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Self-distancing as a Persuasive Amplifier for Increasing Help-seeking among People with
Depression.

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Claremont Graduate University

2022

APPROVAL OF THE DISSERTATION COMMITTEE

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Abstract

Self-distancing as a Persuasive Amplifier for Increasing Help-seeking among People with Depression.

By

Sara M. Hollar

Claremont Graduate University: 2022

People with high levels of depressive symptomatology report less favorable attitudes toward help-seeking and reduced help-seeking intentions than people with lower levels of depressive symptomatology. While some attempts to persuade people with depression to seek help have been successful, others have failed. Preliminary research using both perspective-taking and mental time-travel self-distancing writing tasks have shown potential. However, a video that asked people to think, rather than write, about help-seeking from a distanced perspective failed to increase help-seeking outcomes. This dissertation tests a new approach where participants are prompted to take a self-distanced approach while watching existing help-seeking video messages. In these two studies self-distancing is used as a persuasive amplifier to boost the effectiveness of help-seeking messages. In study 1, participants were instructed to view a video Depression Public Service Advertisement (D-PSA) either from the perspective of their current self (immersive condition) or from the perspective of an objective other (distancing condition). Help-seeking attitudes, help-seeking intentions, and the negativity of thoughts in response to the D-PSAs were measured. The results of study 1 showed that viewing the D-PSA from a self-distanced perspective improved help-seeking attitudes in comparison to the immersive and control condition, and reduced negative thoughts compared to the immersive condition. Additionally, a significant interaction between depression symptomatology and self-distancing was found, such that self-distancing's positive impact on attitudes was stronger at higher levels

of depression. In study 2, participants were randomly assigned to one of two self-distancing conditions, or a control condition. The perspective-taking condition replicated the self-distancing condition from study 1. The mental time-travel condition asked participants to view the message from the point of view of their future self, 10 years into the future. Results of study 2 show that self-distancing through perspective-taking improved help-seeking attitudes, increased help-seeking intentions, and reduced negative thought content compared to a control. Self-distancing through mental time-travel reduced negative thought content compared to the control condition. For both perspective-taking and mental time-travel conditions, self-distancing's effect on help-seeking intentions was mediated through reduced negativity and improved attitudes. These two studies indicate that placing a short instruction request to view a video from a self-distanced perspective amplified the influence of current help-seeking D-PSAs on help-seeking for depression. Adding a self-distancing persuasive amplifier prior to messages may have potential utility for PSA's in other domains as well.

Keywords: Depression, self-distancing, help-seeking, public service announcements

Dedication

To the good people of MTurk.

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CHAPTER 1: INTRODUCTION

Depression is the leading cause of disability in the world (Friedrich, 2017), and affects one in seven adults in their lifetime (Centers for Disease Control and Prevention, 2018). This mood disorder, which is associated with feelings of hopelessness, loss of pleasure, and changes in sleep and eating (American Psychiatric Association, 2013), affects all areas of life from work productivity (Jain et al., 2013) to close relationships (Daley & Hammen, 2002). The ongoing pandemic has contributed to increased rates and severity of depression (Robinson et al., 2022; Varma et al., 2021), indicating that more people may be in need treatment and support for depressive symptoms than in previous years.

Although depression is treatable, many individuals with elevated depressive symptomatology do not seek help (Huntley & Fisher, 2016; Pratt & Brody, 2014). Reported treatment rates have been rising, but the lag between depression onset and treatment can be up to 47 months (Hasin et al., 2018). In fact, unlike many other illnesses where severity predicts higher intentions to seek help, researchers often find a negative relationship between depression severity and intentions to seek help (Hollar & Siegel, 2020; Sawyer et al., 2012). This leads to people with more severe symptoms being less likely to receive treatment. Unfortunately, untreated depression is unlikely to enter remission in the short term (Mekonen et al., 2022) and the duration of untreated depression is associated with increased symptom severity and likelihood of suicide (Ghio et al., 2015; Mekonen et al., 2022).

Given the importance of reducing the duration of untreated depression, researchers have sought to increase help-seeking among people with depression through mass-media campaigns and persuasive interventions (e.g., Costin et al., 2009; Gulliver, Griffiths, Christensen, Mackinnon, et al., 2012; Kohls et al., 2017; Lee et al., 2016). Some efforts have been successful

(Beaudoin, 2008; Parikh et al., 2018; Siegel & Thomson, 2017), but others have not been able to increase help-seeking intentions significantly (Dueweke & Bridges, 2017; Hernandez & Organista, 2013). Most troubling, some interventions have made participants with depression less likely to seek help than a control group (Batterham et al., 2016; Gulliver, Griffiths, Christensen, & Brewer, 2012; Klimes-Dougan et al., 2013). At least some of these failures may be due to a failure to consider the cognitive changes brought about by depression.

Depression can significantly change the way people with depression process and understand messages compared to individuals without depressive symptomatology (Chambers et al., 2005; Siegel et al., 2017). For example, Lienemann and colleagues (2013) conducted an experiment where they showed people with and without depressive symptomatology a billboard that read “You are not to blame for the cause of your depression. Depression is treatable if you are willing to seek help.” Among those with heightened depressive symptomatology, exposure to the ad led to *greater* self-stigma, which was associated with reduced intentions to seek help.

Similarly, qualitative work shows how well-meaning messages can be interpreted negatively among people experiencing depression (Siegel et al., 2019). In this study, participants with depression rated anti-stigma depression ads less favorably than participants with depression. Additionally, nearly a quarter (23.6%) of participants with depression provided responses that were coded as indicating the PSA had negative effects. Only 1.5% of responses from participants without depression were coded this way. These studies show how people with depression process messaging about depression much more negatively than those without depression. Given the importance of increasing help-seeking in this population, researchers have called for research that takes into account both the cognitive changes in people experiencing depression and theories

of persuasion and decision making to improve help-seeking research and public campaigns (Chambers et al., 2005; Siegel et al., 2017).

Beck's (1974) cognitive theory of depression provides a framework for understanding the challenges of persuading people with depression to seek help, as it holds that people experiencing depression see the world through a consistently negative frame. According to Beck, the salience of negative information leads to patterns of thought that are labeled in the CTD as the cognitive triad, which refers to pervasive and lasting negative views of oneself, the world, and the future (Beck, 1967; Rush & Beck, 1978). The CTD also outlines six cognitive errors common among people experiencing depression: 1) absolutistic dichotomous thinking, where all information is placed into extreme binary categories, 2) minimization and magnification, where the implications of positive information is downplayed while negative aspects are highlighted, 3) selective abstraction, where cognitions are focused on one detail while ignoring other potentially more relevant details, 4) arbitrary inference, where conclusions are drawn with little evidence to support them or in the face of contradictory information, 5) overgeneralization, where a few incidents are applied to unrelated circumstances, and 6) personalization, where external events are related to the self even without a clear connection. Beck's theory has been instrumental in developing pathways to understand and treat depression (Clark & Beck, 1999).

Although depression is often understood as a global negative shift, negativity is most powerful and persistent when related to the self (Black & Pössel, 2013; De Raedt et al., 2006; Wisco, 2009). In a review that builds from the foundation of Beck's theorizing to contextualize current research on the impact of self-relevance and depth of processing on depressive cognition, Wisco (2009) concludes there is substantial evidence that "depressive thought is more negative for self-relevant than for externally-focused content" (p. 382). In line with this thinking, some

research on depression indicates that negative self-referent information processing both predicts and maintains depression over time (Black & Pössel, 2013; Glashouwer et al., 2012; Pyszczynski & Greenberg, 1987). So powerful is the negative bias toward self-relevant information in people with depression, that reflecting on positive and happy memories about the self can result in worsened mood (Joormann & Siemer, 2004; Keeler & Siegel, 2016).

Reducing the self-relevance of help-seeking messages may be an effective way to sidestep automatic negative processing and increase help-seeking intentions. Siegel and colleagues (2015) used an overheard approach, where messages appeared to be targeted toward people who knew someone with depression, rather than toward the depressed person themselves. This “overheard” communication was more successful at increasing intentions to seek help than direct messages to those with depressive symptoms (Siegel et al., 2015). Siegel and Thomson's (2017) use of elevation (an other-focused emotion) as a positive emotion infusion also suggests that reducing self-relevance may lead to successful messaging. They found that participants who were induced to feel elevation reported increased levels of help-seeking intentions. In contrast, when participants were induced to experience gratitude (an emotion connected to the self), there was not a significant increase in help-seeking intentions.

We have developed an additional line of research that used reduced self-relevance as a pathway to influence people with depression based on self-distancing tactics. Previous work has shown that self-distancing writing tasks can improve help-seeking intentions and outcome expectations (Hollar & Siegel, 2020; 2022), although a video message was not successful. This work develops a new approach that introduces a brief self-distancing instructional manipulation to pre-existing help-seeking video messages. If successful, this approach could use self-

distancing to sidestep depression's negative biases about self-relevant information, therefore increasing the persuasive power of messaging to this population.

CHAPTER 2: SELF-DISTANCING

Self-distancing is a technique that allows someone to “take a step back” from their current experience (Kross & Ayduk, 2017). This work was borne from the observation that, although people seek to reflect and create meaning from difficult experiences, self-reflection sometimes leads to rumination and reduced well-being (Nolen-Hoeksema et al., 2008), while other times self-reflection leads to insight and increased well-being (Foa & Kozak, 1986; Pennebaker & Seagal, 1999). This paradox in coping literature inspired a line of research that suggests reflection from a self-distanced perspective leads to better outcomes than reflection from an immersed perspective by reducing emotional reactivity and increasing abstraction (Ayduk & Kross, 2010; Kross et al., 2005; Kross & Ayduk, 2017).

This early research took place entirely in the context of making sense of past events and emotions. The research tests the assumption that simply recounting an event from a self-immersed perspective, as if the event were occurring again, does not lead to adaptive outcomes, as people become overwhelmed by the emotionality of the event. Instead, they argue, psychological distance from the event is necessary to reduce distress and allow meaning to be made from the event, leading to better outcomes. Self-distancing from the emotionality of the event allows individuals to reconstruct the event and draw meaning from it, leading to better outcomes (Ayduk & Kross, 2010). Thus, *self-distancing* through changing the visual perspective used to reflect on these memories, is a way to create the necessary distance for meaning making to occur (Kross et al., 2005). In this early program of research, scholars set out to test this hypothesis experimentally by comparing the effects of a distanced visual perspective (viewing an event as if one was a fly on the wall), with an immersed perspective (viewing an event as if one was re-living it), on emotionality while reflecting on intense negative experiences. These

experiences and the emotions associated with them differed across experiments, from anger (Ayduk & Kross, 2008, 2009; Kross et al., 2005), sadness (Kross & Ayduk, 2008), to embarrassment (Kross et al., 2014).

Adaptive self-reflection has been a fertile ground for self-distancing research, and has established many important characteristics of self-distancing. First, that self-distancing reduces negative emotionality in response to past memories (Ayduk & Kross, 2008, 2010; Kross et al., 2005; Kross & Ayduk, 2008). Secondly that self-distancing both occurs spontaneously (Ayduk & Kross, 2010), and it is possible to induce experimentally (Ayduk & Kross, 2009; Kross et al., 2005). Finally, this research also proposed a mechanism by which self-distancing leads to adaptive reflection: increased reconstruing (abstract meaning making) and less recounting of past events (Ayduk & Kross, 2010; Kross, 2009).

Since its introduction as a technique to predict the effects of reflection on coping more accurately (Kross et al., 2005), scholars have continued to explore the role of self-distancing in promoting adaptive self-reflection (Kross et al., 2011), while also testing the impact of self-distancing on emotion regulation to currently unfolding emotional situations (Kross et al., 2014; Résibois, Kuppens, et al., 2018; Streamer et al., 2017). Studies have assigned participants to prepare to make a good impression on a member of the opposite sex (Kross et al., 2014), to give a speech to a panel of people evaluating your performance (Kross et al., 2014; Streamer et al., 2017), and to respond to receiving negative social feedback (Résibois, Kuppens, et al., 2018; Résibois, Rotgé, et al., 2018). In one study, participants were asked to prepare for a public speech from a self-distanced or a self-immersed perspective. Findings show that self-distancing successfully regulated negative emotion, leading to better performance in this stressful situation, as rated by independent observers (Kross et al., 2014). Additionally, although participants in

both the distancing and immersive conditions reported similar levels of negative emotion prior to the task, participants who self-distanced felt significantly less negatively after the speech task was over, and reported feeling less shame (Kross et al., 2014).

Convergent with this finding is that self-distancing reduced both emotional explosiveness (intensity immediately following a stimuli) and emotional accumulation (emotional intensity over time after immediate stimuli response) after receiving negative social feedback (R sibois, Kuppens, et al., 2018). Likewise, self-distancing while being deliberately provoked to anger can reduce feelings of anger, and reduce aggressive behavior in responses to provocation (Mischkowski et al., 2012). This suggests that self-distancing is an effective method of regulating emotions and emotional behavior even in the heat of the moment. Other work has tested the effect of self-distancing on emotional reactivity when thinking about a future stressor (White et al., 2019), and found that self-distancing's dampening effect on emotional reactivity is applicable to future stressors as well.

There is also substantial evidence that self-distancing can improve self-regulation and self-control. In one study, preschool children who were draped with Superman's cape and asked to take on the qualities of Superman were able to delay gratification and resist eating a tempting marshmallow for longer than preschoolers without this instruction (Karniol et al., 2011). This suggests that inhabiting an exemplary other, rather than the self, can improve self-control. This finding is mirrored in White and Carlson's work (2016), which tested the effect of self-distancing on children's executive functioning. They found that executive function, measured by persistence on a boring task, increased as distance from the self increased. Children who were instructed to think of themselves as Batman performed better than children who were instructed to use their own name and third person pronouns, and both of those conditions out-performed

children instructed to use first person pronouns as they undertook the boring task (White & Carlson, 2016). Work in the self-reflection and emotional regulation domains had largely compared a self-distancing condition to a self-immersive or control condition (e.g., Kross et al., 2011; Résibois, Rotgé, et al., 2018). In contrast, studies testing children's self-control have compared both linguistic forms of distancing (e.g., using one's own name, and third-person pronouns) to perspective-taking forms of distancing (e.g., asking what Batman would do) and indicates that perspective-taking may be a more powerful form of distancing (White & Carlson, 2016).

Perhaps because of its success in many domains, researchers have developed many methods to generate a self-distanced state. Most distancing studies in the coping domain prompt participants to take a step back, visually, from their experience, and observe themselves as if they were a fly on the wall, or where watching an event unfold on a stage below them (Kross & Ayduk, 2009; Travers-Hill et al., 2017). In the emotional regulation domain, distancing has been induced both linguistically (e.g., Moser et al., 2017), and through perspective-taking (e.g., Résibois, Rotgé, et al., 2018). On the linguistic side, many studies ask participants to engage in self-talk while encountering an emotional stimuli using third-person pronouns (e.g., she/he) to prompt a self-distanced perspective, compared to first-person pronouns (e.g., I/me; Kross et al., 2014; Moser et al., 2017; Streamer et al., 2017). This linguistic form of distancing has similar effects in terms of emotional regulation as visual distancing, and work by Kross and colleagues (Kross et al., 2014) suggests that pronoun use leads to participants viewing the situation more distantly in their minds than participants who used first-person pronouns.

One of the most commonly used inductions is to ask participants to take on the perspective of an objective other (Bulut et al., 2018; Finkel et al., 2013; Zhang et al., 2013).

Prompts in these studies encourage taking the perspective of another (e.g., “as if you were an impartial observer, a scientist who analyses the feedback impartially;” Résibois, Kuppens, et al., 2018; Résibois, Rotgé, et al., 2018). In a study where participants were tested on their emotional reactivity to disturbing affective images, participants in the self-distancing condition were instructed to “relate to the pictured event from a third-party perspective as though they were an investigator observing a crime scene...or an emergency room doctor” (Bulut et al., 2018, p. 20). Participants using this distancing technique had larger changes in heart rate variability than participants who did not receive distancing instructions, which is consistent with successful regulation of negative emotion. Researchers have also created distance from the current self by asking participants to think about their future-self or of the passage of time from the current moment, sometimes called mental time-travel (Bruehlman-Senecal et al., 2016; Bruehlman-Senecal & Ayduk, 2015; Pronin et al., 2008). Both these forms of inducing distancing (i.e. perspective-taking and mental time-travel) have been used successfully with people experiencing depression (Hollar & Siegel, 2020, 2022).

Self-Distancing and Depression

Not surprisingly, due to the evidence that self-distancing is a powerful tool to reduce negative emotional intensity and promote wellbeing, self-distancing has been investigated in the mental health domain. Early research related to coping with negative life events first tested depression as a possible boundary condition for self-distancing (Kross et al., 2005). Depression causes rumination and it was not known if self-distancing could be used to overcome this tendency (Kross & Ayduk, 2009). However, research indicated that self-distancing can be an effective way to reduce negative emotionality toward negative life events, and may be even more effective for people experiencing more severe depression (Kross & Ayduk, 2009). Additional

research has shown similar patterns, where self-distancing reduces negative emotionality as measured by emotional explosiveness and emotional accumulation most for participants with higher depression symptomatology (Résibois, Kuppens, et al., 2018).

One place where self-distancing's demonstrated effect on emotionality could be well utilized is in promoting help-seeking among people with depression. Although there have been some studies that investigate the effect of self-distancing on depression *symptoms* (Giovanetti et al., 2019; Travers-Hill et al., 2017), very few studies have tested self-distancing to impact *help-seeking* for depression. So far, we have completed four studies suggest self-distancing can be an effective way to increase help-seeking in this population. Hollar and Siegel (2020) reported three studies that tested the impact of self-distancing through perspective-taking on help-seeking. In study 1, participants were instructed to write about a time they had considered seeking help from the point of view of an objective other who wanted what was best for them. This writing-task intervention increased help-seeking intentions among people experiencing depression.

Study 2 attempted to recreate this, but with a video prompt asking participants to think, rather than write, from the objective other's perspective. The video was not successful in impacting any help-seeking outcomes. Faced with this, we chose to re-focus on retesting the writing task in study 3 to ensure the effect was reliable. Although self-distancing did not directly impact help-seeking intentions and outcome expectations, there was an interaction between depression severity and condition akin to that found in other research (e.g., Kross & Ayduk, 2009; Résibois et al., 2018). Self-distancing attenuated the typical negative relationships between depression symptomatology and help-seeking intentions and outcome expectations. The interaction suggested that self-distancing was most effective for people with more severe depression. This paper additionally reported qualitative analyses based on what people wrote in

response to the prompts, and found that participants in the distancing condition were much less likely to write fully negative content about help-seeking (Hollar & Siegel, 2020). This suggests that self-distancing may be a way to reduce negative attitudes and expectations about help-seeking, particularly among people with severe depression—and thus likely having stronger negative attitudes and thoughts.

