeking behavior can best be further concentrated on males within this population as they are most likely to be affected by the scruples of stigma.

There is a preponderance of evidence as to the scarcity of care for those with mental illness, and this gap is overwhelmingly present in the college-aged population. Various studies have shown “30-50% of people will experience a mental disorder in their lifetimes” (Mackenzie et al., 2006), demonstrating the commonplace nature of these issues. However, it has been found that three fourths of DSM-IV cases begin by the age of 24, allowing interventions targeted in this age group to be even more effective (Kessler et al., 2005). A study by Zivin and colleagues cite a persistent, unmet need for mental health treatment among collegiate populations. According to their study, “while the majority of students with probable disorders are aware of the need for treatment, most of these students do not receive treatment,” and in this same study, it was found that “over half of students suffered from at least one mental health problem” (Zivin, Eisenberg, Gollust, & Golberstein, 2009). One must acknowledge that this problem is not just a product of the stressors of college life.

Despite members of the late adolescent population being severely in need of treatment, mental health disorders are not solely unique to university institutions. Mental health disorders are consistently found in the college-aged population, regardless of whether they attend university (Blanco et al., 2008). Considering these findings, it becomes clear it is this age group that is particularly predisposed for the development of mental illness, rather than this population’s being in college. Despite this fact, there is the relevant distinction that, while those not attending university certainly face similar emotional and financial stressors brought about by being a young adult living with mental illness, those facing the same obstacles while in academia run the noteworthy risk of damage to their grades and future earnings. However, one challenge faced in treating mental illness in young adults is that members of this age group not in college are often found in disparate circumstances, and to varying degrees assimilated with the general populace, making interventions targeting this population outside of universities extremely difficult. Fortunately, a significant proportion of this age group is concentrated in clearly delineated areas; namely, college campuses. Thus, “colleges offer a unique opportunity to address one of the most significant public health problems among late adolescents and young adults” (Hunt & Eisenberg, 2010a). Due to their accessibility as a unified age group in

universities, this is an ideal platform in which to focus efforts, maximizing results for this severely at-risk demographic.

To further centralize intervention efforts where they can have to the most effect, attempts to minimize stigma in males have the potential to substantially increase help-seeking behavior. Substantial evidence supports the idea that all forms of stigma are higher in males, particularly those in college. According to a study of Big 10 universities, suicide rates are highest among males, especially those in the age group of 20-24 (Silverman, Meyer, Sloane, Raffel, & Pratt, 1997). Perceived public-stigma is also highest among males (Eisenberg et al., 2009; Golberstein et al., 2008), as is self-stigma (Byrne, 2000; Eisenberg et al., 2009; Golberstein et al., 2008; Nam et al., 2010). Males have also been found to exhibit significantly lower levels of help-seeking behavior (Eisenberg et al., 2009; Golberstein et al., 2008; Leong & Zachar, 1999; Mackenzie et al., 2006; Nam et al., 2010), which is strongly tied to male's apparent zeal for label avoidance (Link, 1987). Based on this surplus of evidence, it is clear that gender is quite well-documented as a predictor of people's' views of mental health and pursuing mental health treatment; males score more highly in public-stigma, self-stigma, and label avoidance, culminating in this population being far less likely to seek help from mental health care providers.

The wealth of literature demonstrates, the age group of 18-24 is also inordinately affected by mental illness. Additionally, males are far more likely to be affected by public stigma and internalize it, affecting their self-perception and efficacy, while also being more averse to the label 'mentally ill'. These facts, combined with the shroud of stigma, lead college-aged men to be substantially less likely to seek help for mental illness; an unfortunate reality when, "timely and effective treatment may offer substantial long-term benefits" (Eisenberg et al., 2009). Put bluntly, "opinions about mental illness are the kind of attitudinal variables that should be more modifiable than gender identity" (Leong & Zachar, 1999). Similarly, the biological and diagnostic mechanisms leading to the college-aged population's increased risk of mental illness are not well-understood, let alone changed. Thus, the demographic where these factors overlap, college-age males, can do little to circumvent this oftentimes psychologically turbulent social and temporal situation in which they find themselves. Even though college-age individuals are universally more likely to be diagnosed with mental illness regardless of whether they attend college, interventions utilizing the organization and access offered by the university institution have the capacity to maximize the benefits of their efforts by focusing specifically on this at-risk, high-stigma subset of the populace.

### ***Past Interventions***

Public health interventions have the capacity to tweak people's attitudes and modes of interaction at a grand scale in order to bring about concrete benefits. In the context of mental health stigma and help-seeking, interventions typically fall into a few broad categories; media campaigns aimed to minimize public-stigma; organizational interventions, often implemented in universities, sports teams, and other similar groups, which can be aimed at reducing public-stigma or self-stigma, and/or increasing help-seeking behavior; and, peer support focused interventions, which can be implemented within organizations or a variety of other means of grouping people, in order to reduce both forms of stigma and increase help-seeking behavior. Each of these strategies has been attempted in multiple settings, achieving various degrees of

success, and reviewing previous interventions offers valuable insight into designing successful interventions in the future.

Campaigns intended reduce public-stigma have been attempted extensively, usually focusing on protest, education, or contact (P. Corrigan & Watson, 2002). Protests seek to minimize public stigma by insisting that the media stop portraying inaccurate representations of people with mental illness, and perpetuating the dangerous misconceptions about these members of society. While campaigns of this sort occasionally succeed at removing damaging portrayals from the public eye, there is little to no empirical evidence for these campaigns' success at reducing public-stigma as a whole (P. Corrigan & Watson, 2002). Conversely, attempts at education have accomplished their goals of conveying facts about mental illness to the public, as evidence has shown members of a better-informed public are less likely to perpetuate stigma (Roman & Floyd, 1981). Efforts to combat public stigma by making contact between members of the general public and people with diagnoses of mental illness, as a negative correlation has been demonstrated between the amount of contact one has with the mentally ill and one's inclination to endorse stigma (Holmes, Corrigan, Williams, Canar, & Kubiak, 1999). Analysis of these efforts has time and again shown that by increasing interactions between those with mental health problems and members of the public, demonstrating that – contrary to popular belief – they are not dangerous and have functioning, relatable everyday lives, peoples' chances of stigma decrease significantly because they can see “people with mental illness as peers” (P. Corrigan & Watson, 2002). Many attempts to reduce public-stigma have been made within the collegiate population through social media campaigns that advertise access to resources and protest the stigmatization of mental illness (Stein et al., 2016). Despite the good intent of these campaigns, “there are limited published reports demonstrating the effectiveness of these programs, and it is often difficult to generalize results across campuses with differing populations and resources” (Hunt & Eisenberg, 2010b).

Due to the well-documented stigma and risk of diagnosis within the collegiate population, as well as the aforementioned access to this population, there have been a glut of interventions aimed at college students. This sharing of goals oftentimes leads to overlap between organizational interventions aimed at stigma reduction and peer-based interventions. By combining these formats, many interventions seek to maximize their potential benefits. In a review of six interventions aimed at reducing self-stigma, Yanos et al. found three common mechanisms at work in reducing stigma: first, the use of “psychoeducation and information to counter-act myths about mental illness is common to all approaches”; the second, was employing cognitive techniques that offer “opportunities to learn and practice skills to identify and combat self-stigmatizing thoughts and beliefs,” examples of which were seen in the Narrative Enhancement and Cognitive Therapy (NECT) program, Ending Self-Stigma (ESS) program, and the Self-Stigma Reduction Program; finally, “almost all interventions also include some degree of behavioral decision-making, and offer tools and experiences designed to increase or elicit hope empowerments, and motivation to act towards one's goals and according to one's values” (Yanos et al., 2015). The programs analyzed by Yanos et al. all reported varying levels of achievement in stigma reduction, and the common themes utilized in reducing self-stigma ought to be considered to build on these successes.

