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AN EXAMINATION OF THE DUAL-PROCESS THEORY OF SUPPORTIVE COMMUNICATION OUTCOMES IN RELATION TO MENTAL HEALTH MESSAGES ON COLLEGE CAMPUSES AND THEIR EFFECT ON PERCEIVED RISK OF SEEKING SOCIAL SUPPORT, HEALTH-RELATED EFFICACY, AND COLLEGE SUCCESS

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by

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Abstract

This study explored how characteristics of mental health messages affected college students' perceived risk of seeking social support on university campuses. Using the dual-process theory of supportive communication as a theoretical lens, we examined how person-centered mental health messages affected students' (a) perception of risk of seeking social support, (b) their health-related efficacy, and (c) their overall college success. Participants (n = 342) from a small, private, southern university were surveyed about their experiences and perceptions of mental health campaigns. Results indicated that highly person-centered health messages decreased students' perceived risk of seeking social support and increased their health-related efficacy. Additionally, students' perceived risk of seeking support mediated the association between person-centered messages and health-related efficacy. Research questions addressing the role of various message-specific structural and sender variables indicated that only source credibility significantly affected students' health-related efficacy and college success. Overall, these results further our understanding of how the perceived risk of seeking social support and health-related efficacy affect students' motivation, satisfaction, and empowerment in college.

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An Examination of The Dual-Process Theory of Supportive Communication Outcomes in Relation to Mental Health Messages on College Campuses and Their Effect on Perceived Risk of Seeking Social Support, Health-Related Efficacy, And College Success

College campuses are rife with challenges that have the potential to negatively impact students' mental health and college success. In recent examinations of college stressors, 27% of students indicated they experienced rape or sexual assault (Cantor, Fisher, Chibnall, & Townsend, 2015), 64% struggled with finances (The Ohio State University, 2014), and 25% reported disordered eating habits (Renfrew Center, 2003). Likely as a result, 42% of college students reported moderate to high anxiety, 36% indicated an ongoing struggle with depression, and 35% reported binge drinking (Mistler, Reetz, Krylowicz, & Barr, 2012). Colleges have tried to minimize the effects of these stressors through health campaigns, but they do not always work (Cleland, 2012; Russel, Clapp, & DeJong, 2009; Wolburg, 2006). Given the number of college students who have struggled with mental health problems, university officials continue to face a significant challenge in determining how best to support their students (Kisch, Lieno, & Silverman, 2005). Many college mental health campaigns have focused on encouraging students to utilize on-campus resources such as counseling or the university health center, unfortunately, less than one third of people who have experienced psychological distress sought help from a professional (Andrews, Issakidis, & Carter, 2001), and when they did, it was frequently as a last resort (Hinson & Swanson, 1993).

Even when students opted to seek mental health services on campus, they were ineffective for a variety of reasons. The type and availability of mental health care varied widely from campus to campus; many campuses were unable to keep an on-site psychiatrist, had limited availability at their counseling center, or even staffed their centers with interns simply because

they did not have the resources needed (Ruark, 2015). In some extreme cases, students reported they felt pressured into inpatient mental health facilities or were asked to leave campus after seeking mental health services because the university was not equipped to help them (Farrow, 2016).

In contrast to the seeming ineffectiveness of university mental health services in ameliorating many college students' mental health concerns, social support from friends, family, and peers is often not only a more accessible resource, but may also be the most appropriate for many of the challenges faced by college students. Indeed, peer-to-peer social support emerged as the most salient predictor of individuals' overall well-being (Kutek, Turnbull, & Fairweather-Schmidt, 2011) and students' mental health was positively correlated to the amount and nature of supportive communication from their social network (MacGeorge, Samter, & Gilliham, 2005; Pauley & Hesse, 2009). However, supportive communication does not always materialize unless people seek it (High & Scharp, 2015) and the process of mobilizing social support for mental health challenges is often fraught with risk.

Even in interpersonal settings among peers, seeking social support is an inherently risky and face-threatening act (Goldsmith & Fitch, 1997), particularly regarding mental health. Students often face a range of social repercussions when seeking social support, driven by the fear of losing personal face with close friends by being viewed as weak or needy. Additionally, students may feel that seeking social support for their mental health challenges would place their peers in challenging situations that they may feel obligated to maintain when providing the requested support. Support recipients may also feel indebted and less competent than the support providers (Eckenrode, 1983). For these reasons, it is crucial for universities to focus on creating effective messages that minimize the face-threatening and taboo nature of seeking help for

mental health issues. One way of accomplishing this goal is by reducing students' perception of the risks in seeking social support for their mental health issues.

Although the provision of social support is a common topic of inquiry in interpersonal communication research, the way that individuals make decisions about seeking and mobilizing social support remains a relatively understudied aspect of supportive communication (High & Scharp, 2015). Beyond the well-established benefits of supportive messages in general, messages designed to provide or promote support (such as those from universities about students' mental health challenges) are most beneficial if they reduce the perceived risk associated with seeking support.

To that end, Bodie and Burleson's (2008) dual-process theory of supportive communication outcomes has provided a framework for understanding the relationships among message characteristics and the outcomes they produce within support recipients (Holmstrom et al., 2015). To better understand how individuals respond to supportive messages, Burleson (2009) suggested that there are at least four factors that should be considered: source characteristics (e.g., credibility, power), message characteristics (e.g., frequency, type of message), context characteristics (e.g., medium, setting), and recipient characteristics (e.g., efficacy, emotional reaction to the message).

When dealing with potentially sensitive content, as mental health messages often do, aspects such as source credibility and power are important markers in understanding how people respond (Sattler, Kirsch, Shipley, Cocke, & Stegmeier, 2014). Specifically, receiving a mental health message from an intelligent and well-meaning source affected an individual's perception of the risks associated with seeking social support by making them feel more confident in their support-seeking behavior (Shen, 2010; McCroskey & Young, 1981; Tasaki & Kim, 1999).

Similarly, variations in message characteristics (e.g., message frequency, medium) also had the potential to affect how people responded. For example, if students received health-related messages often, it may have decreased their sense of isolation as it increased their perception of available support, which can ultimately be beneficial to mental health and well-being (Komproe, Rijken, Ros, Winnubst, & `tHart, 1997). The decrease in feelings of seclusion may bolster their perceptions of inclusion in a community where individuals could potentially receive help, potentially reducing their perceived risk of seeking the social support.

In addition to variations associated with source and message characteristics, the dual-process model of supportive communication outcomes also suggested recipient characteristics impacted how supportive messages were received. The degree to which a supportive message validated people's emotional reactions may provide insight into how they processed it. Specifically, messages that are high in *person-centeredness*, which Bodie and Burleson (2008) argue are the most effective, are those that explicitly and openly acknowledge another's feelings, offer perspective on the situation, and validate individuals' emotional reactions. Thus, health-related supportive messages that are highly person-centered were likely to minimize recipients' fear of negative evaluations for having to rely on others (DePaulo & Fisher, 1980), consequently reducing their perceived risk of seeking social support.

A second salient recipient characteristic in understanding how individuals respond to supportive messages about mental health is their health-related efficacy. *Health-related efficacy,* as conceptualized in this study. is a context-specific form of perceived self-efficacy and refers to a person's belief in their ability to have and maintain conversations about health-related goals, in particular those related to mental health (Bandura, 1994). Health-related efficacy both affects and is affected by the perceived consequences of enacting a health-related behavior such as seeking

social support for mental health challenges. Specifically, these consequences are influenced by how burdensome or face-threatening an individual believes the process of mobilizing support to be. Regardless of whether social support was mobilized, the sense that support was available with minimal face threat was likely to increase individuals' sense of health-related efficacy (Komproe et al., 1997). Conversely, when students perceived the process of seeking social support for mental health issues as "risky," they were likely to frame it as less than ideal, undesirable, or perhaps even unavailable, and feel less efficacious as a result.