With the success of the writing task and the failure of the video, we decided to focus on conceptually replicating and strengthening the writing task intervention (Hollar & Siegel 2022). This paper tested another method of self-distancing, mental time-travel, as a way to impact help-seeking. In this study, participants who wrote from the perspective of their self, 10 years into the future, reported higher help-seeking attitudes, compared to both the immersive and control conditions. Mental time-travel also increased help-seeking intentions and outcome expectations compared to the control condition. There were no differences between the control and immersive conditions. This study also explored mediation models that showed self-distancing's impact on help-seeking intentions was mediated through help-seeking attitudes and outcome expectations.

Both these articles document a consistent negative relationship between depression severity and help-seeking outcome measures, showing that more severe depressive symptomatology is associated with less favorable attitudes and expectancies about help-seeking and reduced intentions to seek help. These papers also document a significant interaction between level of depression severity and the distancing condition. In the distancing condition, the negative relationship is weakened, compared to the immersive condition. In fact, in Hollar and Siegel (2020), participants with severe depression in the distancing condition reported help-seeking intentions in line with participants with only mild depression.

Taken all together, the preliminary research on self-distancing and help-seeking indicates that self-distancing writing tasks can be an effective method of improving help-seeking. However, these studies also are limited in their applied utility as writing tasks are not as prevalent or practical of an intervention as video messaging. Neither self-distancing nor positive emotion infusion approaches have been successful when delivered via video (Hollar & Siegel, 2020; Straszewski & Siegel, 2021). Additional research is needed to develop strategies that effectively incorporate the benefits of self-distancing into video-based messaging. This dissertation attempts to create a brief instructional manipulation that will deliver the benefits of self-distancing in a cost-effective and scalable way.

CHAPTER 3: RATIONALE OF THE PROPOSED STUDIES

People with depression often do not seek help for the treatable condition (Pampallona et al., 2004). This is even more likely among people who are experiencing severe depression (Sawyer et al., 2012). Past research has successfully used self-distancing writing tasks to improve help seeking attitudes and intentions (Hollar & Siegel, 2020, 2022). However, writing tasks are not easy to scale into mass campaigns to reach a broader population of people experiencing depression. Unfortunately, video messages based on writing task instructions have not been successful. Video messaging targeting participants with depression with a self-distancing or positive emotion infusion was ineffective compared to the writing tasks (Hollar & Siegel, 2020; Straszewski & Siegel, 2021). The approach used in these failed video interventions may have been too cognitively complex of a demand for participants. Over the course of a short video (less than two minutes) participants were tasked with 1) altering their mental state (distancing or savoring) 2) generating their own thoughts and arguments in favor of help-seeking, and 3) maintaining this new mental state. This was likely too challenging to be achieved by most participants, particularly over MTurk, where participants are often assumed to be distracted and tempted to multi-task (Zwarun & Hall, 2014). The videos were likely not engaging or instructive enough to shepherd participants through these tasks.

The current studies seek to find a way to reduce the cognitive load of processing help-seeking messages, while still benefiting from a self-distanced perspective. One way to do this is to take advantage of existing messages from health organizations. Many organizations, like the World Health Organization (WHO) or National Alliance of Mental Illness (NAMI) already create and promote video messages to encourage help-seeking. Asking participants to process these existing D-PSAs from a distancing perspective could be a more successful way to reap the

benefits of a self-distanced perspective on help-seeking.

We believe this approach will be successful because viewing the message while in a self-distanced perspective should change the way people with depression process the message. Research has shown that when participants write about help-seeking from a self-distanced perspective, they are less likely to write fully negative responses (Hollar & Siegel, 2020). Before viewing the video, participants will be asked to watch the video from a self-distanced point of view. We predicted that by presenting the help-seeking information to receivers who have been asked to process the message as an objective person would, or as their future self would, participants will be less likely to default to the automatic negative cognitions of depression (Beck & Bredemeier, 2016). People with depression are most negative when reflecting on self-relevant information (Black & Pössel, 2013; Wisco, 2009). We anticipate that self-distancing while viewing will make the D-PSA less self-relevant. This should allow greater persuasion to take place, as participants will be able to process the information without unduly negative cognitions, resulting in improved attitudes toward help-seeking and intentions to seek help. This pathway is tested by building negativity into a mediation model, whereby reduced negativity is tested as a mediator of the relationship between self-distancing and help-seeking attitudes and intentions. The main contribution of this dissertation is in the creation and test of a small instructional manipulation that has the potential to boost and amplify the impact of depression help-seeking messages, therefore increasing the number of people with depression who receive help for their condition. Also, if this pre-message instructional amplifier is successful, the general approach can be applied to campaigns targeting other health behaviors beyond help-seeking for depression.

CHAPTER 4: STUDY 1

Purpose

The goal of this study was to test the effect of a brief instructional intervention inserted before a pre-existing help-seeking D-PSA on help-seeking attitudes and intentions. We also measured the extent to which the self-distancing instruction reduced negative thoughts toward the D-PSA. Rather than having self-distancing embedded into the persuasive task itself (e.g., Hollar & Siegel, 2020 & 2021), we prompted participants to enter into a distanced state by taking on the perspective of an objective other, and then asked them to view an existing D-PSAs from this perspective. We believe that the prior self-distancing video may have failed because it was too cognitively difficult to distance while also essentially coming up with help-seeking rationales on their own. In this study we take a new, less taxing approach, where participants are instructed to view an existing message about help-seeking from a distanced perspective. By taking on a distanced perspective prior to watching the video, we proposed that participants would be more able to actually process help-seeking messages about depression, without triggering the automatic negative biases of depression. Reducing the self-relevance of the message by asking participants to take on a distanced point of view while processing it should reduce the likelihood of negative thoughts in response to the message.

Hypotheses

We hypothesize that receiving an instruction to use a self-distanced perspective while viewing the ads will reduce negative thoughts in response to the ad (H1), improve help seeking attitudes (H2), and increase intentions to seek help (H3), among people with heightened depressive symptomatology (compared to the control and immersive condition). Past research utilizing self-distancing among populations of depressed individuals has sometimes found an

interaction between self-distancing and severity of depression (Hollar & Siegel, 2020; Kross & Ayduk, 2009; Résibois, Kuppens, et al., 2018). However, some studies have found a similar interaction in the immersive condition (Hollar & Siegel, 2022). As such, we will continue to explore the role depression severity plays in self-distancing's effect on the outcome measures. This study was preregistered via the Open Science Framework: [10.17605/OSF.IO/6J5RT](https://osf.io/6J5RT/).

Method

Participants

Participants were recruited through Amazon Mechanical Turk (MTurk). The first section of the survey was screening tool containing PHQ-9 (Kroenke et al., 1999) to assess depression symptomatology, questions about prior help-seeking, and demographic information. There were 7661 participants who completed the screening survey and received \$0.30. Of these participants, those who scored over the threshold of 4—indicating at least mild depressive symptomatology (Costantini et al., 2021; Kroenke et al., 1999)—who reported they had not yet sought help for current feelings of depression, and who passed the embedded attention check were immediately invited to the experimental survey for a \$0.75 bonus ($n = 3,929$). The majority of those who qualified consented to continue with the experimental survey ($n = 3,542$), and most submitted the survey ($n = 3,202$).

To aid in data validity we removed participants who did not meet certain pre-registered criteria prior to analysis. In accordance with our OSF pre-registration, we removed participants who did not correctly answer a manipulation check question about the instructions they viewed were removed ($n = 82$) and those who advanced the survey prior to the time required to watch the full video ($n = 271$). We also removed participants with discrepancies in their age, gender, or race between the screening survey and the experimental survey ($n = 47$) and those who self-

reported at the end of the experimental survey that they did not pay attention or answered dishonestly ($n = 14$). We also removed participants who did not comply with criteria on the writing task—those with fewer than 3 thoughts listed ($n = 407$), or who did not respond to the writing task instructions (e.g., writing one random word in each thought box, or copy and pasted text from other sources, $n = 178$). No participants spent more or less than three standard deviations of the total time to complete the survey. Univariate ($n = 11$) and multivariate ($n = 13$) outliers were also excluded. A total of 1,300 participants (40.6% of those who submitted the survey) were removed—many of whom did not meet requirements in more than one category. This removal rate is in line with other work that use screeners and require a high level of attention from participants (Berinsky et al., 2014).

After removing participants, the final sample for analyses was 1,912. Participants who self-described with a non-binary identity or declined to state their gender ($n = 33$) are not included in the MANCOVA analyses, as binary gender was used as a covariate in these analyses. The average age was 37.22 ($SD = 11.57$). The average score on the PHQ-9 was 11.06 ($SD = 4.99$), indicating moderate depression. On a question asking participants if they considered themselves to be depressed, from 1 (*not at all depressed*) to 7 (*definitely depressed*), the average score was 4.44 ($SD = 1.75$). Additional demographic information about the sample is available in Table 1.

Table 1: Study 1 Demographic Information

Gender	N (%)	Race	N (%)	Education	N (%)
Woman	1161 (60.7%)	White	1453 (76.0%)	Some High School	16 (0.8%)
Man	718 (37.6%)	Black	238 (12.4%)	Diploma or GED	206 (10.8%)
Other	33 (1.8%)	Hispanic/Latino	161(8.4%)	Some College	422 (22.1%)
		Asian	146 (7.6%)	Certificate	44 (2.3%)
		Pacific Islander	12 (0.6%)	Associate degree	209 (10.9%)
		Other	33 (1.7%)	Bachelor’s Degree	728 (38.1%)
				Master’s Degree	254 (13.3%)
				Doctoral Degree	33 (1.7%)

Note: Participants were able to select more than one race, so percentages total above 100%

Procedure

Once participants gave informed consent for the experimental survey, they first viewed a video with wildlife scenes set to music and were asked two multiple choice questions to ensure they could see and hear (and pay attention to) video content. Participants who did not correctly answer the questions were removed from the survey and compensated \$0.30 for completing the screening survey. Participants who advanced were then randomly assigned to one of the three conditions (self-distancing, immersive, or control conditions), where they viewed instructions on how to view one of three randomly assigned videos.

In the control condition, participants were instructed to give the following video their full attention. In the immersive condition participants were given instructions that emphasized viewing the D-PSA from their personal point of view. In the distancing condition, participants were given instructions to view the D-PSA from the perspective of an objective other. The immersive and control condition manipulations were based off of the instructions for a self-distancing writing task that had been successful in impacting help-seeking outcomes in previous work (Hollar & Siegel, 2020). The instructions emphasized taking on the perspective of the objective other, or on immersing one's self in your own personal point of view. The language emphasizing the perspective of an objective other/one's personal perspective is in line with other self-distancing work that uses the idea of an objective other to create distance (Finkel et al., 2013; Kross & Ayduk, 2017). Because the instructional text was very similar to that used in previous work, we felt confident that it would be sufficiently powerful to induce a

distanced/immersed perspective in most participants prior to viewing the message. See Appendix C for full manipulation texts.

The three D-PSAs selected for use in this study are video messages created by national or international public health organizations: The World Health Organization (WHO), National Institute of Mental Health (NIMH), and the National Alliance of Mental Illness (NAMI). These D-PSAs were distributed as part of television or web campaigns within the past 10 years and are also publicly available on the official YouTube channel of these organizations. Each ad begins with information about depression and concludes by urging the viewer to seek help for depression. We consider these ads broadly representative of persuasive messaging about help-seeking for depression. Links to each ad are available in Appendix C.

Immediately after viewing the D-PSA, participants were asked to list their thoughts about the ad (Cacioppo & Petty, 1981; Siegel et al., 2019). We provided 10 separate text-entry boxes and told participants to list one thought per box, and that they did not have to use every box. Participants then completed measures of help-seeking attitudes and intentions. To create a measure of the negativity of participant's thoughts, after completing the outcome scales participants then rated the valence of each of their thoughts. Finally, participants were asked for demographic information.

Measures

Table 2 reports correlations, descriptive information, and reliability information for the measures.

PHQ-9. To measure depressive symptomatology, participants answered the PHQ-9, a depression screening tool based on DSM-V criteria for depression (Kroenke et al., 1999). Participants indicate how often they have experienced certain symptoms over the past 2 weeks.

Response options are *Not at all*, *Several Days*, *More than half the days*, and *Nearly every day*.

This measure is widely used to diagnose or screen for depression in many contexts (Costantini et al., 2021; Jain et al., 2013; Katz et al., 2021). This scale demonstrated appropriate internal consistency in this sample ($\alpha = .80$).

Help-Seeking Attitudes. To gauge general attitudes toward help-seeking, participants responded to the stem “If I were experiencing depression, seeking help would be...” on five pairs of 7-point semantic differential anchors: *negative/positive*, *harmful/helpful*, *bad/good*, *worthless/valuable*, *foolish/wise* (Hollar & Siegel, 2022). We have used this scale in previous self-distancing research that focuses on persuading people with depression to seek help. It has demonstrated high reliability in this population ($\alpha = .93$, Hollar & Siegel, 2022) and continued to do so in this sample ($\alpha = .94$).

General Help-Seeking Questionnaire (GHSQ). We measured help-seeking intentions with the General Help-Seeking Questionnaire (Wilson et al., 2005). The GHSQ is widely used in research investigating help-seeking, typically for mental health concerns (e.g., depression: Siegel & Thomson, 2017; Straszewski & Siegel, 2018; disordered eating: Innes et al., 2018, suicide: Han et al., 2018). The number of items in the GHSQ has sometimes been modified where different sources of help are presented based on what makes sense for the issue or research question at hand. Here, in line with past research among people with depression (e.g., Straszewski & Siegel, 2018), participants indicated how likely they would be to seek help from eight potential sources on a 7-point Likert scale (1 = *extremely unlikely*, 7 = *extremely likely*). The sources we included were a romantic partner, close friend, parent, other family member, counselor/psychologist, psychiatrist, and doctor/general practitioner. The eighth item asked about likelihood of seeking help from at least one source. The GHSQ has shown reasonable internal

consistency in the target population of people with depression when using these eight items (e.g., Hollar & Siegel, 2020 Study 1: $\alpha = .77$ Study 2: $\alpha = .73$; Straszewski & Siegel, 2018: $\alpha = .79$).

Internal consistency was acceptable in this sample as well ($\alpha = .75$).

Single Item Help-Seeking Intentions. Since some participants are presumed to have individualized barriers to some of the sources listed in the GHSQ (e.g., not having a romantic partner, or having no living parents), we also analyzed the last item of the GHSQ that asks participants how likely they would be to seek help from at least one source separately, as a more global measure of help-seeking intentions (see Hollar & Siegel, 2020 and Straszewski & Siegel, 2018 for a similar approach).

Negativity. Using piped text, participants rated the valence of each their own thoughts from the thought listing task on three point scale: *negative, neutral, positive* (Siegel et al., 2019). Having participants code their own thoughts is a frequently used method in studies that use thought listing (Cacioppo & Petty, 1981; Heimberg et al., 1987; Lienemann & Siegel, 2016). This approach is thought to simplify coding by eliminating the potential for errors from researchers incorrectly interpreting the participants thoughts. A negativity score was then created by dividing the number of negative thoughts by the total number of thoughts written by each participant.

Table 2: Study 1 Correlation Matrix, Means, Standard Deviations, and Cronbach's Alphas

	PHQ-9	Attitudes	GHSQ	Single Item	Negativity
PHQ-9	-				
Attitudes	-.15**	-			
GHSQ	-.01**	.50**	-		
Single Item Intentions	-.08**	.51**	.65**	-	
Negativity	.12**	-.26**	-.27**	-.18**	-
<i>M (SD)</i>	11.06 (4.99)	6.01 (1.13)	4.8 (1.19)	5.47 (1.52)	.29 (.29)
<i>Skewness (SE)</i>	.79 (.06)	-1.40 (.06)	-.52 (.06)	-.97 (.06)	.71 (.06)
<i>Kurtosis (SE)</i>	-.15 (.11)	1.81(.11)	-.01 (.11)	.28 (.11)	-.44 (.11)

α	.80	.94	.75	-	-
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Note: All correlations were two-tailed, ** $p < .01$.

Results

To compare the effect of the conditions on the outcome measures, we ran a series of ANCOVAs, with age, a binary measure of gender, PHQ-9, and the extent to which they considered themselves to be experiencing depression (perceived depression) as covariates. Covariates were retained regardless of significance. We also ran planned and pre-registered pairwise comparisons of the conditions against each other. Adjusted marginal means and standard errors in all conditions for all outcome measures are available in Table 3.

Help-Seeking Attitudes. There was not significant main effect of condition on help-seeking attitudes when adjusting for the covariates: $F(2, 1866) = 1.34, p = .36, \eta_p^2 = .40$. PHQ-9, gender and perceived depression were significant covariates. As stated in our pre-registration, we ran planned contrasts, regardless of the overall ANCOVA significance, as the comparisons are a priori hypothesized and theoretically relevant (Streiner & Norman, 2011). One-tailed contrasts show that attitudes were significantly higher in the distancing condition ($M = 6.11, SE = 0.5$) than both the immersive ($M = 5.97, SE = 0.04, p = .01, d = .12$) and control ($M = 5.99, SE = 0.04, p = .001, d = .11$) conditions. The immersive and control conditions were not significantly different from one another ($p = .73$, two-tailed, $d = .02$).

General Help-Seeking Questionnaire. In the overall ANCOVA, there was not significant effect of condition on the GHSQ when adjusting for the covariates: $F(2, 1866) = .20, p = .83, \eta_p^2 = .09$. The PHQ-9 was the only significant covariate. Planned contrasts show no significant differences between conditions (Distancing condition: $M = 4.83, SE = 0.05$; Immersive condition: $M = 4.82, SE = 0.05$; Control condition: $M = 4.80, SE = 0.05$)

Single-Item Intention. There was not a significant effect of condition in the overall

ANCOVA, for the single item measure of intentions when adjusting for the covariates: $F(2, 1866) = 2.8, p = .16, \eta_p^2 = .60$. The PHQ-9 and gender were significant covariates. Planned contrasts show that the likelihood of seeking help was not significantly different between conditions (Distancing condition: $M = 5.54, SE = 0.06$; Immersive condition: $M = 5.47, SE = 0.06$; Control condition: $M = 5.41, SE = 0.06$)

Negativity. In the overall ANCOVA, there was a significant effect of condition on Negativity $F(2, 1866) = 2.78, p = .04, \eta_p^2 = .79$ when controlling for age, gender, PHQ-9, and the extent to which they considered themselves to be experiencing depression. The PHQ-9 was the only significant covariate. Planned one-tailed contrasts show that negativity was significantly lower in the distancing condition ($M = .27, SE = 0.01$) than in the immersive condition ($M = .32, SE = 0.01, p < .01, d = .20$) but not significantly different than the control condition ($M = .29, SE = 0.01, p = .18, d = .08$) conditions. The immersive condition resulted in significantly more negativity than the control condition ($p = .04$, two-tailed, $d = .12$).