In addition to these formats of intervention which employed a top down, counselor-led approaches and emphasized sessions teaching behavioral modification, Peter Byrne reminds readers that “closing the knowledge gap is only part of the answer” to reducing stigma. When

summarizing the *Changing Minds* campaign, Byrne warns that “mental health professionals need to move beyond teaching psychoeducation in isolation (at the clinic) to full participation in planned programmes of public education,” however, as stigmatizers “are unlikely to volunteer to attend educational packages,” even “education alone cannot change centuries of folklore and prejudice” (Byrne, 2000). This sobering reminder from Byrne begs the question: What forms of intervention can best bridge this gap between perpetrators of stigma and the interventions seeking to cushion its effects on vulnerable populations? An answer is hinted at by Corrigan who suggests that “a partnership with the treatment team is central to these interventions; a mutual exchange between practitioners (who are expert in the interventions that improve symptoms and disabilities) and consumers (who are expert in their disability and life goals)” (P. W. Corrigan, 2002). By breaking down barriers between patient and provider, and bearing in mind the wisdom proffered by Byrne, who mentions “several interventions over time exceed the sum of their parts” (Byrne, 2000), a clearer picture of potential interventions begins to arise. What’s more, Corrigan and Rao report that individuals plagued by self-stigma “might benefit from joining groups of peers who have successfully tackled the stigma” (P. W. Corrigan & Rao, 2012), suggesting that a combination more traditional self-stigma reduction campaigns and peer-support-based interventions could hold the keys to successful interventions.

### ***Future Interventions***

Interestingly, the clear majority of peer-based intervention models – nearly all, depending on how one classifies “peer” – have been focused on minimizing stigma and empowering those suffering mental illness by interacting *only* with others who have also been diagnosed with mental illness. While this is an intuitive means of intervening, as people with analogous diagnoses likely have similar experiences and can share insights with one another, this feature which is taken for granted in peer-support interventions may be a missed opportunity. In reference to peer-support, Solomon seems to challenge the common wisdom dictating that “peer providers need to be stable or in a state of recovery,” reminding readers that “support for this characteristic comes from qualitative research and the experience of conducting interventions studies, consequently, there is weak evidence for this”. In the concluding remarks of this article, Solomon continues this line of reasoning, claiming “there is strong support that everyone benefits from the provision of peer support/peer-provided services” (Solomon, 2004). In their review of *Young peoples’ help-seeking for mental health problems*, Rickwood et al. describe a phenomenon whereby young people have a higher proclivity for seeking help for their friends than they otherwise would for themselves. Thus, “interventions should be targeted at the people who influence young people’s help-seeking, as well as young people themselves,” an assertion which Rickwood et al. further, maintaining “it is clear that there are many potential social influences on the help-seeking process, and this is a factor that needs to be more fully explored” (Rickwood, Deane, Wilson, & Ciarrochi, 2005). Clearly, the traditional model of peer-support offers a budding ability to be expanded upon, a new realm of possibilities to be considered with the with the massive popularization of social media over the past few decades.

As the combination of campus-wide and smaller organization-based stigma reduction interventions have commonly been combined with attempts at peer-support, and researchers have pointed out an untapped capacity for peer-based interventions to expand their arenas of focus, more recent literature has sustained this rallying call. Moreover, new research has heralded the positive effects of technology based interventions, using the internet and smartphone apps. Meta-

analyses conducted in the past few years have supported the positive effects of well-implemented internet-based interventions for the treatment of Posttraumatic Stress Disorder (PTSD) (Kuester, Niemeyer, & Knaevelsrud, 2016) and depression (Richards & Richardson, 2012). These findings are further bolstered by studies of naturally occurring peer-support on social media websites, like YouTube (Naslund, Grande, Aschbrenner, & Elwyn, 2014). While the research of Naslund et al. shares the commonality of being focused on building peer-support amongst sufferers of a mental illness – in their case, schizophrenia – with the findings of Kuester et al. and Richards & Richardson, an article by Thomas et al. cites “particular potential of online interventions [...] with the capacity of the internet to promote having contact with peers within one’s stigmatized group, and for user interaction and empowerment” (Thomas, McLeod, Jones, & Abbott, 2014). In proclaiming the vast potential to be found in online stigma-reduction strategies, Thomas et al. acknowledge development in this realm as still in its initial stages, and lay out a framework for evaluation of these efforts in future research. These measures serve as an extremely useful guide for developing and assessing the success of future interventions, however, it is possible Thomas et al. could be failing to see the full potential afforded by online interventions.

In an extremely insightful 2017 article titled, *Three Problems with Current Digital Mental Health Research... and Three Things We Can Do About Them*, Mohr et al. describe three misconceptions commonly held regarding the potential for internet-based interventions, and attempt to reconceptualize them as technology-enabled services (TESs) rather than mere products to be consumed by patients. While these TESs have been thoroughly evaluated as though in a vacuum, “there is little description or evaluation of the ecosystem around that technology (such as human support and organizational factors),” a significant oversight, when considering that “substantive mental health benefits are more consistently achieved in the context of human support”. The authors of this article go on to explain that mental health technologies are created in a top down manner, where “clinical researchers design tools for patients to support behavioral strategies that we believe are important for successful treatment, likely incorporating some of our own biases about how we like to receive and interact with information”. It is these biases that have contributed to the ‘research-to-practice’ gap cited in this article, and despite the excitement surrounding the possibility for internet-based communications to augment the field of mental health treatment and stigma prevention, development in this arena is hindered by “the notion that mental health technologies should mimic existing evidence-based treatments [and] has become a skeuomorph, limiting out vision of what is possible by maintaining a frame based on past conceptualizations” (Mohr et al., 2017). This myopia, though understandable given the rigorous pedagogy of mental health training and intervention development, is be the root of barriers to progress for technology-based interventions. A key oversight that appears to have been made by interventions based on the conventional wisdom of peer-support and stigma reduction lies in one of the fundamental assets offered by technology; its ability to connect groups of people from *all* backgrounds, and facilitate their instantaneous communication.

While the observations of naturally occurring peer-support on YouTube channels created by sufferers of mental illness elicited optimistic discussion about the potential for social media’s use in stigma reduction, these authors may have missed a key implication of their research. The findings of Naslund et al., and all previous research in technology-based interventions focused on peer-support, define the term ‘peer’ as someone who is also suffering from mental illness, oftentimes the same mental illness. This fails to reconcile the claims of those like Rickwood et al. who stipulate that “interventions should be targeted at the people who influence young

people's help-seeking, as well as young people themselves," so that they are "encouraged to build supportive relationships, both within and beyond their informal support system" (Rickwood et al., 2005). Even Thomas et al. whose expansive recommendations provide an immensely useful blueprint for the evaluation of these interventions' success, implicitly assume the "necessity for the active participation of the persons belonging to the stigmatized group" (Thomas et al., 2014). This utterly ignores the fact that the people influencing whether an individual seeks help are seldom solely the people that also belong to this stigmatized group. Indeed, a significant body of evidence supporting the effects of public stigma would imply the contrary. It is likely that the 'peers' wielding a significant amount of power over any individual's experience of stigma are those not suffering from the same mental illnesses, or even any at all. There is apparent dissonance between a cohort of findings which villainize public-stigma, while encouraging sufferers of mental illness to "build supportive relationships, both within and beyond their informal support system" (Rickwood et al., 2005), and the fact that virtually all interventional attempts at minimizing this stigma and inspiring help-seeking by researchers focusing exclusively on interactions within already stigmatized groups. This discord becomes even more conspicuous when one considers internet-based intervention's powerful ability to transcend traditional limitations to communication between individuals. Future interventions aimed at stigma reduction through internet-based peer-support, while universally acclaimed by researchers as "well suited to the development and adaptation of interventions which assist people dealing with social stigma" (Thomas et al., 2014), may increase their benefits by expanding their definition of the term 'peer' beyond merely those suffering stigma.

