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To Meme, or Not to Meme: Applying the Theory of Motivated Information Management to the Provision of Support After Depressed Individuals Share Suicidal Memes

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TO MEME, OR NOT TO MEME: APPLYING THE THEORY OF MOTIVATED

INFORMATION MANAGEMENT TO THE PROVISION OF SUPPORT AFTER

DEPRESSED INDIVIDUALS SHARE SUICIDAL MEMES

by

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ABSTRACT

TO MEME, OR NOT TO MEME: APPLYING THE THEORY OF MOTIVATED
INFORMATION MANAGEMENT TO THE PROVISION OF SUPPORT AFTER
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Social media sites are increasingly where individuals seek and share information on a range of

topics. The focus of this thesis is on suicidal memes and how individuals interpret them. Suicidal

memes are memes that suggest suicide through either text or visual images. No research has

investigated interpretations of suicidal memes to date as well as why individuals post them. It is

important to study such issues as the interpretations of these memes can mean the difference

between depressed individuals, for example, receiving the help they need or those same

individuals alienating themselves from their loved ones. Informed by the theory of motivated

information management, this study aimed to determine the variance and likelihood of social

support provision after seeing a depressed loved one has shared a suicidal meme. Through a

four-group experimental design consisting of 161 participants, results indicated viewing a

suicidal meme shared by a loved one did not significantly change the amount or type of

anticipated support participants might provide.

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Major Depressive Disorder (MDD) is a nationwide epidemic that affects millions of Americans every year [National Alliance on Mental Illness (NAMI), 2015]. Those who experience MDD are at significant risk of suicidal thoughts and attempts, particularly when the disorder goes undiagnosed (American Psychiatric Association, 2013). For this reason, it is especially important that those who show signs of MDD or suicidal thoughts and ideations receive the support and care that they need. Individuals with MDD and suicidal thoughts or ideations might show signs and symptoms through a variety of channels, such as online (High & Solomon, 2011; Youngvorst & High, 2018). A popular form of online communication is through the use of memes (Beck-Fernandez, Nettleton, Recalde, Saez-Trumper, & Barahona-Penaranda, 2017; Nettle, 2000). Memes can be used to discuss a wide range of topics from political commentary (Bebic & Volarevic, 2018; Glaveanu, de Saint-Laurent, & Literat, 2018) to personal expression of emotions (Lester, 2009). One way that depressed and suicidal individuals might use memes to represent personal expression of emotions is through suicidal memes. Though it is still unclear how these memes are perceived by others or what the intention is when posting them, some individuals with depression and suicidal thoughts or ideations might share memes with suicidal content or subtext explicitly through a clear method choice (method specific memes) or use of the word "suicide," less explicitly with an indirect reference to a method of choice (method non-specific memes), or implicitly through signs of passive suicide ideation (passive ideation memes). Regardless of the type of meme or intention when posting, it is important to understand how these memes affect network members' likelihood to provide various types of support.

The aim of this study is to determine how suicidal meme content relates to the decision to provide different types of support to a depressed loved one (e.g., if suicidal memes deter network

members from providing needed support). Because the intentions of those posting suicidal memes likely vary, it is important to understand how posting these memes affects support. If posting suicidal memes discourages network members from providing support, then those who post suicidal memes to seek it might not receive it. Through the framework of the Theory of Motivated Information Management (TMIM) and an experimental design, the present study seeks to evaluate how suicidal memes alter the likelihood that individuals will provide social support to a depressed loved one (e.g., family member, close friend, romantic partner).

Major Depressive Disorder

Despite being a nationwide epidemic that spans generations, those aged 18-25 are 60% more likely to experience depression than those aged 50 and above (NAMI, 2015). MDD is classified in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) as a common mood disorder characterized by sadness, loss of interest in once enjoyable activities, and hopelessness (American Psychiatric Association, 2013). Some of the most common effects of MDD are associated with emotional distress, however, MDD also presents itself physically, through chronic pain, and relationally, through a diminished interest in social interaction (American Psychiatric Association, 2013; Knobloch & Theiss, 2011). In order to be classified as MDD, depressive symptoms must be presented for no less than two weeks at a time.

MDD often is left untreated due to the common belief that depression is a normal part of growing up (NAMI, 2015). While depression can be a common facet of maturation and young adulthood (American Psychiatric Association, 2013), it can be particularly dangerous to ignore signs and symptoms of MDD. When untreated, MDD can increase the risk for suicide [American Psychiatric Association, 2013; Centers for Disease Control and Prevention (CDC), 2017b].

Nationally, suicide ranks as one of the top causes of mortality for adults age 18-25 with about 4,600 youth dying from suicide each year (CDC, 2017b). According to statistics from the National Survey on Drug Use and Health [Substance Abuse and Mental Health Services Administration (SAMHSA), 2017], adults age 18-25 are at particular risk for suicide attempts, thoughts, and ideations with 10.5% of adults in that age range experiencing suicidal thoughts and 1.9% attempting suicide. Furthermore, it is the second leading cause of death, after unintentional injury, with 5,723 individuals completing a suicide attempt in 2016 (CDC, 2017a).

Suicidality can present itself in a variety of ways [Department of Health and Human Services (HHS), 2018]. Suicidal individuals can show blatant signs through explicit talk about wanting to kill oneself or wanting to die (HHS, 2018). However, a majority of the warning signs of suicidality are less obvious. For example, individuals who are contemplating suicide might talk about being trapped or in unbearable pain, talk about being a burden to others, sleep too little or too much, increase use of drugs and/or alcohol, behave recklessly, and/or display extreme mood swings (HHS, 2018). Warning signs of suicide vary widely from explicit talk and plans of suicide to more passive symptoms such as withdrawing from interactions. While it is important to pay attention to any signs of suicidal thoughts, it is especially important to watch for passive symptoms as they are often the warning signs that get overlooked (HHS, 2018).

Aside from blatant displays of suicidality, those with MDD can often present signs of suicidal thoughts through expressions of passive suicidal ideation (American Psychiatric Association, 2013). Passive suicide ideation refers to wishes of being dead without any specific plans to kill oneself (Simon, 2014). For example, a common sign of suicidality is having a suicide plan or specific ideas on how to commit suicide and an intent to follow through with those plans. Passive suicide ideation does not involve an explicit plan for suicide. Instead, a

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passively suicidal individual might wish for death through means such as dying in their sleep or being killed by someone else (Simon, 2014). Because passive suicide ideation often goes unnoticed, it can be incredibly difficult to support a suicidal individual whose symptoms appear to be passive (American Psychiatric Association, 2013). Though signs and symptoms of passive suicide ideation appear to be less threatening to the individual's life, passive suicide ideation, if left untreated, can be a genuine threat and lead to suicide (American Psychiatric Association, 2013). Direct and passive expressions of suicidal thoughts can be shared in face to face interactions as well as mediated moments online. One expression of such darker emotions in mediated interactions can be found through the sharing of memes.

Memes as Expression of Emotions

Passive suicidal ideation can be presented in face to face interactions as well as through online channels such as social networking sites (SNSs) (High & Solomon, 2011; Youngvorst & High, 2018). Depressed individuals can post online in search of support (High & Solomon, 2011; Rains, Peterson, & Wright, 2015) or merely as an outlet for their heavier emotions (Wang, Kraut, & Levine, 2015; Youngvorst & High, 2018). Because both types of posts, those looking for support and those using posts as an outlet, are common, it can be difficult to judge whether the poster is actively asking for help or not. The argument has been made that such memes are often posted not to mock suicidality, but to commiserate with others who experience the same emotions (Brown, 2019). While this use of suicidal meme posting can be therapeutic to the posters, those who see the memes being shared but do not experience the same emotions may be shocked or view the memes as cries for help (Brown, 2019). Because it remains unclear if this therapeutic outlet is being used strictly as an outlet (no response expected) or is the postings are

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searching for like-minded individuals to respond, it is important to closely examine suicidal memes and the specific form of communication being used.

One form of online communication that is growing in popularity is memes (Beck-Fernandez et al., 2017; Nettle, 2000). Memes are digital jokes that follow a format of text connected to an image related to pop culture (Beck-Fernandez, et al., 2017; Nettle, 2000). Memes can range in topic from political jokes and commentary (Bebic & Volarevic, 2018; Glaveanu et al., 2018), to individual relationships and emotions (Lester, 2009). It can be argued that memes are a modern, digital form of Aristotle's enthymeme, wherein a text provides one part of an argument and a conclusion, leaving the audience to fill in the remainder of the argument using their own knowledge and experience with the subject matter (Smith, 2007). In the case of memes, the audience viewing the meme is presented with text and an image and is left to make the connection between them. Should a viewer be unaware of the implied connection, they will likely not understand the meme. With the rise in popularity of memes comes a rise in expression of personal emotions including darker emotions, such as depression and suicidality, through memes. Suicidal memes, as they will be referred throughout the present study, are memes that revolve around suicide or suicidal ideation.