Overall, reducing students' perceived risk of seeking social support and increasing their health-related efficacy may have far-reaching benefits. Reducing the risk perceived in mobilizing support can be beneficial to mental health in and of itself, as it makes support feel more available which can be viewed as an additional coping mechanism, which in turn can reduce appraisals of threat and stress (Barrera, 1986). This reduction of overall pressure on the psyche can be of tremendous benefit, even if social support is never actually mobilized (Komproe et al., 1997), as it can lessen students' perceptions of dealing with mental health concerns on their own. Similarly, an increase in health-related efficacy can have positive effects on a student's life beyond health (Bandura, 1997), and many of those benefits are likely to be reflected in the extent to which students successfully negotiate their college experiences as evidenced by their satisfaction, motivation, and empowerment.

At its core, the primary purpose of this study is to examine existing university mental health campaigns to determine which types of messages were most central in supporting students' well-being and academic success. Using the dual-process theory of supportive communication outcomes as a theoretical framework, this study examined (1) how varying levels of person-centeredness in mental health messages affected students' perceived risk of seeking

social support, (2) how variations in sender and message characteristics affected students' perceived risk of seeking social support as well as their health-related efficacy, and (3) how that health-related efficacy and perception of risk ultimately affected students' well-being and academic health. An evaluation of how mental health message characteristics affect perceived risk of seeking social and health-related efficacy will help create the possibility of improving campaigns on university campuses.

Theoretical Perspective

Traditionally, communication scholars interested in social support have investigated the benefits of supportive messages in the context of dyadic, interpersonal relationships. For example, High and Solomon (2016) examined the durability of the benefits of highly person-centered supportive messages in interpersonal dyads over time. Similarly, Holmstrom and her colleagues (2013) evaluated how message helpfulness varied as a function of whether the message was provided by an acquaintance or a friend. A common and relatively consistent assumption of this line of research is that the support recipient has already sought out, mobilized, or obtained support from another. However, much less is known about the mechanisms that guide the process of *deciding* to seek support and how those processes are impacted by unbidden but potentially supportive messages, such as those often received by college students.

College students receive a number of messages related to mental health campaigns from a variety of sources on campus, such as university counseling centers, resident assistants, and campus life. Unlike traditional heath campaigns that often attempt to promote or prevent a specific health behavior, many of these mental health campaigns instead offer general statements of support, communion, and empathy. For example, the National Alliance on Mental Illness (NAMI) offers a variety of materials to colleges and universities related to bipolar disorder,

anxiety disorders, and depression with the common thematic message of "You are Not Alone." Similarly, the stated goals of the international "R U OK?" campaign is to nurture a sense of responsibility to support others and strengthen the knowledge that others are available for support ("What We're About," n.d.).

Because concern of stigma is the number one reason college students do not seek help (NAMI, 2012), it seems likely that the underlying goal of many mental health campaigns on college campuses today is to reduce students' perceived risk of seeking social support for the mental health issues they experience. Consequently, the primary goal of this study was to consider how variations in university mental health messages affected college students' perceived risk of seeking social support and how those variations in perceived risk impacted their efficacy and overall college success. Thus, to better understand how university mental health messages functioned as a unique form of social support, we turned to the dual-process theory of supportive communication outcomes.

Social Support and The Dual-Process Theory of Supportive Communication Outcomes

When dealing with stressful or uncertain situations such as those related to mental health challenges, it is natural for individuals to seek (or desire to seek) social support. In a communication context, *social support* can be conceptualized as an overarching term for a variety of resources provided by others that ultimately affect well-being (Goldsmith, 2004). To that end, Bodie and Burlseon's (2008) dual-process theory of supportive communication outcomes seeks to explain how variations in supportive messages differently affect support recipients. Burleson (2009) attempted to quantify why certain types of messages were more effective in supportive interactions by considering four primary ways in which messages can vary. Specifically, message source characteristics (e.g., credibility, power), message

characteristics (e.g., frequency, type of message), context characteristics (e.g., medium, setting), and recipient characteristics (e.g., efficacy, emotional reaction to the message) were likely to impact the effectiveness of supportive messages (Burleson, 2009). At its core, this model maintained that the effect of supportive messages varied as a function of how individuals emotionally processed the message, which in turn is influenced by a number of factors in the communication context.

To better understand how message variations were linked to support effectiveness, Bodie and Burleson (2008) considered how the quality of a supportive message changed the way support recipients evaluated its helpfulness. Specifically, messages with positive intent, feeling, and commitment were perceived as most helpful by recipients and most closely associated with beneficial outcomes (Burleson, 2009). These high-quality and emotionally supportive messages that express positive helper intent, caring feeling, and supportive commitment towards the individual are referred to as highly person-centered messages.

Person-Centered Messages and Mental Health

Burleson's (1982) hierarchy of message coding is most often used to measure different levels of person-centeredness in the context of social support. Low person-centered messages are those that deny others' feelings, challenge their legitimacy, and question their behaviors that result from specific emotional reactions (i.e., *You don't look crazy to me, I'm sure you're fine).* Messages that are moderately person-centered acknowledge another's feelings and attempt to reframe a stressful situation, but do not allow the person in question to elaborate or justify those emotions or offer assistance on how to cope (i.e., *You seem sick, you should really get some kind of help for that).* Finally, highly person-centered messages are those which explicitly validate emotional responses, support the individual's feelings, and offer perspectives on the situation

(i.e., *I can see you're dealing with some tough things right now, and I know you're doing your best. Maybe I can come with you to set up an appointment at the health center so you don't have to go alone?).* Scholars have done extensive work on the role of person-centeredness across communication research, and certain patterns have emerged consistently regardless of context. Research has reliably revealed that highly person-centered messages constantly had more positive outcomes than both moderate and low person-centered messages (Burleson et al., 2005). In fact, many elements of low person-centered support (i.e., informing receivers how they *should* act and feel) were likely to exacerbate the negative aspects of situation instead of alleviating distress (Dunkel-Schetter, Blasband, Feinstein, & Herber 1992).

One area in which it may be particularly valuable to examine the impact of person-centeredness is the context of mental health messages. The stigma associated with mental health issues suggests that individuals struggling with even relatively minor mental health challenges often feel stress and anxiety related to seeking support (NAMI, 2012), which can lead to feelings of isolation and an overall reluctance to mobilize support. Thus, in a mental health context, person-centered messages are likely to not only acknowledge and validate the recipients' emotions (High & Solomon, 2016) but also offer justification for support-seeking behavior that may help to reduce their perceived risk of seeking support. Specifically, highly person-centered messages regarding sensitive topics are often perceived as less threatening and more supportive (High & Dillard, 2012). This decrease in perceived threat can increase the perception of security and available support (Komproe et al., 1997), which is often reflected as a decreased perception of risk of seeking social support. Thus, even among individuals who may feel reluctant to seek support for mental health issues, highly person-centered messages can validate and encourage

positive changes from those feelings instead of rejecting and stigmatizing the individual for experiencing them.