Table 3: Study 1 Estimated Marginal Means and Standard Errors

	Attitudes	GHSQ	Single Item	Negativity
Self-Distancing	6.11 (.05) ^a	4.83 (.05) ^a	5.54 (.06) ^a	.27 (.01) ^b
Immersive	5.97 (.04) ^b	4.82 (.05) ^a	5.47 (.06) ^a	.32 (.01) ^a
Control	5.99 (.04) ^b	4.80 (.05) ^a	5.41 (.06) ^a	.29 (.01) ^b

Note: superscripts indicate significant differences across rows.

Exploratory Analyses¹

Some work using self-distancing has found evidence of a moderating effect of depression level on self-distancing's relationship with help-seeking outcomes. Researchers have documented interactions where self-distancing is more effective among participants with more

¹ To parallel the analyses from Study 2, we also ran a sequential mediation analysis, where self-distancing's effect on intentions was mediated through reduced negativity and improved attitudes. This analysis is available in Appendix D.

severe depression (e.g., Hollar & Siegel, 2020; Résibois, Kuppens, et al., 2018). We ran a series of linear regressions to see if this interaction was present when self-distancing was used as a pre-message frame. Entered into the equation were age, a binary measure of gender, centered score on the PHQ-9, perceived depression and two dummy-coded variables that test the two treatment conditions (distancing, immersive) in contrast to the control condition (Aiken & West, 1991). Then we entered interaction terms between the two treatment conditions and the centered PHQ-9, to test the contribution of the interaction term to the outcome variables beyond the contributions of the other variables in the equation.

Help-Seeking Attitudes and Depressive Symptomatology. The overall equation was significant $F(8, 1869) = 9.65, p < .001, R^2 = .04$. Gender, ($B = .19, SE = 0.05, t = 3.52, p < .001$), and the PHQ-9 ($B = -.04, SE = 0.01, t = -4.16, p < .001$) were significant predictors. Additionally, the distancing x PHQ-9 interaction term was significant ($B = .04, SE = 0.01, t = 2.95, p = .003$), indicating that in the distancing condition, the negative relationship between the PHQ-9 and help-seeking attitudes was attenuated. This interaction is modeled in Figure 1.

GHSQ and Depressive Symptomatology. The overall equation to predict scores on the GHSQ was significant $F(8, 1869) = 2.35, p = .02, R^2 = .01$. However, the PHQ-9 was the only significant predictor ($B = -.02, SE = 0.01, t = -2.32, p = .02$). The distancing x PHQ-9 interaction ($B < .001, SE = 0.01, t = .004, p = .10$), was not significant

Single-Item Intentions and Depressive Symptomatology. The overall equation to predict scores on the single item measure help-seeking intentions was significant: $F(8, 1869) = 4.56, p < .001, R^2 = .02$. Only the PHQ-9 was a significant predictor ($B = -.04, SE = 0.01, t = -2.71, p = .007$). The distancing x PHQ-9 interaction was not significant ($B = .008, SE = 0.02, t = .47, p = .64$).

Negativity and Depressive Symptomatology. The overall equation to predict negativity was significant: $F(8, 1869) = 6.55, p < .001, R^2 = .03$. The immersive condition was a significant predictor ($B = .03, SE = 0.02, t = 2.08, p = .04$), as was the immersive x PHQ-9 interaction ($B = .01, SE = 0.003, t = 2.22, p = .03$), indicating that in the immersive condition, the relationship between the PHQ-9 and increased negativity was stronger than in the control condition. The distancing x BDI-II interaction was not significant ($B = -.002, SE = 0.003, t = -.65, p = .51$). These relationships are shown in Figure 2.

Figure 1.

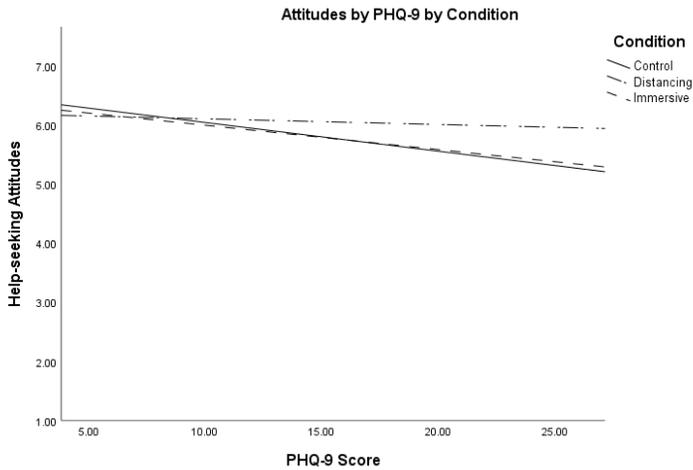
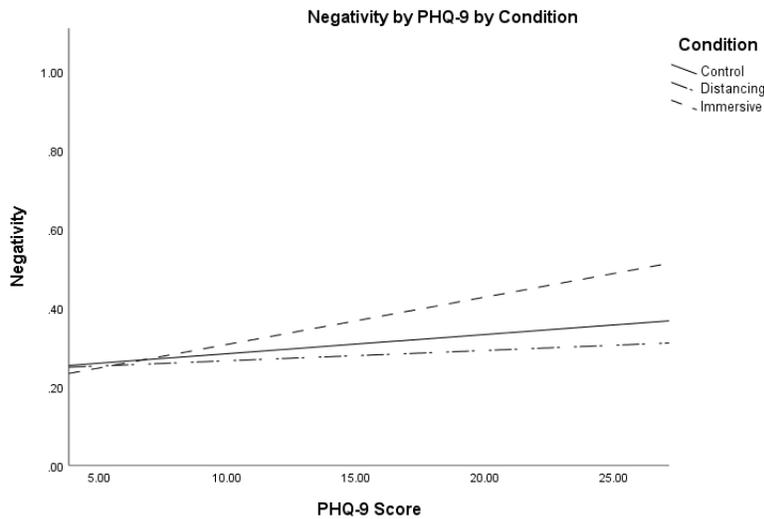


Figure 2.



Discussion

The results of this study supported two of the three hypotheses. Self-distancing reduced negative thought content compared to the immersive condition. Help-seeking attitudes were also more favorable in the distancing condition than both the control and immersive condition. However, help-seeking intentions, as measured by both the GHSQ and the single-item measure of intentions were not different between the conditions. A very minimal intervention—a short, six sentence prompt to think a certain way—was powerful enough to reduce negativity and improve attitudes.

These results must be understood in context with other help-seeking research among participants with depression. People experiencing depression typically report less favorable attitudes toward help-seeking than people without depression, and symptom severity has an inverse relationship with help-seeking attitudes. These attitudes are often resistant to change, even in the face of persuasion attempts (see Siegel et al., 2017 for discussion). Some persuasive message campaigns even produce iatrogenic effects, where participants attitudes worsen in response (Gulliver, Griffiths, Christensen, Mackinnon, et al., 2012). In the current study, taking on the perspective of an objective other while watching existing help-seeking improved attitudes and significantly weakened the relationship between depression severity and negative thoughts. As negative thoughts, particularly negative thoughts about the self, are a defining feature of depression, this suggests that just a short prompt to self-distance while viewing a message is able to overcome this automatic negative processing.

Although self-distancing did not impact intentions, improving help-seeking attitudes can be an important step for participants experiencing depression. Help-seeking intentions are also likely to be more resistant to persuasion than attitudes, as they are more bound by practical

limitations on resources, time, or access. This is reflected in some of the participants' written responses, such as "The price of therapy and help is too much" or "Imao implying I have the money to pay for that," or "In some areas it is hard for people to get or even find mental health help because they live so far from clinics and doctors or they are homeless in general." Given that a two minute or shorter video is unlikely to materially change participants' access to help-seeking resources, it is perhaps not surprising that intentions were not impacted. The demonstrated improvement in attitudes is still meaningful as attitude change can prepare people to develop new ways of thinking and lead to changes in intentions down the line.

In this study, we included an immersive condition as an additional comparison to the self-distancing condition. In the immersive condition, participants were asked to consider the D-PSA from their own personal point of view. The immersive condition resulted in increased negativity compared to the control condition, and this effect was stronger for participants with more severe depression. Although many self-distancing studies include an immersive condition (Ayduk & Kross, 2008; Grossmann & Kross, 2014; Hollar & Siegel, 2020), this study clearly show that asking participants with depression to focus on their own personal point of view can be harmful.

CHAPTER 5: STUDY 2

Purpose

Study 2 built upon what was learned from study 1 and has the potential to contribute to both applied help-seeking research and conceptual self-distancing research. This study included an alternative method of creating self-distancing, mental time-travel, comparing it against perspective-taking, and a control condition. Like in study 1, participants were instructed to watch a D-PSA from a self-distanced state. The perspective-taking condition is a direct replication of study 1, allowing us to test the reliability of the findings, while the inclusion of the mental time-travel condition tests of the robustness of the phenomena. The inclusion of a mental time-travel provides an opportunity for conceptual replication, testing the ability of another method of self-distancing to impact the same outcomes. Additionally, comparing the two self-distancing conditions against one another to explore whether one method is more beneficial than the other in this population can have important impact on applied work in this domain.

We also removed the immersive condition, where participants were asked to watch the video while emphasizing their own personal point of view, for participant safety. In study 1 participants in this condition had a significantly higher proportion of negative thoughts than in the control and distancing conditions. Furthermore, the significant interaction between the immersive condition and negativity suggested that the immersive condition's effect on negativity was stronger at higher levels of depression severity. In light of this finding, study 2 does not include an immersive condition as a comparison.

Study 2 also includes a pre-registered statistical test of a mediation model where reduced negative thought content mediates the relationship between distancing and help-seeking attitudes

and intentions. This helps build out a theoretical mechanism for how self-distancing can improve help-seeking.

Hypotheses and Research Questions

We hypothesized that both self-distancing conditions would result in reduced negative thought content in response to the D-PSAs, and that both self-distancing conditions would result in improved attitudes toward help-seeking and improved help-seeking intentions. We additionally hypothesized that improvements in help-seeking outcomes would be mediated by reduced negative thought content. We also tested the effectiveness of the two self-distancing conditions against each other but had no directional hypotheses. Similarly, we tested for interactions between level of depression and the self-distancing conditions but had no directional hypotheses.

Method

The method used was similar to study 1, but with the addition of a mental time-travel distancing condition, adapted from previous work (Hollar & Siegel, 2022). The perspective-taking condition instructions were identical to study 1, allowing for a direct replication of this condition, and a conceptual replication in the mental time-travel condition. The perspective-taking condition asked participants to view the D-PSA's from the point of view of an objective other. In the mental time-travel condition, participants were asked to view the D-PSAs from the perspective of their self, 10 years into the future. Although there is not consensus on how long of a gap between the current and future self is needed to create distance (Bruehlman-Senecal & Ayduk, 2015; Pronin et al., 2008), 10 years was chosen in line with past work using mental time-travel with people experiencing depression (Hollar & Siegel, 2022). The language of the instructional manipulation was based on previous work using a mental time-travel condition,

adapted to parallel the format of the perspective-taking condition. The full manipulations are available in appendix C. This study was preregistered via the Open Science Framework: osf.io/y362k.

Participants and procedure

As in the previous study, participants were recruited from Amazon’s Mechanical Turk. Requirements and procedures for this study were similar to study 1. However, the screening survey included a new question intending to block bots from qualifying for the experimental survey, which appears to have been very successful. There were 8,503 responses to the screening survey, 1,200 of whom qualified for the

Table 4: Study 2 Data Exclusion

experimental survey. Of these 1,200, 1,086 consented to participate. Participants were originally compensated \$.10 for participation in the screening study and bonused \$1.00 for the experimental study. To speed data collection, some participants received \$.15 for the

Removal Criteria	N
Instruction Check	11
Did not watch full video	74
Demographic Discrepancies	7
Self-reported inattention	5
Fewer than 3 thoughts	323
Thoughts did not respond to prompt	44
Time watching videos	9
Time on total survey	0
Univariate outlier	14
Multivariate outlier	0

screening survey and bonused \$1.15 for the experimental survey. In accordance with our OSF pre-registration, we removed participants who did not meet certain criteria prior to analysis.

Table 4 shows the number of participants removed for each discretion. Many respondents did not meet several criteria. The overall removal rate was in line with study 1 (42%).

After removing participants, the final sample for analyses was 628. Participants who self-described with a non-binary identity or declined to state their gender ($n = 12$) are not included in analyses with covariates, as we covaried using a binary measure of gender. The average age was 36.61 ($SD = 11.36$). The average score on the PHQ-9 was 12.08 ($SD = 4.72$), indicating

moderate depression. On a question asking participants if they considered themselves to be depressed, from 1 (*not at all depressed*) to 7 (*definitely depressed*), the average score was 5.14 ($SD = 1.00$). Additional demographic information about the sample is available in Table 5.

Table 5: Study 2 Demographic Information

Gender	N (%)	Race	N (%)	Education	N (%)
Woman	403 (64.2%)	White	460 (73.2%)	Some High School	11 (1.8%)
Man	213 (33.9%)	Black	79 (12.6%)	Diploma or GED	86 (13.7%)
Other	12 (1.9%)	Hispanic/Latino	74 (11.8%)	Some College	168 (26.8%)
		Asian	48 (7.6%)	Certificate	20 (3.2%)
		Pacific Islander	6 (1.0%)	Associate degree	71 (11.3%)
		Other	16 (2.5%)	Bachelor's Degree	213 (33.9%)
				Master's Degree	51 (8.1%)
				Doctoral Degree	8 (1.3%)

Note: Participants were able to select more than one race, so percentages total above 100%

Measures

All scales were identical to study 1. Scales measured depression severity, help-seeking attitudes, help-seeking intentions, and thought negativity in response to the depression advertisements. Table 6 reports descriptive statistics, correlations, and reliability information on the measures. As in study 1, Participants were also asked for demographic information and about their history with depression.

Table 6: Study 2 Correlation Matrix, Means, Standard Deviations, and Cronbach's Alphas

	PHQ-9	Attitudes	GHSQ	Single Item	Negativity
PHQ-9	-				
Attitudes	-.14**	-			
GHSQ	-.19**	.47**	-		
Single Item Intentions	-.21**	.44**	.67**	-	
Negativity	.04**	-.19**	-.14**	-.14**	-
<i>M (SD)</i>	12.08 (4.72)	5.90 (1.14)	4.42 (1.24)	4.85 (1.56)	.29 (.29)
<i>Skewness (SE)</i>	.70 (.10)	-.90 (.10)	-.43 (.10)	-.18 (.10)	.72 (.10)
<i>Kurtosis (SE)</i>	-.10 (.20)	-.006 (.20)	-.31 (.20)	-.28 (.20)	-.43 (.20)
α	.76	.92	.75	-	-

Note: All correlations were two-tailed, ** $p < .01$.

Results

ANCOVA and Pairwise Comparisons

Like in study 1, we ran a series of ANCOVAs, with age, a binary measure of gender, PHQ-9, and the extent to which they considered themselves to be experiencing depression (perceived depression) as covariates. As a direct test of our hypotheses, we also ran planned and pre-registered pairwise comparisons of the conditions against each other. In line with our hypotheses and pre-registration, reported p -values are one-tailed when comparing the distancing conditions to the control condition, and two-tailed when comparing the two distancing conditions to each other. Adjusted marginal means and standard errors for all outcome measures are available in Table 7.

Table 7: Study 2 Estimated Marginal Means and Standard Errors

	Attitudes	GHSQ	Single Item	Negativity
Perspective-taking	6.16 (.08) ^a	4.60 (.09) ^a	5.06 (.11) ^a	.23 (.02) ^a
Mental Time-Travel	5.84 (.08) ^b	4.36 (.09) ^b	4.86 (.11) ^b	.28 (.02) ^a
Control	5.73 (.08) ^b	4.35 (.08) ^b	4.69 (.11) ^b	.35 (.02) ^b

Note: superscripts indicate significant differences across rows.

Help-Seeking Attitudes. There was a significant main effect of condition on help-seeking attitudes when adjusting for the covariates: $F(2, 603) = 6.97, p = .05, \eta_p^2 = .78$. PHQ-9,

gender and perceived depression were significant covariates. Planned contrasts show that attitudes were significantly higher in the perspective-taking condition ($M = 6.16, SE = 0.08$) than both the future-self ($M = 5.84, SE = 0.08, p = .003, d = .28$) and control ($M = 5.73, SE = 0.08, p < .001, d = .43$) conditions. The future-self and control conditions were not significantly different from one another ($p = .17, d = .10$).

General Help-Seeking Questionnaire. In the overall ANCOVA, there was not significant effect of condition on the GHSQ when adjusting for the covariates: $F(2, 603) = 3.94, p = .11, \eta_p^2 = .67$. Age, gender, PHQ-9 and perceived depression were significant covariates. Planned contrasts show that attitudes were significantly higher in the perspective-taking condition ($M = 4.60, SE = 0.09$) than both the future-self ($M = 4.36, SE = 0.09, p = .046, d = .20$) and control ($M = 4.35, SE = 0.08, p = .02, d = .22$) conditions. The future-self and control conditions were not significantly different from one another ($p = .48, d = .01$).

Single-Item Intention. There was not a significant effect of condition in the overall ANCOVA, for the single item measure of intentions when adjusting for the covariates: $F(2, 603) = 4.76, p = .09, \eta_p^2 = .71$. PHQ-9, age, gender and perceived depression were significant covariates. Planned contrasts show that the likelihood of seeking help was significantly higher in the perspective-taking condition ($M = 5.06, SE = 0.11$) than the control condition ($M = 4.69, SE = 0.11, p = .007, d = .23$) but not significantly different than the future-self condition ($M = 4.86, SE = 0.11, p = .19, d = .13$). The future-self condition was not significantly different from the control condition ($p = .23, d = .11$).