Little research exists on the topic of suicidal memes (Lester, 2009); therefore, it is unknown what are the types of memes being shared, their prevalence, or how the memes are perceived by loved ones. Suicidal memes might be perceived negatively, but due to the lack of research on suicidal memes, it is unclear how they are perceived. Given the contrast between their light-hearted approach to such a dark matter, however, suicidal memes might also be perceived as shocking or confusing. Should network members view a suicidal meme, they might be unsure how to react if they do not know if the person sharing the meme wants support or not.

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For this reason, this study aims to answer the question of how individuals respond to suicidal memes after they are shared by a depressed loved one. To better understand how these memes are interpreted, the following research question was posed:

RQ1: How are suicidal memes interpreted by loved ones (friends and family)?

Social Support

Research on social support continues to report that social relationships foster mental well-being and can moderate the effects of stress (Goldsmith, 2004; Vangelisti, 2009) (Goldsmith, 2004; Vangelisti, 2009), such as that experienced by those with depression or suicidal thoughts. Recent literature on social support primarily centers on perceptions of available support and how much it assists in lessening stressors (Vangelisti, 2009). Regardless of how the social support is provided, research has shown that the support receiver's perception of support is what has the most significant influence on how beneficial the support is to the receiver (Cutrona & Russell, 1990; Goldsmith, 2004; Vangelisti, 2009). Because social network members might view posts of suicidal memes as social support seeking behavior, it is important to recognize the different types of support someone might give in response to viewing such memes.

There are three types of social support that reflect 5 particular forms: action-facilitating (informational and tangible support), nurturant (emotional and network support) and esteem support (Cutrona & Suhr, 1994). Individual situations demand their own approach to social support. For this reason, Cutrona and Russell (1990) developed the optimal matching model to coordinate types of support and various stressors. According to the model, the most optimal type of support for any given situation depends on four main factors: the stressor's controllability ("the degree to which the individual can prevent the occurrence or consequences of an event"),

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desirability ("the nature and intensity of the negative emotions they engender"), duration of consequences (how long lasting the consequences might be), and life domain ("loss or threat to assets, relationships, achievements or social roles") (Goldsmith, 2004, p. 82). As Cutrona and Russell (1990) posit, determining the state of each of these factors will determine which type of support (action-facilitating, nurturant, or esteem) will best benefit the situation.

Action-Facilitating Support

Informational support, one of the two types of action-facilitating support, involves providing "advice or guidance concerning possible solutions to a problem" (Cutrona & Russell, 1990, p. 322) and might be as simple as giving a self-help suggestion or directing a support seeker towards a professional, or be as complex as providing life-changing advice, for example. Informational support can be useful in a variety of situations and is often provided regardless of whether the support receiver asked for support or not (Goldsmith, 2004; High & Dillard, 2012). Informational support is most effective when the support recipient specifically asks for this type of support (Cutrona et al., 2007). When provided despite being unprompted, informational support can lead to perceptions of partner insensitivity (Cutrona, Shaffer, Wesner, & Gardner, 2007). These perceptions might be due to informational support's nature as a more objective type of support (e.g., giving advice on steps to take or what to do) instead of a sympathetic one. If a support receiver is looking for empathy but instead receives advice or guidance to speak with another individual, the receiver might view the support provider as unmotivated to help or "insensitive."

Whereas informational support focuses on helping someone gain information or alter their perceptions, tangible support is defined as "concrete instrumental aid" (Cutrona & Russell, 1990, p. 322). Tangible support can include anything from cooking dinner for someone to

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offering to take care of their kids for a night. During stressful periods of time, such as grief or periods of mental distress, tangible support can prove useful as it lessens minor stressors in the support receiver's life so that they might focus instead on what they perceive to be the main stressor in their life.

According to the optimal matching model (Cutrona, 1990; Cutrona & Russell, 1990; Goldsmith, 2004), action-facilitating support is most beneficial when applied to a situation with a controllable stressor, such as moving to a new house. Controllable stressors often have direct solutions with steps that can be taken to resolve the issue. For example, when moving, there are long lists of things to do, but specific tasks need to be accomplished to address the stressor. With less controllable stressors, such as anxiety attacks or bouts of suicidal episodes, specific answers and solutions are not as clear. While informational and tangible support can help to alleviate stress in more uncontrollable situations, such as periods of mental distress, research has shown that action-facilitating types of support are more advantageous when combined with a controllable stressor (Cutrona, 1990; Cutrona & Russell, 1990) as they can more readily identify a potential solution.

Nurturant Support

While action-facilitating types of support focus more objectively on support, the nurturant types of support, emotional and network support, focus on the support receiver and their individualized needs (Goldsmith, 2004). One of the most common types of support, emotional support, is defined as "expressions of caring, concern, empathy, and reassurance of worth" (Goldsmith, 2004, p. 13). Emotional support is not as obvious as helping someone to pack boxes. Instead, emotional support can be very subtle. Acts of emotional support can include listening to someone's problems, expressing empathy or encouragement, or giving a hug. Due to

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the associated benefits, emotional support can be helpful when the support receiver is experiencing negative emotions such as anxiety, or depression (Goldsmith, 2004; High & Dillard, 2012). When the support receiver is experiencing a diminished mood, emotional support can be very beneficial as the provision of empathy often results in elevated feelings of value and worth (Derlega, Winstead, Oldfield III, & Barbee, 2003).

A second type of nurturant support is network support which is defined as support that promotes "a person's feeling part of a group whose members have common interests and concerns" (Cutrona & Russell, 1990, p. 322). While emotional support often includes one-on-one interactions revolving around empathy, network support often involves entire groups of people sharing interests. Such support can present itself in more serious settings, such as support groups, or in trivial settings, such as a brunch group. When individuals feel that they are a part of something, it positively impacts their feelings of inclusion and self-worth (Derlega et al., 2003; Vitak & Ellison, 2012). Within these groups, support can present itself directly by members sharing concerns or, more commonly, support can be indirect. Indirect network support is often experienced without any sort of prompt due to the fact that existing in a network of similar individuals can provide a boost to an individual's overall mentality (Cutrona, 1990; Cutrona & Russell, 1990; High & Dillard, 2012; Vitak & Ellison, 2012). For example, being a member of a club sport can foster feelings of inclusion even if explicit conversations about the cohesion of the network (the team) do not occur.

Under the optimal matching model (Cutrona, 1990; Cutrona & Russell, 1990; Goldsmith, 2004), nurturant support has been shown to be most beneficial when combined with uncontrollable stressors. While nurturant support can have minimal benefits in situations with controllable stressors, like moving, often times, nurturant support is most helpful in situations of

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emotional distress (Cutrona, 1990; Cutrona & Russell, 1990; Goldsmith, 2004). These include situations where the support recipient cannot "fix" the stressor causing them distress. Such instances might include bouts of anxiety and depression, relationship struggles, and general stress. In situations where the primary stressor is uncontrollable, or without a clear-cut solution, nurturant support benefits the support receiver by providing them with the mental strength to reduce the stressor at hand (Cutrona, 1990; Cutrona & Russell, 1990; Goldsmith, 2004; High & Dillard, 2012). By providing them with displays of concern and empathy, the support receiver will experience relief from the mental taxation that is causing them distress. Though the stressor is not "resolved," the distress experienced by the support receiver will be lessened (Goldsmith, 2004; High & Dillard, 2012).

Esteem support

Similar to nurturant types of support, esteem support is centered on improving the support receiver's sense of worth or "bolstering a person's sense of competence or self-esteem" (Cutrona & Russell, 1990, p. 322). Though esteem support is very similar to emotional support, esteem support is often a direct expression of the support receiver's value or worth (Goldsmith, 2004). Much like nurturant support, esteem support can be very useful when paired with uncontrollable stressors or situations where the support receiver is experiencing emotional turmoil (Cutrona, 1990; Holmstrom, 2012). More specifically, esteem support works best when the stressor is directly related to the support receiver's sense of self (e.g., self-confidence issues, being rejected, and failing) (Cutrona, 1990; Goldsmith, 2004; Holmstrom, 2012).

Due to the nature of memes revolving around jokes and making light of darker and heavier situations, it would be expected that individuals sharing memes about darker emotions, such as depression and suicidality, would be perceived as less in need of support of any kind.