One obvious concern with the inclusion of people not suffering mental illness into peer-based groups for interventions is safety, and the damage to a sense of community that could be caused by those not traditionally considered 'peers' using a potential platform to perpetuate stigma and negativity. These apprehensions are warranted, and addressed when discussing "negative comments or "outsider" attempts to criticize" the YouTube posts of those who were suffering from schizophrenia (Naslund et al., 2014). In their observations, these vindictive comments caused members of the YouTube community to respond with vehement support of the affronted individual, and served to strengthen the sense of community amongst those suffering stigma. While this phenomenon of stigma causing the stigmatized to band together against discrimination, this objection to the expansion of the term 'peers' can be nearly circumvented entirely by limiting an intervention to an existing community whose members care about one another, and could use the veil of anonymity usually afforded to users of the internet for malicious purposes. By implementing its scope within such a pre-existing community, an intervention could capitalize on the benefits observed in peer-based support groups for the reduction of self-stigma, while also incorporating a broader swath of the social fabric with which individuals affected by mental illness interact. An intervention capable of bridging this gap could offer the best of both worlds. Furthermore, by incorporating already trusted peers who do not have diagnoses of mental illness, a peer-based program of this nature could potentially reduce public stigma, or at least minimize its effects on help-seeking by proving to potential patients that the label of mental illness does not bring ostracism, since they could observe positive interactions between members with and without mental illness. Additionally, as mentioned above, potential interventions could maximize their benefits by focusing on a male population in the college age group.

An organization that could potentially serve as the perfect testing ground for this form of intervention is a fraternity. Not only do they provide a population of college-aged males, an at-risk of mental illness group in dire need of stigma reduction, fraternities offer a pre-existing community, sheltered from the anonymous negativity of the internet. Members of these groups purport to deeply care for each other, and typically form their own tight-knit subcultures, both in person and using social media. Greek organizations offer an environment not often found in any other group. Though fraternities and sororities have - in both their depictions in popular culture and many highly-publicized instances of misconduct - strayed far from their stated goals, based solely on their doctrinaire intent, these organizations offer a truly unique social dynamic, not commonly seen elsewhere in society; a group of young people banded together for the communal benefit of the members of the organization. If realized, the intent of many of these organizations offers a potential respite for the crushing anonymity of large collegiate institutions and the internet, which could be a barrier to the use of social media for stigma reduction more generally. Greek organizations also providing a microcosm of society where social norms can be bent, for both good and bad. While the media's portrayal of Greek life is rife with examples of these organizations' propensity for insular social isolationism run amok, this characteristic can be used to push the social norms for a group of college men towards attitudes of acceptance towards mental illness and respect for help-seeking. Because greek organizations already provide a network on social media populated by individuals who care about one another, an internet-based peer-support intervention in a fraternity could "fit into and leverage people's daily behavioral patterns," thereby "nudging users to useful actions" (Mohr et al., 2017). A peer-support intervention in a fraternity has the potential to break the cycle of public-stigma, combat self-stigma, and reduce the fear of labels, leading to an increase in help-seeking.

## ***Methods***

### ***The Intervention: SupportMe***

The SupportMe platform was designed over the course of a semester in 2015 as a way to increase brotherhood and build connections within the fraternity, Tau Kappa Epsilon. It quickly gained traction as members of the organization participated with much enthusiasm. While its methods could likely be improved, and its effectiveness has yet to be quantified, this program offers a solution to the "research-to-practice gap" described by Mohr et al. in their 2017 article, by coming from the reverse direction. This intervention was originally made by and for members of Tau Kappa Epsilon, and in this sense, must bridge a practice-to-research gap. By formalizing its methods and laying out a format for its evaluation, this section is an attempt to do so. After nearly two years of inactivity, this program is planned to be reimplemented into this organization, and its success to be evaluated as a public health intervention aimed at reducing mental health stigma and increasing help-seeking behavior. SupportMe is designed to target a college-aged, male population of fraternity members, by simultaneously implementing a three-prong approach to intervention: 1.) Voluntary, in-person meetings for members of the organization to gather and discuss their mental health, share highs and lows in their life at a given moment, and offer advice to one another; 2.) A group message (hosted on an already ubiquitously used application, GroupMe) used to discuss acute issues going on in one's life, ask for advice whenever needed, and share news about life events - good and bad - with the entire organization at once; and finally, 3.) A private Facebook group, used to formally discuss various forms of mental illness, including the sharing of coping strategies and resources, as well as

hosting initiatives aimed at fostering honest self-improvement and introspection. In this section, each of these prongs will be further explained and explored, then methods for this program's evaluation will be discussed.

### *SupportMeetings*

These in-person meetings are to be held either weekly or bi-weekly, at a time interval that is convenient for the most members, as determined by a poll. Alternatively, these meeting times can be varied, to accommodate members' schedules and reach a more diverse portion of the group. Attendance to these meetings is completely voluntary, and members are to be encouraged to come sit in and listen if they would not like to speak. At the beginning of each meeting, participants are to be reminded by a moderator that any information discussed is to be kept confidential, and that this is a place where brothers can trust one another to safely and respectfully share aspects of their lives, including their experiences in regards to mental health, with one another.

In these meetings members begin by sharing the highs (most positive events that inspired happiness) and the lows (whatever the most negative issues are in their lives happen to have been) either since their last attending one of these meetings, or whatever time interval they feel comfortable sharing. After going around the circle, the person moderating can either decide to open the floor for general discussion of an issue or topic of their choosing or, more commonly, play the "Peel the Onion" game. In this activity, the participants are encouraged to share either a 'higher high' or a 'lower low', delving more deeply into their current emotional status. As the 'onion' is peeled back, members can either share a different event – from the high or low end of the emotional spectrum – or delve further into the events that they described, deepening participants' understandings of one another, and allowing members experiencing mental health issues to share advice and coping strategies.

When facilitating these conversations, it is important that the moderator be experienced in Motivational Interviewing, a technique commonly utilized by and shown to be effective in self-stigma reduction campaigns (Blanco et al., 2008; Yanos et al., 2015), and have access to mental health hotlines and local campus resources. As the facilitators are to be members of the fraternity, not a mental health professionals, these meetings are not to be run like group counseling sessions. Facilitators are simply to attempt to sustain respectful, open dialogues between members, and – though they are not mandatory reporters – they are encouraged to reach out to any members that notice are struggling particularly badly, to offer support and resources when they feel it is necessary.

SupportMeetings are intended to build solidarity between the participants, whether they are experiencing mental illness or not, and their role in the intervention has multiple purposes. On one hand, they are to function like a peer-support group in the traditional sense; as some participants in the discussions may be experiencing mental illness, these meetings can serve as an opportunity for people with mental illness to discuss their mental illnesses with others going through similar experiences, and discuss coping strategies. In this capacity, SupportMeetings can function like peer-support-based intervention, dismantling self-stigma, and building more positive self-identities for those struggling with mental illness. On the other hand, these meetings are also to be attended by people without diagnoses of mental illness, and in this sense, can

function in the capacity of an education-focused public-stigma campaign. Since participants not struggling with mental illness are able to see their friends, and members of their fraternity talk candidly about their mental illness, while also knowing them to be safe, functioning members of society, these meetings can serve the function of normalizing mental illness, ideally decreasing the likelihood that these members of the public will perpetuate negative stereotypes and misconceptions about mental illness. These meetings also have the benefit that, for participants that are struggling with mental illnesses, they offer the opportunity to interact with members of the public that don't have diagnoses of mental illness but are still offering their support and are willing to openly talk about mental health without the typical stigma found in the outside world; a positive feedback loop of public-stigma reduction, for members with and without mental illness.

### *SupportMe GroupMe*

As a typical means of large-group communication, the vast majority of fraternities and sororities in the University of Minnesota use the GroupMe application. This service is offered on both mobile phones and desktop, and is commonly used to make announcements and facilitate discussions for a multitude of purposes within many organizations, by allowing members of the groups to like each other's posts and start direct messages to one another within the application. Since it is already regularly used, creating another group specifically for the purposes of SupportMe is simple for Tau Kappa Epsilon, though, for the purposes of generalization, any group messaging service would suffice provided it offers similar features. If large group messages are not already commonplace, this could serve as a barrier for other fraternities, though use of some similar service is a staple of most Greek organizations.

