Usage of Message Framing to Promote Stress Management Between U.S. and International Students

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Abstract

Message framing has been utilized to generate behavioral change based on its emphasis on the costs or benefits of enacting a health behavior. Effective application of framing may help increase mental health help-seeking behavior among international and U.S. students. Framed messages about stress management were exposed to students to encourage seeking help for stress management. A total of 253 undergraduate participants were presented information promoting stress management in either the gain- or loss-frame and were asked to indicate specific mental health services they would consider using. Participants were also assessed on the likelihood they would seek help and their perceived effectiveness of the message. The type of frame that students were exposed to did not show a resulting change. Findings suggest that more research is required to determine the effect of message framing mental health to international and domestic students. Results contribute to a growing literature about international students’ mental health help-seeking attitudes and behaviors.

Keywords: stress management, message framing, international students, mental health
Promoting Stress Management to U.S. and International Students Using Message Framing

A consistent concern accompanying the rise of mental health problems among American colleges has been the lack of students seeking treatment or help. Despite an increase in mental health problems, most diagnosed students have been reported to forego or avoid treatment (Hunt & Eisenberg, 2010). Andrews, Issakidis and Carter (2001) found that less than a third of those experiencing psychological distress pursue help for mental health. Unsurprisingly, untreated mental illnesses have significant consequences for students’ academic success, productivity, and substance use, especially during a developmentally critical period (Kessler, Foster, Saunders, & Stang, 1995). Studies have identified several predictive risk factors that hinder mental health help-seeking. Among these include stigmatization of mental illness, fear of emotion (Komiya, Good, & Sherrod, 2000), concerns of privacy (Vogel, Wester, & Larson, 2007), skepticism about treatment effectiveness (Eisenberg, Golberstein, & Gollust, 2007), and a lack of perceived need and awareness of campus resources, policies, and insurance coverage (Eisenberg et al., 2007). Low socioeconomic status and cultural norms within ethnic minority groups have also been found to differentiate decisions to seek help. One demographic group in particular is the international student group population (Hunt & Eisenberg, 2010).

The number of international students enrolled in American institutions has been rapidly growing in recent years. Between 2012 and 2017, the Institute of International Education (2017) reported a 17.8% increase in international students. Yet, international students have been reported to significantly underutilize health services despite reported need for psychological help (Bradley, Parr, Lan, Bingi, & Gould, 1995). International students have been found to experience more stressful adjustment problems than domestic students and to be at more risk of physical and mental problems. Despite their different cultural, social, and ethnic backgrounds, international
students generally share common academic pursuits and objectives (Misra, 2000). International students are faced with harsh life changes that follow cultural adjustments (Leong & Mallinckrodt, 1992) and have limited social support networks being estranged from home (Mori, 2000). Students have also been found to have a more difficult time adjusting and transitioning to college due to the cultural, linguistic, academic, financial, and social adjustments that face them. Yet international students, compared to domestic students, have repeatedly been studied in the literature to seek help for mental health problems less frequently (Mori, 2000).

Cultural differences of international students’ perception about mental health have been found to be part of what sets apart help-seeking behaviors from American/Euro-American students (Mori, 2000). Asian, Hispanic, and Black cultures view the self as a part of a collective whole, and individuals tend to attribute personal problems as external, and beyond the control of the individual. As a result, it has been proposed that members of a collective culture will less often seek, deliberate help to relieve concerns. Instead of seeking therapy or counseling, students are more acculturated to seek the advice of members of the group (Brinson & Kottler, 1995). In contrast, Western culture views the self as autonomous and central; therefore, individuals have been found to internalize problems as personal inadequacies rather than external influences. As a result, American students are acculturated to actively seek solutions for themselves to ameliorate concerns (Axelson, 1993).

In general, both international students and minority groups have been reported to be less trusting of counselors because of the cultural differences that separate them from the counselors. Counselors are often seen as a member of the “out-group” (Atkinson et al., 1994), and may consider self-disclosure of personal problems as weak or disgraceful (Misra, 2000). Such mental health help-seeking behavior can be regarded as shameful and a “loss of face,” and international
students’ often avoid going to counseling services out of fear of being seen by acquaintances (Vogel et al. 2007). Instead, international students will tend to somaticize their stress rather than seeking psychological assistance (Mori, 2000). Consequently, international students have been reported to utilize college health centers more often than American students to alleviate stress-related medical problems that often do not have a pathology (Ebbin & Blankenship, 1986). Beyond culturally associated stigma, international students’ unfamiliarity with campus mental health resources may cause misconceptions to further their avoidance of mental health assistance. Some students worry that they will be sent home because of their need for formal counseling and are highly suspicious about the motives of counselors (Mori 2000).