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Due to the anticipated perception that those sharing suicidal memes are not in need of support, the following research question was posed:

RQ2: Which types of support will individuals provide after a suicidal meme has been shared?

To examine the process one goes through when contemplating whether or not to provide support to a loved one, the present study will apply the Theory of Motivated Information Management (TMIM) to the context of social support, specifically the process one goes through when deciding whether or not they will provide support to a loved one after viewing a suicidal meme.

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Theory of Motivated Information Management

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The Theory of Motivated Information Management (TMIM), as developed by Afifi and Weiner (2004), posits that individuals will make use of various information management strategies in order to navigate their uncertainty about a particular topic (e.g., whether or not a loved one is suicidal) (see Appendix A for the full model). Previous research has applied TMIM to a variety of contexts including, but not limited to, sexual health (Afifi & Weiner, 2006; Dillow & LaBelle, 2014), end of life preferences (Rafferty, Cramer, Priddis, & Allen, 2015), and romantic partner's dating histories (Lancaster, Dillow, Ball, Borchert, & Tyler, 2016). In each context, those seeking information experience a discrepancy between how uncertain they are and how uncertain they wish to be. The uncertainty leads them to seek information that will alleviate the discrepancy, which happens across three phases: the *interpretation phase*, the *evaluative phase*, and the *decision phase*.

Interpretation phase

The *interpretation phase* of TMIM occurs when individuals experience an *uncertainty discrepancy* that elicits emotions such as anxiety or discomfort. As described above, an *uncertainty discrepancy* occurs when information seekers become "aware of an important issue for which they desire more or less uncertainty than they have" (Afifi & Weiner, 2004, p. 174). In some instances, individuals might desire more uncertainty than they presently have. However, in most cases, the individual desires less uncertainty (Afifi & Robbins, 2015). When individuals experience a large uncertainty discrepancy, their feelings of anxiousness surrounding the topic are heightened as well (Afifi & Morse, 2009).

In the present study, TMIM will be used in a context of support provision as opposed to information seeking. In this application of the model, the formerly labeled information seeker becomes the support provider, the uncertainty discrepancy refers to the support provider's uncertainty of the mental state of a loved one, and the information provider becomes the support receiver. Through this model, the interpretation phase will be used to assess the levels of uncertainty individuals have regarding their loved one's mental state after seeing suicidal memes posted. More specifically, the interpretation phase will determine how uncertain the individual is about their loved one's contemplations of suicide.

Evaluative phase

In the *evaluative phase* of TMIM, the individual experiencing the uncertainty discrepancy evaluates the situation through *outcome assessments* and *efficacy assessments*. Through *outcome assessments*, the individual weighs the expected benefits and costs associated with each information management (support provision) strategy (Afifi & Weiner, 2004). Should the

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perceived outcome generate more benefits, such as successfully helping a loved one through a hard time or becoming closer in the relationship, than costs, such as face threats or damage to the relationship, then the individual will be more likely to proceed with an active strategy to manage information (support) such as information seeking (providing support). Conversely, if the outcome is perceived to be costly, the individual will be more likely to choose an inactive strategy such as information avoidance (not providing support) (Afifi & Morse, 2009; Afifi & Robbins, 2015; Afifi & Weiner, 2004).

In addition to outcome assessments, those experiencing an uncertainty discrepancy also make use of *efficacy assessments*. Through *efficacy assessments*, the individual assesses how efficient they would be while engaging in the information management (support provision) strategy (Afifi & Morse, 2009; Afifi & Weiner, 2004). Such assessments are based on three primary components: *communication efficacy*, *target efficacy*, and *coping efficacy*. Through *communication efficacy*, the individual weighs whether or not they have the skill required to seek the information (provide the support) they desire (Afifi & Morse, 2009; Afifi & Weiner, 2004). Therefore, individuals who judge themselves to have higher communication efficacy are more likely to engage in information seeking (support providing) than are individuals who perceive themselves as having lower communication efficacy. Prior to engaging in an information seeking (support providing) interaction, individuals must evaluate their own ability to approach the situation. For example, individuals who experience anxiety around figures of authority might evaluate themselves as having lower communication efficacy when seeking information from a superior, such as a boss or supervisor. Similarly, those who struggle to provide emotional support might evaluate themselves as having lower communication efficacy when attempting to provide emotional support. According to TMIM, individuals would be less likely to seek

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information from a superior (or provide emotional support) due to their perceived low communication efficacy.

According to TMIM, after evaluating their efficacy in seeking information (providing support), potential support providers consider the efficacy of the person with the information (the person who would receive support; i.e., the target). Through *target efficacy*, individuals assess whether or not the target has the information being sought (or the ability to respond to the type of support being provided) (Afifi & Morse, 2009; Afifi & Weiner, 2004). Regardless of their own efficacy assessment, if the target does not have the desired information, then the interaction will be unsuccessful. In the application of this model to social support, if the potential support provider does not anticipate that the target will positively receive the support, then they likely expect that the interaction will be unsuccessful. Therefore, prior to seeking information (providing support), it is important to determine who has the information being sought (who would be receiving support). For example, if individuals would like to know more about their current health status, a medical professional would likely be perceived as having the highest target efficacy. Conversely, a friend or relative with no medical experience would be perceived as having lower target efficacy. Due to these assessments, it is more likely that this individual would seek information from a medical professional than from a friend or relative. Similarly, a loved one who does not respond well to emotional support would likely be perceived as having lower target efficacy while a loved one who positively responds to emotional support would be perceived as having higher target efficacy.

Once it has been determined that both the information seeker (support provider) can approach the conversation and the information provider (support receiver) has the information being sought (perceived ability to respond to the type of support), it is important to evaluate how

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well the information seeker (support provider) will be able to cope with the information they sought (the conversation following the support provision). Through *coping efficacy*, the individual evaluates whether they will be able to cope with the information (conversation) once the interaction has occurred (Afifi & Morse, 2009; Afifi & Weiner, 2004). If both participants are able to engage in information sharing (support provision) but the information (topic of conversation) is highly sensitive and could harm the information seeker (support provider), then it is less likely that the information seeker (support provider) will seek the information (provide support). For example, an individual being tested for cancer might be curious about their results. However, if the results come back positive, it is likely that the patient will experience emotional distress. In this situation, the patient might have lower coping efficacy as they might not be able to cope with the results. Even though they have the ability to ask the doctor for the results and the doctor can inform the patient of their current health standing, the patient might avoid asking for their results due to an inability to cope with an unwanted result. Similarly, individuals might be uncertain about a loved one's mental state or the possibility that their loved one could be suicidal. After having a conversation with the aforementioned loved one, the individual might struggle with discovering that their loved one wants to kill themselves. Even though they have the ability to have the conversation or provide support to their loved one, the individual might avoid doing so as they might perceive themselves as being unable to cope (having lower coping efficacy) with the result of their loved one's mental state. In the present study, the evaluative phase will be used to assess the individual's perceived ability to provide various types of support (*communication efficacy*), how well the loved one will respond to various types of support (*target efficacy*), and how the individual will cope with communicating about their loved one's potential suicidality (*coping efficacy*).

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Because memes are by definition intended as humorous, it is expected that perceptions surrounding memes about depression and suicidality will be that the individual sharing the meme is joking about their depression and suicidality and therefore might be perceived as having lower target efficacy on the topic of their mental health. Should it be perceived that individuals are joking about their depression and suicidality through these memes, others might feel uneasy due to the light-hearted approach to such a serious topic. For these reasons, individuals might feel less able to provide support (lower communication efficacy) as social support might not be the best form of approach when having conversations about the loved one's emotional state. Similarly, due to the sensitive nature of suicidality, it is likely that individuals would perceive coping efficacy to be lower as it might be more difficult or mentally distressing to have such conversations. These conclusions lead to the following research question:

RQ3: How will participants who have viewed suicidal memes evaluate **a)** target efficacy, **b)** communication efficacy, and **c)** coping efficacy compared to those who do not view them?

Decision phase

In the *decision phase* of TMIM, the information management strategy is decided. Two strategies might be used at this stage: *information seeking* (providing support) and *information avoidance* (not providing support) (Afifi & Morse, 2009; Afifi & Weiner, 2004). According to TMIM, if the outcome assessments are positive and the efficacy assessments are elevated, it is likely that the individual will seek information (provide support) (Afifi & Morse, 2009; Afifi & Weiner, 2004). However, should any of the aforementioned assessments predict a negative interaction or outcome, the individual will be more likely to err on the side of information avoidance (not providing support) (Afifi & Morse, 2009; Afifi & Weiner, 2004). In the present

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study, the *decision phase* will be used to assess which information management strategy will be chosen: *information seeking* (provide support) or *information avoidance* (do not provide support). Due to the anticipated support provider's uneasiness in approaching jokes about depression and suicide with social support, as described above, the following research question was posed:

RQ4: Will individuals whose loved one has shared a suicidal meme be more or less likely to enact information avoidance, through avoidance of support provision, than those whose loved one has not shared a suicidal meme?