Negativity. In the overall ANCOVA, there was a significant effect of condition on Negativity $F(2, 603) = 8.43, p = .04, \eta_p^2 = .80$ when controlling for age, gender, PHQ-9, and the extent to which they considered themselves to be experiencing depression. Age was the only

significant covariate. Planned contrasts show that negativity was significantly lower in the perspective-taking condition ($M = .23$, $SE = 0.02$) than the control condition ($M = .35$, $SE = 0.01$, $p = .01$, $d = .43$) but not significantly different than in the future-self condition ($M = .28$, $SE = 0.02$, $p = .10$, $d = .18$). The future-self condition resulted in significantly lower negativity than the control condition ($p = .01$, $d = .25$).

Mediation Analyses

We used PROCESS model 6 (Hayes, 2022) to test a mediation model where both changes in attitudes and changes in intentions are mediated through reductions in thought negativity. Age, gender, PHQ-9 and perceived depression were included as covariates, to be consistent with the other analyses.

Results of the mediation model show a significant indirect effect of self-distancing through perspective-taking on help-seeking intentions sequentially through negativity and then attitudes; $b(SE) = .04(.01)$, 95% CI (.02, .07). Similarly, there was also a significant indirect effect from the future-self condition to intentions through negativity and attitudes; $b(SE) = .02(.01)$, 95% CI (.003, .05). Both the a1 path (to negativity; $b[SE] = -.12[.03]$, $p < .001$, 95% CI [-.17, -.06]), and the a2 path (to attitudes; $b[SE] = .35[.11]$, $p = .001$, 95% CI [.14, .56]) were significant for the perspective-taking condition. Only the a1 path was significant for the future-self condition (negativity: $b[SE] = -.07(.03)$, $p = .02$, 95% CI [-.12, -.01]; attitudes $b[SE] = .06[.11]$, $p = .57$, 95% CI [-.15, .27]). The b1 path (negativity to intentions: $b[SE] = -.20[.15]$, $p = .19$, 95% CI [-.50, .10]) was not significant. The b2 path (attitudes to intentions; $b[SE] = .48[.04]$, $p < .001$, 95% CI [.40, .56]) was significant. The d path was also significant (negativity to attitudes; $b[SE] = -.68[.15]$, $p < .001$, 95% CI [-.98, -.38]). These relationships are shown in Figure 3.

Figure 3

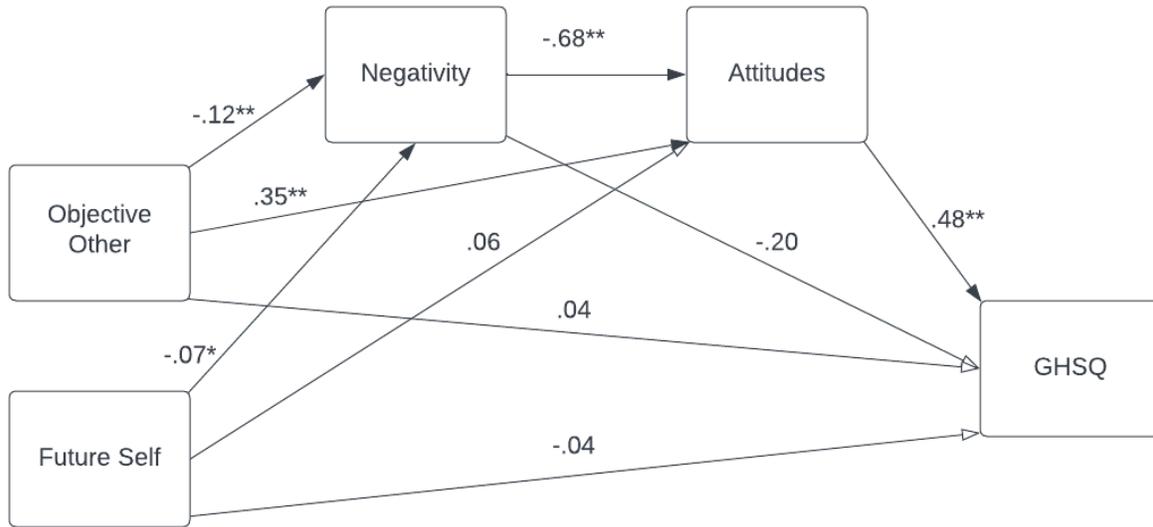


Figure 3: Sequential Mediation of self-distancing's impact on intentions, through negativity and attitudes. **indicates significance at $p < .01$

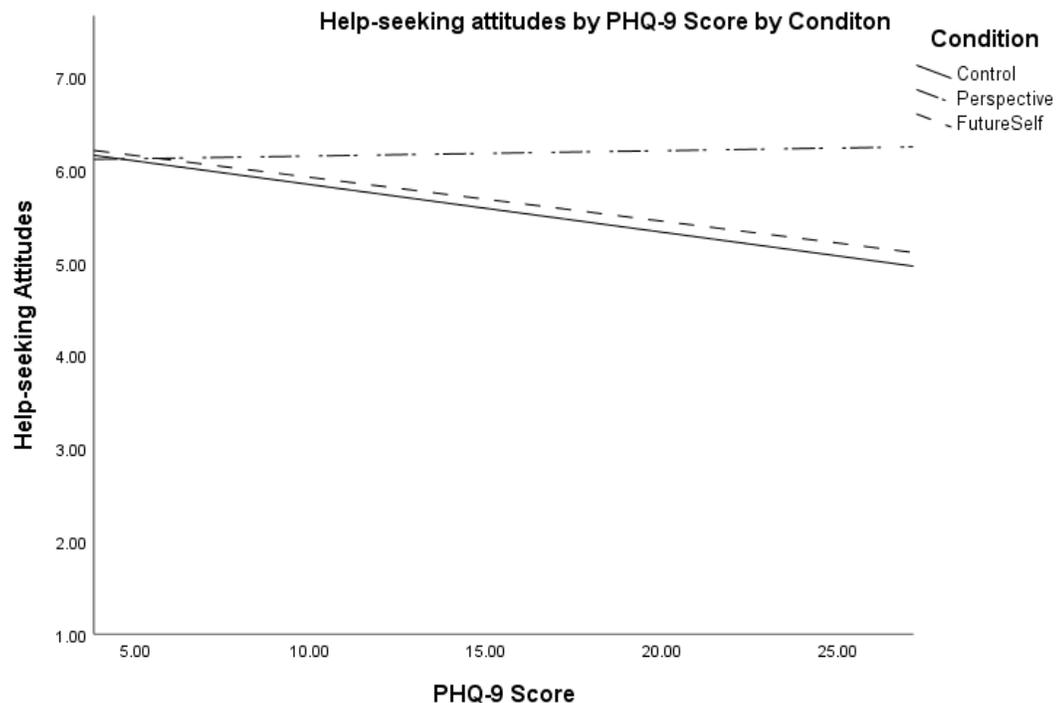
Exploratory Interaction Analyses

As in study 1, we ran a series of linear regressions to see if an interaction between self-distancing and depression symptomatology was present for either self-distancing condition. Entered into the equation were age, a binary measure of gender, centered score on the PHQ-9, perceived depression and two dummy-coded variables that test the two treatment conditions (perspective-taking, mental time-travel) in contrast to the control condition (Aiken & West, 1991). Then we entered interaction terms between the two treatment conditions and the centered PHQ-9, to test the contribution of the interaction term to the outcome variables beyond the contributions of the other variables in the equation.

Help-Seeking Attitudes and Depressive Symptomatology. The overall equation was significant $F(8, 615) = 6.58, p < .001 R^2 = .08$. Gender, ($B = .21, SE = 0.09, t = 2.19, p = .03$),

perceived depression ($B = .16, SE = 0.05, t = 2.99, p = .003$) PHQ-9 score ($B = -.07, SE = 0.02, t = -4.16, p < .001$) were significant predictors, as was the perspective-taking condition ($B = .44, SE = 0.12, t = 4.01, p < .001$). Additionally, the perspective-taking x PHQ-9 interaction term was significant ($B = .07, SE = 0.02, t = 2.93, p = .004$), indicating that in the distancing condition, the negative relationship between the PHQ-9 and help-seeking attitudes was attenuated. The mental time-travel x PHQ-9 interaction was not significant ($B = .006, SE = 0.02, t = .26, p = .79$). The relationship between depression, condition, and help-seeking attitudes is shown in Figure 4.

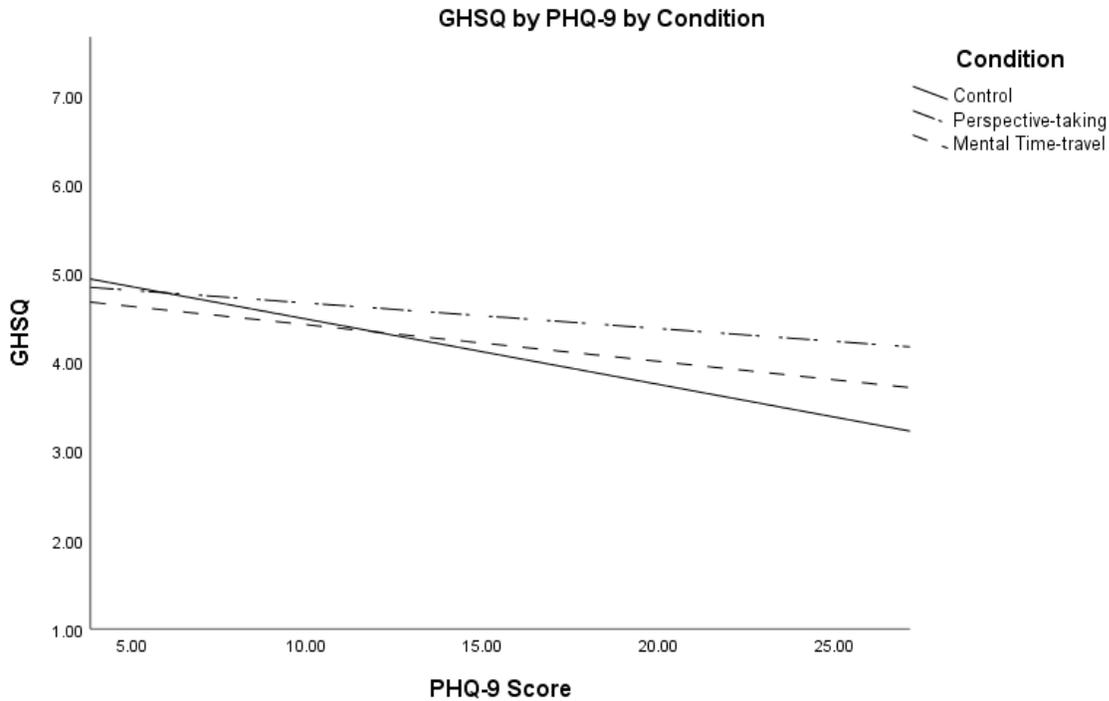
Figure 4.



GHSQ and Depressive Symptomatology. The overall equation to predict scores on the GHSQ was significant $F(8, 615) = 6.50, p < .001, R^2 = .06$. PHQ-9 score ($B = -.07, SE = 0.02, t = -3.82, p < .001$) and the perspective-taking condition ($B = .27, SE = 0.12, t = 2.27, p = .02$) were significant predictors. Additionally, the perspective-taking x PHQ-9 interaction term was significant ($B = .05, SE = 0.03, t = 1.97, p = .049$), indicating that in the distancing condition, the

negative relationship between the PHQ-9 and help-seeking intentions was attenuated. The mental time-travel x PHQ-9 interaction was not significant ($B = .03$, $SE = 0.03$, $t = 1.28$, $p = .20$). These relationships are modeled in Figure 5.

Figure 5.



Single-Item Intentions and Depressive Symptomatology. The overall equation to predict scores on the single item measure help-seeking intentions was significant: $F(8, 615) = 5.52$, $p < .001$, $R^2 = .07$. PHQ-9 score ($B = -.10$, $SE = 0.02$, $t = -4.09$, $p < .001$) and the perspective-taking condition ($B = .39$, $SE = 0.15$, $t = 2.60$, $p = .01$) were significant predictors. Neither the perspective-taking x PHQ-9 interaction ($B = .04$, $SE = 0.03$, $t = 1.39$, $p = .17$) nor the mental time-travel x PHQ-9 interaction ($B = .04$, $SE = 0.03$, $t = 1.20$, $p = .23$) were significant.

Negativity and Depressive Symptomatology. The overall equation to predict negativity was significant: $F(8, 615) = 3.20$, $p = .001$, $R^2 = .04$. Age ($B = -.002$, $SE = 0.001$, $t = -2.08$, $p = .04$), and both the perspective-taking ($B = -.12$, $SE = 0.03$, $t = -4.11$, $p < .001$) and mental time-

travel conditions ($B = -.07$, $SE = 0.03$, $t = -2.34$, $p = .02$) were significant predictors. Neither the perspective-taking x PHQ-9 interaction ($B = -.005$, $SE = 0.01$, $t = -.88$, $p = .38$) nor the mental time-travel x PHQ-9 interaction ($B = .001$, $SE = 0.01$, $t = .25$, $p = .80$) were significant.

Discussion

The goal of the current study was to replicate the initial implementation of the video processing instructional prompt and to test another version of the self-distancing prompt processing instructional prompt (i.e., mental time-travel). All participants were exposed to one of the two instructional prompts and then shown an existing PSA. The control condition viewed the PSA but did not receive instructions to view the video in any particular way. We hypothesized that both self-distancing instructional prompts would make help-seeking related outcomes more favorable after viewing the ad. Our replication of study 1 was successful, as self-distancing through perspective-taking improved help-seeking attitudes, compared to a control, just as in study 1. The results here were stronger than in study 1, as perspective-taking also improved help-seeking intentions and reduced negativity compared to the control. Mental time-travel was not as successful as perspective-taking, as the perspective-taking prompt resulted in more favorable attitudes, stronger help-seeking intentions, and lower negativity than the mental time-travel condition. Self-distancing via mental time-travel was not as beneficial as perspective-taking, however it did successfully reduce negativity in response to the advertisements.

Additionally, results of study 2 indicate the effect of self-distancing on attitudes and intentions is mediated through the reduction in negativity. This was true for both perspective-taking and mental time-travel conditions. For participants in both the perspective-taking condition and the mental time-travel condition, self-distancing while viewing the D-PSA's was

associated with lower negativity, which was associated with more favorable attitudes, which were then associated with increased intentions to seek help.

This study was the second time that being instructed to view a D-PSA through the eyes of an objective other has resulted in improved help-seeking attitudes. It is also important to note that prior attempts at improving help-seeking intentions through video messaging have failed (Hollar & Siegel, 2020; Straszewski & Siegel, 2021), while the brief perspective-taking instruction has succeeded in improving intentions.

CHAPTER 6: GENERAL DISCUSSION

This dissertation sought to develop and test the impact of a brief self-distancing instructional manipulation prior to D-PSAs promoting help-seeking for depression. We hypothesized that this would reduce negative thought content in response to the message and improving help-seeking attitudes and intentions in people experiencing depression. Two experimental studies investigated the ability of self-distancing guided instructional manipulations to amplify the persuasive influence of existing D-PSAs. Study 1 instructed participants to view a help-seeking D-PSA from either their own perspective or the perspective of an objective other. Study 2 expanded upon the first study by adding a second self-distancing instructional manipulation based on mental time-travel. The results of both studies indicate that a self-distancing guided instructional manipulation where participants take on the point of view of an objective other can boost the persuasive strength of existing PSAs, thus increasing help-seeking in people with depression, which has potential lifesaving implications.

In study 1, participants currently experiencing symptoms of depression either viewed a self-distancing instruction, an immersive instruction, or no instruction. In the distancing condition, participants were asked to watch a D-PSA from the perspective of an objective person. In the immersive condition, they were asked to watch from their own personal perspective. All participants then saw one of three D-PSAs from a large mental health organization: WHO, NAMI or NIMH. Each video shared some information about the symptoms of depression, offered treatment options, and ended with appeals for those with depression to seek help for the condition. After viewing the video, participants listed their thoughts about the video, completed measures of help-seeking attitudes and help-seeking intentions, and rated the valence of their thoughts.

Analysis of these measures showed that self-distancing via taking on the perspective of an objective other significantly reduced negative thought content compared to the immersive condition and significantly improved help-seeking attitudes compared to both the control and immersive conditions. However, self-distancing did not improve help-seeking intentions. In addition to these main effects, we also documented an interaction between self-distancing and depression symptomatology, such that the improvements in help-seeking attitudes were more powerful for people with more severe depression. Results also revealed another interaction, where the immersive condition's significant impact on negativity was also stronger among participants with elevated depressive symptomatology. Although self-distancing did not directly impact help-seeking intentions in study 1, the fact that a 6-sentence instructional manipulation, shown briefly before a video, was enough to impact help-seeking attitudes and reduce negativity is compelling.

Study 2 provided both a direct replication and a conceptual replication of study 1. As self-distancing had not previously been used to alter processing of persuasive messages, we saw value in conducting an exact and conceptual replication. The perspective-taking condition was identical to study 1. The addition of the mental time-travel condition allowed for a conceptual replication test to examine if self-distancing induced in another way was still effective at impacting help-seeking outcomes. It also allowed for a direct comparison of these two types of self-distancing inductions, providing preliminary evidence on which method may be most useful for people experiencing depression.

The pattern of results was strongest in the perspective-taking condition, where taking on the perspective of an objective other out-performed the control condition for all outcomes. Self-distancing through mental time-travel improved negativity compared to the control condition but

was not significantly better than the control in terms of changing attitudes or intentions. This provides some evidence of conceptual replication—self-distancing’s effect on negativity is not dependent on the method of distancing.

However, the weight of evidence suggests that taking on the perspective of an objective other is a stronger amplifier of persuasive message. Only the perspective-taking instruction improved help-seeking attitudes and intentions over the control. Additionally, analysis of study 2 showed that for both perspective-taking and mental time-travel’s effect on self-distancing was mediated through reductions in negativity. Reductions in negative thoughts about the ad are associated with more favorable attitudes toward help-seeking, and improved intentions to seek help.

Effect sizes for study 2 were much larger than study 1. When comparing help-seeking attitudes between the perspective-taking condition in study one, *cohen’s d* was .11, considered a very small effect. In study 2 it was .43, nearly 4 times larger. The true effect size of a self-distancing instructional manipulations likely sits somewhere between these two results. However, the strong effect size here is especially encouraging as past self-distancing interventions targeting help-seeking outcomes have had small effects (Hollar & Siegel, 2020, 2022). This suggests this approach of a self-distancing pre-message treatment may be more impactful than a self-distancing writing approach. Because of the perils of untreated depression, even a small effect that can improve help-seeking in this population is an important contribution to the field.