While both U.S. and international college students would benefit from frequenting more psychological assistance, the cultural differences that separate the two groups are key factors to consider when approaching ways to promote mental health help-seeking behavior. To improve the mental health of all college students, awareness of cultural differences is essential to tailor the most effective way of encouraging students to seek help for mental health. The current study seeks to investigate differential applications of message framing stress management to both international and U.S. student group population to examine ideal methods of encouraging students’ mental health help-seeking.

Persuading a health behavior can depend on differences in the phrasing or descriptions of the behavior. In particular, the promotion of healthy behaviors has been manipulated through message framing techniques. Health communications that highlight the benefits of the behavior are considered a “gain-frame” while communications that highlight the costs associated with not doing the behavior are considered a “loss-frame”. Health decisions are often made based on the
degree of risk and uncertainty associated with the behavior (Meyerowitz & Chaiken, 1987). Therefore, message framing research has found that the impact of a health behavior message is contingent on its frame—emphasizing the positive or the negative, relative to the risk involved (Rothman & Salovey, 1997). Message framing health behaviors originates from prospect theory by Tversky and Kahneman (1985). Prospect theory states that the framing of information in either a gain or a loss, relative to the level of risk involved, differentially influences behavioral decision-making (Tversky & Kahneman, 1985). When faced with information about a potential gain, people are more willing to avoid risks to secure a certain gain. In contrast, when faced with information about a potential loss, people are more willing to seek risks to avoid a certain loss (Rothman & Salovey, 1997).

The pairing of a frame to a particular health behavior has been found to promote the effectiveness of the message and influence health behavior decision making (Rothman, Salovey, Antone, Keugh, & Martin, 1993). When a gain-frame is matched to describe a health prevention behavior (e.g., sunscreen, flossing), the message is perceived to be more effective because of its emphasis on the safety of prevention behaviors. Conversely, when a loss-frame is matched to describe a health detection behavior (e.g., HIV testing, cancer screening) the message is more effective because of its emphasis of the risk and uncertainty of detection behaviors.

Research on message framing have adjusted framing variations to elicit behavior or cognition change. For example, individuals who perceive certain illness detection behaviors as particularly riskier have been found to be more receptive to loss-frame messages than those who consider the behavior as less risky (Meyerowitz & Chaiken, 1987). In addition, those who are avoidance oriented respond better in the loss-frame while approached oriented individuals respond better in the gain-frame (Sherman, Mann, & Updegraff, 2006). Cross-cultural studies of
message framing have also demonstrated the effect of matching health behavior message frames to cultural backgrounds and respective self-regulatory focuses (Uskul & Sherman, 2008). Lechuga, Swain, and Weinhardt (2011) found Hispanic and Black participants to respond better to loss-frame promotions of HPV vaccines, due to collectivist cultures’ tendency to avoid losses. Additionally, message framing has been found to influence behaviors to aid individuals’ mental health (Detweiler-Bedell & Salovey, 2003). Mavandadi, Wright, Klaus, and Oslin (2018) have found that message framing influences the engagement rate of specialty mental health care appointments. Detweiler-Bedell and Salovey (2003) have also found that using either the approach or avoidance message frame can enhance psychosocial treatment for individuals with depression.

The present study seeks to extend the applications of message framing to mental health behaviors to encourage mental health help-seeking. Prior findings have primarily focused on the promotion of physical health behaviors, while little have researched its application on mental health behaviors. To our knowledge, no study has explored the effects of message framing on the promotion of stress management. Additionally, no study has analyzed the effects of mental health message framing on college students. Investigating how different types of students receive different message frames will help universities and institutions understand the best method of advocating for students’ mental wellness, while also accommodating for their cultural differences.