This portion of the intervention will serve as an immediate outlet for members of the organization to share and discuss life events, ask for advice, and reach out for support when needed. The ground-rules of the group are simple, but must be upheld to maintain a proper amount of solemnity:

1. *All information in this GroupMe pertaining to individual members is not to be discussed or shared with anyone who is not a member of this fraternity.*
2. *To avoid spamming and clutter of this forum, things posted in this GroupMe should only be for the immediate benefit of the individual posting, and/or for the chapter at-large.*

The purpose of the first rule is to maintain confidentiality, and is extremely important, as members feeling safe to post about the private details of their lives is paramount for the success of this prong of the intervention. The second rule is to maximize the benefits to the individuals who post, and the members of the chapter who are inclined to read the group chat, while also minimizing potential annoyances to members of the chapter; essentially, this rule is there to make sure that all members of the fraternity take the group seriously. The application has the ability to either send notifications for every post or mute them, and only appear when an individual views this group within the application, however, all members of the fraternity are to be encouraged to leave notifications "on" for this group, so that when individuals ask for advice or support, they can immediately reach as much of the chapter as possible. The second rule is in place to incentivize as many members as possible to maintain the group's "mute" button in the "off" position.

When this group was first attempted in 2015, members used it to post about events as diverse as the death of friends and family members or their having broken up with their significant other, to their having received job offers or deciding to attend therapy. Some members would also reach out when they just needed someone to talk to, while others discussed their mental illnesses and coping strategies for them. For example, much discussion was had about how to best handle panic attacks, both when having them oneself and when helping a friend who might be struggling with them. Many times, members also posted about and received academic advice, and campus resources, and occasionally these discussions would diverge from the original intent of the group. In these instances, it was important for a moderator or member of the chapter to remind members what the purpose of this group was, and if a current discussion could be better had in another group forum, to move a given topic to such a place. There were also times that large discussions would be had regarding resources for various mental health issues, and since it is difficult to reference links and suggestions at a later time (this would require arduously scrolling backwards through the chat's history), these discussions would be moved to the SupportMe Facebook, as this format was better fitted for this type of discussion. Taking these rules and experiences into account when implementing this portion of the intervention will be important for the maintaining the integrity of this prong, and maximizing its benefits to members of any organization in which it is attempted.

The SupportMe group message format offers the benefits of members being able to openly discuss their mental illnesses and life events; implicitly normalizing mental illness for members who decide to participate, while also backing up the narrative that 'everyone is struggling with something'. Thus, the GroupMe has the potential to act as a device for public-stigma reduction, demonstrating that mental illnesses do not make their sufferers a part of an 'otherized' group, while also minimizing self-stigma, as sufferers of mental illness can challenge the negative self-perceptions thrust on them by an otherwise condemning society. By making these disorders more visible among groups of peers, this portion of the program also mirrors previously mentioned social norms-based interventions, by correcting misconceptions about peers' beliefs regarding mental health (Eisenberg et al., 2009). This group message also has the possibility of bringing about the benefits of peer-support groups, by allowing members with diagnoses of mental illness to build solidarity and challenge negative stereotypes.

### *SupportMe Facebook*

The SupportMe Facebook page is to be used as a private group forum on the already ubiquitous website, Facebook. As mentioned above, this group can be used to host discussions that do not fit well with the GroupMe format, such as conversations about favorite resources for specific issues, like guided meditations, crisis hotlines, and resources for Motivational Interviewing. Additionally, larger 'meta-threads' can be created for members to discuss the trials and tribulations, and share solutions regarding specific mental illnesses. On this sense, the Facebook group can function much like more traditional peer-based interventions, bringing their benefits of self-stigma reduction and community building. This portion of the group can also combat public-stigma by making these discussions available to those who may not have mental illness at all, and by showing members that may be struggling with these issues without a diagnosis, these threads could help to increase help-seeking. These Facebook threads have the potential to bring the benefits to self-stigma observed by other similar peer-support interventions,

with the added potential to reduce public-stigma and label avoidance by including all members of the organization.

Another use of the Facebook portion of the SupportMe program is for the development of self-efficacy, the building of self-esteem and openness, a trait highly correlated with the propensity to seek help for mental illness (Mackenzie et al., 2006), within the organization. This can be attempted through an opt-in portion of the Facebook group, called “CriTKE’s” and “CeleBROtions”. These dual initiatives can be participated in by liking a post within the group. The “CriTKE’s” entail each member being devoted day and a separate post, in which members can post honest, heartfelt criticism and feedback on how they can improve in any aspect of their life. As members may not be privy to the self-awareness necessary to make observations readily available to others, this initiative is meant to inspire honest introspection and growth for the members who decide to participate, and is only possible by strictly enforcing a policy that all post for “CriTKE’s” must be intended to inspire growth through constructive criticism *only*. What’s more, members are encouraged to privately message any portions of CriTKE’s that may not be fit for all members to see, minimizing the potential for feelings to be hurt and maximizing the constructive nature of this portion of the initiative. This portion of the initiative is meant to inspire growth and facilitate open dialogue within the organization. Members are encouraged to respond to their “CriTKE’s” with comments within the threads, or private messages to the individuals that posted them, and this portion of the initiative ought to encourage its participants to make plans to change in response to feedback they receive.

After each member who has liked the original post has been given their allotted day of “CriTKE’s,” the second phase of this initiative, “CeleBROtions,” begins. During this time, any members that would like to participate can like another post within the Facebook group, and are then given a devoted day and separate post in which members can herald their successes. In these posts members are encouraged to share what they admire about an individual, express support for their progress towards changing in response to their “CriTKE,” and offer sincere compliments of any kind. This initiative, to some extent mirrors the efforts to change gender norms on an oil rig, which resulted in increased emotional openness and decreased stigma in its participants (Ely & Meyerson, 2010). As observed on these oil platforms, the practice of admitting one’s limitations has been shown to undo the oftentimes constricting gender roles that may be responsible for the inordinate stigma found in males. Inciting genuine communication of faults to inspire change, and the sharing of sincere, meaningful compliments is not something common among young people, especially on social media, and the “CriTKE’s” and “CeleBROtions” help to promote this behavior, turning “keyboard courage” into a force for good, while building openness which could lead to more help-seeking when it is needed.

### ***Methods of evaluation***

This intervention was originally created by the members of Tau Kappa Epsilon for internal uses, and while many of its members reported significant positive impacts on the social dynamics of the chapter, there has yet to be any quantitative evaluation of its success as a public health intervention. This intervention aims to increase help-seeking behavior, reduce public- and self-stigma, and ideally improve the overall well-being of participants. To attempt to measure these factors, the fact that this program has not been used by this fraternity for nearly two years is useful. This period of inactivity allows baseline measurements to be taken and relative changes to be observed. To further validate that any changes observed within this organization

are not simply the result of changes within this population over time – for example, data collection’s proximity to midterm or final exams affecting these metrics more than the program itself – these same metrics will be measured for other fraternities, so that changes within the experimental organization can be compared relative to a control group. To validate this program, it is proposed that three data collections of three fraternities – one with the intervention, and two without it – will be sufficient for an initial measurement of this intervention’s success; first, a baseline measurement at the end of one semester to test the initial conditions of all the organizations and confirm that they are sufficiently similar; second, a data collection at the beginning of the following semester to confirm that significant changes have not taken place over the summer, suggesting constancy among the groups; and third, a data collection at the end of a semester of the program being implemented within one of the chapters. Changes in this chapter can then be compared within the group over time, as well as between the groups without the intervention, to determine the efficacy of the program as a whole. The first of these three measurements was recorded by means of an internet-based survey sent to the emails of all members of each of these three chapters, and a summary of these results can be found below.

Data was collected by a survey conducted through Google Forms, which was sent to the entirety of all the participating organizations, and its completion was voluntary. This survey began with nine questions comprising the PHQ9, a questionnaire chosen for its brevity and accuracy, whose reliability and validity as a measure of depression severity has been well-documented (Kroenke, Spitzer, & Williams, 2001). In this survey, respondents answer prompts about how often they experience depression symptoms, selecting from numbers ranging from zero, or “not at all,” to 3, for “nearly every day”. The sum of these responses can then be used as a reliable measure of respondents’ depression symptoms, with the cut point of a sum of 10 demonstrating both a sensitivity and specificity of 88% for patients to have diagnosable depression (Kroenke et al., 2001). With results for the PHQ9 standing in as a sampling of participants’ well-being in regards to depression, the survey next section of the survey collected some sparse demographics on participants, including their year in school, whether this was their first year in the chapter (a measure included to determine whether new members were assimilating well into their newly joined organizations), whether they are currently receiving mental health treatment and whether they’d begun treatment over the course of the this past semester, and whether anyone in their family had ever received mental health treatment. The third section of the survey asked questions about respondents’ attitudes towards mental health, their comfortability with discussing these issues with members of their chapter, and their openness to giving and receiving criticism to and from members of their chapter. The results of the first data collection are found below in the *Initial Results* section, and subsequent data collection will begin to draw a clearer picture of the efficacy of the SupportMe program in improving these metrics.