These studies an important extension of previous work using self-distancing with people experiencing depression (Hollar & Siegel, 2020; Kross & Ayduk, 2009; Résibois, Kuppens, et al., 2018). Past research has found that self-distancing can be an effective emotional regulation

tool for people experiencing depression. For example, self-distancing can reduce negative emotion accumulation and explosiveness for this population (Résibois, Kuppens, et al., 2018), and reduced negative emotionality when reflecting on past life (Kross & Ayduk, 2009). In both these studies, the effects were stronger at higher levels of depression. This is in line with the significant interactions we found between self-distancing and depression level, where self-distancing effect on help-seeking attitudes (studies 1 and 2) and intentions (study 2) were stronger at higher levels of depression, replicating patterns from previous work (Hollar & Siegel, 2020).

Most closely related are the studies that have used self-distancing to impact help-seeking for depression. Previous research using self-distancing to increase help-seeking among people with depression has been successful, but only as a writing task where participants were instructed to write about help-seeking from a self-distanced perspective (Hollar & Siegel, 2020, 2022). The writing task, although effective, lacked ecological validity as they are less able to be adapted to mass media campaigns. Video messaging that paralleled the writing task instructions was not successful (Hollar & Siegel, 2020). This message was likely too complex and cognitively effortful to be delivered over video. These studies had the same goal—to use the power of self-distancing to increase help-seeking in people experiencing depression, but used a new approach. Here, participants were prompted to watch a pre-existing help-seeking message while taking on the point-of-view of an objective other or their future self, rather than generate help-seeking thoughts on their own. Theoretically, we believed this approach would be successful as self-distancing can reduce self-relevance, therefore allowing for effortful processing of the D-PSA's while minimizing negative biases of depression.

It is widely known in social influence and persuasion domains that changing the state message receivers are in prior to a persuasion attempt impacts persuasion success (e.g., Cialdini, 2016). Much of this research has focused on how shifting the emotion or mood state of the message receiver interacts with messaging (Griskevicius et al., 2009, 2010; Raghunathan & Pham, 1999). However, to our knowledge, no research has tested the effect of putting a direct instruction on how to cognitively process a PSA ahead of the PSA. Many lines of research have had participants enter a self-distanced state prior to or during a cognitive task (e.g., Bulut et al., 2018; Moser et al., 2017), but it has not previously been used to impact persuasive message processing.

That applying a self-distancing instruction prior to a help-seeking message was successful is particularly noteworthy because people with depression can be considered one of the most difficult populations to persuade (Siegel et al., 2017). As depression severity increases, attitudes and intentions toward help-seeking become less favorable (Sawyer et al., 2012)—a finding we replicated here and that is well documented in our previous work (Hollar & Siegel, 2020, 2022). Shifting these strongly held attitudes and impacting intentions via messaging can be difficult, as people with depression typically process messages much more negatively than people without depression (e.g., Lienemann & Siegel, 2016; Siegel et al., 2019). Many help-seeking interventions targeting this population have failed (Costin et al., 2009; Dueweke & Bridges, 2017; Gulliver, Griffiths, Christensen, & Brewer, 2012; Gulliver, Griffiths, Christensen, Mackinnon, et al., 2012), perhaps because they did not account for or counteract the negativity brought about by depression.

Taken together, these studies contribute both applied and theoretical knowledge in the domain of health persuasion. In both study 1 and study 2, there was no effect of which D-PSA

was shown, lending confidence that it is self-distancing can improve persuasive outcomes regardless of what D-PSA is shown afterwards. The self-distancing persuasive amplifier was shown to be successful through an exact and a conceptual replication across three different PSAs. The applied implications are clear: mental health organizations can consider adding a brief self-distancing instruction directly prior to pre-existing messages targeted toward people with depression and have confidence that this will reduce negative thought content in response to the message. It will also likely improve help-seeking attitudes and intentions. A self-distancing pre-message amplifier also has the potential to amplify persuasive campaigns outside of the mental health domain. This dissertation presents a powerful and low-cost way to improve the performance of previously developed messages.

Limitations

Although this work has important contributions, there are still limitations that should be considered. First, both studies took place on MTurk. Mturk is generally more representative of the general US population than convenience samples (Burnham et al., 2018), and Mturkers have been documented as more likely to pass attention check questions than in-person samples (Hauser & Schwarz, 2016), but data quality can still be an issue. Many participants on MTurk are distracted and multitasking (Ansolabehere & Schaffner, 2015; Zwarun & Hall, 2014) or worse, bots (Chmielewski & Kucker, 2020; Moss, 2018; Yarrish et al., 2019). This can introduce Type II error. We took great care to ensure that our analysis included only attentive, human participants by having stringent pre-registered exclusion criteria. However, it is possible that some robots made it through our checks. This may have occurred more in study 1 than in study 2—in study 2 we included a new type of automated check for robots that seemed to result in

slower data collection compared to study 1. This interpretation is supported by the much smaller effect sizes in study 1.

Another limitation common in help-seeking research is measuring intentions rather than behaviors as an outcome variable. Intentions are much easier to measure, but are not always predictive of behavior (Fishbein & Ajzen, 2010; Sheeran & Webb, 2018). Lack of resources or access barriers can stymie good intentions from becoming actual help-seeking behavior. It is possible that viewing a help-seeking message from a distanced perspective is not powerful enough to overcome these barriers. Future research may benefit from including a behavioral measure of help-seeking, both to investigate whether self-distancing can impact behavior, and to take advantage of the theoretically brief window of opportunity opened by presenting help-seeking information while a participant is self-distancing.

We assume that the effect of the distancing instruction is short in duration, perhaps lasting only long enough to complete the outcome measures (or access an immediately presented resource for help and treatment). This is a meaningful practical limitation as accessing meaningful help for depression can be a multi-step process. This limitation could be addressed by designing a help-seeking intervention that asks participants to process help-seeking information from a distanced perspective and immediately providing a vetted help-source.

Conclusion

People with depression are known to have negative attitudes toward seeking help, in part because the negative cognitions brought on by depression, including hopelessness, worthlessness, and guilt, may make the idea of seeking help feel futile and undeserved by those suffering (Huntley & Fisher, 2016). While many campaigns to improve help-seeking have succeeded, a number have had no effect, or even more troubling, produced iatrogenic effects

where the intervention resulted in reduced help-seeking intentions (Batterham et al., 2016; Jorm et al., 2003; Wright et al., 2014). Given the failures of some interventions, more strategies are needed to increase the persuasive power of help-seeking messages targeted at people experiencing depression.

These studies develop and test two self-distancing instructional manipulations that amplify existing help-seeking messages. Self-distancing through perspective-taking while viewing a D-PSA resulted in improved help-seeking attitudes in both study 1 and study 2. In study 2, it also resulted in reduced negative thoughts in response to the ad, and critically, improvements in help-seeking intentions. Self-distancing through mental time-travel while viewing the D-PSA's was not as successful as perspective-taking, but did result in reduced negative thought content. These studies have important applied implications—including a brief instruction on viewing a D-PSA from a self-distanced perspective can significantly boost the power of help-seeking messages for people with depression. Given that messaging to people with depression has often failed, and that people with depression often do not seek help for their treatable condition, a brief self-distancing instruction could result in improved treatment and reduce unnecessary human suffering for people experiencing depression.

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APPENDIX A: TABLES AND FIGURES

Table 1: Study 1 Demographic Information

Gender	N (%)	Race	N (%)	Education	N (%)
Woman	1161 (60.7%)	White	1453 (76.0%)	Some High School	16 (0.8%)
Man	718 (37.6%)	Black	238 (12.4%)	Diploma or GED	206 (10.8%)
Other	33 (1.8%)	Hispanic/Latino	161(8.4%)	Some College	422 (22.1%)
		Asian	146 (7.6%)	Certificate	44 (2.3%)
		Pacific Islander	12 (0.6%)	Associate degree	209 (10.9%)
		Other	33 (1.7%)	Bachelor's Degree	728 (38.1%)
				Master's Degree	254 (13.3%)
				Doctoral Degree	33 (1.7%)

Note: Participants were able to select more than one race, so percentages total above 100%

Table 2: Study 1 Correlation Matrix, Means, Standard Deviations, and Cronbach's Alphas

	PHQ-9	Attitudes	GHSQ	Single Item	Negativity
PHQ-9	-				
Attitudes	-.15**	-			

GHSQ	-.01**	.50**	-	-	-
Single Item Intentions	-.08**	.51**	.65**	-	-
Negativity	.12**	-.26**	-.27**	-.18**	-
<i>M (SD)</i>	11.06 (4.99)	6.01 (1.13)	4.8 (1.19)	5.47 (1.52)	.29 (.29)
<i>Skewness (SE)</i>	.79 (.06)	-1.40 (.06)	-.52 (.06)	-.97 (.06)	.71 (.06)
<i>Kurtosis (SE)</i>	-.15 (.11)	1.81(.11)	-.01 (.11)	.28 (.11)	-.44 (.11)
α	.80	.94	.75	-	-

Note: All correlations were two-tailed, ** $p < .01$.

Table 3: Study 1 Estimated Marginal Means and Standard Errors

	Attitudes	GHSQ	Single Item	Negativity
Self-Distancing	6.11 (.05) ^a	4.83 (.05) ^a	5.54 (.06) ^a	.27 (.01) ^b
Immersive	5.97 (.04) ^b	4.82 (.05) ^a	5.47 (.06) ^a	.32 (.01) ^a
Control	5.99 (.04) ^b	4.80 (.05) ^a	5.41 (.06) ^a	.29 (.01) ^b

Note: superscripts indicate significant differences across rows.

Table 4: Study 2 Data exclusion

Removal Criteria	N
Instruction Check	11
Did not watch full video	74
Demographic Discrepancies	7
Self-reported inattention	5
Fewer than 3 thoughts	323
Thoughts did not respond to prompt	44
Time watching videos	9
Time on total survey	0
Univariate outlier	14
Multivariate outlier	0

Table 5: Study 2 Demographic Information

Gender	N (%)	Race	N (%)	Education	N (%)
Woman	403 (64.2%)	White	460 (73.2%)	Some High School	11 (1.8%)
Man	213 (33.9%)	Black	79 (12.6%)	Diploma or GED	86 (13.7%)
Other	12 (1.9%)	Hispanic/Latino	74 (11.8%)	Some College	168 (26.8%)
		Asian	48 (7.6%)	Certificate	20 (3.2%)
		Pacific Islander	6 (1.0%)	Associate degree	71 (11.3%)
		Other	16 (2.5%)	Bachelor's Degree	213 (33.9%)
				Master's Degree	51 (8.1%)
				Doctoral Degree	8 (1.3%)

Note: Participants were able to select more than one race, so percentages total above 100%

Table 6: Study 2 Correlation Matrix, Means, Standard Deviations, and Cronbach's Alphas

	PHQ-9	Attitudes	GHSQ	Single Item	Negativity
PHQ-9	-				
Attitudes	-.14**	-			
GHSQ	-.19**	.47**	-		
Single Item Intentions	-.21**	.44**	.67**	-	
Negativity	.04**	-.19**	-.14**	-.14**	-
<i>M (SD)</i>	12.08 (.472)	5.90 (1.14)	4.42 (1.24)	4.85 (1.56)	.29 (.29)
<i>Skewness (SE)</i>	.70 (.10)	-.90 (.10)	-.43 (.10)	-.18 (.10)	.72 (.10)
<i>Kurtosis (SE)</i>	-.10 (.20)	-.006 (.20)	-.31 (.20)	-.28 (.20)	-.43 (.20)
α	.76	.92	.75	-	-

Note: All correlations were two-tailed, ** $p < .01$.

Table 7: Study 2 Estimated Marginal Means and Standard Errors

	Attitudes	GHSQ	Single Item	Negativity
Perspective-taking	6.16 (.08) ^a	4.60 (.08) ^a	5.06 (.11) ^a	.23 (.02) ^a
Mental Time-Travel	5.84 (.08) ^b	4.36 (.09) ^b	4.86 (.11) ^b	.28 (.02) ^a
Control	5.73 (.08) ^b	4.35 (.08) ^b	4.69 (.11) ^b	.35 (.02) ^b

Note: superscripts indicate significant differences across rows.

Figure 1

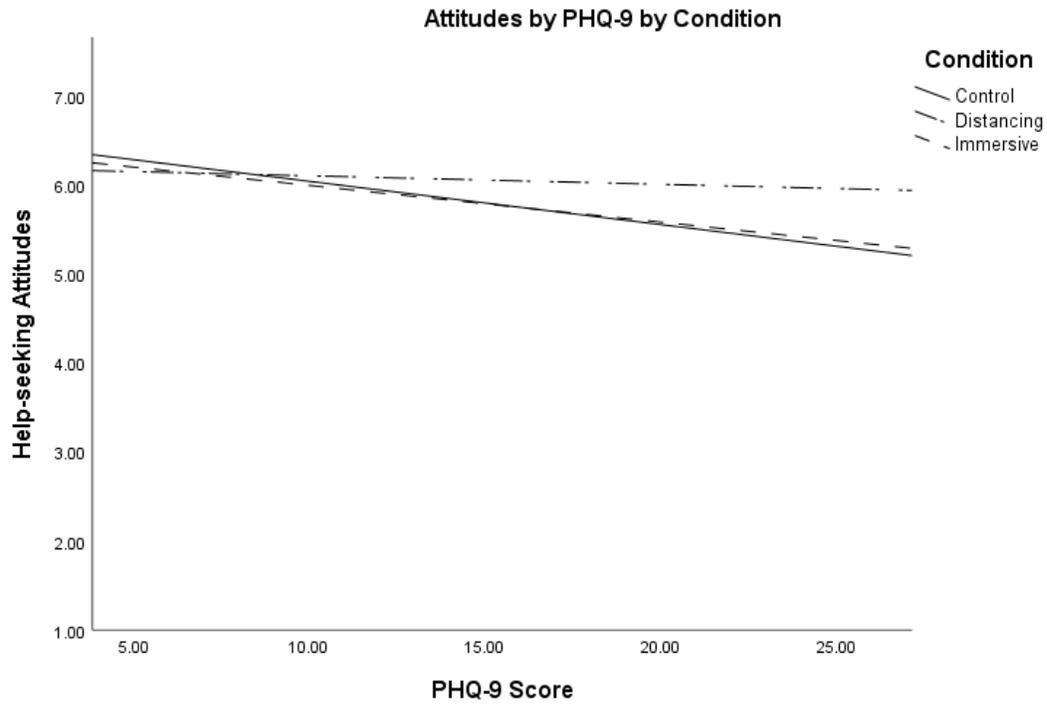


Figure 2

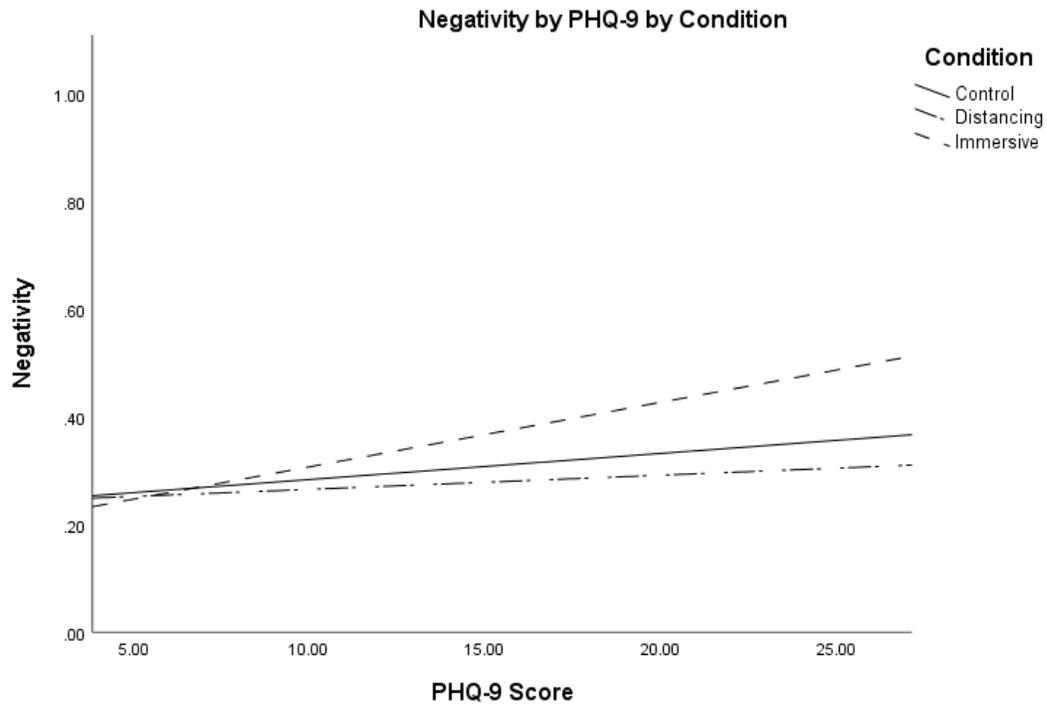


Figure 3

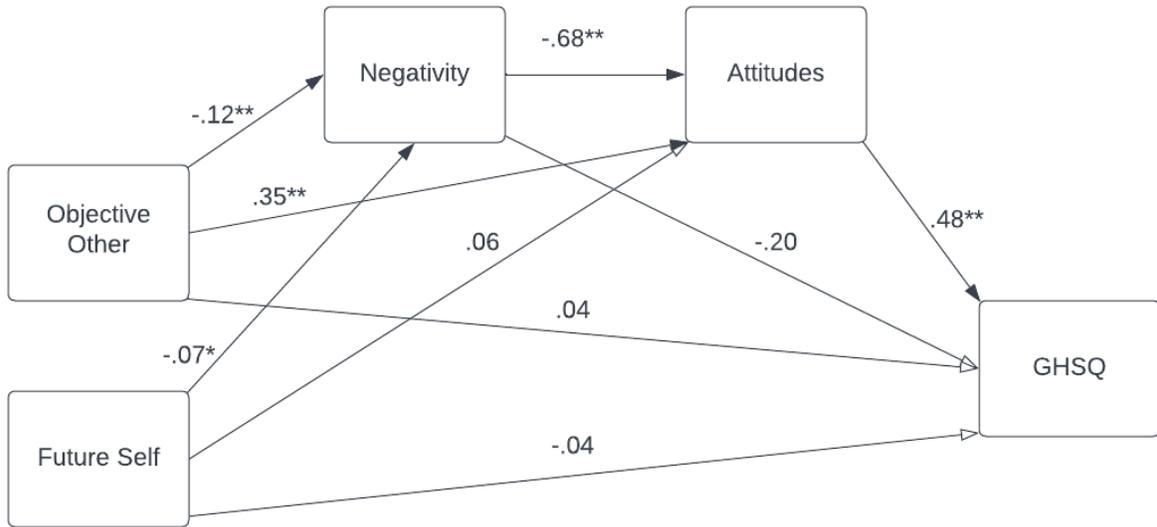


Figure 3: Sequential Mediation of Self-Distancing's impact on intentions, through negativity and attitudes.
 ** indicates significance at $p = .01$ level