Person-centered Messages and Perceived Risk of Seeking Social Support

Social support functions not only as the outcome of a communicative interaction, but also as a process that ultimately begins with individuals' decisions to seek it. Yet, the decision to mobilize social support is complex, and there are a variety of factors that may influence the perceived "riskiness" in seeking it. To successfully understand the complex and ongoing processes of social support, it is important to include both the ability and willingness of an individual to actively mobilize available support as salient variables in and of themselves (Metts, 1997). Although there is limited research on how individual perceptions of risks can affect the actualization of social support, research suggests that the amount of risk perceived in seeking it may be more present for some rather than others (An, 2014; Bolger, Foster, Vinokur, & Ng, 1996; Bolger, Zuckerman, & Kessler, 2000).

One way to explore the perceived risk of seeking social support in general, and factors that influenced support-seeking preferences in particular, was to examine why certain types of social support could be viewed as inherently risky (Carr & Wilder, 2016). For instance, seeking support from others regarding mental health issues may be viewed as weak, undesirable, or unnecessary. Because individuals may need to share sensitive and socially taboo material to receive this type of support, they perceived these disclosures as symptomatic of some type of integral weakness or helplessness (Brashers, Neidig, & Goldsmith, 2004; Goldsmith & Fitch, 1997). Indeed, the associated perceived risk of negative social stigma was identified as one of the largest impediments that individuals had to overcome when seeking help for mental health concerns (Sibicky & Dovidio, 1986; Stefl & Prosperi, 1985). Consequently, a message that seeks

to help individuals overcome this fear and actively encouraged seeking social support should have emotionally validating characteristics to be most effective. To test this line of reasoning, the following hypothesis is advanced:

> H1: Mental health messages high in person-centeredness are inversely associated with perceived risk of seeking social support.

Person-centered Messages and Health-Related Efficacy

In addition to affecting students' perceived risk of seeking social support for mental health issues, the person centeredness of a message was likely to influence the confidence individuals have in their own ability to successfully initiate and sustain the conversations and interactions required to receive that social support. According to social cognitive theory, *self-efficacy* reflects a sense of control over one's personal environment and beliefs of being able to exercise control over stressful events and their aftermath through adaptive actions (Bandura, 1997). Efficacy is important not only because it largely influences health-related goals, and the strength of the commitment to those goals, but also because it has direct influence over other social cognitive health-related determinants (Bandura, 2004).

In a health context, efficacy was a primary motivator for an individual to enact change; indeed, most individuals did not act unless they believed they had the ability to do so. For example, efficacy was the greatest predictor of individuals filing sexual harassment complaints, likely because they felt a reduction in their perceived risk of doing so (Rudman, Borgida, & Robertson, 1995). Additionally, a 2009 meta-analysis of self-efficacy studies found that it was the most salient factor when predicting recovery from and resilience to health-related incidents (Luszczynska, Benight, & Cieslak, 2009).

To better understand the factors that potentially impacted efficacy in a mental health context, we drew from Afifi and Weiner's (2004) conceptualization of both communication and coping efficacy combined. Specifically, *communication efficacy* was defined as an individual's perceived ability to successfully complete the communication tasks associated with a specific situation (Afifi & Weiner, 2004). In a health context, scholarship showed that an increase in communication efficacy may also increase the ability for individuals to act on the information they received (Clayman et al., 2010). Although this is a simple concept, its ramifications in health communication can be broad. In a recent cancer study, individuals with higher levels of communication efficacy and more open communication on the topic were associated with decreased perceptions of burdening their partner (Venetis, Magsamen-Conrad, Checton, & Greene, 2014).

Relatedly, *coping efficacy* was generally defined as the perceived ability to deal with both the demands of a situation, as well as the associated emotional arousal (Sandler, Tein, Mehta, Wolchik, & Ayers, 2000). More specifically, it referred to individuals' perceived access to emotional, instrumental, and network support resources to manage both the process, as well as the possible outcomes of a stressful situation (Benight et al., 1997). Given the sensitive nature of mental health issues, a primary means of bolstering individuals' health-related efficacy may be providing the kind of emotional support typically received from highly person-centered messages. Person-centered messages are often characterized as containing elements of emotional foundation that support long-term health-enhancing behaviors (Harvey & Alexander, 2012), which can be reflected in an individual's health-related efficacy. Therefore, this study hypothesizes that:

H2: Mental health messages high in person-centeredness are positively associated with health-related efficacy.

Efficacy was likely to affect individuals' belief in their own ability to overcome the more abstract risks associated with seeking social support. When individuals had increased health-related efficacy, they were more likely to believe that they had the ability and motivation to overcome the risks associated with seeking social support as it was framed as a more attractive and available option to them (Luszczynska et al., 2009; Rudman, Borgida, & Robertson, 1995). In other words, efficacy was not just evidenced by specific actions; rather, the outcome of increased efficacy may be the sense that individuals had the *ability* to act if they choose to do so. Therefore, in the present study, changes in health-related efficacy were not necessarily tied to a specific action, but rather to a change in the perception of the risks associated with seeking social support as well as the ability to initiate conversations if the risk was low enough, and deal with its potential ramifications. Put differently, if seeking social support was perceived as risky, this avenue of social support could now be seen as undesirable or even unavailable, thus reducing the possible options for managing health concerns and reducing overall health-related efficacy. Consequently, when the perceived risk of seeking support is lessened, individuals may be more likely to believe they have the resources to respond to challenges as they feel more supported both from increased perceived availability of supportive avenues but also from an increased sense of health-related efficacy. To test this line of reasoning, this study hypothesizes that:

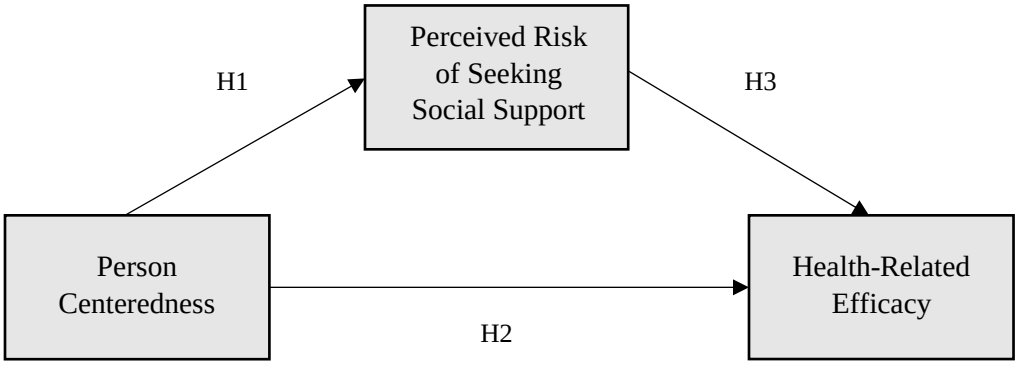
H3: Perceived risk of seeking social support is inversely associated with health-related efficacy.

To summarize, highly person-centered health messages seemed likely to increase health-related efficacy, but the explanatory mechanism for understanding this proposed association was

unclear. If highly person-centered health messages decreased students' perception of the risk associated with seeking support for mental health issues (H1), and that subsequent reduction in perceived risk helped them feel more efficacious (H3), then perceived risk of seeking social support may mediate the positive relationship between person-centered messages and health-related efficacy. Highly person-centered messages contain elements of emotional provision that support long-term health-enhancing behaviors (Harvey & Alexander, 2012). As the risk of seeking social support decreases, available options for managing health problems increase. Increasing students' perception of available support reduces perceived threat and stress appraisal by giving individuals additional coping options (Barrera, 1986) and this increase in perceived options can help bolster health-related efficacy. In other words, highly person-centered health-messages that make seeking support seem less face-threatening and risky may also make college students feel more capable in managing health-related concerns (Komproe et al., 1997). Thus, we hypothesize a mediational relationship to further explain the role of perceived risk of seeking social support in this study (see Figure 1):

> H4: The association between health messages high in person-centeredness and health-related efficacy is mediated by the perceived risk of seeking social support, such that highly person-centered messages decreases the perceived risk of seeking support, which in turn increases students' health-related efficacy.