### ***Initial Results and Discussion***

Three surveys were administered to three fraternities and collected responses over the course of one week in April, nearing the end of a semester without the intervention in any of the organizations. Tau Kappa Epsilon, Delta Chi, and Pi Kappa Alpha (henceforth, TKE, DX, and PKA, respectively) had a combined total of 60 responses from the 266 possible respondents. The response-rates for and average PHQ9 scores can be found in *Table 1* for each of the three fraternities, in addition to number of respondents whose score exceeded 10, and the average

PHQ9 scores for the group within each fraternity whose total score fell on either side of this cut-point. Delineating scores in this way demonstrates score distribution, allowing a relative comparison of the average depression severity for those who likely do and do not have depression, since the questionnaire is structured such that the higher the sum of responses to the PHQ9, the more severe the depression symptoms.

Fraternity	Response-Rate	Proportion of Respondents with PHQ9 $\geq 10$	Average Overall PHQ9 per Respondent	Average PHQ9 of those $\geq 10$	Average PHQ9 of those $\leq 10$
TKE (proposed control)	35/78 (44.9%)	12/35 (34.3%)	7.22	12.92	4.26
DX (proposed experimental)	14/82 (17.1%)	6/14 (42.9%)	8.14	13.33	4.25
PKA (proposed experimental)	11/106 (10.2%)	1/11 (9.1%)	5.64	13.00	4.90
Total	60/266 (22.6%)	19/60 (31.7%)	7.15	13.05	4.42

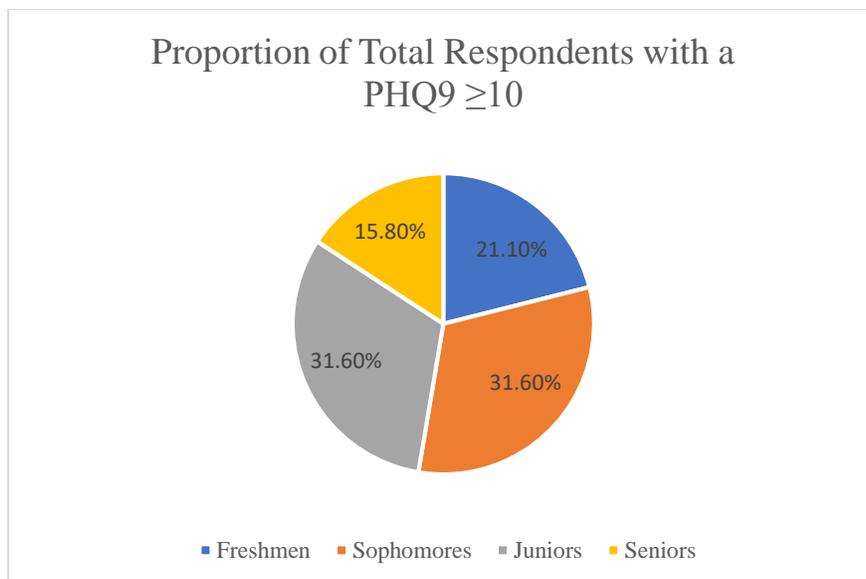
**Table 1:** The figure above shows the proportion of each chapter that responded to the survey, the proportion of respondents from each chapter with a PHQ9 greater than or equal to 10 and the average PHQ9 for each chapter and the group on either side of the cut-point of 10.

As seen in *Table 1*, the response-rates vary widely between the chapters, with a significant disparity between the proposed experimental group and the proposed control groups. There is also a significant difference in the proportion of each chapter that scored above or equal to 10 on the PHQ9, though this could be more a result of the low response-rate for PKA than anything, as the other two chapters are relatively similar in this regard. Despite these differences in response-rates, the distribution of PHQ9 scores is remarkably similar. Between the three chapters, there is only a difference of 2.5 in overall average scores between the highest and lowest average. By separating the extremes of each group, this gap shrinks to 0.41 for the group with PHQ9 scores above or equal to 10, and 0.65 for those below this cut-point. This demonstrates a significant similarity in likely depression severity, despite the gaps caused by differing responses-rates among the chapters.

Fraternity	% of New Member Respondents (% with PHQ9 $\geq 10$ )	Freshman (% with PHQ9 $\geq 10$ )	Sophomore (% with PHQ9 $\geq 10$ )	Junior (% with PHQ9 $\geq 10$ )	Senior (% with PHQ9 $\geq 10$ )
TKE (proposed control)	31.4% (11.4%)	25.7% (5.7%)	31.4% (11.4%)	25.7% (8.6%)	14.3%* (8.6%)
DX (proposed experimental)	21.5% (7.1%)	21.5% (7.1%)	35.7% (14.3%)	21.5% (21.5%)	21.5% (0%)
PKA (proposed experimental)	18.2% (0%)	27.3% (0%)	27.3% (0%)	18.2% (18.2%)	27.3% (0%)
Total	26.7% (8.3%)	26.6% (6.6%)	31.7% (10.0%)	21.7% (10.0%)	20.0%* (5.0%)

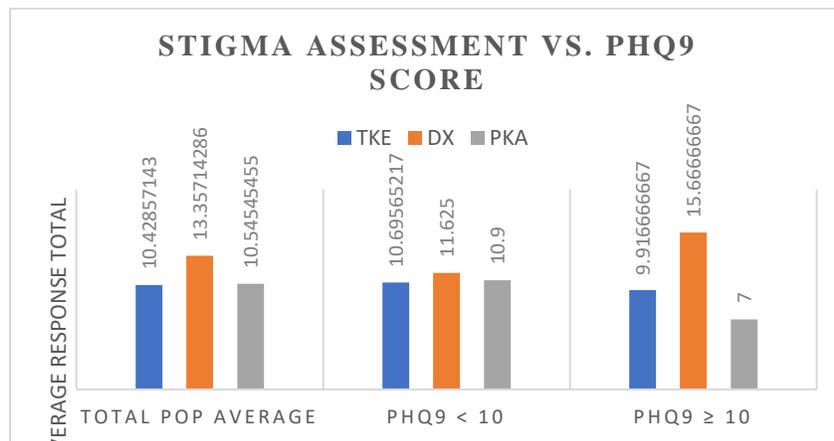
**Table 2:** The figure above shows the proportion of respondents from each group that identified themselves for each grade and the proportion of new members. The values in parentheses show the proportion of each group that scored  $\geq 10$  on the PHQ9. Values with a \* denote that one respondent answered “Super Senior,” a response that was counted within the Senior category.

As shown in Table 2, there is similar distribution in the grade-levels of respondents; with upperclassmen tending to be slightly overrepresented, and underclassmen being more likely to respond to the survey, though uniformly across the chapters. The data for PKA diverges from this trend, though it is likely more a product of the small response rate than demographic differences within the organization. Also notable is the high concentration of juniors in DX scoring 10 or above on the PHQ9, though like the findings from PKA, variations in this data set may be more due to its small sample size than significant trends.



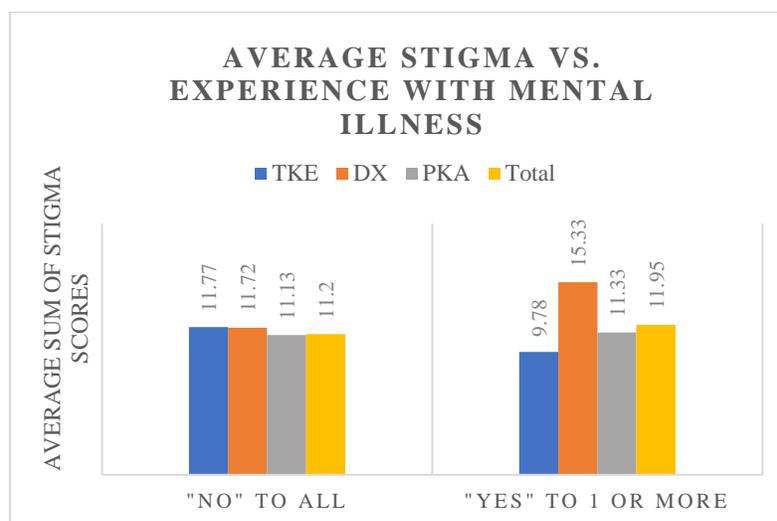
**Figure 1:** The chart above shows the distribution of respondents from all chapters that whose PHQ9 score was greater than or equal to 10, separated by grade.