Method

The present study employed a four-group experimental online survey design comparing individuals' thought processes on whether or not to provide support to a loved one. An online survey was used for three reasons. First, this type of survey can reach a large number of participants in a shorter frame of time. Second, due to the nature of memes as a component of CMC, displaying the sample memes to participants through a similar channel made the presentation of said memes somewhat naturalistic. Additionally, an online survey allowed for increased face protection as discussions of a loved one's depression and suicidality can be a sensitive topic (High & Solomon, 2011). By allowing participants to have these internal discussions from behind the safety of a computer screen, face threats were minimalized, and confidentiality was promoted.

Participants

The present study recruited 161 participants (46 men, 113 women, 2 genderqueer) from social media networks as well as from communication courses at a Midwestern University.

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Participants reported an average age of 22.03 years (*SD* = 4.95, *range*: 18-61 years) and an average of 14.38 hours spent on social media weekly (*SD* = 11.54, *range*: 0-80 hours weekly). One hundred and twenty-seven participants reported having a loved one who had been diagnosed with depression. Participants reported that these loved ones were family (*n* = 59), friends (*n* = 48), or significant others (*n* = 15) and depressive symptoms were reported as present for an average of 82.48 months (*SD* = 98.67, *range*: 3-780 months). Approximately 27% (26.8%) of participants who reported having a loved one with depression (*n* = 34) also reported that their loved one had attempted suicide in the past, while 56.5% of all participants (*n* = 91) reported having had conversations with their loved one about whether or not they have had suicidal thoughts.

Procedure

After securing approval from the UWM Institutional Review Board (IRB#19.A.254), a recruitment flyer was sent out to communication instructors at the university to pass on to their students while the same flyer was posted on personal SNSs (such as Facebook) with requests to participate in the survey. Participants were required to be at least 18 years old to participate, and university students who completed the survey (see Appendix B) received extra credit for their participation. Participants not affiliated with communication courses at the university were thanked for their participation but were not compensated in any other way.

To participate in the study, participants followed the survey link in the recruitment message. The survey included 6 sections. First, participants answered demographic questions about their age, gender, race, religion, education level, and the amount of time spent on SNSs. Participants' reports on how much time they typically spend on SNSs was collected in order to determine if greater exposure to platforms in which memes are commonly circulated had an

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impact on the interpretation of suicidal memes. Following demographic questions, participants were randomly assigned into one of the four groups: the control group ($n = 38$), the method specific group ($n = 42$), the method non-specific group ($n = 39$), or the passive ideation group ($n = 41$).

All groups were asked to think of a loved one who has been diagnosed with MDD. If participants could not think of a loved one with MDD, they were instructed to think of a loved one and imagine they have been diagnosed with MDD. After this prompt, the control group was directed to the next set of questions while the experimental groups were shown two suicidal memes that were representative of their specific group type (i.e., participants in the method-specific group were shown method-specific suicidal memes, participants in the method non-specific group were shown method non-specific suicidal memes, and participants in the passive ideation group were shown passive ideation suicidal memes). To control for the variety of suicidal memes being circulated, two of each type of meme (method specific, method non-specific, and passive ideation) excluding imagined interaction were included. The experimental groups were then told to imagine that the loved one they just identified had shared the presented memes on social media. After being shown these memes and connecting them to their loved one, all groups continued with the same set of questions inquiring about the type of support they would provide as well as the likelihood that they would provide said support. After completion of the survey, participants were provided with a fact sheet on the warning signs of suicide (see Appendix C) as well as a phone numbers for the National Suicide Prevention Lifeline and local helplines.

After the primary survey, participants were provided with an additional survey asking if they are enrolled in a communication course at the university that offered extra credit for

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participation in the study. Responding "no" directed participants to the end of the survey and thanked them for their participation. Responding "yes" prompted the participant to provide their name and the name of their instructor. Responses to this survey were separated from responses to the primary survey so that confidentiality could be maintained.

Thematic Analysis of Suicidal Memes

To identify and label the different types of suicidal memes being circulated on the internet, the author and an undergraduate research assistant conducted a thematic analysis of 100 suicidal memes. Memes qualifying as suicidal were found online by searching "suicide meme", which produced active suicidal ideation memes, and "never wake up meme," which produced passive suicidal ideation memes. Memes were only considered to be "suicidal memes" if the topic of killing oneself was explicitly presented or implied. Memes about depression that failed to display signs or suicidality were not included.

Two types of memes that emerged were method specific and method non-specific. Method specific memes were suicidal memes that displayed a method that might be used to commit suicide. Examples included showing pictures of nooses, guns, and outlets (i.e., suicide by electrocution). In order to be classified as a suicidal meme, the meme must have presented some form of suicidal ideation or warning sign of suicide. In order for the meme to be classified as a method specific meme, the meme must also have included a specific method of suicide along with the suicidal ideation or warning sign of suicide. Typically, method specific memes would discuss the topic of suicide explicitly through the method (e.g., poison, hanging, gunshot) or through words associated with suicide (e.g., "suicide," "kill myself," "off myself"). In contrast, the second type of meme, method non-specific, did not show any sort of method that could be used to commit suicide. Similar to method specific memes, method non-specific memes

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tended to explicitly discuss suicide or killing oneself through verbal use of suicide associated words. However, method non-specific suicidal memes did not identify any particular method through which the suicide would occur.

A third type of meme that emerged from the analysis was passive ideation memes. Unlike method specific and method non-specific memes, passive ideation memes did not explicitly discuss topics of suicide. Instead, passive ideation memes presented topics related to signs and symptoms of passive suicide ideation (e.g., wanting to die in one's sleep or dying by accident). Passive ideation memes could be identified by topics relating to wanting to die, however, these memes did not express interest in causing one's own death to happen. Examples of passive ideation memes included memes about wanting to never wake up or memes that express little interest in saving oneself from danger.

A fourth meme that emerged, though less common than the first three types, reflected imagined interaction. Imagined interaction memes differed sharply from method specific, method non-specific, and passive ideation memes. Instead of presenting some sort of sign of suicidality, imagined interaction memes revolved around conversations depressed individuals might have with network members. For example, an imagined interaction meme might begin with someone acknowledging the individual's repeated posting of suicidal memes. These memes typically end with either a sarcastic response or no response at all from the "self" being presented implying that they acknowledge what the other person is saying but are giving no verbal or serious response to their concerns. Imagined interaction memes, though lacking a sign of suicidality, should still be considered suicidal memes due to the fact that they explicitly discuss topics related to suicide. A characteristic of imagined interaction memes is that they appear unconcerned about suicidal thoughts and, in turn, might generate perceptions about the poster as

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being unapproachable about the topic. Because this type of meme was significantly less common than the three other suicidal memes identified (less than 2% of the examples), they were not included in the present study. See Appendix D for examples of each the three meme types used in the study.

Measures

The measure that was used to gauge support provision was a modification of the TMIM measures used in Afifi et al., (2006). The measure approached support provision in the same manner as information seeking (i.e., information seeking was substituted with providing support). Participants responded on 7-point Likert-scales (ranging from Strongly Agree to Strongly Disagree) to questions following the model of TMIM in association with social support in order to determine uncertainty discrepancies, issue importance, anxiety levels, and efficacy (communication, target, and coping) levels, as well as questions measuring levels of action-facilitating support, nurturant support, and esteem support. Each measurement involving TMIM (uncertainty discrepancies, issue importance, anxiety levels, and efficacy assessments) used line items adapted from the measures used in Afifi et al., (2006). Line items measuring support types were developed for the present study.

Uncertainty discrepancy was measured through five items similar to the following: "I would know less than I would like to know about my loved one's thoughts of suicide." Reliability scores for measures of uncertainty discrepancies were excellent with a Cronbach's α of .931. Issue importance was measured through ten items similar to the following: "It would be important to me to consider if my loved one was having suicidal thoughts." Reliability scores for measures of issue importance were excellent with a Cronbach's α of .959. Anxiety levels were measured through six items similar to the following: "I would be nervous because of how little I

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know about my loved one's thoughts of suicide." Reliability scores for measures of anxiety levels were excellent with a Cronbach's α of .974.