Figure 4

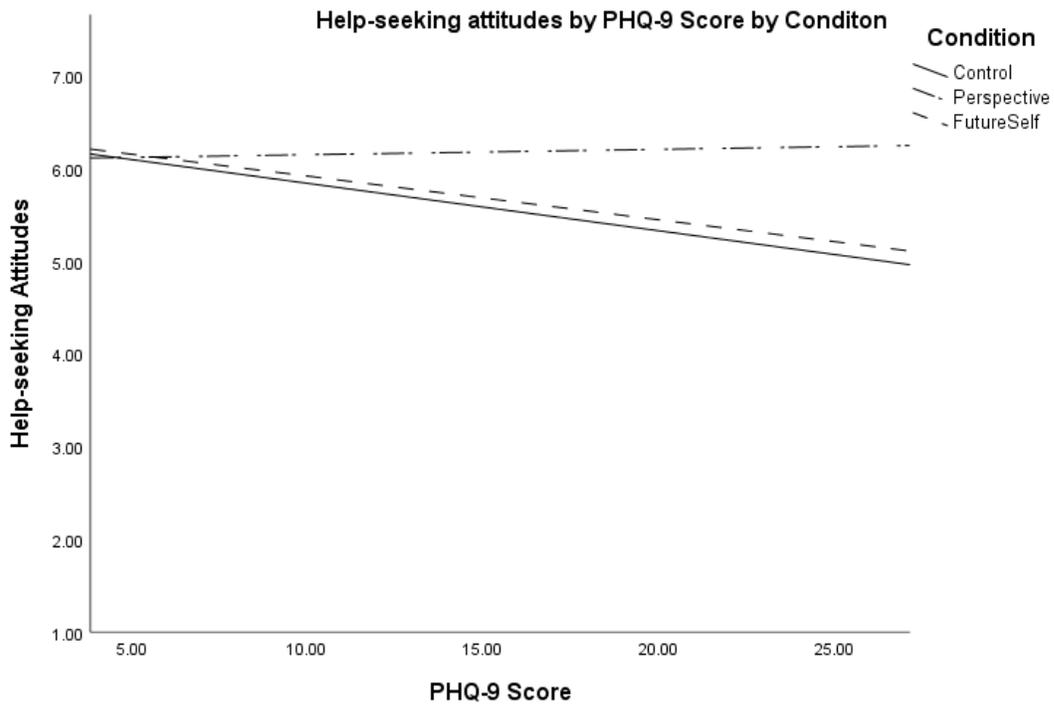
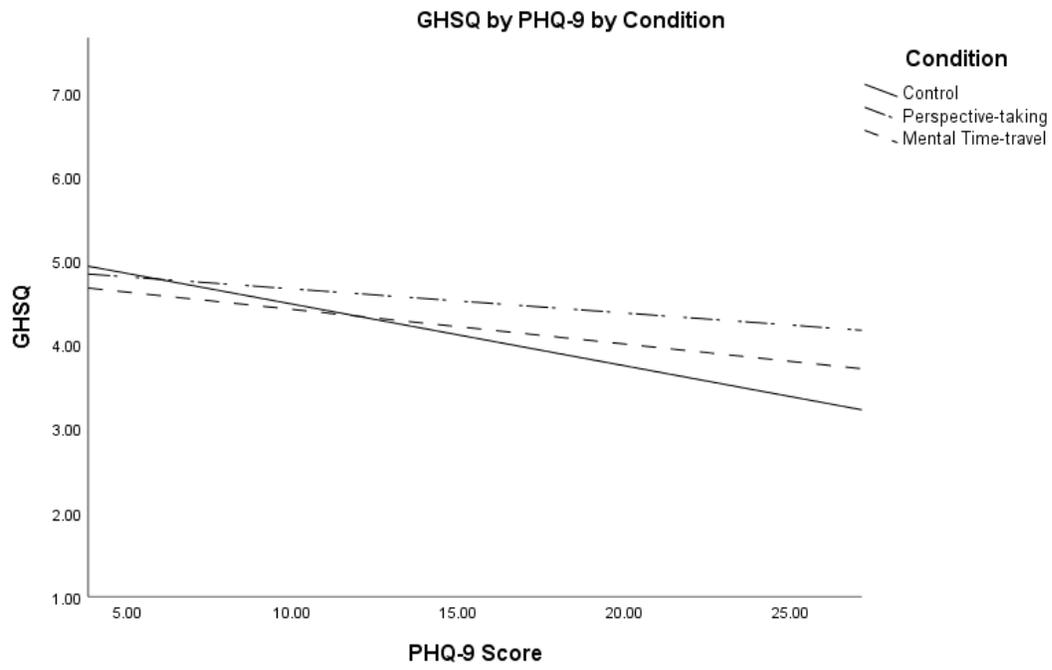


Figure 5



APPENDIX B: DATA COLLECTION INSTRUMENT

Study 1 Full Survey Instrument

Start of Block: Consent - Screener

Q1

Informed Consent

You are invited to participate in a research project. Volunteering may not benefit you directly, but you will be helping us identify participants for further research. If you volunteer, you will answer a series of questions about your mood and personal characteristics. This will take about 3-5 minutes of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

STUDY LEADERSHIP: This research project is led by Sara Hollar of Claremont Graduate University, who is being supervised by Dr. Jason Siegel, of Claremont Graduate University.

PURPOSE: The purpose of this study is to assess your current mood and behavior to recruit participants for follow-up studies.

ELIGIBILITY: To participate in this survey, you must be a US resident able to read and write in English, and be 18 years of age or older.

PARTICIPATION: During the study, you will be asked to answer a series of questions about your mood, behavior, and demographic characteristics. This will take about 5 minutes.

RISKS OF PARTICIPATION: The risks that you run by taking part in this study are minimal. These risks include being uncomfortable answering some of the questions. If you feel any discomfort or if you would like to speak to someone about your feelings, you can contact the National Mental Health Association (1-800-969-6642), the suicide prevention hotline (1-800-273-8255) available 24 hours a day, or visit the website (<http://www.nimh.nih.gov/health/topics/depression/index.shtml>) for more information. You can also stop the survey at any time.

BENEFITS OF PARTICIPATION: We do not expect the study to benefit you personally. This study will benefit the researcher by building a pool of participants interested in participating in further research about depression messaging. This study is also intended to benefit people experiencing mental health challenges.

COMPENSATION: You will be directly compensated 30 cents for participating in this study.

VOLUNTARY PARTICIPATION: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

CONFIDENTIALITY: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will never store your MTurk ID with your responses, and will keep all data stored on a password protected computer with access limited only to study researchers.

FURTHER INFORMATION: If you have any questions or would like additional information about this study, please contact Sara Hollar at sara.hollar@cgu.edu. You may also contact Jason Siegel at Jason.siegel@cgu.edu. The CGU Institutional Review Board (IRB) has certified this project as exempt. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu.

CONSENT: Clicking “yes, I agree to participate in this research” means that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.



Consent Do you consent?

- Yes, I agree to participate in this research (1)
- No (0)

Skip To: End of Block If Do you consent? = Yes, I agree to participate in this research

Skip To: Q13 If Do you consent? = No

Q98 reCAPTCHA verification:

Page Break

Q13 Sorry you did not give us your informed consent and thus cannot continue with the survey.

Skip To: End of Survey If Sorry you did not give us your informed consent and thus cannot continue with the survey. Is Displayed

End of Block: Consent - Screener

Start of Block: Welcome

Q80 Our research lab is currently recruiting participants **both with and without** depressive symptoms for a series of studies we are conducting. Your honesty will ensure that possible follow-up questionnaires are relevant to you. Thank you for your time, **honesty**, and help in advance!

End of Block: Welcome

Start of Block: PHQ-9

instructions Over the last 2 weeks, how often have you been bothered by the following problems?



PHQ_1 Little interest or pleasure in doing things

- Not at all (0)
- Several days (1)
- More than half the days (2)
- Nearly every day (3)



PHQ_2 Feeling down, depressed, or hopeless

- Not at all (0)
- Several days (1)
- More than half the days (2)
- Nearly every day (3)

X→

PHQ_3 Trouble falling or staying asleep, or sleeping too much

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_4 Feeling tired or having little energy

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_5 Poor appetite or overeating

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_6 Feeling bad about yourself or that you are a failure or have let yourself or your family down

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_7 Trouble concentrating on things, such as reading the newspaper or watching television

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_8 Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_9 Thoughts that you would be better off dead, or of hurting yourself

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-



AttentionCheck About the preceding questions

- I have not paid attention to these questions (0)
- I have paid very little attention to these questions (0)
- I have paid attention to these questions (1)
- I didn't pay any attention at all to these questions (0)

End of Block: PHQ-9

Start of Block: Suicide

Display This Question:

If Thoughts that you would be better off dead, or of hurting yourself = Several days

Or Thoughts that you would be better off dead, or of hurting yourself = More than half the days

Or Thoughts that you would be better off dead, or of hurting yourself = Nearly every day



Q368 Your answers indicated that you may be experiencing thoughts about suicide or self harm. These thoughts can be scary, but help is available.

Please consider talking to a family member or a mental health professional in your area. If you would like to talk to someone about your thoughts and feelings now, you can contact the National Suicide Prevention Lifeline at any time by calling the 24/7 toll-free number 1-800-273-TALK (8255), or visiting www.suicidepreventionlifeline.org. You could also call The National Mental Health Association hotline (1-800-969-6642), or visit The Depression & Bipolar Support Alliance website (<http://www.dbsalliance.org>) or The American Foundation for Suicide Prevention website (<http://www.afsp.org/>).

You can also text CONNECT to 741741 from your phone to text a crisis counselor from the crisis text line. As a reminder, this survey is completely confidential. If you'd like to stop this survey and contact these resources now, you may and you will still receive payment.

Please indicate if you'd like to end the survey now, or if you'd like to continue.

- I wish to continue with the survey. (1)
- I would like to end this survey. (0)

Skip To: End of Block If Your answers indicated that you may be experiencing thoughts about suicide or self harm. These th... = I wish to continue with the survey.

Page Break

Display This Question:

If Your answers indicated that you may be experiencing thoughts about suicide or self harm. These th... = I would like to end this survey.

Q173 Here are the resources again.

You can contact the National Suicide Prevention Lifeline at any time by calling the 24/7 toll-free number 1-800-273-TALK (8255), or visiting www.suicidepreventionlifeline.org. You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. Once you press next on this page, you'll be taken to the final page of the survey with the MTurk Code to receive payment.

Page Break

Display This Question:

If Your answers indicated that you may be experiencing thoughts about suicide or self harm. These th... = I would like to end this survey.

Q80 Thank you for participating in this survey. **Your MTurk code is at the bottom of this page.** While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. Once again, thank you for your time. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu. **MTURK CODE: sonia9\${e://Field/random}**

Skip To: End of Survey If Thank you for participating in this survey. Your MTurk code is at the bottom of this page. Whil... Is Displayed

End of Block: Suicide

Start of Block: Current Help Seeking

Page Break

Q164 You are almost finished with this survey. The following questions ask about your history with depression.

Depression is more than just sadness. People with depression may experience a lack of interest and pleasure in daily activities, significant weight loss or gain, insomnia or excessive sleeping, lack of energy, inability to concentrate, feelings of worthlessness or excessive guilt.



EverHelp At any point in your life, have you sought help for depression?

- Yes (1)
 - No (0)
-



MostLikelySource If you were currently experiencing depression, from where would you be most likely to seek help?

- Romantic Partner (1)
 - Friend (2)
 - Parent (3)
 - Other Family Member (4)
 - Counselor/Psychologist (5)
 - Psychiatrist (6)
 - Doctor/General Practitioner (7)
-



ConsiderDepressed Do you consider yourself to be currently depressed?

- Definitelynot1 (1)
- (2)
- (3)
- (4)
- (5)
- (6)
- Definitelyyes7 (7)

Skip To: End of Block If Do you consider yourself to be currently depressed? = Definitelynot1

Skip To: End of Block If Do you consider yourself to be currently depressed? =

Skip To: End of Block If Do you consider yourself to be currently depressed? =

Page Break



CurrentHelp Have you sought help or talked to **anyone** at all regarding your current feelings of depression? (This could include talking in person, via online chats, or over the phone, or searching the internet for more information).

- Yes (1)
- No (0)

Page Break

Display This Question:

If Have you sought help or talked to anyone at all regarding your current feelings of depression? (T... = Yes



CurrentLovedOne Have you talked to any **loved ones (e.g., family, romantic partner, friend)** about your current feelings?

- Yes (1)
 - No (0)
-



CurrentProfessional Have you sought **professional help (e.g., primary care doctor, psychologist, psychiatrist)** for your current feelings?

- Yes (1)
 - No (0)
-

Display This Question:

If Have you sought help or talked to anyone at all regarding your current feelings of depression? (T... = Yes



CurrentInternet Have you searched the **internet** for information about how you have been feeling?

- Yes (1)
- No (0)

End of Block: Current Help Seeking

Start of Block: Demographics

Q174 You are now on the last page of the screening survey.

We ask for the following information so we can describe the sample of participants when reporting the results of this research. We will never report the responses of individual participants. Any information you provide will be completely confidential.

Thank you for taking this survey!



Gender Which do you identify as?

- Man (0)
- Woman (1)
- Self-describe (3) _____
- Prefer not to say (4)



Age What is your age?



Race Which Ethnicity describes you? Check all that apply:

- White/Caucasian (1)
- Black/African American (2)
- Hispanic/Latino (3)
- Asian (4)
- Pacific Islander (5)
- Other (6) _____



Education What is the highest level of education that you completed?

- Some high school (1)
 - High school diploma or GED (2)
 - Some college (3)
 - Certificate (4)
 - Associate's degree (5)
 - Bachelor's degree (6)
 - Master's degree (7)
 - Doctoral degree (8)
-



MaritalStatus Which of the following best describes your current marital status?

- Single (1)
- Married (2)
- Separated (3)
- Divorced (4)
- Widowed (5)

End of Block: Demographics

Start of Block: Debriefing Screener -Invite to Follow Up

Q136 Thank you for taking part in this survey. Your answers indicate that you are eligible for a study we are currently running. This study should take 7-10 minutes. **If you participate in this study we will bonus you \$1.20 for your time.**

*You will need to be able to **watch and hear video content** to participate.*

Would you like to participate in this additional study right now?

- No, I would not like to participate in the additional study (1)
- Yes, I would like to participate in the additional study (2)

Skip To: Q86 If Thank you for taking part in this survey. Your answers indicate that you are eligible for a stu... = No, I would not like to participate in the additional study

Skip To: End of Block If Thank you for taking part in this survey. Your answers indicate that you are eligible for a stu... = Yes, I would like to participate in the additional study

Page Break

Q86 Thank you for participating in the screening survey. **The Mturk code is at the bottom of this page.** While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. If you or someone you know is suffering from depression, help is available. If you would like to talk to someone about depression or to learn more about depression, you can call the National Mental Health Association hot line (1-800-969-6642) or visit NAMI.org. You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu.

Q88 If you have any further thoughts about this survey, please leave them in the comment box below!

Q186 This is your unique alphanumeric code, and won't work for any other Mturker.
MTURK CODE: Davis8\${e://Field/random}

Q90 Press next to submit your survey. Thanks again!

Skip To: End of Survey If Press next to submit your survey. Thanks again! Is Displayed

End of Block: Debriefing Screener -Invite to Follow Up

Start of Block: Consent - Main Study

Q672 Informed Consent

You are invited to participate in a research project. Volunteering may not benefit you directly, but you will be helping us improve health messages about depression. If you volunteer, you will

view a short video about depression, and share your thoughts about it. This will take about 10 minutes of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

STUDY LEADERSHIP: This research project is led by Sara Hollar of Claremont Graduate University, who is being supervised by Dr. Jason Siegel of Claremont Graduate University.

PURPOSE: This purpose of this study is to understand the thoughts people have in response to different types of health messaging.

ELIGIBILITY To participate in this survey, you must be residing in the US, able to read and write in English, and be 18 years of age or older.

PARTICIPATION: During the study, you will be asked to watch a video about depression, and share your thoughts about it. We will also ask some questions about depression in general and about your demographic characteristics. The study will take about 10 minutes.

RISKS OF PARTICIPATION: The risks that you run by taking part in this study are minimal. These risks include feeling uncomfortable sharing your thoughts or answering some questions. You can stop participation at any time. If you feel any discomfort or if you would like to speak to someone about your feelings, you can contact the National Mental Health Association (1-800-969-6642), the suicide prevention hotline (1-800-273-8255) available 24 hours a day, or visit the website (<http://www.nimh.nih.gov/health/topics/depression/index.shtml>) for more information.

BENEFITS OF PARTICIPATION: We do not expect the study to benefit you personally. This study will benefit the researchers by improving understanding of health messaging. This study is also intended to benefit people experiencing depression by improving messages to them.

COMPENSATION: You will be directly compensated \$1.20 for participating in this study.

VOLUNTARY PARTICIPATION: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

CONFIDENTIALITY: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will not store your MTurk ID with your responses, and will use an arbitrary ID code with your responses. We will also store all data on a password protected computer, only accessible by the researcher.

FURTHER INFORMATION: If you have any questions or would like additional information about this study, please contact Sara Hollar at sara.hollar@cgu.edu You may also contact Jason Siegel at Jason.siegel@cgu.edu. The CGU Institutional Review Board (IRB) has certified this

project as exempt. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. A copy of this form will be given to you if you wish to keep it.

CONSENT: Clicking “yes, I consent to participate in this research” means that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.



ExpConsent Do you consent to participate?

- Yes, I consent to participate in this research (1)
- No (0)

Skip To: End of Block If Do you consent to participate? = Yes, I consent to participate in this research

Skip To: Q674 If Do you consent to participate? = No

Page Break

Q674

Sorry you did not give us your informed consent and thus cannot continue with the follow-up survey.

Please use this full alphanumeric code to receive payment for the first screening survey:

CODE: Davis8\${e://Field/random}

Skip To: End of Survey If Sorry you did not give us your informed consent and thus cannot continue with the follow-up survey... Is Displayed

End of Block: Consent - Main Study

Start of Block: Sound test

Q132 First we will show you a short video clip. This video has sound, so please make sure your speakers or headphones are working! **Please watch the entire clip before answering the questions.**

Q139

Page Break



Q134 What do you see in the video?