Figure 1 above illustrates the distribution of respondents that scored a 10 or above on the PHQ9 for each grade as a proportion of the total number of people in this group. Of these individuals who are likely depressed, the largest proportion is made up of sophomores and juniors, while freshmen and seniors scored less highly. This is likely not a product of underrepresentation of specific grades, since this is relatively uniform, though these sophomores and juniors do also make up the largest portions of respondents (31.7% and 21.7%, respectively) as seen in Table 2.



**Figure 2:** Represents the average sum of scores per respondent in response to questions regarding attitudes on stigma, where 1 corresponded to the least stigmatized response and 4 corresponded to the most possible stigma, separated by chapter and by PHQ9 grouping. The higher the average total in this category, the higher the relative stigma.

In Figure 2 an interesting phenomenon is shown. One would expect stigma to be higher in those whose PHQ9 score is higher, however, this is only true of DX. The average total of responses for TKE are consistent across PHQ9 scores, and in PKA, this trend is reversed. Again, this may be caused by only having one respondent from PKA who scored above 10 on the PHQ9, though this reiterates a theme of the data collected; a lack of sufficient response-rate to draw significant conclusions. As mentioned in the *Limitations and Conclusions* section, the metrics for stigma assessment used in this survey need refinement, and these results could be more an artifact of weak survey design than anything else. This lack of correlation between PHQ9 scores and the metrics evaluating stigma could also be a result of their simply not being related, due to a decoupling of perceived stigma and depression scores caused by unknown social factors, or an indication that the questions used to measure stigma did not sufficiently address the phenomenon.



**Figure 3:** Compares the average sum of scores per respondent in response to questions regarding attitudes on stigma, where 1 corresponded to the least stigmatized response and 4

*corresponded to the most possible stigma, separated by whether they answered “Yes” to at least one question related to themselves or a family member having at some point in time received mental health treatment.*

Above, *Figure 3* demonstrates a curious pattern. While the levels of stigma separated by PHQ9 scores in *Figure 2* do not show any clear correlation, the findings of *Figure 3* show consistency within at least one group. Across all groups, among those who answered no to all questions regarding themselves or a family member having ever received mental health treatment, the average sum of scores relating to stigma varied only 0.57 points. This suggests either a consistent level of stigma between chapters, or consistent responses to the questions regarding stigma among respondents for all three organizations. On the other hand, stigma levels varied much more between organizations for those who had received mental health treatment or had a family member who had received mental health treatment; TKE having significantly lower stigma score than the average, DX having a significantly higher score than the average, while scores for PKA strayed very little from the average for the totals, and also showed little variation between “Yes” and “No” group. On balance, the average total stigma score was slightly higher across all respondents within the “Yes” category, but only by 0.75 points. These differences between organizations in the “Yes” category could be explained by random variation between those who happened to respond to the survey, or could be indicative of differing attitudes amongst those with close contact to mental health treatment between the groups. The consistency of scores in the “No” category between groups lends credence to the latter hypothesis, however, further evaluation is needed to strengthen or disprove this assumption.

In all, the initial survey results suggest that a reworking of the evaluation tools is in order. The low response-rates are a bottle-neck to significant results, and this must be ameliorated for future findings to hold any weight. One way this could be improved would be through an extension of the data collection period, as the responses for this initial survey was only one week. Additionally, creating some form of incentive to fill out the survey, be it internal motivation from the fraternities involved (many organizations use points systems to compel participation in Greek activities), or some form of extrinsic motivator – such as entry into a lottery for a gift card – improvement of response-rates is a must for findings of this evaluation to be meaningful. Alternatively, expansion of this study to other organizations could allow both the experimental and control groups to be larger, and could help to overcome such detrimentally small sample size.

Despite disappointing response-rates, these findings do indicate consistency within chapters of the grade levels and proportion of new members that responded, as well as relative consistency of the proportion of each grade level with PHQ9 scores of at least 10. What’s more, while the correlation between average stigma response total and PHQ9 scores did not follow a discernable pattern, the average stigma among those who had no direct personal or familial contact with mental illness was consistent. This finding is somewhat confounded by the disparate stigma scores between organizations for those who did have contact with mental health treatment, though it’s possible this could be a result of differing attitudes towards mental illness for the different organizations. While the findings of this initial data collection do not demonstrate a robust similarity between the organizations being evaluated, relative change over time could still be indicative of a successful implementation of the evaluation. As discussed in the *Limitations and Conclusions* section below, many changes can be made to improve this

methodology, though this initial data collection proved a useful opportunity to field test the methods of evaluation initially proposed for this intervention.

### ***Limitations and Conclusions***

There are manifold limitations with this methodology, the most significant of which is the issue of universalizability. Even if every organization were to have a 100% response-rate and findings of these surveys were to show a drop-off in PHQ9 and stigma scores within the experimental group, there is still little to suggest that these findings could be replicated in another organization with certainty. It is very possible that this program, because it was designed by and for members of a particular chapter, could be of little use to other organizations. Though the preponderance of evidence put forth by other interventions suggest that an intervention of this type might succeed, “null results might be due to an ineffective intervention being deployed (intervention failure), due to an effective intervention being deployed incorrectly (implementation failure), or due to some combination of both factors (Raghavan, 2014). Further, this method of evaluation may be substantially flawed.

The gathering of data by means of voluntary surveys poses a significant barrier to the collection of useful information. As large groups of late adolescents, fraternities often struggle with garnering significant participation, which poses a barrier to response-rates and the implementation of the intervention itself. The significant gap in response rates could be caused by a few factors. On one hand, a willingness or lack thereof to fill out a mental health related survey could be indicative of endemic levels of stigma within the organizations being surveyed. Someone who is significantly averse to the topic of mental illness in general is not likely to fill out such a survey by choice, and the disparity in response-rates is could be a symptom of different preexisting levels of stigma within these chapters, rendering any comparison of changes in their levels of stigma over time useless. On the other hand, and somewhat more likely, the salience of the fact that this program and survey were created by a member of one of the chapters could be making members of TKE more likely to fill out the survey than those members of the other two chapters that do not have this personal connection. This factor could affect response-rates, respondents’ levels of openness when filling out the survey, and also make the implementation of this program into other organizations somewhat dubious. Tertiarily, the fact that this program was created and operated within TKE, and participated in by members who are still active within the chapter, could have caused some lasting changes to the social dynamics of the organization, skewing the results of the pre-implementation survey and any subsequent attempts to measure change. Any combination of these confounding factors is possible, and discerning them based on data collected from this simply not possible. Despite these problems between the potential controls and the uncertain nature of this program’s universalizability, changes within the experimental group along these metrics could still be indicative of this program’s success. Additionally, response-rates could be improved by incentivizing members of these organizations to fill out these surveys with offers of gift cards, entrance into lotteries for prizes, or any of the repertoire typically employed to motivate study participation. Only by attempting this intervention within other organizations and expanding the population of people being surveyed in future attempts can this intervention’s viability be accurately assessed.

Another set of issues with the methodology proposed for evaluating the effectiveness of this intervention arise from the use of the PHQ9 score as a metric of well-being and the sparse set of questions used to measure levels of stigma. The PHQ9, while being a valid and reliable

metric for depression and its severity in the population studied by Kroenke et al., it remains possible that relevant differences between the target populations in their study and those who responded to this survey could render their findings for the specificity and sensitivity of this measure somewhat dubious. Any variance among these populations could skew results, and this possibility must be noted and future efforts should attempt to control for such factors. Additionally, the use of only a PHQ9 to measure the well-being of participants completely ignores the wider spectrum of mental illnesses that could be experienced by this population. While depression is a significant concern, many other mental illnesses are not addressed by this metric, and future assessments could be more effective by expanding their measurements to compensate for this blind spot in the survey's findings. Though its focus is somewhat narrow, and its external validity is somewhat questionable, data collected from the PHQ9 is far from useless. Changes in these scores will be internally reliable measures of the relative change in depression frequency and severity, though it is certainly possible that the addition of measures for other forms of mental illness could help future evaluations to capture a more holistic picture of respondents' mental health.