The study will focus on the potential of message framing stress management promotion to both international and domestic students’ mental wellbeing. Stress management promotion was chosen because of its relevance to general university students. The purpose of the study is to
differentially promote mental health management by tailoring information to students’ respective cultural perceptions. We hypothesize that matching a message frame informing students to seek stress management according to student type will emphasize the effectiveness of the message and lead to behavioral change. Following prospect theory, information about mental health treatment can be considered as an illness detecting behavior because it involves a certain level of risk (Mavandadi et al., 2018). Initiating mental health treatment or seeking a screening could induce a diagnosis, and seeking help itself can be considered risky because of the stigma that is associated with mental health help-seeking. Therefore, it is hypothesized that individuals who associate a greater risk or uncertainty towards seeking help for mental health will be more responsive to the loss-frame, and will consider seeking help more than when faced with the mismatched frame.

When students are confronted with an article encouraging seeking help for stress management, U.S. students are hypothesized to be more willing to seek help when the information is in the gain-frame, while international students will respond more effectively to the loss-frame. International students are predicted to find mental health help-seeking as particularly undesirable than U.S. students due to their perception about mental health assistance by collectivist cultures (Brinson & Kottler, 1995), differences in mental health stigmatization, and misconceptions about the consequences of receiving aid (Mori, 2000). In contrast, U.S. students are hypothesized to be more sensitive to the gain-frame because of individualists’ perceptions about mental health assistance (Brinson & Kottler, 1995), and the relatively fewer social consequences associated with mental health help-seeking.

Conclusively, the study will evaluate how effective participants construe messages about stress management, as well as their likelihood of seeking help. Results will demonstrate the
significance of applying differential frames cross-culturally for mental health related issues and mental health behaviors. There are three main dependent measures to be examined from the study. The first will evaluate how many campus mental health resources students are interested in pursuing, following the presentation of the message frames. The second will evaluate how willing students are to seek help for themselves, while the third will evaluate if students will consider that others would seek help.

Methods

Participants

The participants were 253 undergraduate students enrolled at a large Midwestern university (N = 253). The sample was 77% female and 23% male, 0.03% African American, 32% Asian, 57% White, 0.05% Hispanic, and 0.02% Multiracial. Age of the participants ranged from 18 to 52 years (M = 20.61, SD = 3.31). The sample consisted of 65 international students and 188 American students. The mean duration international students have lived in America was reported to be 2.49 years (M = 2.49, SD = 2.62; minimum 0.5 years, maximum 17 years). Participants were recruited through a research experience program available to students enrolled in a psychology course, and offered a choice of $5 or extra course credit as compensation.

Procedure

Participants were invited to complete an online survey about stress management. Students were initially asked to identify whether they were an international student or a student from the United States. All participants were first presented with questions that measured their likelihood of seeking stress management and their regular ways of handling everyday stressors. These questions were intended to measure participants’ initial attitudes towards stress management and
help-seeking. Participants were then randomly assigned to read either a gain-frame or loss-frame message about stress management. In order to maintain equal minimum reading time across participants, participants could not continue with the survey until at least 30 seconds had passed once the article was presented.

Afterwards, the survey presented a list of nine different campus mental health services and asked participants to select any of the resources they would be interested in pursuing. We listed a variety of resources such as campus counseling centers, stress management assistance, and mental wellness programs. Additionally, participants were asked to complete Likert scales to evaluate their perception of the message, and if they would consider seeking help for stress management after reading the message. Participants were also asked if they would think others who have read the same article would consider seeking help as well. After completion of the questions, the survey presented a page of the same list of mental health services previously shown. In addition to the original nine resource titles, we listed the website link and phone number under each resource. The survey kept count of the number of clicks participants made on the page in order to measure a behavioral evaluation following the conditions.

**Materials**

International students completed an additional demographics questionnaire which included their country of birth, the country they considered as their home, the country where their family resides, and the length that they have been living in the United States.

All participants indicated their attitudes towards seeking help for stress management and their likelihood of seeking stress management on a nine-point scale questionnaire (1=Not at all likely, 9=Very likely).

Two messages were developed specifically for the current study, framed in either the
gain- or loss-frame, based on a guideline by Rothman and Salovey (1997). Messages about stress management were short informational articles visually formatted to look like newsletters that are emailed by the university. The articles were framed in either the gain- or loss-frame; both were equal in meaning but differed in how the information was presented. The gain-frame article was titled “Strengthen your grip on stress management!” while the loss-framed article was titled “Losing a grip on stress management?” Both articles included facts and figures about stress among college students, and a recommendation to seek professional help to manage prolonged or severe stress.