Communication efficacy levels were measured through four items similar to the following: "I know that I would be able to provide support to my loved one." Reliability scores for measures of communication efficacy levels were good with a reported Cronbach's α of .838. Target efficacy levels were measured through four items similar to the following: "I think that supporting my loved one would encourage them to share their suicidal thoughts with me, if they were having them." Reliability scores for measures of target efficacy levels were good with a reported Cronbach's α of .800. Coping efficacy levels were measured through five items similar to the following: "After supporting my loved one, I am certain that I could handle a conversation about their potential suicidal thoughts." Reliability scores for measures of coping efficacy levels were excellent with a reported Cronbach's α of .914.

Action-facilitating support levels were measured through four items similar to the following: "I would provide support to my loved one by connecting them to someone who can help them." Reliability scores for measures of action-facilitating support were excellent with a reported Cronbach's α of .949. Nurturant support levels were measured through four items similar to the following: "I would provide support to my loved one by providing expressions of concern." Reliability scores for measures of action-facilitating support were excellent with a reported Cronbach's α of .951. Lastly, esteem support levels were measured through four items similar to the following: "I would provide support to my loved one by telling them how loved they are." Reliability scores for measures of action-facilitating support were excellent with a reported Cronbach's α of .958.

Data Analysis

Likelihood of each type of support was analyzed using two sample t-tests to compare the responses of the control group to the responses of the experimental group as well as one-way analysis of variance (ANOVA) tests to compare the responses from each of the four groups (RQ2). Similarly, one-way analysis of variance (ANOVA) tests were used to measure uncertainty discrepancy in knowing if a loved one is suicidal, efficacy assessments (RQ3), issue importance, anxiety levels, and interpretations of and reactions to suicidal memes (RQ1). Two sample t-tests were also used to compare control and experimental group responses to uncertainty discrepancy, efficacy assessments (RQ3), issue importance, anxiety levels, and interpretations of and reactions to suicidal memes (RQ1). To analyze participants' decisions to provide support or not to provide support, three open-ended questions were asked inquiring what would be done (or had been done) to support the loved one, if memes would be (or had been) discussed, and if suicidality would be (or had been) discussed (RQ4).

Results

To answer RQ1, a one-way ANOVA was conducted to compare the effect of meme type (method specific, method non-specific, and passive ideation) on interpretation of memes. After conducting a one-way ANOVA, it was found that meme type significantly determined the interpretation of the memes [$F(2,115) = 6.204$, $p < .005$]. Post hoc analyses using the Scheffé post hoc criterion for significance indicated that participants who saw method non-specific memes ($M = 7.98$, $SD = 3.97$) reported a greater belief that the memes represented a need for support ($p < .005$) than those who saw method specific memes ($M = 11.61$, $SD = 5.05$) or passive ideation memes ($M = 9.98$, $SD = 4.41$). Taken together, these results suggest that individuals

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view method non-specific memes to be serious or cries for help, while method specific memes and passive ideation memes are viewed in a milder manner.

To answer RQ2, an independent-samples t-test was conducted to compare the levels of various types of support in control and experimental conditions. There was not a significant difference in the levels of action-facilitating support to be provided for control (*M* = 7.24, *SD* = 3.47) or experimental (*M* = 8.29, *SD* = 3.64) conditions; *t*(154) = -1.564, *p* > .05. Similarly, there was not a significant difference in the levels of nurturant support to be provided for control (*M* = 5.95, *SD* = 2.71) or experimental (*M* = 5.68, *SD* = 2.38) conditions; *t*(154) = 0.587, *p* > .05. Lastly, there was not a significant difference in the levels of esteem support to be provided for control (*M* = 6.24, *SD* = 2.41) or experimental (*M* = 6.21, *SD* = 2.86) conditions; *t*(154) = 0.456, *p* > .05. According to these results, there is no evidence that meme type has an effect on levels of support to be provided, whether they be action-facilitating, nurturant, or esteem.

To further differentiate group types, a one-way ANOVA was conducted to compare the effect of meme type (control, method specific, method non-specific, and passive ideation) on the levels of various types of support to be provided (action-facilitating, nurturant, and esteem). After conducting a one-way ANOVA, it was found that type of meme shared did not significantly determine the level of action-facilitating support to be provided [*F* (3,152) = 1.168, *p* > .05], the level of nurturant support to be provided (*F* (3,152) = .546, *p* > .05), or the level of esteem support to be provided (*F* (3,152) = .127, *p* > .05). Taken together, these results suggest that exposure to suicidal memes, regardless of which type, does not influence the amount of support one would provide to a loved one.

An independent-samples t-test was conducted to compare uncertainty discrepancy levels, issue importance, and anxiety levels in control and experimental conditions. There was not a

significant difference in uncertainty discrepancies for control ($M = 13.50$, $SD = 4.05$) or experimental ($M = 13.83$, $SD = 4.86$) conditions; $t(158) = -.377$, $p > .05$. Similarly, there was not a significant difference in issue importance for control ($M = 21.82$, $SD = 5.41$) or experimental ($M = 21.93$, $SD = 6.80$) conditions; $t(156) = -0.090$, $p > .05$. Lastly, there was not a significant difference in anxiety levels for control ($M = 16.63$, $SD = 7.41$) or experimental ($M = 14.96$, $SD = 7.01$) conditions; $t(158) = 1.266$, $p > .05$. According to these results, there is no evidence that meme type has an effect on uncertainty discrepancy in knowledge of a loved one's suicidality, issue importance, or anxiety levels.

To further differentiate group types, a one-way ANOVA was conducted to compare the effect of meme type (control, method specific, method non-specific, and passive ideation) on uncertainty discrepancy in levels of knowledge about a loved one's suicidality, issue importance, and anxiety levels. After conducting a one-way ANOVA, it was found that type of meme shared did not significantly determine the uncertainty discrepancy ($F(3,156) = .429$, $p > .05$), issue importance ($F(3,154) = .407$, $p > .05$), or anxiety levels ($F(3,156) = .531$, $p > .05$). Taken together, these results suggest that exposure to suicidal memes, regardless of which type, does not influence the one's uncertainty discrepancy in regards to a loved one's suicidality, nor do suicidal memes influence one's anxiety levels about a loved one's suicidality or their thoughts on how important it is to discuss their loved one's suicidality.

To answer RQ3, an independent-samples t-test was conducted to compare the various efficacies when evaluating support type in control and experimental conditions. There was not a significant difference in communication efficacies for control ($M = 8.03$, $SD = 3.16$) or experimental ($M = 7.50$, $SD = 3.39$) conditions; $t(150) = 0.815$, $p > .05$. Similarly, there was not a significant difference in target efficacies for control ($M = 9.19$, $SD = 3.53$) or experimental (M

= 10.18, *SD* = 4.62) conditions; *t*(152) = -1.198, *p* > .05. Lastly, there was not a significant

difference in coping efficacies for control (*M* = 12.42, *SD* = 5.45) or experimental (*M* = 13.69,

SD = 6.50) conditions; *t*(154) = -1.090, *p* > .05. According to these results, there is no evidence

that meme type has an effect on efficacy levels when deciding whether or not to provide support.

To further differentiate group types, a one-way ANOVA was conducted to compare the

effect of meme type (control, method specific, method non-specific, and passive ideation) on the

various types of efficacies when evaluating support type (communication efficacy, target

efficacy, and coping efficacy). After conducting a one-way ANOVA, it was found that type of

meme shared did not significantly determine the communication efficacy (*F* (3,148) = .787, *p* >

.05), target efficacy (*F* (3,150) = .535, *p* > .05), or coping efficacy (*F* (3,152) = .518, *p* > .05).

Taken together, these results suggest that exposure to suicidal memes, regardless of which type,

does not influence communication, target, or coping efficacy in regard to the decision to provide

support to a loved one.

To answer RQ4, all participants in the experimental groups were asked if their identified

loved one had shared suicidal memes in the past. 76% of participants (*n* = 87) reported that their

loved one had not shared suicidal memes previously, while 24% of participants (*n* = 27) reported

that their loved one had previously shared suicidal memes. Participants who had not seen the

memes before were then asked if they would provide support to their loved one if they had

shared them while participants who had seen the memes before were asked if they had provided

support for their loved one upon seeing the suicidal memes. 59% of the participants who had

previously seen the memes (*n* = 16) said that they did provide support for their loved one while

94% of the participants who had not previously seen the memes (*n* = 82) said that they would

provide support if they saw their loved one sharing suicidal memes. When asked how they

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would, or did, provide support, 68% of participants (*n* = 67) said they would or had provided nurturant support ("I would talk to them [and] ask them what they are feeling"), 27% of participants (*n* = 26) said they would or had provided esteem support ("I would … remind her of her value"), and 5% of participants (*n* = 5) said they would or had provided informational support ("reaching out to them and getting them professional support").