Along a similar vein of reasoning, there are issues with the methods used to measure stigma in this evaluation. While questions used regarding the attitudes of respondent's comfort with offering help to members of their fraternity, and likelihood of seeking help in the event of a personal mental health crisis are certainly useful and interesting data points, they fail to address the full extent of stigma of both public- and self-stigma, which renders the information collected from these surveys rather narrow in this regard. Future assessments would do well to use the internalized stigma of mental illness scale (P. W. Corrigan & Rao, 2012; Rüscher et al., 2014; Thomas et al., 2014; Watson, Corrigan, Larson, & Sells, 2007; Yanos et al., 2015) or the self-stigma of mental illness scale (Shutz, n.d.; Thomas et al., 2014; Watson et al., 2007; Yanos et al., 2015), which are the industry standards for measurement of self-stigma. Measuring perceived public stigma in a more externally valid way would also be useful, and though there are more disparate methods of measurement for this phenomenon, the use of a mixed-methods approach would do well to capture both public- and self-stigma. As this program is implemented, future assessments would do well to include space for respondents to voice their opinions on the functioning of the intervention, as this information could be vital for its improvement.

One barrier to improvement, and an issue with this program's methodology more generally, is the issue of the full-frontal, three-pronged approach. While Byrne mentioned the additive effect that multiple interventions can have on reducing stigma and improving help-seeking outcomes (Byrne, 2000), from the current methodology it is impossible to parse whether one of the prongs of intervention is responsible for more or less than the others. It would not be unreasonable to assume that any measurable difference among respondents over time could be solely the result of just the SupportMeetings, or any of the other components of the intervention. This method of introducing an entire system into an organization, while having the potential to provide a more all-encompassing change for its members, does not lend itself to the improvement of any of the individual parts. Additionally, this system, while briefly outlined in this article, is not fully codified as a set of rules, and no manual for its implementation has yet been written, presenting difficulties for the uniform application in other organizations. However, this program was originally developed for members, by members, and its quirks are a product of this imperfect, unrefined process. Though its success is yet unknown, measurement of its impact as a whole can be measured and its methods can be subsequently formalized and refined. What's

more, future assessments could implement just one, or varied combinations, of these prongs of the platform in other organizations to discern the effects of the GroupMe, FaceBook, and in-person meetings, and use insights from these assessments to further optimize the program.

To further enhance the methods for evaluating this program, the survey could better address differences between organizations' respondent. Varied stress levels from differing compositions of majors within chapters, and differences in socioeconomic status could account for substantial differences amongst organizations. Future surveys could address the respondent's family income, specific college and school that they are attending, as well as how much financial assistance they are receiving from outside sources. It is well known that financial and other life stressors can affect academic performance and mental health (Andrews & Wilding, 2004). People of low income backgrounds are found to have a higher likelihood of having a psychiatric disorder (Blanco et al., 2008) as well as depressive and anxiety symptoms (Hunt & Eisenberg, 2010a), and are less likely to use mental health services (Hunt & Eisenberg, 2010b). What's more, perceived stigma has been found to be higher among those from low socioeconomic backgrounds, as well as international and non-white populations (Golberstein et al., 2008). Collecting data on students' ethnic, educational and financial backgrounds could allow for better comparison between groups for this study, and provide the ability to control for these factors as they differ among respondents.

Finally, while this program faces a multitude of barriers and bottle-necks, information gained from this methodology will still be useful for the design of future interventions. The problem of small response-rates can be circumvented by broadening the data-collection and implementation to a larger number of organizations, as well as incentivizing members of participating organizations to complete the survey. Limitations posed by the program's current methodology and evaluation can be improved by formalizing the three prongs of the program, and including more accurate and holistic metrics for the assessment of respondents' demographics, mental health, and perceived stigma levels. The current methodology, while somewhat rudimentary, does offer the benefit of having been created by and for members of a fraternity who sought to better their mental health internally, a background that has the potential to bridge the research-to-practice gap lamented by Mohr et al. by approaching the problem using direct implementation of tactics in a real-world situation and analyzing the results, rather than attempting to apply isolated research to real-world practice. This bottom-up approach runs antithetical to the typical top-down tactics utilized by most mental health interventions, and could – by expanding the definition of peer-support and giving participants a newfound sense of ownership and intimacy – challenge what conventional wisdom dictates for stigma reduction, while maximizing the benefits to its participants; the population of college-aged males, desperately in need of mental health intervention.

## References

- Andrews, B., & Wilding, J. M. (2004). The relation of depression and anxiety to life-stress and achievement in students. *British Journal of Psychology (London, England : 1953)*, *95*(Pt 4), 509–521. <https://doi.org/10.1348/0007126042369802>
- Blanco, C., Okuda, M., Wright, C., Hasin, D., Grant, B., Liu, S.-M., & Olfson, M. (2008). Mental Health of College Students and Their Non-College-Attending Peers. *Arch Gen Psychiatry*, *65*(12), 1429–1437. <https://doi.org/10.1001/archpsyc.65.12.1429>
- Byrne, P. (2000). Stigma of mental illness and ways of diminishing it. *Advances in Psychiatric Treatment*, *6*(1), 65–72. <https://doi.org/10.1192/apt.6.1.65>
- Cooper, A. E., Corrigan, P. W., & Watson, A. C. (2003). Mental illness stigma and care seeking. *The Journal of Nervous and Mental Disease*, *191*(5), 339–341. <https://doi.org/10.1097/01.NMD.0000066157.47101.22>
- Corrigan, P. (2004). How Stigma Interferes With Mental Health Care. *American Psychologist*, *59*(7), 614–625. <https://doi.org/10.1037/0003-066X.59.7.614>
- Corrigan, P. W. (2002). Empowerment and serious mental illness: Treatment partnerships and community opportunities. *Psychiatric Quarterly*. <https://doi.org/10.1023/A:1016040805432>
- Corrigan, P. W., & Rao, D. (2012, August). On the self-stigma of mental illness: Stages, disclosure, and strategies for change. *Canadian Journal of Psychiatry*. NIH Public Access. <https://doi.org/10.1080/03017609608413404>
- Corrigan, P., & Watson, A. (2002). Understanding the impact of stigma on people with mental illness. *World Psychiatry 1:1*, 16–20. Retrieved from [http://www.waisman.wisc.edu/EVENTS/ethics/Corrigan\\_Stigma\\_WP\\_2002.pdf](http://www.waisman.wisc.edu/EVENTS/ethics/Corrigan_Stigma_WP_2002.pdf)
- Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for mental health among college students. *Medical Care Research and Review : MCRR*, *66*(5), 522–541. <https://doi.org/10.1177/1077558709335173>
- Ely, R. J., & Meyerson, D. E. (2010). An organizational approach to undoing gender: The unlikely case of offshore oil platforms. *Research in Organizational Behavior*. <https://doi.org/10.1016/j.riob.2010.09.002>
- Gilles, D. M., Turk, C. L., & Fresco, D. M. (2006). Social anxiety, alcohol expectancies, and self-efficacy as predictors of heavy drinking in college students. *Addictive Behaviors*, *31*(3), 388–398. <https://doi.org/10.1016/j.addbeh.2005.05.020>
- Golberstein, E., Eisenberg, D., & Gollust, S. E. (2008). Perceived Stigma and Mental Health Care Seeking. *Psychiatric Services*, *59*(4), 392–399. <https://doi.org/10.1176/appi.ps.59.4.392>
- Holmes, E. P., Corrigan, P. W., Williams, P., Canar, J., & Kubiak, M. A. (1999). Changing Attitudes About Schizophrenia. *Schizophrenia Bulletin*, *25*(3), 447–456. <https://doi.org/10.1093/oxfordjournals.schbul.a033392>
- Hunt, J., & Eisenberg, D. (2010a). Mental Health Problems and Help-Seeking Behavior Among College Students. *Journal of Adolescent Health*. <https://doi.org/10.1016/j.jadohealth.2009.08.008>
- Hunt, J., & Eisenberg, D. (2010b). Mental Health Problems and Help-Seeking Behavior Among College Students. *Journal of Adolescent Health*. <https://doi.org/10.1016/j.jadohealth.2009.08.008>
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime Prevalence and Age-of-Onset Distributions of DSM-IV Disorders in the National Comorbidity Survey Replication. *Arch Gen Psychiatry*, *62*, 593–602. Retrieved from [http://www.ph.ucla.edu/epi/faculty/detels/PH150/Kessler\\_DSMIV\\_AGP2009.pdf](http://www.ph.ucla.edu/epi/faculty/detels/PH150/Kessler_DSMIV_AGP2009.pdf)
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. <https://doi.org/10.1046/j.1525-1497.2001.016009606.x>
- Kuester, A., Niemeyer, H., & Knaevelsrud, C. (2016). Internet-based interventions for posttraumatic stress: A meta-analysis of randomized controlled trials. *Clinical Psychology Review*.