- Food (0)
 - Wildlife (1)
 - Children (0)
 - Traffic (0)
 - I could not see the video (0)
-



Q136 What did you hear in this video?

- Nature Sounds (0)
 - Music (1)
 - Car Noises (0)
 - Laughter (0)
 - I did not hear the video (0)
-

Page Break

Display This Question:

If What do you see in the video? != Wildlife

Or What did you hear in this video? != Music

Q138 Sorry, it seems like you weren't able to see the video, so you won't be able to continue with the study.

Please use this full alphanumeric code to receive payment for the first screening survey: CODE: Viola10\${e://Field/random}

Skip To: End of Survey If Sorry, it seems like you weren't able to see the video, so you won't be able to continue with the... Is Displayed

End of Block: Sound test

Start of Block: Distancing

Q184 **Soon, we will show you an important video message.**

Q181 Please give the video your full attention.

However, as you watch, please **take on the perspective of a highly objective person**, who can see the situation in its entirety and wants what's best for you. Try to see the video entirely through the **eyes of this other person**. As you do this, think about how this **objective person** would see the message. What thoughts would **an objective person** have? How would **an objective person** feel about the video?

As you watch the video be sure to immerse yourself in the perspective of this objective person.

DistancingTiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break



DManipulationCheck Because it's a very important part of the study, we want to make sure you carefully read the instructions on the previous page. Please indicate what perspective you were instructed to use to watch the video.

- My own personal perspective (0)
- The perspective of an objective other (1)
- I'm not sure (0)

Skip To: End of Block If Because it's a very important part of the study, we want to make sure you carefully read the inst... = The perspective of an objective other

Page Break

Q183 *Please read the instructions again carefully.*

Q146

Please give the video your full attention.

However, as you watch, please take on the perspective of a highly **objective person**, who can see the situation in its entirety and wants what's best for you. Try to see the video entirely through the eyes of this **other person**. As you do this, think about how this **objective person** would see the message. What thoughts would an **objective person** have? How would an **objective person** feel about the video?

As you watch the video be sure to immerse yourself in the perspective of this objective person.

Page Break



DManipulationCheck2 Please indicate what perspective you were instructed to use to watch the video.

- My own personal perspective (0)
- The perspective of an objective other (1)
- I'm not sure (0)

End of Block: Distancing

Start of Block: Immersive

Q185 **Soon we will show you an important video message.**

Q119 Please give the video your full attention.

As you watch, please consider the video as deeply as possible from **your personal point of view**. Try to see the video entirely from **your own unique perspective**. How do **you** see the message? What thoughts do **you** have? How do **you** feel about the video?

As you watch the video be sure to immerse yourself in your personal perspective on the message.

ImmersiveTiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break



IManipulationCheck Because it's a very important part of the study, we want to make sure you carefully read the instructions on the previous page. Please indicate what perspective you were instructed to use to watch the video on the next page.

- My own personal perspective (1)
- The perspective of an objective other (0)
- I'm not sure (0)

Skip To: End of Block If Because it's a very important part of the study, we want to make sure you carefully read the inst... = My own personal perspective

Page Break

Q162 Please read the instructions again carefully.

Please give the video your full attention.

As you watch, please consider the video as deeply as possible from **your personal point of view**. Try to see the video entirely from **your own unique perspective**. How do **you** see the message? What thoughts do **you** have? How do **you** feel about the video?

As you watch the video be sure to immerse yourself in your personal response to the message.

Page Break



IManipulationCheck2 Please indicate what perspective you were instructed to use to watch the video on the next page.

- My own personal perspective (1)
- The perspective of an objective other (0)
- I'm not sure (0)

End of Block: Immersive

Start of Block: Control

Q131 On the next page, you will view an important video message. Please give the message your full attention.

ControlTiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: Control

Start of Block: NIMHVideo

Display This Question:

If DistancingCondition Is Not Empty

NIMHDInst Please fill your mind with the thoughts of an objective person as you watch this video.

Display This Question:

If ImmersiveCondition Is Not Empty

NIMHImInst Please fill your mind with your personal thoughts as you watch this video.

NIMHvideo

NIMHvideotiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: NIMHVideo

Start of Block: WHOvideo

Display This Question:

If DistancingCondition Is Not Empty

WHODinst Please fill your mind with the thoughts of an objective person as you watch this video.

Display This Question:

If ImmersiveCondition Is Not Empty

WHOIInst Please fill your mind with your personal thoughts as you watch this video.

WhoVideo

whovideotiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: WHOvideo

Start of Block: NAMIVideoDistancing

Display This Question:

If DistancingCondition Is Not Empty

NAMIDInst Please fill your mind with the thoughts of an objective person as you watch this video.

Display This Question:

If ImmersiveCondition Is Not Empty

Q170 Please fill your mind with your personal thoughts as you watch this video.

Namivideo

Namivideotiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: NAMIVideoDistancing

Start of Block: Thought Listing

Q107 Please take at least one minute to write down **every thought** you can remember thinking while watching the video.

Please use one box per thought. You do not have to use every box.

Thought1 Thought:

Thought2 Thought:

Thought3 Thought:

Thought4 Thought:

Thought5 Thought:

Thought6 Thought:

Thought7 Thought:

Thought8 Thought:

Thought9 Thought:

Thought10 Thought:

End of Block: Thought Listing

Start of Block: Intentions

Asking questions Thank you for sharing your thoughts about the video with us. Now we're interested in your opinions more generally. Please respond to the questions below.

Attitudes If I were experiencing depression, seeking help would be:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
negative	<input type="radio"/>	positive						
harmful	<input type="radio"/>	helpful						
bad	<input type="radio"/>	good						
worthless	<input type="radio"/>	valuable						
foolish	<input type="radio"/>	wise						

Page Break



GHSQ

Please indicate the extent to which you would be unlikely or likely to seek help from the following sources, if you were experiencing symptoms of depression.

Please only select N/A if you do not have the option listed (e.g., you are not currently in a romantic partnership).

	Extremely Unlikely (1)	(2)	(3)	(4)	(5)	(6)	Extremely Likely (7)	N/A (999)
Romantic Partner (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Close Friend (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parent (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Family Member (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor/Psychologist (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Psychiatrist (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doctor/General Practitioner (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



SingleItem If you had depression, how unlikely or likely is it that you would seek help from at least one source?

- Extremely Unlikely 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Extremely Likely 7 (7)

End of Block: Intentions

Start of Block: Thought Rating



Thoughtrating Earlier in the survey, you wrote down thoughts you had about the video message. Here, we want to know more about these thoughts.

For each of the thoughts that you listed, please indicate if the thought is negative, neutral, or positive.

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

	Negative (-1)	Neutral (0)	Positive (1)
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought1/ChoiceTextEntryValue}$ (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought2/ChoiceTextEntryValue}$ (3)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought3/ChoiceTextEntryValue}$ (22)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought4/ChoiceTextEntryValue}$ (4)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought5/ChoiceTextEntryValue}$ (5)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought6/ChoiceTextEntryValue}$ (6)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought7/ChoiceTextEntryValue}$ (7)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display This Choice:
If If Thought: Text Response Is Not Empty

$\{\text{Thought8/ChoiceTextEntryValue}\}$
(8)

Display This Choice:
If If Thought: Text Response Is Not Empty

$\{\text{Thought9/ChoiceTextEntryValue}\}$
(9)

Display This Choice:
If If Thought: Text Response Is Not Empty

$\{\text{Thought10/ChoiceTextEntryValue}\}$
(10)

End of Block: Thought Rating

Start of Block: TestDemos



TestGender Which do you identify as?

- Man (0)
- Woman (1)
- Self-describe (3) _____
- Prefer not to say (4)



TestAge What is your age?



TestRace Which Ethnicity describes you? Check all that apply:

- White/Caucasion (1)
- Black/African American (2)
- Hispanic/ Latino (3)
- Asian (4)
- Pacific Islander (5)
- Other (6) _____

End of Block: TestDemos

Start of Block: Last Page

Q150 Thank you for completing the survey. We have two last questions for you - please note, **you'll be paid and receive the same bonus regardless of how you answer** - we just want your *honest* response.



AttentionAsk Did you pay attention and answer all the questions honestly while taking this survey?

- Yes (1)
 - No (0)
-



Q99 Please rate your level of attention while taking the survey.

- No attention at all (1)
 - 2 (2)
 - 3 (3)
 - 4 (4)
 - 5 (5)
 - 6 (6)
 - Full attention (7)
-

Q258 If you want to leave any comments about this survey or how you answered, please leave them below:

End of Block: Last Page

Start of Block: Main study Debriefing

Q89 Thank you for participating in this survey. **Your MTurk code is at the bottom of this page.** By the completion of this survey you have helped us understand what types of messages can help people with depression. While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. If you, or someone you know, is suffering from depression, help is available. If you would like to talk to someone about depression or to learn more about depression, you can call the National Mental Health Association hot line (1-800-969-6642) or visit <http://NAMI.org> You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu. This is your unique alphanumeric code and won't work for any other Mturker. **MTURK CODE:** Franklin5\${e://Field/random}

Q93 Press next to submit your survey. Thanks again!

End of Block: Main study Debriefing

Start of Block: Debriefing Screener -End of Survey

Q93 Thank you for participating in this survey. **Your Mturk code is at the bottom of this page.** While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. If you, or someone you know, is suffering from depression, help is available. If you would like to talk to someone about depression or to learn more about depression, you can call the National Mental Health Association hot line (1-800-969-6642) or visit NAMI.org. You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu.

Q94 If you have any further thoughts about this survey, please leave them in the comment box below!

Q187 This is your unique code, and won't work for any other Mturker.
MTURK CODE: Nightingale7\${e://Field/random}

Q96 Press next to submit your survey. Thanks again!

Skip To: End of Survey If Press next to submit your survey. Thanks again! Is Displayed

End of Block: Debriefing Screener -End of Survey

Study 2 Full Survey Instrument

Start of Block: Consent - Screener

Q1

Informed Consent

You are invited to participate in a research project. Volunteering may not benefit you directly, but you will be helping us identify participants for further research. If you volunteer, you will answer a series of questions about your mood and personal characteristics. This will take about 3-5 minutes of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

STUDY LEADERSHIP: This research project is led by Sara Hollar of Claremont Graduate University, who is being supervised by Dr. Jason Siegel, of Claremont Graduate University.

PURPOSE: The purpose of this study is to assess your current mood and behavior to recruit participants for follow-up studies.

ELIGIBILITY: To participate in this survey, you must be a US resident able to read and write in English, and be 18 years of age or older.

PARTICIPATION: During the study, you will be asked to answer a series of questions about your mood, behavior, and demographic characteristics. This will take about 5 minutes.

RISKS OF PARTICIPATION: The risks that you run by taking part in this study are minimal. These risks include being uncomfortable answering some of the questions. If you feel any discomfort or if you would like to speak to someone about your feelings, you can contact the National Mental Health Association (1-800-969-6642), the suicide prevention hotline (1-800-273-8255) available 24 hours a day, or visit the website (<http://www.nimh.nih.gov/health/topics/depression/index.shtml>) for more information. You can also stop the survey at any time.

BENEFITS OF PARTICIPATION: We do not expect the study to benefit you personally. This study will benefit the researcher by building a pool of participants interested in participating in further research about depression messaging. This study is also intended to benefit people experiencing mental health challenges.

COMPENSATION: You will be directly compensated 30 cents for participating in this study.

VOLUNTARY PARTICIPATION: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

CONFIDENTIALITY: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will never store your MTurk ID with your responses, and will keep all data stored on a password protected computer with access limited only to study researchers.

FURTHER INFORMATION: If you have any questions or would like additional information about this study, please contact Sara Hollar at sara.hollar@cgu.edu. You may also contact Jason Siegel at Jason.siegel@cgu.edu. The CGU Institutional Review Board (IRB) has certified this project as exempt. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu.

CONSENT: Clicking “yes, I agree to participate in this research” means that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.



Consent Do you consent?

- Yes, I agree to participate in this research (1)
- No (0)

Skip To: End of Block If Do you consent? = Yes, I agree to participate in this research

Skip To: Q13 If Do you consent? = No

Q98 reCAPTCHA verification:

Page Break

Q13 Sorry you did not give us your informed consent and thus cannot continue with the survey.

Skip To: End of Survey If Sorry you did not give us your informed consent and thus cannot continue with the survey. Is Displayed

End of Block: Consent - Screener

Start of Block: Welcome

Q80 Our research lab is currently recruiting participants **both with and without** depressive symptoms for a series of studies we are conducting. Your honesty will ensure that possible follow-up questionnaires are relevant to you. Thank you for your time, **honesty**, and help in advance!

End of Block: Welcome

Start of Block: PHQ-9

instructions Over the last 2 weeks, how often have you been bothered by the following problems?



PHQ_1 Little interest or pleasure in doing things

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-



PHQ_2 Feeling down, depressed, or hopeless

- Not at all (0)
- Several days (1)
- More than half the days (2)
- Nearly every day (3)

X→

PHQ_3 Trouble falling or staying asleep, or sleeping too much

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_4 Feeling tired or having little energy

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_5 Poor appetite or overeating

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-

X→

PHQ_6 Feeling bad about yourself or that you are a failure or have let yourself or your family down

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-



PHQ_7 Trouble concentrating on things, such as reading the newspaper or watching television

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-



PHQ_8 Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-



PHQ_9 Thoughts that you would be better off dead, or of hurting yourself

- Not at all (0)
 - Several days (1)
 - More than half the days (2)
 - Nearly every day (3)
-



AttentionCheck About the preceding questions

- I have not paid attention to these questions (0)
- I have paid very little attention to these questions (0)
- I have paid attention to these questions (1)
- I didn't pay any attention at all to these questions (0)

End of Block: PHQ-9

Start of Block: Suicide

Display This Question:

If Thoughts that you would be better off dead, or of hurting yourself = Several days

Or Thoughts that you would be better off dead, or of hurting yourself = More than half the days

Or Thoughts that you would be better off dead, or of hurting yourself = Nearly every day



Q368 Your answers indicated that you may be experiencing thoughts about suicide or self harm. These thoughts can be scary, but help is available.

Please consider talking to a family member or a mental health professional in your area. If you would like to talk to someone about your thoughts and feelings now, you can contact the National Suicide Prevention Lifeline at any time by calling the 24/7 toll-free number 1-800-273-TALK (8255), or visiting www.suicidepreventionlifeline.org. You could also call The National Mental Health Association hotline (1-800-969-6642), or visit The Depression & Bipolar Support Alliance website (<http://www.dbsalliance.org>) or The American Foundation for Suicide Prevention website (<http://www.afsp.org/>).

You can also text CONNECT to 741741 from your phone to text a crisis counselor from the crisis text line. As a reminder, this survey is completely confidential. If you'd like to stop this survey and contact these resources now, you may and you will still receive payment.

Please indicate if you'd like to end the survey now, or if you'd like to continue.

- I wish to continue with the survey. (1)
- I would like to end this survey. (0)

Skip To: End of Block If Your answers indicated that you may be experiencing thoughts about suicide or self harm. These th... = I wish to continue with the survey.

Page Break

Display This Question:

If Your answers indicated that you may be experiencing thoughts about suicide or self harm. These th... = I would like to end this survey.

Q173 Here are the resources again.

You can contact the National Suicide Prevention Lifeline at any time by calling the 24/7 toll-free number 1-800-273-TALK (8255), or visiting www.suicidepreventionlifeline.org. You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. Once you press next on this page, you'll be taken to the final page of the survey with the MTurk Code to receive payment.

Page Break

Display This Question:

If Your answers indicated that you may be experiencing thoughts about suicide or self harm. These th... = I would like to end this survey.

Q80 Thank you for participating in this survey. **Your MTurk code is at the bottom of this page.** While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. Once again, thank you for your time. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu. **MTURK CODE: sonia9\${e://Field/random}**

Skip To: End of Survey If Thank you for participating in this survey. Your MTurk code is at the bottom of this page. Whil... Is Displayed

End of Block: Suicide

Start of Block: Current Help Seeking

Page Break

Q164 You are almost finished with this survey. The following questions ask about your history with depression.

Depression is more than just sadness. People with depression may experience a lack of interest and pleasure in daily activities, significant weight loss or gain, insomnia or excessive sleeping, lack of energy, inability to concentrate, feelings of worthlessness or excessive guilt.



EverHelp At any point in your life, have you sought help for depression?

- Yes (1)
 - No (0)
-



MostLikelySource If you were currently experiencing depression, from where would you be most likely to seek help?

- Romantic Partner (1)
 - Friend (2)
 - Parent (3)
 - Other Family Member (4)
 - Counselor/Psychologist (5)
 - Psychiatrist (6)
 - Doctor/General Practitioner (7)
-



ConsiderDepressed Do you consider yourself to be currently depressed?

- Definitelynot1 (1)
- (2)
- (3)
- (4)
- (5)
- (6)
- Definitelyyes7 (7)

Skip To: End of Block If Do you consider yourself to be currently depressed? = Definitelynot1

Skip To: End of Block If Do you consider yourself to be currently depressed? =

Skip To: End of Block If Do you consider yourself to be currently depressed? =

Page Break



CurrentHelp Have you sought help or talked to **anyone** at all regarding your current feelings of depression? (This could include talking in person, via online chats, or over the phone, or searching the internet for more information).

- Yes (1)
- No (0)

Page Break

Display This Question:

If Have you sought help or talked to anyone at all regarding your current feelings of depression? (T... = Yes



CurrentLovedOne Have you talked to any **loved ones (e.g., family, romantic partner, friend)** about your current feelings?

- Yes (1)
- No (0)



CurrentProfessional Have you sought **professional help (e.g., primary care doctor, psychologist, psychiatrist)** for your current feelings?

- Yes (1)
- No (0)

Display This Question:

If Have you sought help or talked to anyone at all regarding your current feelings of depression? (T... = Yes



CurrentInternet Have you searched the **internet** for information about how you have been feeling?

- Yes (1)
- No (0)

End of Block: Current Help Seeking

Start of Block: Demographics

Q174 You are now on the last page of the screening survey.

We ask for the following information so we can describe the sample of participants when reporting the results of this research. We will never report the responses of individual participants. Any information you provide will be completely confidential.

Thank you for taking this survey!



Gender Which do you identify as?

- Man (0)
- Woman (1)
- Self-describe (3) _____
- Prefer not to say (4)



Age What is your age?



Race Which Ethnicity describes you? Check all that apply:

- White/Caucasian (1)
- Black/African American (2)
- Hispanic/Latino (3)
- Asian (4)
- Pacific Islander (5)
- Other (6) _____



Education What is the highest level of education that you completed?