Participants were also asked if they would or had discussed the memes when supporting their loved one or if they would or had discussed suicidality when supporting their loved ones. 51% of participants who had previously seen the memes (*n* = 14) reported that they had discussed the memes when they supported their loved one while 77% of participants who had not seen the memes (*n* = 65) reported that they would discuss the memes when supporting their loved one. Similarly, 48% of participants who had previously seen the memes (*n* = 13) reported that they had discussed suicidality when they supported their loved one while 82% of participants who had not seen the memes (*n* = 70) reported that they would discuss suicidality when supporting their loved one.

Discussion

The present study found minimal support for the initial claim that suicidal memes influence decisions to provide support to a loved one who has depression. It was found that method non-specific memes were more troubling to viewers than method specific or passive ideation memes. This result is somewhat surprising as method specific memes are the most explicit in their displays of suicidal talk. Unlike method specific memes, method non-specific memes only mention suicide, but do not show or talk about a specific method. Further research should explore what component of method non-specific suicidal memes causes them to be more troubling than method specific or passive ideation memes.

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The findings generated in response to RQ2 found that the four groups did not report significantly different levels of support across the three support types: action-facilitating, nurturing, and esteem. This finding might mean that whether individuals are exposed to suicidal memes or not, they will provide the same amount of each type of support to their loved ones. Previous research has shown that nurturant support and esteem support are often provided when an uncontrollable stressor is present, such as mental distress, while action-facilitating support is provided when a controllable stressor is present, such as looking for a new therapist (Cutrona, 1990; Cutrona & Russell, 1990). However, when a perception exists that an individual is not experiencing a stressor, it is significantly less likely that they will receive support from their loved ones (Cutrona, 1990; Cutrona & Russell, 1990). Due to their joking manner, memes about serious topics might communicate to loved ones that the individual sharing the memes is not in need of support. For this claim to have been supported, the experimental groups that were shown suicidal memes (method specific, method non-specific, and passive ideation) would have reported significantly less support than the control group that was not exposed to any suicidal memes. Because there was no significant difference between any of the groups, the findings indicate that suicidal memes did not influence the level or type of support provided to those who share suicidal memes.

Analysis of uncertainty discrepancy, issue importance, and anxiety levels showed that suicidal memes did not significantly impact the interpretation phase when deciding to provide support to a loved one. At the start of the TMIM model, the interpretation phase is where individuals first feel anxious. When individuals experience elevated anxiety levels about a topic that they feel is important, they are more likely to continue through the model and pursue information seeking, or support provision in this application. Similarly, when individuals

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experience a discrepancy in how uncertain they are about the topic, they feel more inclined to take action to resolve the discrepancy. Through the present study, it was found that control groups and experimental groups did not significantly differ in their reports of uncertainty discrepancy, issue importance, or anxiety levels. This finding suggests that suicidal memes do not cause any additional anxiety or lead individuals to desire less of a discrepancy in uncertainty. Similarly, this finding suggests that suicidal memes do not lead the viewers to feel that the issue of their loved one's suicidality is any more or less important than it was prior to viewing the meme.

Much like the interpretation phase, the efficacies in the evaluation phase showed no significant differences between control and experimental groups. In the interpretation phase, individuals evaluate communication efficacy (whether they have the ability to seek the information/provide the support), target efficacy (if the target has the information being sought/if they would respond well to the support), and coping efficacy (how well the individual thinks they would be able to handle the information/conversation), to decide whether or not they should seek information/provide support. If any of the efficacies are evaluated to be low, it is less likely that individuals would seek information, or provide support. Conversely, higher efficacies are associated with greater confidence in the anticipated interaction and, therefore, are linked to greater likelihood that information will be sought, or support will be provided. In the present study, none of the efficacy assessments were significantly different across the four groups, meaning that suicidal memes do not influence an individual's assessment of the anticipated interaction. The findings generated in response to RQ3 suggest that regardless of whether or not a suicidal meme has been shared, individuals do not evaluate their ability to share support, the

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ability of the other person to receive support, or their ability to cope with the conversation to be any different than if they had not seen the suicidal meme.

After evaluating the various efficacies, individuals decide if they seek information (provide support) or not. As mentioned above, if efficacy assessments are evaluated to be low, it is less likely that individuals would seek information, or provide support. In the present study, the decision phase was evaluated through open-ended questions asking if individuals would, or have, provide(d) support to their loved one, what they did or would do to support them, if they discussed or would discuss the suicidal memes, and if they discussed or would discuss suicidality. Through responses to these prompts, it was found that those who have not previously seen a suicidal meme shared by a loved one would be more likely to provide support than those who had previously seen a suicidal meme shared by a loved one. Much like the previous two phases, there was no significant difference between the control group and the experimental groups in regard to whether or not they would provide support to a loved one. This finding suggests that suicidal memes do not influence the decision to provide support to a loved one in regard to their depression or suicidal thoughts.

Further analysis of the qualitative data found that individuals were more likely to provide nurturant support than esteem or action-facilitating support. Upon coding participant responses, it was found that 68% of participants who said that they would or have provide(d) support to their loved one said that they would or have provide(d) support that was categorized as nurturant support. Such support included responses claiming that they would "check in" or "make sure they are okay." Additionally, multiple responses mentioned referring the loved one to a professional for "help." This theme, generated in response to RQ4, suggests that participants feel that their loved ones need more mental and emotional help than they themselves can provide.

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Implications

Practically speaking, the findings of the present study suggest that sharing suicidal memes does not change the amount or type of support that one would receive for their depression or suicidality. This finding suggests that a depressed individual who shares suicidal memes will not be decreasing the amount of support that they receive from loved ones. However, sharing these memes does not increase the amount of support either. This finding may be beneficial for depressed individuals who share these memes out of humor instead of attempts to seek support as levels of support provided do not change. However according to the findings of the present study, depressed individuals who share these memes in attempts to seek support will not receive the increased level of support they so desire. This finding should be noted so that those who share suicidal memes in order to receive support can be informed that an alternative method should be explored.

Theoretically speaking, the present study's application of social support to TMIM suggests a new area of exploration for the theory. From the results gathered for the present study, the model seems to fit the context of deciding whether or not to provide support. However, more in-depth analysis on the intersection of TMIM and social support should be conducted to better determine the fit of this theory with decisions related to social support.

In terms of suicidal meme research, there is still much that can be explored. The present study, however, has provided minimal groundwork that future studies can continue to build off of. Through the findings of the present study, studies revolving around suicidal meme research now have a starting point to continue exploring the perceptions revolving around suicidal memes.

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Limitations and Future Directions

There are a few limitations that warrant consideration in the present study. First, the sample collected was limited in size and gender. With 161 participants, there is possibility that a type II error occurred. A larger sample size could potentially show different results. Similarly, as with most social science studies, the participants of the present study consisted primarily of women. While women are often the primary providers of support, a male perspective could certainly provide additional insight. Additionally, participants were not asked if they themselves experience depressive or suicidal symptoms. This could have provided additional insight into how suicidal memes are perceived from the perspective of someone who can empathize with the poster. In the present study, suicidal memes were exclusively examined from the viewpoint of someone receiving them. In order to adequately determine what message these memes are trying to send, an analysis from the perspective of the poster should be done. Lastly, this application of TMIM is still largely theoretical and untested. Future research should test the fit of social support within the model of TMIM. Further research should also explore those who share suicidal memes and what their interpretations of the memes are. Additionally, future research should test the validity of the sample memes through use of new sample memes, potentially including imagined interaction memes.

Conclusion

Through a four-group experimental design, the effects of suicidal memes were analyzed to determine if seeing a suicidal meme shared by a loved one impacts the type of amount of support provided to a loved one with depression. Types and likelihood of support were applied to the TMIM model to evaluate the process through which individuals decide whether or not they should provide support to a loved one with depression. After analyzing data reported by 161

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participants, it was found that suicidal memes do not influence any part of the TMIM model (interpretation phase, evaluation phase, or decision phase). However, method non-specific memes were evaluated to be of more concern than any other type of meme. These findings suggest that depressed individuals who share suicidal memes would receive the same type and level of support as depressed individuals who do not share suicidal memes. Additionally, those who were presented with suicidal memes did not report any difference in the various phases of the TMIM model. In sum, it can be deduced that sharing suicidal memes does not alter the amount or type of support that one would receive for depression or suicidality.