- <https://doi.org/10.1016/j.cpr.2015.11.004>
- Leaf, P. J., Bruce, M. L., Tischler, G. L., & Holzer, C. E. (1987). The relationship between demographic factors and attitudes toward mental health services. *Journal of Community Psychology*, *15*(2), 275–284. [https://doi.org/10.1002/1520-6629\(198704\)15:2<275::AID-JCOP2290150216>3.0.CO;2-J](https://doi.org/10.1002/1520-6629(198704)15:2<275::AID-JCOP2290150216>3.0.CO;2-J)
- Leong, F. T. L., & Zachar, P. (1999). Gender and opinions about mental illness as predictors of attitudes toward seeking professional psychological help. *British Journal of Guidance & Counselling*, *27*(1), 123–132. Retrieved from <http://web.b.ebscohost.com.ezp1.lib.umn.edu/ehost/pdfviewer/pdfviewer?sid=a493cd88-b35e-49b5-9e18-05b58e7f36a9%40sessionmgr104&vid=1&hid=101>
- Link, B. G. (1987). Understanding Labeling Effects in the Area of Mental Disorders: An Assessment of the Effects of Expectations of Rejection. *American Sociological Review*, *52*(1), 96–112. <https://doi.org/10.2307/2095395>
- Mackenzie, C. S., Gekoski, W. L., & Knox, V. J. (2006). Age, gender, and the underutilization of mental health services: The influence of help-seeking attitudes. *Aging & Mental Health*, *10*(6), 574–582. <https://doi.org/10.1080/13607860600641200>
- Mahlke, C. I., Krämer, U. M., Becker, T., & Bock, T. (2014). Peer support in mental health services. *Current Opinion in Psychiatry*, *27*(4), 276–81. <https://doi.org/10.1097/YCO.0000000000000074>
- Mohr, D. C., Weingardt, K. R., Reddy, M., & Schueller, S. M. (2017). Three Problems With Current Digital Mental Health Research . . . and Three Things We Can Do About Them. *Psychiatric Services*, (1–3), appi.ps.2016005. <https://doi.org/10.1176/appi.ps.201600541>
- Nam, S. K., Chu, H. J., Lee, M. K., Lee, J. H., Kim, N., & Lee, S. M. (2010). A meta-analysis of gender differences in attitudes toward seeking professional psychological help. *Journal of American College Health : J of ACH*, *59*(2), 110–116. <https://doi.org/10.1080/07448481.2010.483714>
- Naslund, J. A., Grande, S. W., Aschbrenner, K. A., & Elwyn, G. (2014). Naturally Occurring Peer Support through Social Media: The Experiences of Individuals with Severe Mental Illness Using YouTube. *Plos One*, *9*(10), e110171–e110171. <https://doi.org/10.1371/journal.pone.0110171>
- Raghavan, R. (2014). Improving the identification of mental health need on college campuses. *Journal of Adolescent Health*, *55*(5), 598–599. <https://doi.org/10.1016/j.jadohealth.2014.08.007>
- Richards, D., & Richardson, T. (2012). Computer-based psychological treatments for depression: A systematic review and meta-analysis. *Clinical Psychology Review*. <https://doi.org/10.1016/j.cpr.2012.02.004>
- Rickwood, D., Deane, F. P., Wilson, C. J., & Ciarrochi, J. (2005). Young people’s help-seeking for mental health problems. *Australian E-Journal for the Advancement of Mental Health*, *4*(3), 218–251. <https://doi.org/10.5172/jamh.4.3.218>
- Roman, P. M., & Floyd, H. H. (1981). Social acceptance of psychiatric illness and psychiatric treatment. *Social Psychiatry*, *16*(1), 21–29. <https://doi.org/10.1007/BF00578066>
- Rüsch, N., Abbruzzese, E., Hagedorn, E., Hartenhauer, D., Kaufmann, I., Curschellas, J., . . . Corrigan, P. W. (2014). Efficacy of coming out proud to reduce stigma’s impact among people with mental illness: Pilot randomised controlled trial. *British Journal of Psychiatry*, *204*(5), 391–397. <https://doi.org/10.1192/bjp.bp.113.135772>
- Shutz, A. (n.d.). Peer Support: The Peer Support Movement and the Future of Mental Health Care. Retrieved from <http://digitalcommons.wou.edu/maurice>
- Silverman, M. M., Meyer, P. M., Sloane, F., Raffel, M., & Pratt, D. M. (1997). The Big Ten Student Suicide Study: a 10-year study of suicides on midwestern university campuses. *Suicide & Life-Threatening Behavior*, *27*(3), 285–303. <https://doi.org/10.1111/j.1943-278X.1997.tb00411.x>
- Solomon, P. (2004). Peer Support/Peer Provided Services Underlying Processes, Benefits, and Critical Ingredients. *Psychiatric Rehabilitation Journal*, *27*(4), 392–401. <https://doi.org/10.2975/27.2004.392.401>
- Stein, B., Sontag-Padilla, L., Ashwood, J., Woodbridge, M., Eberhart, N., May, E., . . . Burnam, M. (2016). Campus Climate Matters: Changing the Mental Health Climate on College Campuses

- Improves Student Outcomes and Benefits Society. *Power*. <https://doi.org/10.7249/RB9904>
- The Effectiveness of and Need for Professional Counseling Services March 2011. (2011). *American Counseling Association - Office of Public Policy and Legislation*, (March), 1–11. Retrieved from [https://www.counseling.org/docs/public-policy-resources-reports/effectiveness\\_of\\_and\\_need\\_for\\_counseling\\_2011.pdf?sfvrsn=2](https://www.counseling.org/docs/public-policy-resources-reports/effectiveness_of_and_need_for_counseling_2011.pdf?sfvrsn=2)
- Thomas, N., McLeod, B., Jones, N., & Abbott, J. A. (2014). Developing internet interventions to target the individual impact of stigma in health conditions. *Internet Interventions*, 2(3), 351–358. <https://doi.org/10.1016/j.invent.2015.01.003>
- Watson, A. C., Corrigan, P., Larson, J. E., & Sells, M. (2007). Self-stigma in people with mental illness. *Schizophrenia Bulletin*, 33(6), 1312–1318. <https://doi.org/10.1093/schbul/sbl076>
- Weiss, E. L., Gross, G. D., & Moncrief, D. (2016). Can Health Care Reform End Stigma Toward Mental Illness? *Journal of Progressive Human Services*, 27(2), 95–110. <https://doi.org/10.1080/10428232.2016.1155249>
- Yanos, P. T., Lucksted, A., Drapalski, A. L., Roe, D., & Lysaker, P. (2015). Interventions targeting mental health self-stigma: A review and comparison. *Psychiatric Rehabilitation Journal*, 38(2), 171–8. <https://doi.org/10.1037/prj0000100>
- Zivin, K., Eisenberg, D., Gollust, S. E., & Golberstein, E. (2009). Persistence of mental health problems and needs in a college student population. *Journal of Affective Disorders*, 117(3), 180–185. <https://doi.org/10.1016/j.jad.2009.01.001>