Message effectiveness was indicated on a nine-point Likert scale (1 = Not at all likely, 9 = Very likely). Participants also indicated their likelihood of seeking help for stress management on a nine-point scale. Additionally, participants indicated the likelihood that others who have read the same article would seek help on another nine-point scale.

**Results**

The effects of student type (International v U.S.) and message frame (gain v loss) on all three dependent variables were evaluated with two-way ANOVAs. An interaction between student type and message frame, such that international students were more likely to seek help (and check more messages and find the messages more effective) with a loss framed message and American students were more likely to seek help (and check more messages and find the messages more effective) with a gain frame would support our hypotheses.

Resources checked

The mean number of resources that participants checked were compared between
international students in the gain-frame article condition ($M = 3.79, SD = 1.70$) and loss-frame ($M = 3.83, SD = 1.26$) article conditions, as well as between U.S. students in the gain-frame ($M = 3.62, SD = 1.81$) and loss-frame ($M = 3.48, SD = 1.76$) article conditions. There was no main effect of type of student $F(1, 249) = 1.12, p = .29$ or frame condition $F(1, 249) = 0.04, p = .84$. There was also no significant interaction between student type and frame on the mean number of mental health resources students were interested in, $F(1, 249) = 0.13, p = .72$.

Likelihood of seeking help

Participants indicated likelihood they would seek stress management help, as well as the likelihood that they perceived others would want to seek help after reading the health message. The mean level of participants’ reported likelihood of seeking help for themselves was compared between international students in the gain-frame article condition ($M = 5.68, SD = 1.55$) and loss-frame ($M = 5.45, SD = 2.06$) article conditions as well as between U.S. students in the gain-frame ($M = 4.95, SD = 1.89$) and the loss-frame ($M = 4.80, SD = 1.73$), There was a significant main effect of type of student on the reported likelihood of seeking help, $F(1,249) = 7.01, p = .009$, but there was no main effect of the gain-, loss-frame condition, $F(1, 249) = 0.52, p = .47$. The result of the two-way ANOVA indicated no significant interaction between student type and message frame on the reported likelihood of participants seeking help $F(1,249) = 0.20, p > .05$.

Participants were additionally measured on their perception of others’ willingness to seek help. Likewise, the mean level of participants’ perception of others’ likelihood of seeking help was compared between international students in the gain-frame article condition ($M = 5.79, SD = 1.32$) and loss-frame ($M = 5.87, SD = 1.57$) article conditions, as well as between U.S. students in the gain-frame ($M = 5.38, SD = 1.73$) and loss-frame ($M = 4.97, SD = 1.58$) article conditions.
There was a significant main effect of type of student on the reported likelihood of seeking help, 
$F(1,249) = 8.15, p = .005$, but there was no main effect of the gain-, loss-frame condition, $F(1, 249) = 0.52, p = .47$. There was not a significant interaction between student type and message frame on perceived likelihood that others would seek help $F(1,249) = 1.12, p = .29$.

Message effectiveness

Lastly, the mean level of effectiveness that participants rated the messages were compared between international students in the gain-frame article condition ($M = 5.59, SD = 1.56$) and loss-frame ($M = 5.55, SD = 1.50$), as well as between U.S. students in the gain-frame ($M = 5.72, SD = 1.67$) and loss-frame ($M = 5.56, SD = 1.51$) conditions. No main effect emerged for student type, $F(1, 249) = 0.09, p = .76$, or message frame $F(1, 249) = 0.19, p = .67$, on message effectiveness. There was also no significant interaction between student type and message frame on the mean level of rated effectiveness, $F(1, 249) = 0.07, p = .78$.