Figure 1. Hypothesized Model of Perceived Risk of Seeking Social Support as a Mediator of Person-Centered Messages and Health-Related Efficacy



Other Variations in Mental Health Messages

Although supportive messages are often communicated interpersonally, mental health messages share a number of similar characteristics in that they are frequently intended to provide a sense of communion, empathy, and emotional connection like more traditional forms of social support. In addition to offering mechanisms to explain how supportive messages are affected by more abstract variables such as person-centeredness, the dual-process model of supportive communication also offers a framework for investigating when and why factors related to message content, source, context, and recipient influence the outcomes of support interactions (Burleson, 2009). Thus, a secondary goal of this study was to consider how message structural variations (i.e., frequency and channel) and sender characteristics (i.e., credibility and power) ultimately affect both self-efficacy as well as an individual's perceived risk of seeking social support after receiving supportive health messages.

Structural Characteristics. In relation to the role of frequency, the exposure effect suggests that people react more positively to a stimulus as their exposure to that stimulus increases in frequency (Brehm, Kassin, & Fein, 2002), and the effect itself has been repeatedly supported (Ishii, 2005; Weeks, Longenecker, McKinney, & Moore, 2005). Therefore, if a health message urging an individual to rely on available mental health resources is received multiple times, the message may be evaluated more positively than a single iteration. It is thus logical to include the role of frequency as a salient factor that may affect health-related efficacy as well as the perceived risk of seeking those specific resources. In addition, the dual-process theory of supportive communication outcomes suggests that the medium or channel of the message can influence how successful a supportive message can be (Burleson, 2009). Further, Huang & Shen (2016) found that media channel was a significant moderator to effectiveness in the context of

health-messages, but also that their messages created more impact when delivered through audio/video, compared to printed and mixed media channels.

Therefore, when examining these types of structural message variations in combination, this study will attempt to advance the following research question specifically to examine how they may interact (if at all) in the context of a social support health message:

> RQ1: How, if at all, do structural variations in mental health message characteristics (i.e., frequency and channel) associate with perceived risk of seeking health-related social support?

Sender Characteristics. In addition to message characteristics, the dual-process theory of supportive communication also suggests that the sources' credibility positively influences the reception of the message (Burleson, 2009). O'Keefe (2003) highlighted how characteristics of the message sender can influence outcomes of persuasive efforts. Of interest in this study is the role of sender credibility and power. The dual-process theory of supportive communication outcomes also suggests that the source's credibility and confidence in the message will positively influence its reception of from the recipient (Burleson, 2009). *Source credibility* refers to a variety of source characteristics including perceived intelligence and perceived competence, and has been found to be positively related to an individual's acceptance of a message's persuasive content (McCroskey, 1966; McCroskey & Jenson, 1975; McCroskey & Young, 1981). Additionally, research finds that people are influenced by their perception of source credibility when they are deciding whether to accept a message (Dholakia, 1979; Shelby, 1986) and messages that are considered more powerful are often more effective in enacting health-related change.

Another characteristic through which the source may influence message effectiveness is the source's power over the recipient (Hass, 1981). Sources exert power to gain compliance with both routine requests as well as to secure commitment for long term events (Yukl & Falbe, 1991), like seeking mental health help and creating health-plans. However, a source exercising too much power, particularly in a delicate mental health situation, can cause negative consequences. Lövestam, Fjellström, Koochek and Andersson (2015) found that in a health-related context, patient-centeredness care promotes a sharing of power between the medical source and the recipient. This implies that while there is a clear differentiation in power dynamics, effective social support seeks to equalize the relationship as much as possible to be able to foster trust and successful long-term care.

With these possible connections in mind, this study advances the following research question of how these variables may all interact (if at all) in the context of social support health message:

RQ2: How, if at all, do sender characteristics (credibility and power) associate with perceived risk of seeking health-related social support?

College Success

Once students feel secure in their environments, bolstered by a strong network of social support, they are often more free to focus on more complex wants. Reducing students' perceived risk of seeking social support and increasing their health-related efficacy is likely to support their overall academic health, as it allows students to feel more motivated, empowered in their own educational goals, and therefore satisfied with their overall college experience. "College success" is a somewhat nebulous concept and has in the past been quantified using very basic and impersonal measures that do not take into context students' feelings or health. For instance, a

single measure of success may include the overall grade point average of a student, or even more basically, rates of college graduation (McCroskey, Booth-Butterfield & Payne, 1989). While numerical measures such as these are important data points, it leaves out many important facets of what will predict long-term academic health and college success.

In this study, college success is operationalized using a combination of motivation, learner empowerment, and college satisfaction. While these are all distinct concepts that capture individual snapshots of a college student's experience, when taken in combination, they can help create a profile of how successful that student may be. Students' motivation is defined as any directed behavior that is enacted to succeed in a goal (Schunk, 1990), and is crucial to conceptualizing student success in college. Richmond (1990) reports that motivation levels strongly predict student learning, and in turn will be reflected in overall college successes as students work harder to achieve their academic goals. Motivation and self-efficacy often go hand in hand, because if individuals perceive themselves to be efficacious, they are more likely to have the associated motivation to meet their goals. Also, students who have high reported levels of self-efficacy are often prone to both creating and testing alternate solutions when they are faced with initial failure (Bandura, 1997); therefore, belief in oneself is central to a student's motivation. Additionally, as general capability and health-related efficacy are often positively associated (Kvarme, Haraldstad, Helseth, Sorem, & Natvig, 2009), there is precedent to imagine that an increase in health-related efficacy would be reflected in both a student's motivation and learner empowerment.

Learner empowerment is a construct related to student motivation developed by Frymier, Shulman, and Houser (1996), which addresses the extent to which students feel in control of their studies and positively correlates with both cognitive and affective learning, adjustment to

college expectations, and overall interest in higher education (Frymier et al., 1996; Pennebaker, Colder, & Sharp, 1990; Weber, Martin, & Patterson, 2001). Therefore, if individuals lack a strong sense of empowerment, they are more likely to feel as though they are not in control of events in their lives beyond academics, and have been shown to show less ability to perform basic assigned tasks (Zimmerman, 1990). Additionally, students with higher levels of depression also reported lower levels of efficacy and empowerment in their academic environment (Rahman & Rollock, 2004). Using health-related messages that reduce students' perceived risk of seeking social support may similarly bolster their efficacy and decrease the likelihood of depression.

In addition to the connection between motivation, empowerment, and efficacy, *college satisfaction* is predictive of higher academic achievement, long-term student growth, and college retention (Astin, 1993; Morgan & Shim, 1990). Additionally, research documents a positive correlation between higher rates of college satisfaction and higher GPAs (Okun & Weir, 1990). College satisfaction is also directly affected by how comfortable individuals feels about their time on their campus, and this can be affected by their perceived risk of seeking support from both their peers as well as specific campus resources. In general, students more at ease in the knowledge that they could seek support seem more likely to evaluate their overall college satisfaction more positively. To test this line of reasoning, we asked the following research question:

> RQ3: How, if at all, do students' (a) health-related efficacy and (b) perceived risk of seeking social support affect their overall college success (i.e., motivation, empowerment, and satisfaction)?