- Some high school (1)
 - High school diploma or GED (2)
 - Some college (3)
 - Certificate (4)
 - Associate's degree (5)
 - Bachelor's degree (6)
 - Master's degree (7)
 - Doctoral degree (8)
-



MaritalStatus Which of the following best describes your current marital status?

- Single (1)
- Married (2)
- Separated (3)
- Divorced (4)
- Widowed (5)

End of Block: Demographics

Start of Block: Debriefing Screener -Invite to Follow Up

Q136 Thank you for taking part in this survey. Your answers indicate that you are eligible for a study we are currently running. This study should take 7-10 minutes. **If you participate in this study we will bonus you \$1.20 for your time.**

*You will need to be able to **watch and hear video content** to participate.*

Would you like to participate in this additional study right now?

- No, I would not like to participate in the additional study (1)
- Yes, I would like to participate in the additional study (2)

Skip To: Q86 If Thank you for taking part in this survey. Your answers indicate that you are eligible for a stu... = No, I would not like to participate in the additional study

Skip To: End of Block If Thank you for taking part in this survey. Your answers indicate that you are eligible for a stu... = Yes, I would like to participate in the additional study

Page Break

Q86 Thank you for participating in the screening survey. **The Mturk code is at the bottom of this page.** While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. If you or someone you know is suffering from depression, help is available. If you would like to talk to someone about depression or to learn more about depression, you can call the National Mental Health Association hot line (1-800-969-6642) or visit NAMI.org. You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu.

Q88 If you have any further thoughts about this survey, please leave them in the comment box below!

Q186 This is your unique alphanumeric code, and won't work for any other Mturker.
MTURK CODE: Davis8\${e://Field/random}

Q90 Press next to submit your survey. Thanks again!

Skip To: End of Survey If Press next to submit your survey. Thanks again! Is Displayed

End of Block: Debriefing Screener -Invite to Follow Up

Start of Block: Consent - Main Study

Q672 Informed Consent

You are invited to participate in a research project. Volunteering may not benefit you directly, but you will be helping us improve health messages about depression. If you volunteer, you will

view a short video about depression, and share your thoughts about it. This will take about 10 minutes of your time. Volunteering for this study involves no more risk than what a typical person experiences on a regular day. Your involvement is entirely up to you. You may withdraw at any time for any reason. Please continue reading for more information about the study.

STUDY LEADERSHIP: This research project is led by Sara Hollar of Claremont Graduate University, who is being supervised by Dr. Jason Siegel of Claremont Graduate University.

PURPOSE: This purpose of this study is to understand the thoughts people have in response to different types of health messaging.

ELIGIBILITY To participate in this survey, you must be residing in the US, able to read and write in English, and be 18 years of age or older.

PARTICIPATION: During the study, you will be asked to watch a video about depression, and share your thoughts about it. We will also ask some questions about depression in general and about your demographic characteristics. The study will take about 10 minutes.

RISKS OF PARTICIPATION: The risks that you run by taking part in this study are minimal. These risks include feeling uncomfortable sharing your thoughts or answering some questions. You can stop participation at any time. If you feel any discomfort or if you would like to speak to someone about your feelings, you can contact the National Mental Health Association (1-800-969-6642), the suicide prevention hotline (1-800-273-8255) available 24 hours a day, or visit the website (<http://www.nimh.nih.gov/health/topics/depression/index.shtml>) for more information.

BENEFITS OF PARTICIPATION: We do not expect the study to benefit you personally. This study will benefit the researchers by improving understanding of health messaging. This study is also intended to benefit people experiencing depression by improving messages to them.

COMPENSATION: You will be directly compensated \$1.20 for participating in this study.

VOLUNTARY PARTICIPATION: Your participation in this study is completely voluntary. You may stop or withdraw from the study at any time without it being held against you. Your decision whether or not to participate will have no effect on your current or future connection with anyone at CGU.

CONFIDENTIALITY: Your individual privacy will be protected in all papers, books, talks, posts, or stories resulting from this study. We may use the data we collect for future research or share it with other researchers, but we will not reveal your identity with it. In order to protect the confidentiality of your responses, we will not store your MTurk ID with your responses, and will use an arbitrary ID code with your responses. We will also store all data on a password protected computer, only accessible by the researcher.

FURTHER INFORMATION: If you have any questions or would like additional information about this study, please contact Sara Hollar at sara.hollar@cgu.edu You may also contact Jason Siegel at Jason.siegel@cgu.edu. The CGU Institutional Review Board (IRB) has certified this

project as exempt. If you have any ethical concerns about this project or about your rights as a human subject in research, you may contact the CGU IRB at (909) 607-9406 or at irb@cgu.edu. A copy of this form will be given to you if you wish to keep it.

CONSENT: Clicking “yes, I consent to participate in this research” means that you understand the information on this form, that someone has answered any and all questions you may have about this study, and you voluntarily agree to participate in it.



ExpConsent Do you consent to participate?

- Yes, I consent to participate in this research (1)
- No (0)

Skip To: End of Block If Do you consent to participate? = Yes, I consent to participate in this research

Skip To: Q674 If Do you consent to participate? = No

Page Break

Q674

Sorry you did not give us your informed consent and thus cannot continue with the follow-up survey.

Please use this full alphanumeric code to receive payment for the first screening survey:

CODE: Davis8\${e://Field/random}

Skip To: End of Survey If Sorry you did not give us your informed consent and thus cannot continue with the follow-up survey... Is Displayed

End of Block: Consent - Main Study

Start of Block: Sound test

Q132 First we will show you a short video clip. This video has sound, so please make sure your speakers or headphones are working! **Please watch the entire clip before answering the questions.**

Q139

Page Break



Q134 What do you see in the video?

- Food (0)
 - Wildlife (1)
 - Children (0)
 - Traffic (0)
 - I could not see the video (0)
-



Q136 What did you hear in this video?

- Nature Sounds (0)
 - Music (1)
 - Car Noises (0)
 - Laughter (0)
 - I did not hear the video (0)
-

Page Break

Display This Question:

If What do you see in the video? != Wildlife

Or What did you hear in this video? != Music

Q138 Sorry, it seems like you weren't able to see the video, so you won't be able to continue with the study.

Please use this full alphanumeric code to receive payment for the first screening survey: CODE: Viola10\${e://Field/random}

Skip To: End of Survey If Sorry, it seems like you weren't able to see the video, so you won't be able to continue with the... Is Displayed

End of Block: Sound test

Start of Block: Distancing

Q184 **Soon, we will show you an important video message.**

Q181 Please give the video your full attention.

However, as you watch, please **take on the perspective of a highly objective person**, who can see the situation in its entirety and wants what's best for you. Try to see the video entirely through the **eyes of this other person**. As you do this, think about how this **objective person** would see the message. What thoughts would **an objective person** have? How would **an objective person** feel about the video?

As you watch the video be sure to immerse yourself in the perspective of this objective person.

DistancingTiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break



DManipulationCheck Because it's a very important part of the study, we want to make sure you carefully read the instructions on the previous page. Please indicate what perspective you were instructed to use to watch the video.

- My own personal perspective (0)
- The perspective of an objective other (1)
- I'm not sure (0)

Skip To: End of Block If Because it's a very important part of the study, we want to make sure you carefully read the inst... = The perspective of an objective other

Page Break

Q183 *Please read the instructions again carefully.*

Q146

Please give the video your full attention.

However, as you watch, please take on the perspective of a highly **objective person**, who can see the situation in its entirety and wants what's best for you. Try to see the video entirely through the eyes of this **other person**. As you do this, think about how this **objective person** would see the message. What thoughts would an **objective person** have? How would an **objective person** feel about the video?

As you watch the video be sure to immerse yourself in the perspective of this objective person.

Page Break



DManipulationCheck2 Please indicate what perspective you were instructed to use to watch the video.

- My own personal perspective (0)
- The perspective of an objective other (1)
- I'm not sure (0)

End of Block: Distancing

Start of Block: Immersive

Q185 **Soon we will show you an important video message.**

Q119 Please give the video your full attention.

As you watch, please consider the video as deeply as possible from **your personal point of view**. Try to see the video entirely from **your own unique perspective**. How do **you** see the message? What thoughts do **you** have? How do **you** feel about the video?

As you watch the video be sure to immerse yourself in your personal perspective on the message.

ImmersiveTiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

Page Break



IManipulationCheck Because it's a very important part of the study, we want to make sure you carefully read the instructions on the previous page. Please indicate what perspective you were instructed to use to watch the video on the next page.

- My own personal perspective (1)
- The perspective of an objective other (0)
- I'm not sure (0)

Skip To: End of Block If Because it's a very important part of the study, we want to make sure you carefully read the inst... = My own personal perspective

Page Break

Q162 Please read the instructions again carefully.

Please give the video your full attention.

As you watch, please consider the video as deeply as possible from **your personal point of view**. Try to see the video entirely from **your own unique perspective**. How do **you** see the message? What thoughts do **you** have? How do **you** feel about the video?

As you watch the video be sure to immerse yourself in your personal response to the message.

Page Break



IManipulationCheck2 Please indicate what perspective you were instructed to use to watch the video on the next page.

- My own personal perspective (1)
- The perspective of an objective other (0)
- I'm not sure (0)

End of Block: Immersive

Start of Block: Control

Q131 On the next page, you will view an important video message. Please give the message your full attention.

ControlTiming Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

End of Block: Control

Start of Block: NIMHVideo

Display This Question:

If DistancingCondition Is Not Empty

NIMHDInst Please fill your mind with the thoughts of an objective person as you watch this video.

Display This Question:

If ImmersiveCondition Is Not Empty

NIMHImInst Please fill your mind with your personal thoughts as you watch this video.

NIMHvideo

NIMHvideotiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: NIMHVideo

Start of Block: WHOvideo

Display This Question:

If DistancingCondition Is Not Empty

WHODinst Please fill your mind with the thoughts of an objective person as you watch this video.

Display This Question:

If ImmersiveCondition Is Not Empty

WHOIInst Please fill your mind with your personal thoughts as you watch this video.

WhoVideo

whovideotiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: WHOvideo

Start of Block: NAMIVideoDistancing

Display This Question:

If DistancingCondition Is Not Empty

NAMIDInst Please fill your mind with the thoughts of an objective person as you watch this video.

Display This Question:

If ImmersiveCondition Is Not Empty

Q170 Please fill your mind with your personal thoughts as you watch this video.

Namivideo

Namivideotiming Timing

First Click (1)

Last Click (2)

Page Submit (3)

Click Count (4)

End of Block: NAMIVideoDistancing

Start of Block: Thought Listing

Q107 Please take at least one minute to write down **every thought** you can remember thinking while watching the video.

Please use one box per thought. You do not have to use every box.

Thought1 Thought:

Thought2 Thought:

Thought3 Thought:

Thought4 Thought:

Thought5 Thought:

Thought6 Thought:

Thought7 Thought:

Thought8 Thought:

Thought9 Thought:

Thought10 Thought:

End of Block: Thought Listing

Start of Block: Intentions

Asking questions Thank you for sharing your thoughts about the video with us. Now we're interested in your opinions more generally. Please respond to the questions below.

Attitudes If I were experiencing depression, seeking help would be:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)	
negative	<input type="radio"/>	positive						
harmful	<input type="radio"/>	helpful						
bad	<input type="radio"/>	good						
worthless	<input type="radio"/>	valuable						
foolish	<input type="radio"/>	wise						

Page Break



GHSQ

Please indicate the extent to which you would be unlikely or likely to seek help from the following sources, if you were experiencing symptoms of depression.

Please only select N/A if you do not have the option listed (e.g., you are not currently in a romantic partnership).

	Extremely Unlikely (1)	(2)	(3)	(4)	(5)	(6)	Extremely Likely (7)	N/A (999)
Romantic Partner (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Close Friend (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parent (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other Family Member (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Counselor/Psychologist (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Psychiatrist (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doctor/General Practitioner (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



SingleItem If you had depression, how unlikely or likely is it that you would seek help from at least one source?

- Extremely Unlikely 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Extremely Likely 7 (7)

End of Block: Intentions

Start of Block: Thought Rating



Thoughtrating Earlier in the survey, you wrote down thoughts you had about the video message. Here, we want to know more about these thoughts.

For each of the thoughts that you listed, please indicate if the thought is negative, neutral, or positive.

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

Display This Choice:

If If Thought: Text Response Is Not Empty

	Negative (-1)	Neutral (0)	Positive (1)
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought1/ChoiceTextEntryValue}$ (1)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought2/ChoiceTextEntryValue}$ (3)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought3/ChoiceTextEntryValue}$ (22)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought4/ChoiceTextEntryValue}$ (4)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought5/ChoiceTextEntryValue}$ (5)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought6/ChoiceTextEntryValue}$ (6)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p><i>Display This Choice:</i></p> <p><i>If If Thought: Text Response Is Not Empty</i></p> <p>$\\${Thought7/ChoiceTextEntryValue}$ (7)</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display This Choice:
If If Thought: Text Response Is Not Empty

$\${Thought8/ChoiceTextEntryValue}$
(8)

Display This Choice:
If If Thought: Text Response Is Not Empty

$\${Thought9/ChoiceTextEntryValue}$
(9)

Display This Choice:
If If Thought: Text Response Is Not Empty

$\${Thought10/ChoiceTextEntryValue}$
(10)

End of Block: Thought Rating

Start of Block: TestDemos



TestGender Which do you identify as?

- Man (0)
- Woman (1)
- Self-describe (3) _____
- Prefer not to say (4)



TestAge What is your age?



TestRace Which Ethnicity describes you? Check all that apply:

- White/Caucasion (1)
- Black/African American (2)
- Hispanic/ Latino (3)
- Asian (4)
- Pacific Islander (5)
- Other (6) _____

End of Block: TestDemos

Start of Block: Last Page

Q150 Thank you for completing the survey. We have two last questions for you - please note, **you'll be paid and receive the same bonus regardless of how you answer** - we just want your *honest* response.



AttentionAsk Did you pay attention and answer all the questions honestly while taking this survey?

- Yes (1)
 - No (0)
-



Q99 Please rate your level of attention while taking the survey.

- No attention at all (1)
 - 2 (2)
 - 3 (3)
 - 4 (4)
 - 5 (5)
 - 6 (6)
 - Full attention (7)
-

Q258 If you want to leave any comments about this survey or how you answered, please leave them below:

End of Block: Last Page

Start of Block: Main study Debriefing

Q89 Thank you for participating in this survey. **Your MTurk code is at the bottom of this page.** By the completion of this survey you have helped us understand what types of messages can help people with depression. While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. If you, or someone you know, is suffering from depression, help is available. If you would like to talk to someone about depression or to learn more about depression, you can call the National Mental Health Association hot line (1-800-969-6642) or visit <http://NAMI.org> You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu. This is your unique alphanumeric code and won't work for any other Mturker. **MTURK CODE:** Franklin5\${e://Field/random}

Q93 Press next to submit your survey. Thanks again!

End of Block: Main study Debriefing

Start of Block: Debriefing Screener -End of Survey

Q93 Thank you for participating in this survey. **Your Mturk code is at the bottom of this page.** While we did not anticipate that the tasks involved in this study would cause any more discomfort than what is experienced in every-day life, we apologize if this process has been difficult. If you, or someone you know, is suffering from depression, help is available. If you would like to talk to someone about depression or to learn more about depression, you can call the National Mental Health Association hot line (1-800-969-6642) or visit NAMI.org. You can also text CONNECT to 741741 from your phone to text with a crisis counselor from the crisis text line. If you have any questions about this study, please contact the researcher at sara.hollar@cgu.edu.

Q94 If you have any further thoughts about this survey, please leave them in the comment box below!

Q187 This is your unique code, and won't work for any other Mturker.
MTURK CODE: Nightingale7\${e://Field/random}

Q96 Press next to submit your survey. Thanks again!

Skip To: End of Survey If Press next to submit your survey. Thanks again! Is Displayed

End of Block: Debriefing Screener -End of Survey

APPENDIX C: MANIPULATIONS

Study 1 Conditions

Distancing	<p>Please give the video your full attention.</p> <p>However, as you watch, please take on the perspective of a highly objective person, who can see the situation in its entirety and wants what's best for you. Try to see the video entirely through the eyes of this other person. As you do this, think about how this objective person would see the message. What thoughts would an objective person have? How would an objective person feel about the video?</p> <p>As you watch the video be sure to immerse yourself in the perspective of this objective person.</p>
Immersive	<p>Please give the video your full attention.</p> <p>As you watch, please consider the video as deeply as possible from your personal point of view. Try to see the video entirely from your own unique perspective. How do you see the message? What thoughts do you have? How do you feel about the video?</p> <p>As you watch the video be sure to immerse yourself in your personal perspective on the message.</p>
Control	<p>Please give the video your full attention.</p>

Study 2 Conditions

Perspective-taking	<p>Please give the video your full attention.</p> <p>However, as you watch, please take on the perspective of a highly objective person, who can see the situation in its entirety and wants what's best for you. Try to see the video entirely through the eyes of this other person. As you do this, think about how this objective person would see the message. What thoughts would an objective person have? How would an objective person feel about the video?</p> <p>As you watch the video be sure to immerse yourself in the perspective of this objective person.</p>
Mental Time-travel	<p>Please give the video your full attention.</p> <p>However, as you watch, please take on the perspective of your ideal future self, 10 years into the future. Try to see the video entirely through the eyes of your future self. As you do this, think about how your future self would see the message. What thoughts would your future self have? How would your future self feel about the video?</p> <p>As you watch the video be sure to immerse yourself in the perspective of your ideal future self, 10 years into the future.</p>
Control	<p>Please give the video your full attention.</p>

NAMI D-PSA: What is Depression?

<https://youtu.be/CTXkyFbGqEg>

NIMH D-PSA: Mental Health Minute: Depression

<https://youtu.be/IQhpetkwWnM>

WHO D-PSA: Depression-Let's Talk

<https://youtu.be/X-fAEMgQnt8>

APPENDIX D: STUDY 1 MEDIATION ANALYSIS

We used PROCESS model 6 (Hayes, 2022) to test a mediation model where changes in intentions are mediated through reductions in thought negativity and improved attitudes. Age, gender, PHQ-9 and perceived depression were included as covariates, to be consistent with the other analyses.

Results of the mediation model show there were no significant indirect effect of self-distancing on help-seeking intentions sequentially through negativity and then attitudes; $b(SE) = .01(.03)$, 95% CI $(-.01, .02)$. However, there was a significant indirect effect of the immersive condition; $b(SE) = -.02(.01)$, 95% CI $(-.03, -.001)$. The immersive condition led to more negativity, which was associated with less favorable attitudes toward help-seeking and reduced intentions. The relationships between all variables are shown below.