Discussion

This study investigated the potential effects of message framing stress management between international and U.S. college students. An informational article about seeking help for stress management was presented to both international and American students in the format of the gain- or loss-frame. After assessing participants’ perceived effectiveness and consideration for seeking help, the results did not support our hypothesis that international students would be more receptive to the loss-frame and U.S. students would be more receptive to the gain-frame. No significant relationship emerged between message framing stress management promotion and the type of student.
Despite the results, matching health messages to individual or group differences have been repeatedly found in previous research. Message framing studies have investigated the effectiveness of matching messages regarding cultural cognition (Lechuga et al., 2011), cross-cultural self-regulatory focus (Uskul et al., 2009), and degree of risk perception (Meyerowitz & Chaiken, 1987). Recent studies have observed the significance of message framing on mental health related behaviors as well (Mavandadi et al., 2018; Detweiler-Bedel & Salovey, 2003).

One possible reason for the current results can be explained by weak messages that were presented to participants. On average, messages were not perceived as especially effective by participants in all conditions. Likewise, framed messages did not produce a significant effect on participants’ willingness to seek help. It is a possibility that the health messages were not persuasive enough, or that the act of stress management promotion was not a pressing matter to elicit enough concern or interest that it could be manipulated by a message frame. To our current knowledge, no other studies have investigated the effects of message framing stress management, so it is difficult to discern the extent of message framing in this context.

A notable finding from the study is the main effect of international students’ reported likelihood of seeking help. Contrary to the literature, we found that international students—regardless of the frame they were exposed to—were significantly more likely than U.S. students to consider seeking mental health assistance. Moreover, international students were more likely to consider that others would be willing to seek help after reading the messages, suggesting that international students are more receptive to the general idea of seeking stress management assistance. Considering how international students have been found to avoid and under-utilize mental health services (Hunt & Eisenberg, 2010; Mori, 2000; Brinson & Kottler, 1995), this was an unexpected and surprising result. Although this does not explain the disparity between actual
help-seeking behavior between international and U.S. students, it indicates that students’ self-reported likelihood or desire to seek help should not be misplaced for behavior. One study by Russell, Thomson, and Rosenthal (2008) found a similar gap between students’ perceived need and action, where international students who indicated need for mental health assistance did not pursue help and visit counseling services. A study by Fallon and Barbara (2005) found that students reported inaction due to perceived lack of severity to initiate help.

These results suggest two noteworthy implications. The first is that, perhaps with a stronger measurement and message, stress management could potentially yield effects through message framing. The current study is one of few that explore the applications of message framing in the context of mental health communications, because health communications research is predominantly focused on the promotion of healthy, physical behaviors. Message framing mental health behavior is a field that has not been thoroughly studied, and despite the current studies that suggest its significance, future studies can capitalize on the possibilities to bridge this gap in the literature. Second, because international students were found to be more open to seeking stress management assistance, it is possible to consider further studying the attitudes versus intent of international students’ help-seeking behavior in relation to mental health. Further studies can take into the account this information and formulate new framing methods to approach international students to effectively increase help-seeking behavior, apart from reported willingness or desire. In order to address the differences in mental health help-seeking between international and U.S. students, studying their attitudes towards seek help, separate from their behavior, would be a necessary step to understand and increase help-seeking behaviors.

A critical flaw in the study is the lack of a substantive measure to evaluate behavior
change. Originally, the study planned to track the number of resource links participants clicked to quantify behavioral change. However, the data was not collected properly, and analysis was not possible. The study resorted to relying on participants’ reported interest in mental health services and their willingness to seek help as a result. Self-reported interest and willingness were comparatively weaker alternatives to the original operationalization of behavior change.

Additionally, the study failed to take into account participants’ initial risk perception of seeking help for specifically stress management. It is possible that stress management is not something that is considered as particularly risky or pressing enough to seek assistance. Future studies can examine how seriously college students consider the consequences of not attending to stress, and the degree of risk that they associate with chronic stress.

Finally, as with many health communications, messages about personal health have been met with the challenge of substantiating the readers’ receptivity of the message. The effectiveness of a message framed article is contingent on multiple factors, including the reader’s attention, interest, or familiarity with the content of the message (Rothman & Salovey, 1997). Participants may not have given their full attention when reading the messages, or mental health help-seeking may not have been one of crucial importance to participants.

Findings the present study demonstrate that there is much to be studied from the potential effects of message framing stress management, and ways to encourage mental wellness and mental health behavioral change among college students. Results add to a small, but growing literature on mental health message framing, and help to understand international students’ perceptions towards receiving mental health assistance. More rigorous measurements and quantification can potentially produce significant results in future studies.
References