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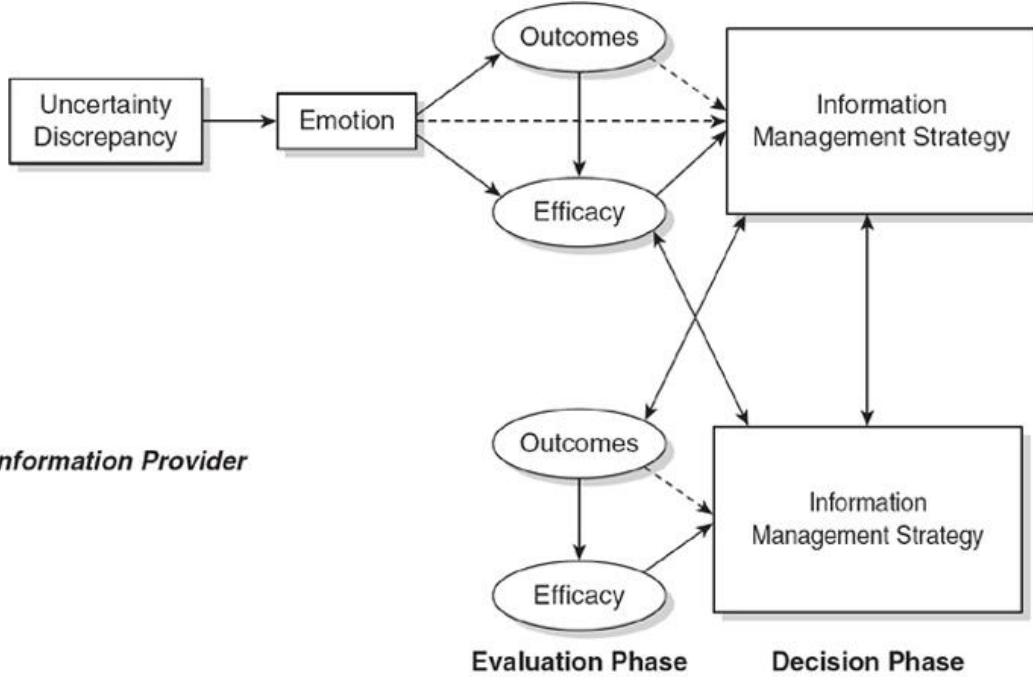Appendix A: TMIM Model

TMIM Information Seeker

Full TMIM Model

Note: The figure is intended as a visual simplification of the general theoretical framework. The dashed paths represent paths that are partly mediated by other variables with which the relevant variable has associations.

R Reverse coded.

<mark>Experimental Group Only</mark>

Demographics

"Hello! Thank you for taking part in our survey. We value your time and responses to our survey. For this survey, we ask that you keep a loved one (family member or friend) who has depression in mind. If you do not have a loved one with depression, please pick a loved one and have them in mind instead, It will start by asking general questions about you and your loved one and then transition to asking about your thoughts and feelings about your loved one's mental state. Plan for about 30-60 minutes to respond to the entire survey. As a reminder, your participation is voluntary and you are able to not answer any of the questions, or drop out at any time with no penalty.

First, we want to know some background about you and your loved one.

1. What gender do you identify with? I identify as a: woman, man, genderqueer, or other.

2. What is your age? _____

3. What is your ethnicity? White/Caucasian, African American, Hispanic/Latino, Asian, Native American or Alaska Native, Native Hawaiian.

4. Roughly, how many hours a week do you spend on social media (Facebook, Instagram, Twitter, etc.)? _____

5. Do you have a loved one (relative, partner or close friend) who has been diagnosed with depression? Yes, No

   #5 If yes:

a. How long has this person had depression (that you know of)? _____

b. What is your relation to your loved one with depression (your Father, Mother, Brother, Sister, Cousin, Grandparent, Aunt, Uncle, Niece, Nephew, Grandchild, Friend)? _____

c. Has your loved one attempted suicide in the past? Yes, No

#5 If no:

For the remainder of the survey, think about one of your loved ones and imagine that the person has been diagnosed with depression.

a. What is your relation to your loved one (your Father, Mother, Brother, Sister, Cousin, Grandparent, Aunt, Uncle, Niece, Nephew, Grandchild, Friend)? _____

b. Has this person experienced depression that you know of? Yes, No

#5b If no, skip to #6

d. How long has this person had depression (that you know of)? _____

e. What is your relation to your loved one with depression (your Father, Mother, Brother, Sister, Cousin, Grandparent, Aunt, Uncle, Niece, Nephew, Grandchild, Friend)? _____

f. Has your loved one attempted suicide in the past? Yes, No

6. Have you had a conversation with your loved one about whether they are having suicidal thoughts? Yes, No

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Experimental Group 1: Method Specific
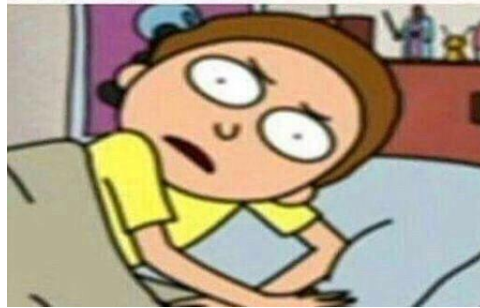

Experimental Group 2: Method Non-Specific

Experimental Group 3: Passive Ideation

when you hear something go bump in the dark but then you remember you don't care whether you live or die

That annoying feeling when you wake up in the morning instead of dying in your sleep.

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Uncertainty Discrepancy

[EXPERIMENTAL GROUPS ONLY!!] "Imagine that your loved one has shared the memes you just saw on social media. Please respond to the following questions with the previous memes in mind."

[CONTROL GROUP] "As you answer the following questions, please think of the specific loved one who has been diagnosed with depression that you reported on the previous page. If you cannot think of anyone close to you with depression, please think of a loved one and IMAGINE they have been diagnosed with depression as you answer the following questions using the 7-point Likert scale (strongly disagree to strongly agree)."

1. I would know less than I would like to know about my loved one's thoughts of suicide.

   7-point Likert scale: Strongly Disagree – Strongly Agree

2. I would not know if my loved one is having thoughts of suicide and I would want to know more.

   7-point Likert scale: Strongly Disagree – Strongly Agree

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3. I would be very uncertain if my loved one was having thoughts of suicide.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

4. I would want to know more than I do about depression and suicidal thoughts.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

5. I would want to know if my loved one was having thoughts of suicide.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

Anxiety

1. Thinking about the difference between how much I know, compared to how much I would want to know, about my loved one's thoughts of suicide would make me anxious.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

2. I would be nervous because of how little I know about my loved one's thoughts of suicide.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

3. Not knowing how my loved one might react to conversations about suicide would make me anxious.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

4. Not having as much information as I would like to have about my loved one's thoughts of suicide would make me nervous.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

5. It would make me anxious to think about how little I would know about my loved one's thoughts of suicide.

>   7-point Likert scale: Strongly Disagree – Strongly Agree

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6. Not knowing how my loved one might react to conversations about suicide would make me anxious.

7-point Likert scale: Strongly Disagree – Strongly Agree

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Issue Importance

[EXPERIMENTAL GROUPS ONLY!!] "Continue to imagine that your loved one has shared the memes you just saw on social media. Please respond to the following questions with the previous memes in mind."

[CONTROL GROUP] "As you answer the following questions, please continue to think of the specific loved one who has been diagnosed with depression that you reported on the previous page. If you could think of anyone close to you with depression, please continue to think of the same loved one and IMAGINE they have been diagnosed with depression as you answer the following questions using the 7-point Likert scale (strongly disagree to strongly agree)."

1. It would be important to me to consider if my loved one was having suicidal thoughts.

7-point Likert scale: Strongly Disagree – Strongly Agree

2. It would be critical to our relationship to consider if my loved one was having suicidal thoughts.

7-point Likert scale: Strongly Disagree – Strongly Agree

3. Potentially knowing if my loved one was having suicidal thoughts is important to me.

7-point Likert scale: Strongly Disagree – Strongly Agree

4. I believe that knowing if my loved one was having suicidal thoughts is important.

7-point Likert scale: Strongly Disagree – Strongly Agree

Outcome Expectancies

1. I assume that knowing if my loved one is having suicidal thoughts would be beneficial to our relationship.

    > 7-point Likert scale: Strongly Disagree – Strongly Agree

2. I expect that knowing if my loved one was having suicidal thoughts would be beneficial to our relationship.

    > 7-point Likert scale: Strongly Disagree – Strongly Agree

3. I think that the benefits of talking about if my loved one is having suicidal thoughts would be big enough to outweigh the drawbacks.