Method

Participants and Procedures

Participants in this study included 342 college students enrolled in communication courses at a medium-sized, private university in the southwestern United States. After receiving human-subjects approval, students were asked to confirm they met three criteria for participation in the current study (i.e., all participants must be 18 years of age, enrolled at the university in question, and must be able to identify and recall at least one mental health-related message from their university) and then to provide their informed consent. Participants received minimal course credit (less than 2% of their total grade) for participation.

Of the participants in the current study, 63% were women (n = 215) and 37% were men (n = 126), with one participant choosing not to disclose. Participants ranged in age from 18 to 30 with a mean age of 19.10 (SD = 1.31). Approximately 80% (n = 272) identified that they were Caucasian/White, while 2.9% (n = 10) reported that they were Asian, 4.1% (n = 14) indicated they were African American/Black, 11.1% (n = 38) indicated they were Hispanic, .3% (n = 1) indicated American Indian or Alaskan Native, and one chose not to disclose. Participants were also asked to identify their GPA, which ranged from 1.50 to 4.00 with a mean GPA of 3.25 (SD = .46). Lastly, participants were asked their school classification, with 52% (n = 178) freshman, 30.4% (n = 104) sophomores, 11.4% (n = 39) juniors, and 6% (n = 20) seniors. Of the campaigns reported, 46% (n = 159) of participants reported messages related to depression and anxiety (e.g. Need2Talk), 44% (n = 152) of participants reported messages related to suicide prevention (e.g. R U OK), 6% (n = 20) reported messages pertaining to health and coping skills (e.g. FrogsCARE), and the remaining 3% (n = 11) reported messages that did not fit into the above categories.

Prior to beginning the online survey, participants were provided with an electronic copy of the informed consent form and were asked to indicate their agreement by checking a box on the online questionnaire. Participation in this study was completely voluntary. All participation took place outside of regular class time; students completed the questionnaire anonymously, and could withdraw at any time by closing their browser window. The survey took approximately 30 minutes to complete, after which participants were thanked for their participation.

Approximately halfway through the survey, participants were asked to identify a university mental health campaign they had been exposed to in the past 3 months. To help guide their choice, participants were given the following simplified definition of mental health: "*Mental health* refers to your emotional well-being and ability to cope with everyday stressors." Participants were offered some examples of known mental health campaigns on campus such as RUOK, Need2Talk, and the HOPE Initiative. After participants provided the mental health campaign with which they were most familiar, the remaining questions referred specifically to the campaign they selected.

Measures

Person-centeredness. To assess participants' perception of person-centeredness, Goldsmith, McDermott, and Alexander's (2000) scale was used. This scale includes 12 items each measured on a seven-point semantic differential scale (i.e., "encouraging–discouraging," "ignorant – knowledgeable"). In previous research, the inter-item alpha reliabilities for each scale provided evidence that the scales were internally consistent (i.e., problem-solving utility, $\alpha = .89$; relational assurance, $\alpha = .92$; emotional awareness, $\alpha = .92$.) (High & Dillard, 2012). In this study, this measure had a combined alpha reliability of .96 and the inter-item alpha

reliabilities for each scale were as follows: problem-solving utility, α = .88; relational assurance, α = .94; emotional awareness, α = .87.

Perceived risk of seeking social support. To measure participants' perceived risk of seeking social support, we used an adapted version of the Goldsmith and Parks (1990) scale. Responses were scored on a five-point Likert-type scale that ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). Sample items included "I am hesitant to talk about my problems because I do not want to feel dependent on people," and "I am concerned people will get a negative impression of me if I discuss my mental health concerns." Previous research reflected good reliability of α =.82. (Carr & Wilder, 2016). In this study, it had an internal reliability of α = .91.

Health-related efficacy. To measure participants' health-related efficacy, an adapted version of Afifi and Weiner's (2004) communication and coping efficacy measure was used. This five-item Likert-type scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*) with sample items including *"*I know how to talk about stressful mental health issues with people who are close to me*"* and *"*I would have no problem coping with others' attitudes about stressful mental health issues in my life, whatever they may be.*"* Previous research reported acceptable reliability coefficients of α =.74 and α =.73 across both dimensions of efficacy (Afifi et al., 2006). In this study, it had a combined alpha reliability of .89.

Message frequency. The frequency with which students recalled receiving mental health messages was measured by asking them to estimate out of the given options how often they had received the health message in the last 3 months (i.e., *once, 2-3 times, 4-5 times, 6-7 times, more than 7 times).*

Channel type. Channel type was measured with a rank-order question asking participants to indicate which channel type (i.e. email, poster, face to face) from which they most

frequently received the health message. For the purposes of this analysis, only the most frequently reported channel was retained.

Sender credibility. To measure the participants' perception of the credibility of the message sender, a modified version of McCroskey, Holdridge, and Toomb (1974) instructor credibility scale was used. Responses were scored using a five-point semantic differential scale (e.g., "Intelligent- unintelligent," "Untrustworthy – trustworthy") used to measure sender character, sociability, composure, extroversion, and competence. McCroskey and colleagues self-reported the reliability and has a range of α =.82 to α =.86 across the five dimensions (McCroskey, Holdridge, & Toomb, 1974). In this study, all 18 items were combined to produce a combined alpha reliability of .96.

Sender power. Participants' perception of the senders' power was measured via a seven-point nine item semantic differential scale (e.g., "powerful-not powerful," "authoritative-democratic," "influential-unimportant." In this study, this measure produced an acceptable alpha coefficient of .89.

College motivation. To measure participants' college motivation, French and Oakes (2003) Academic Intrinsic Motivation Scale (AIMS) scale was used. The scale consists of 25 items (e.g. "I have academic goals," and "Staying in college is my decision"). Responses were scored on a five-point Likert-type scale that ranged from 1 (*strongly agree*) to 5 (*strongly disagree*). French and Oakes (2003) reported alpha coefficient of .96. In this study, the measure produced an alpha reliability of .94.

College satisfaction. To measure participants' college satisfaction, an adapted version of Huston, McHale, and Crouter's (1986) marital opinion questionnaire was used. The original scale was modified to measure students' recent feelings of satisfaction with their college

experience. Ten of the items used seven-point semantic differential scales (e.g., "miserable-enjoyable," "rewarding-disappointing") and an additional item assessed global satisfaction in college using responses that ranged from (1) *completely dissatisfied* to (7) *completely satisfied*. This modified scale was reliable in recent research with a reliability of α =.90 (Kranstuber, Carr, and Hosek, 2012). In this study, it produced an alpha reliability of .86.

Learner empowerment. To assess learner empowerment, Weber, Martin, and Cayanus (2005) learner empowerment scale was used. This 18-item measure solicited responses on a five-point Likert-type scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). Items included statements such as "I made a difference in the learning that went on in my classes" and "I felt I could do well in my classes." Weber, Martin, and Cayanus (2005) reported the alpha reliability of .91. In this study, it produced an alpha reliability of .89.

Data Analysis

Hypotheses 1 through 3 were tested using Pearson's product-moment correlations. H4 was tested using a mediation model (Model 4) in Hayes' (2012) PROCESS macro for SPSS. The first research question was examined using a factorial ANOVA, and the final two research questions were considered using multiple linear regression.

Results

Preliminary Analyses

Descriptive statistics for all continuous variables including means, standard deviations, and Pearson's product-moment correlations are presented in Table 1

Table 1
Descriptive Statistics and Pearson's Product-Moment Correlations for All Variables (N = 342)

Variable	M(SD)	1	2	3	4	5	6	7	8
1. Person-Centeredness	5.78(1.04)	-	-.17**	.22**	.82**	.56**	-.27**	-.32**	.29**
2. Perceived Risk	2.97(0.97)		-	-.39**	-.15**	-.04	.13*	.18**	-.36**
3. Health-Related Efficacy	5.13(1.27)			-	.16**	.12*	-.28**	-.27**	.31**
4. Sender Credibility	4.15(0.70)				-	.58**	-.20**	-.30**	.24**
5. Sender Power	4.94(0.92)					-	-.20**	-.29**	.28**
6. College Motivation	1.81(0.64)						-	.54**	-.44**
7. College Empowerment	2.24(0.51)							-	-.56**
8. College Satisfaction	4.94(0.92)								-

*p = .05, **p = .01

Primary Analysis

Hypothesis 1 predicted that university health-related messages high in person-centeredness would be associated with a decrease in participants' perceived risk of seeking social support. As evidenced in Table 1, results of a Pearson's Product-Moment correlation revealed a significant, inverse relationship between the person-centeredness of a message and students' perceived risk of seeking social support for mental health issues, offering support for H1.

H2 predicted that health-related messages high in person-centeredness would be positively related with students' health-related efficacy. Indeed, results indicated that highly person-centered messages were associated with an increase in health-related efficacy (see Table 1), reflecting support for H2.

Hypothesis 3 predicted that the perceived risk of seeking social support would be inversely associated with health-related efficacy. As illustrated in Table 1, results of a Pearson's Product-Moment correlation revealed that a reduction in perceived risk was associated with increased health-related efficacy, offering support for H3.

The fourth hypothesis posited that the perceived risk of seeking social support would mediate the association between highly person-centered health messages and health-related efficacy. To test for significant indirect effects as hypothesized in H4, a mediation model was tested using 5,000 bootstrapped samples in PROCESS (Hayes, 2012). The mediation model produced a significant multiple correlation coefficient, $R = .16$, $F\ (1, 339) = 9.77$, $p < .01$, accounting for 2.8% of the variance in health-related response efficacy. Additionally, the association between person-centeredness and efficacy was partially mediated by perceived risk of seeking social support, such that highly person-centered messages decreased students'

perceived risk of seeking support, which in turn increased their health-related efficacy (b = .02, SE = .01 CI: .01, .04). Thus, H4 was supported.

The first two research questions asked about structural variations (RQ1) and sender characteristics (RQ2), and their potential associations on perceived risk of seeking social support. To test RQ1, a factorial ANOVA was used. Perceived risk was subjected to a two-way analysis of variance including frequency and channel type. There were no statistically significant effects in the model, $F(25, 294) = 1.33$, $p > .05$.

To test RQ2, multiple linear regression was used to see if source credibility and power predicted perceived risk of seeking social support. Regression analysis revealed that the model significantly predicted perceived risk of seeking social support, $F(2, 338) = 4.67$, $p < .05$, $R^2 = .03$. An examination of the beta weights indicated that only the credibility of the sender predicted a reduction in perceived risk ($\beta = -.20$, $t = -2.97$, $p < .01$), such that more credible senders decreased students' perception of the risk of seeking social support.

Research question three asked about the associations between of health-related efficacy and perceived risk of seeking social support on college success, which was initially operationalized as a combination of motivation, learner empowerment, and satisfaction with college. Because preliminary analyses revealed that two of three variables used to measure college success (i.e., motivation and empowerment) were only moderately correlated with each other, and college satisfaction was *negatively* associated with both motivation and empowerment, a series of multiple regression analyses were conducted using each college success variable as a separate outcome. For the first test, the regression model significantly predicted college motivation $F(1, 339) = 28.39$, $p < .01$, $R^2 = .08$. An examination of the beta weights indicated that perceived risk of seeking social support was non-significant, however,

health-related efficacy did positively predict motivation (β = .28, t = 5.33, p < .01). For the second test relating to learner empowerment, the overall model was significant, $F(1, 339)$ = 25.99, p < .01, R^2 = .07. As with the model for motivation, an examination of the beta weights reflected that perceived risk of seeking social support was non-significant, although health-related efficacy did once again significantly predict learner empowerment (β = .27, t = 5.10, p < .01). The third model relating to college satisfaction was also significant, $F(2, 338)$ = 32.92, p < .001, R^2 = .16. An examination of the beta weights revealed that both perceived risk of seeking social support (β = -.27, t = -5.20, p < .01) and health-related efficacy (β = .15, t = 3.74, p < .01) significantly predicted college students' satisfaction.

Discussion

These hypotheses were designed to guide an investigation into the role of the perceived risks associated with seeking social support and health-related efficacy in the larger process of how health messages support students' college success. Overall, results indicated that highly person-centered health messages decreased students' perceived risk of seeking social support and increased their health-related efficacy. Additionally, students' perceived risk of seeking support mediated the association between person-centered messages and health-related efficacy. Research questions addressing the role of various message-specific structural and sender variables indicated that only source credibility significantly affected health-related efficacy and college success.

Hypotheses and Major Findings

Hypothesis 1 through 3 investigated the relationships among health-related messages' level of person-centeredness, individuals' health-related efficacy, and the role of perceived risk of seeking social support. All three hypotheses were supported by the data. Specifically, highly

person-centered mental health messages both decreased students' perception of the associated risk of seeking social support and bolstered students' belief in their own efficacy to deal with the conversations and emotional arousal associated with seeking that social support. It seems that when students perceive risk associated with seeking social support, they also believe themselves less able to deal with the associated mental health-related issues. The confirmation of both H1 and H2 is consistent with the literature as well as the parameters of the dual-process model of supportive communication outcomes that posits that the role of person-centeredness (framed in Bodie and Burleson [2008] as helper intent, feelings, and commitment) is viewed as broadly helpful in supportive messages. Our results continue to support the trend that highly person-centered messages consistently have more positive outcomes (Burleson et al., 2005). Importantly, the presence of highly person-centered characteristics decreased students' perceived risk of seeking social support while also increasing their health-related efficacy. This suggests that mental health messages designed to be largely informative with highly person-centered characteristics can function as a type of support in and of themselves.

Support for H3 continues to bolster the idea outlined in Komproe et al. (1997) that the perception of low risk, available support has far reaching health and wellness benefits even if that support is never mobilized. In this study, just a reduction in the *perception* of the risks involved in seeking social support was enough to increase an individual's belief in their own health-related efficacy. These results also support the functional distinction made by Schwarzer and Leppin (1991) between the role of perceived availability of support and the activation of that support. Overall, results from the present study substantiate the assertion that these two types of support are distinct and our data gives weight to the fact that they should be treated and measured distinctly from each other, as they are expected to produce different outcomes.

In addition, the fourth hypothesis suggests a mediational relationship to explain why highly person-centered messages might affect health-related efficacy, proposing the role of perceived risk of seeking social support as the explanatory mechanism. Specifically, we found that the perceived risk of seeking social support mediated the relationship between the effects of highly person-centered messages and health-related efficacy. Overall, the relationship is such that a more highly person-centered message decreases students' perceived risk of seeking support, which in turn increases their health-related efficacy. This suggests that an element to target when designing health campaigns is not directly an individual's efficacy, but rather to create highly person centered messages that will actively decrease the perception of risk associated with seeking social support. With the use of highly person-centered messages that directly target this facet of the supportive process, health-related efficacy will increase regardless of whether it is expressed in the content of the message.

Research Questions and Minor Findings

Beyond the directional hypotheses, there were three exploratory research questions relating to possible relationships between structural elements (RQ1) and sender elements (RQ2), on the perceptions of risk associated with seeking social support, as well as an overarching question (RQ3) about how health-related efficacy and perceived risk of seeking social support might affect overall college success (i.e. motivation, empowerment, and satisfaction). There were mixed results across these research questions, and yet some interesting findings arose that added to our overall understanding of these constructs.

Overall, there were no significant results from RQ1. The fact that there are no significant findings in RQ1 suggests that the structural variables of a message are less important to the overall effectiveness of a supportive message in lessening perceived risk of seeking social

support than was expected. While the channel variable was largely exploratory in this supportive communication context, we expected message frequency to affect how individuals perceive the risks associated with seeking social support positively because of the documented mere exposure effect (Ishii, 2005; Weeks, Longenecker, McKinney, & Moore, 2005). A possible reason for this lack of significant results could be that our data shows that most students reported receiving the message no more than two or three times. If students truly did not receive the message more than two or three times, it would be understandable that they would not be affected in the predicted ways. Additionally, as most people reported receiving messages primarily over email, reporting significance about other types of channels is difficult because of the lack of exposure. These results (or lack thereof) suggest that when designing messages to both offer social support for mental health and decrease perceived risk, there are no simple answers in manipulating basic structural elements such as channel. Additionally, if students are to benefit from high frequency exposure to these messages they must be sent with enough regularity for them to have an effect.

Moving to RQ2, of the sender characteristics (i.e., credibility and power), only sender credibility significantly predicted a change in perceived risk such that if students perceived the source to be credible (no matter if the source had the power to offer support), there was a decrease in the perception of risks associated with seeking social support. The literature supports the connection between source credibility and how positively a message is received (McCroskey, 1966; McCroskey & Jenson, 1975; McCroskey & Young, 1981), but this finding further supports this relationship in a health communication and social support context. It seems that the most salient factor is the role of credibility in offering reliable advice and information about the reality of actual risks associated with seeking social support.

Finally, in relation to RQ3, which addressed the associations between perceived risk of seeking social support and health-related efficacy on overall college success (i.e. motivation, satisfaction, and empowerment), there were significant results. Specifically, health-related efficacy positively predicted motivation, satisfaction, and empowerment across the board. However, perceived risk of seeking social support inversely predicted college satisfaction levels and was not related to motivation or empowerment. As the literature on efficacy suggested that individuals with high levels of efficacy were more likely to problem-solve and implement solutions when faced with academic challenges (Bandura, 1997), the fact that a reduction in perceived risk of seeking social support does not affect motivation or empowerment is contrary to what would be expected. While it is previously supported in H3 that there is a relationship between the reduction in perceived risk of seeking social support and an increase in health-related efficacy, this does not carry over to empowerment, which has been viewed similarly to general efficacy. Ultimately, it seems that this decrease in perceived risk is not strong enough to affect efficacy in relation to motivation or empowerment beyond the health context. This is important to consider when creating messages, as it reminds us that when dealing with something as complex as mental health and its wide-ranging effects on a student's time at college, there are no panaceas. Reducing perceived risk of seeking social support is a useful tool for helping students start the process of receiving help for their problems, but as always, the locus of control for long-term success must come from the affected individual.

Additionally, there are some surprising differences in the way motivation, empowerment, and satisfaction interact at the bivariate level. Specifically, motivation and empowerment are positively correlated with each; however, satisfaction is inversely correlated to both. There are two possible explanations for these unexpected associations. On one hand, it may be that

students who are highly motivated feel constrained in the traditional university model. Students with clear goals and plans may simply see a university education as a stepping stone to their next project, and are likely to show decreased interest in basic introductory courses from which this sample was drawn. This could apply to both highly motivated students as well as more non-traditional students that are looking more for a set of skills rather than the traditional "college experience." Conversely, students that are less motivated in their academics may still be highly satisfied with their overall college experience (e.g., social life, extracurricular activities, increased independence, etc.). While existing research often associates college satisfaction with academic motivation (Donohue & Wong, 1997; Madonna & Philpot, 2013), for those that are unsure of their long-term plans or see university as an obligation, it makes sense to see these two constructs inversely correlated.

Limitations and Future Research

Although there are some interesting findings within the data, it should be noted that no study is without fault. Of note to readers may be the sample composition. Like many survey studies, the sample is one of convenience and is drawn from a small, private, southern university with a majority population of women. These context-specific factors (i.e. gender, socio-economic status, etc.) may have affected the presumptions and understanding of mental health within the participants as they completed the survey measures and may affect larger the generalizability of this sample. Additionally, although this sample is largely comprised of first year students (52%; n = 178), this may not be as limiting as first perceived. First year students are the population most at risk to the early stressors of university as they learn the relevant coping skills and expectations of their new environments. If this study can help them, then it is targeting a major population that would most benefit from its results. Ideally, replication of this

study across various university campuses, with diverse population demographics will help increase the overall strength and generalizability of these findings.

Furthermore, it is important to note that the nature of this research design focuses on students' perceptions of many of the variables. For instance, students are asked to report their perceptions of the risks associated with seeking social support and these findings are not designed to be generalized to the actualization and mobilization of social support. However, it should be noted that the continued study of perceived risk of seeking social support as a unique construct separate from actualized social support is important, as it clearly has distinct applications. Specifically, as this study finds, the reduction of the perception of these associated risks can have real and measurable impacts on health-related efficacy. It should also be noted at this point that due to the correlational nature of these data, findings should not be considered directly causal. As the nature of this study is largely exploratory, other proposed models might better or more completely explain the associations found among variables. Further study and exploration of these constructs would no doubt help untangle these relationships and establish causality between these variables.

Additionally, while all the student generated mental health campaigns included in this data set are valid and applicable, these survey measures are designed to assess an individual's perceptions of these campaigns, which may or may not be consistent with the actual goals or aims of the campaigns. Future research could address these design concerns with a randomized experimental study with a dedicated, controlled mental health campaign offered to the participants in place of asking students to self-select. This would further help control the message characteristics as well as standardize the goals of the campaign across all conditions; however, some element of realism may be lost in the process.

Despite these limitations, the study found significant results, including the mediating effect of perceived risk of seeking social support, the role of credibility in reducing that risk, and the larger implications relating to college success. These results further add to our understanding of the roots of the social support process. Additionally, they provide guidelines for designing health messages with deliberate care that offer information about mental health and also offer provisions of social support.

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Appendix

Qualtrics Survey

Directions: In the following spaces, please select the most appropriate response to each question. If there is a separate set of instruction, please read those instruction carefully and answer each question according to the instructions for that section of the questionnaire.

Demographic Information

What is your age? _____

What is your biological sex?
Male
Female

What is your current classification in school?
Freshman 4 Senior
Sophomore 5 Graduate /Ph.D. student
Junior

What is your ethnicity or race?

1	White	4	Native American
2	African American	5	Asian American
3	Hispanic American	6	Other (please specify): _____

What is your current college GPA estimated to the closest tenth? ___/4.0
(If you have not yet completed a full semester, please estimate your GPA based on your current class grades.)

Academic Health

College Motivation – French and Oakes (2003) Academic Intrinsic Motivation Scale
Instructions: For this section, please indicate the extent to which you agree or disagree with the following statements.

1	2	3	4	5
Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

I have academic goals.
I am confident I can complete my degree.
I determine my career goals.
I enjoy solving challenging difficult problems.
I work on an assignment until I understand it.
I am confident I will graduate from college.

I determine the quality of my academic work.
I am pursuing a college degree because I value education.
I feel good knowing that I determine how my academic career develops.
I have high standards for academic work.
Staying in college is my decision.
I study because I like to learn new things.
I enjoy doing outside readings in connection to my course work.
I am intrigued by the different topics introduced in my courses.
I study because I am curious.
I look forward to going to class.
I am excited to take more courses within my major.
I enjoy learning more within my field of study.
I like to find answers to questions about material I am learning.
I enjoy studying.
I have pictured myself in a profession after college.
I am excited about the job opportunities I will have when I graduate.
I have pictured myself being successful in my chosen profession.
I believe I will make a substantial contribution to my chosen profession.
I feel good knowing I will be a member of the professional community in my area of study

College satisfaction - Huston, McHale, & Crouter's Marital Opinion Questionnaire (1986)
Instructions: We would like to know about your satisfaction with your relationship with your overall college experience over the last three months. Consider the following words and phrases to describe your satisfaction with your college experience. Select the number that most closely describes your feeling toward your relationship. A "4" represents a "neutral" feeling.

1	2	3	4	5	6	7
Strongly disagree			Neither agree nor disagree			Strongly agree

Miserable – Enjoyable
Discouraging – hopeful
Tied down – free
Empty – full
Boring – Interesting
Disappointing – Rewarding
Doesn't Give me much – Brings out the best in me
Lonely – Friendly
Hard – Easy
Useless – Worthwhile

All things considered, how satisfied or dissatisfied are you with your college experience over the past three months?

Learner empowerment - Weber, Martin, and Cayanus (2003) Learner Empowerment Scale
Instructions: For this section, please think about all of the classes you have taken (or are currently enrolled in) over the past three months and indicate the extent to which you agree or disagree with the following statements.

1	2	3	4	5
Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly disagree

I could make an impact on the way things were run in my classes.
I could help others learn in my classes.
I had power to create a supportive learning environment in my classes.
I made a difference in the learning that went on in my classes.
I influenced the teacher in my classes.
I felt appreciated in my classes.
The work that I did for my classes was meaningful to me.
My classes are/were exciting.
The work that I did for my classes was valuable to me.
The things I learned in my classes were useful.
My classes helped me to achieve my goals in life.
The work I did for my classes was a waste of my time. [R]
I felt that I could do the work assigned in my classes well.
I felt I could do well in my classes.
I didn't think that I could do well on the assigned work in my classes. [R]
I believed that I could achieve my goals in my classes.
I believed in my ability to do well in my classes.
I had what it took to do well in my classes.

Coping/Mental Health

Risks of Seeking Health-Related Social Support - Adapted from Goldsmith & Parks (1990)
Instructions: For this section, please indicate the extent to which you agree or disagree with the following statements.

1	2	3	4	5
Strongly agree		Neither agree or disagree		Strongly disagree

I am concerned people will get a negative impression of me if I discuss my mental health concerns.
I do not want to burden people with my mental health concerns.
I am hesitant to talk about my mental health concerns because I do not want to feel dependent on other people.
I am worried it is wrong to share my mental health concerns with other people.
I doubt whether talking about my mental health concerns would do any good.

Health-Related Efficacy – Communication & Coping Efficacy (Afifi & Weiner, 2004)
Instructions: Please indicate the extent to which you agree or disagree with the following statements.

1	2	3	4	5	6	7
Strongly disagree			Neither agree nor disagree			Strongly agree

I know how to talk about stressful mental health events with people who are close to me.
I know what I need to say to successfully discuss stressful mental health events with people who are close to me.
I would have no problem coping with others' attitudes about the stressful mental health events in my life, whatever they may be.
I am certain that I could handle whatever others' thought about the stressful mental health events in my life, whether it be positive or negative.
I'd be able to fully cope with others' opinions about the stressful mental health events in my life, whatever they may be.

Message Variables

Message Selection
Instructions: This section of the survey will ask you a series of questions about mental health messages. "Mental health" refers to your emotional well-being and ability to cope with everyday stressors. Please think about all of the mental health messages that you have received from various sources in the TCU community over the last three months. For example, you may recall receiving messages from TCU mental health campaigns such as *RU OK, Need to Talk, Frogs CARE, Need2Know,* or any other. These mental health messages may be about a wide variety of topics related to healthy behaviors.

Please identify the one mental health message that you have received from TCU and recall most clearly from the past three months, and describe it below.

What is the name of this mental health campaign?
[insert text box here]
In your opinion, what type of mental health behavior (if any) is this campaign trying to increase or promote?
[insert text box here]
In your opinion, what type of mental behavior (if any) is this campaign trying to decrease or prevent?
[insert text box here]

Instructions: With this mental health campaign in mind, please answer the following questions in relation to the specific messages you have received.
Note: In the sections below, questions referring to [mental health campaign] will be populated by Qualtrics with the specific mental health campaign selected by the participants.

Channel

Thinking about all of the messages you have heard about [mental health campaign] in the past three months, how have you received them?

1. Email
2. Posters/Flyers
3. Text messages
4. TCU Presentation (either standalone or within a larger program)
5. TCU Residence Hall Program
6. Professor or TCU Staff member
7. Friend
8. Other (please describe)

Thinking about all the ways you have received this message in the past three months, please rank them in order from most frequently received to least frequently received. For example, if most messages were over email, you should rank email as "1."

Frequency

Approximately how many times have you heard a message about [mental health campaign] in the past three months?

1. Once
2. 2-3 times
3. 4-5 times
4. 6-7 times
5. More than 7 times

Sender Power

Instructions: Consider the following words and phrases while thinking about the person or group that sends you messages about [mental health campaign] most often. Select the item that best represents them from each pair of words.

1	2	3	4	5	6	7
Strongly disagree			Neither agree nor disagree			Strongly agree

Powerful - Not powerful
Dominating – submissive
Official – unofficial
Authoritative – democratic
Privileged – disadvantaged
Strong – weak
Influential – unimportant
Superior – inferior
Capable – incapable

Sender Credibility - McCroskey, J. C., & Teven, J. J. (1999).
Instructions: Consider the following words and phrases while thinking about the person or group that sends you messages about [mental health campaign] most often. Select the item that best represents them from each pair of words.

1	2	3	4	5
Strongly agree		Neither agree or disagree		Strongly disagree

Intelligent- unintelligent
Untrained – trained
Cares about me – doesn't care about me
Honest – Dishonest
Has my best interest at heart – doesn't have my best interest at heart
Untrustworthy – trustworthy
Inexpert -expert
Self-centered – not self-centered
Concerned about me – not concerned about me
Honorable – dishonorable
Informed – uninformed
Moral – immoral
Incompetent – competent
Unethical – ethical
Insensitive – sensitive
Bright – stupid
Phony – genuine
Not understanding – understanding

Person Centeredness - Goldsmith, D. J., McDermott, V. M., & Alexander, S. C. (2000).
Instructions: Consider the following words and phrases while thinking about the content of these [mental health campaign] messages. Select the item that best represents them from each pair of words.

1	2	3	4	5	6	7

Relational assurance
supportive–unsupportive (R)
encouraging–discouraging
comforting– distressing (R)
reassuring–upsetting.

Emotional awareness
sensitive–insensitive(R)
compassionate–heartless
considerate– inconsiderate(R)
misunderstanding-understanding

Problem solving utility
helpful – hurtful (R)
useless – useful
ignorant – knowledgeable
selfish - generous