    > 7-point Likert scale: Strongly Disagree – Strongly Agree

4. I expect that my loved one would have a good reaction to discussing if they were having suicidal thoughts.

    > 7-point Likert scale: Strongly Disagree – Strongly Agree

5. I expect that a conversation about if my loved one was having suicidal thoughts would have too many drawbacks. R

    > 7-point Likert scale: Strongly Disagree – Strongly Agree

6. I think that knowing if my loved one is having suicidal thoughts would be more beneficial than harmful.

    > 7-point Likert scale: Strongly Disagree – Strongly Agree

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Efficacies

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"**The following questions will reference you potentially providing support to your loved one. For this section please think of support in any sense that you would potentially provide support to a depressed loved one.**"

Communication Efficacy

1. I believe that if I decided to support my loved one, I would be able to discuss whether they were having thoughts of suicide.

   7-point Likert scale: Strongly Disagree – Strongly Agree

2. I know that I would be able to provide support to my loved one.

   7-point Likert scale: Strongly Disagree – Strongly Agree

3. I think that I would have the ability to provide support to my loved one.

   7-point Likert scale: Strongly Disagree – Strongly Agree

4. I know that if I decided to provide support to my loved one, I would be able to talk about my loved one's suicidal thoughts, if they were having them.

   7-point Likert scale: Strongly Disagree – Strongly Agree

Target Efficacy

1. If I supported them, I would trust my loved one to be honest about if they were having suicidal thoughts.

   7-point Likert scale: Strongly Disagree – Strongly Agree

2. I believe that my loved one would be aware of their suicidal thoughts if they were having them.

   7-point Likert scale: Strongly Disagree – Strongly Agree

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3. I think that supporting my loved one would encourage them to share their suicidal thoughts with me, if they were having them.

> 7-point Likert scale: Strongly Disagree – Strongly Agree

4. I believe that if I provided them with support, my loved one would provide me with clear information about if they were having suicidal thoughts.

> 7-point Likert scale: Strongly Disagree – Strongly Agree

Coping Efficacy

1. After supporting my loved one, I am certain that I could handle a conversation about their potential suicidal thoughts.

> 7-point Likert scale: Strongly Disagree – Strongly Agree

2. I know that I would have no problem coping with my loved one's suicidal thoughts, if they were having them.

> 7-point Likert scale: Strongly Disagree – Strongly Agree

3. After providing support, I think that I would be able to fully cope with a conversation about my loved one's potential suicidal thoughts.

> 7-point Likert scale: Strongly Disagree – Strongly Agree

4. I believe that, if I decided to support to my loved one, I would be able to cope with their suicidal thoughts (if they were having them).

> 7-point Likert scale: Strongly Disagree – Strongly Agree

5. After providing them with support, I believe that I could cope with finding out that my loved one was suicidal.

> 7-point Likert scale: Strongly Disagree – Strongly Agree

Outcome: Decision to Provide Support

[EXPERIMENTAL GROUPS ONLY!!] "Continue to imagine that your loved one has shared the memes you just saw on social media. Please respond to the following questions with the previous memes in mind using the 7-point Likert scale (very unlikely to very likely)."

[CONTROL GROUP] "Please continue to think of your loved one (close friend, relative, or partner) as you answer the following questions using the 7-point Likert scale (very unlikely to very likely)."

Action-Facilitating Support

"I would provide support for my loved one by:"

1. Providing advice.

2. Providing information on the subject.

3. Connecting them to someone who can help them.

4. Doing favors for them.

Nurturant Support

"I would provide support for my loved one by:"

1. Providing expressions of empathy.

2. Providing expressions of concern.

3. Including them in shared interests.

4. Including them in group activities.

Esteem Support

"I would provide support for my loved one by:"

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1. Giving them compliments.

2. Telling them how much people like them.

3. Telling them how loved they are.

4. Boosting their self-esteem.

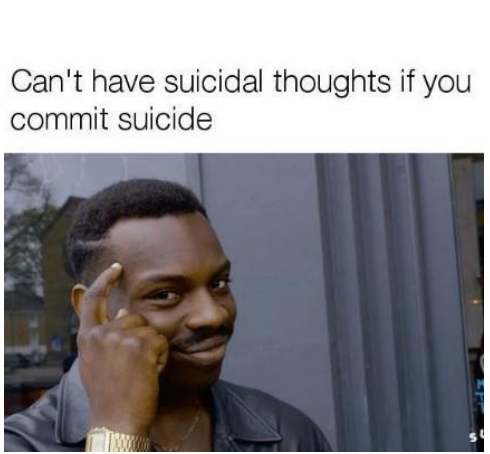---PAGE BREAK--

==Meme Influences==

=="Recall the memes you were asked to imagine your loved one posting to social media."==

Experimental Group 1: Method Specific

Experimental Group 2: Method Non-Specific

Experimental Group 3: Passive Ideation

when you hear something go bump in the dark but then you remember you don't care whether you live or die

That annoying feeling when you wake up in the morning instead of dying in your sleep.

" Please respond to the following questions using the 7-point Likert scale (Strongly Disagree – Strongly Agree) while keeping these memes in mind."

1. The memes presented earlier would make me anxious if my loved one shared them.

   7-point Likert scale: Strongly Disagree – Strongly Agree

2. I believe my loved one would share these memes on social media as a cry for help.

   7-point Likert scale: Strongly Disagree – Strongly Agree

3. These memes look like something my loved one would share on social media.

   7-point Likert scale: Strongly Disagree – Strongly Agree

4. These memes look like something my loved one **has** shared on social media.

   7-point Likert scale: Strongly Disagree – Strongly Agree

"Please rank the above memes based on the following:"

5. I believe these memes are a sign of suicidal thoughts.

   7-point Likert scale: Strongly Disagree – Strongly Agree

6. I believe these memes are a cry for help.

   7-point Likert scale: Strongly Disagree – Strongly Agree

7. I believe these memes are a sign that the person sharing them needs support.

8. Has your loved one shared memes of these nature in the past? Yes, No

    #8 If yes:

9. When your loved one shared these memes, did you provide support to your loved one? If so, how? _____

10. Did you discuss the memes with your loved one? If so, how? _____

11. Did you discuss if your loved one was suicidal? If so, how? _____

    #8 If no:

12. Imagine your loved one shared these memes. Would you provide support to your loved one? If so, how? _____

13. Would you discuss the memes with your loved one? If so, how? _____

14. Would you discuss if your loved one was suicidal? If so, how? _____

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Meme Ranking

"Please rank the following sets of memes based on how concerned you would be if your loved one shared them (1 = least concerned, 3 = most concerned)."

A:

B:

C:

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Are you taking this survey for extra credit in a communication course at the University of

Wisconsin-Milwaukee? Yes, No

➔ Selecting Yes redirects to the separate extra credit survey

➔ Selecting No redirects to the end of the survey

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Extra Credit Survey

What is your first and last name? _____

What is the name of the Communication instructor for the class you would like to receive extra credit? _____

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Thank you for your time! We appreciate your responses. Please use the following fact sheet on warning signs of suicidality if you are concerned that anyone you know might be suicidal.

Warning Signs of Suicide

If someone you know is showing one or more of the following behaviors, he or she may be thinking about suicide. Don't ignore these warning signs. Get help immediately.

- Talking about wanting to die or to kill oneself

- Looking for a way to kill oneself

- Talking about feeling hopeless or having no reason to live

- Talking about feeling trapped or in unbearable pain

- Talking about being a burden to others

- Increasing the use of alcohol or drugs

- Acting anxious or agitated; behaving recklessly

- Sleeping too little or too much

- Withdrawing or feeling isolated

- Showing rage or talking about seeking revenge

- Displaying extreme mood swings

Get Help

If you or someone you know needs help, call the National Suicide Prevention Lifeline at 1-800-273-TALK (8255). Trained crisis workers are available to talk 24 hours a day, 7 days a week.

If you think someone is in immediate danger, do not leave him or her alone—stay there and call 911.

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www.manaraa.com

Method Specific Theme

Method Non-Specific Theme

Passive Ideation Theme

That annoying feeling when you wake up in the morning instead of dying in your sleep.

when you hear something go bump in the dark but then you remember you don't care whether you live or die

Imagined Interaction Theme

Me & my friends : *Makes suicide pact*

Me: *Trys to commit suicide*

Friends:

Friends: "Are you okay?"
Me: "Yeah"
Friends: "But your memes increasingly theming suicide and crippling depression."
Me: