

Which Emotion(s) Mediate the Relationship Between Mental Illness and Trust?

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Abstract

Previous literature has shown that the stigma of mental illness can have serious negative effects on trust ratings in the person suffering from the illness. Furthermore, prior studies have shown that general affect (emotions) mediate the relationship between mental illness stigma and trust; that is, people trust those with mental illness less because they feel more negatively towards them. The current study expands on these findings by analyzing specifically which emotions mediate this relationship, and how strong that mediation effect is. We used Ekman and Friesen's (1971) six universal facial expressions of emotions to test this missing gap in the literature. In two studies, participants were presented with a target individual who had severe and chronic depression (versus a control group) and asked to provide ratings of affect and trust in the target individuals. In Study 1, we replicated a previous finding that general affect mediates the relationship between mental illness and trust. In Study 2, we found that of the six universal emotions, only Happiness had a significant

mediating effect on the relationship between mental illness and trust. We discuss the theoretical, practical and methodological implications of this data.

Keywords: mental illness, trust, emotions, affect, mediation

1. Introduction

Depression is an international mental illness that affects about 350 million people of all ages (World Health Organization, 2012). Individuals diagnosed with a mental illness, such as depression, face the challenges of both societal and internalized stigma. Although the term stigma originated from bodily marking denoting undesirable persons within a society (Fisher, 2002), the term has a vaster meaning by current cultural labels. Stigmatization occurs when undesirable qualities or circumstances are associated with a particular individual or group resulting in devaluation (Jones, Farina, Hastorf, Markus, Miller, & Scott, 1984; Link & Phelan, 2001).

Individuals can experience stigma in two ways, through social environments and interactions or through internalization. Social stigmas are experienced when other members of society negatively interact with individuals identified as having a mental illness (Corrigan & Kleinlein, 2005). Internalization of social stigmas can manifest into self-stigma, resulting in increasing self-criticism (Link, 1987). This paper focuses on the six universal emotions and their mediating effects on mental illness and trust.

1.1 Stigma and Intergroup Dynamics

In order to better understand the negative effects that stigmatized groups face, the importance of intergroup dynamics must be considered. Interaction within a group can impact the social constructs of stigma formation. Therefore, mental illness stigma literature must be considered within the intergroup framework.

Human nature rewards social interaction through protection, affection, and resources (Brewer, 2001). Literature consistently validates the benefits and validation of in-group membership through trust and cooperation (Brewer, 1979; Brewer & Brown, 1998). Members of out-groups receive minimal levels of trust and are often met with high rates of tension and skepticism (Insko, Schopler, Hoyle, Dardis, & Graetz, 1990; Insko, Schopler, & Sedikides, 1998).

For those suffering from mental illness, the rates of discrimination and being placed in an out-group vastly outweighs the mental illness symptoms themselves (Link, Struening, Rahav, Phelan, & Nuttbrock, 1997). Sufferers can be denied access to proper medical care, employment opportunities, and or housing (Link & Phelan, 2001; Smith, 2002; Link & Phelan, 2006; Stuart, 2006). Furthermore, certain cultures view mental illness in such a light that they reject these individuals from their communities entirely (Davidson, Shahar, Stayer, Chinman, Rakfeldt, & Tebes, 2004; Kirkwood & Stamm, 2006; Lauber, Nordt, Falcatto, & Rossler, 2004). A possible diagnosis of mental illness can also deter individuals from seeking treatment due to the associated stigmas (Link & Phelan, 2006). Based on these stigmas, researchers are working to diminish these biases.

1.2 Stigma, Erroneous Beliefs, and Social Distancing

The general public often misperceives that those diagnosed with mental illnesses cause their own disorders (Gureje, Olley, Ephriam-Oluwanuga, & Kola, 2006). Particular erroneous and

unfounded beliefs about those with mental illness include that they must be cared for by professionals and are unable to make responsible health care decisions (Corrigan, Edwards, Green, Diwan, & Penn, 2001). A lack of understanding, knowledge, or contact with individuals with mental illness can perpetuate inaccurate beliefs about symptoms and treatment, resulting in apathy towards diagnosed individuals (Baumann, 2007; Harris & Fiske, 2006).

Unfortunately media has perpetuated the erroneous beliefs that those with mental illness should be feared due to violent character portrayals (Angermeyer, Matschinger, & Corrigan, 2004; Corrigan, River, Lundin, Uphoff-Wasowski, Champion, Mathisen et al 1999; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 2007; Haslam, Bain, Douge, Lee, & Bastian, 2005; Leyens, Demoulin, Vaes, Gaunt, & Paladino; Wahl, 1995). These beliefs have not only increased the stigma associated with mental illness but have also preserved the notion that sufferers lack humanity (Martinez, Piff, Mendoza, -Denton and Hinshaw, 2011). Perceptions of dangerousness are also a contributing factor in mental illness stigma. Individuals diagnosed with a mental illness as a result of genetics or stress are more likely to experience positive social interaction than those diagnosed as being dependent on drugs or alcohol (Martin, Pescosolido, & Tuch, 2000).

Further research shows that those diagnosed with a severe mental illness are more likely to experience social distancing (Kasow & Weisskirch, 2010). For example, schizophrenia as compared to depression. In addition, it is less likely that Americans would interact with someone diagnosed with a mental illness than someone with a physical deformity (Harris & Fiske, 2006). These perpetuated attitudes and beliefs only further manifest into negative reactions and interactions with those being labeled as mentally ill. Society inaccurately views those individuals diagnosed with mental illness as being helpless and unable to care for themselves or others.

The previous study from Rice, Richardson, and Kraemer (2014) identified trust as a mediating factor in out-group degradation. The construct of trust is widely studied in many areas of research. Trust is used in social interactions to navigate motives and behaviors or perceived groups (Lewicki, McAllister, & Bies, 1998; Kollock, 1994; Rotter, 1980). Trust in social relationships foster cooperation and goal attainment (Kollock, 1994) and further preserves positive social relationships (Rotter, 1980). Communities thrive when members display trust for one another (Fisher & Brown, 1988; Soloman & Flores, 2001). In addition, members who trust one another display mutual dependence (Michalos, 1990) and have increased rates of cooperation (Burt & Knez, 1995; Chwe, 1999). When trust is not prevalent within communities, mental illness stigmatization is more likely to occur.

Exposure to these stigmatized groups greatly reduces the negative interactions from in-group members (Corrigan, Morris, Michaels, Rafacz, & Rusch, 2012; Couture & Penn, 2003). Trust can be established and stigma between in-groups and out-groups eliminated when contact is increased or someone with a mental illness becomes part of an in-group (Bornstein, 1989; Harmon-Jones & Allen, 2001; Lee, 2001; Zajonc, 1968; Bizub & Davidson, 2011). Furthermore, empathy and contact with the out-group can be increased through

self-disclosure (Turner, Hewstone, & Voci, 2007; Miller, 2002). Trust also fosters intergroup conflict resolution and increased trust with out-group members (Tam, Hewstone, Kenworthy, & Caines, 2009). However, measures of attitude are distinct from measures of trust, revealing that trust is a more accurate predictor of behaviors towards out-group members.

Comparable to stigma, lack of trust in out-group members creates negative attitudes and actions towards out-group members. Even though unfounded beliefs about mental illness preserve current stigmas, personal interactions with sufferers can help to reverse these assumptions. Contact with individuals with mental illness can help to dispel some of the baseless assumptions of inhumanity and dangerousness. Furthermore, increased contact can decrease social distancing and curb trust deficits.

Both measures of trust and affect must be considered when examining stigma associated with mental illness (Tam et al, 2009). While measures of attitude correspond to liking or disliking members of a group, trust corresponds to the positive or negative behaviors towards members of the out-group (Tam et al, 2009). Therefore, research indicates that impaired levels of trust contribute to social stigmas and discrimination towards out-group members. Considering that trust is associated more with affect, Rice, Richardson, and Kraemer (2014) examined affect as a mediator in relation to distrust of out-groups.

1.3 The Role of Affect in Trust

The role of affect is considerable when looking at the research on trust. In psychological terms, affect is the “observable expression or emotion” (Encyclopedia of Mental Disorders, 2014). Although affect refers to all observable emotions a person experiences, the current study focuses on the six universal facial gestures of sadness, happiness, surprise, disgust, fear, and interest. Researchers are striving to understand how these emotions, or affect, mediate the decision-making processes. Research indicates that affect is regulated by automatic responses to incoming stimuli (Frijda, 1986; Levenson, 1994; Oatley & Johnson-Laird, 1996). The evaluative process of trust, an emotional regulated behavior, is then an affect-based construct (Rice, Richardson, & Kraemer, 2014).

McAllister (1995) outlined affect-based trust “as a type of trust in which sincere concern and support creates emotional ties between individuals” (Rice et al., 2014, p. 8). Trust, although mediated by individual factors, also exists in social groups, in which affect moderates trust (Brewer & Alexander, 2002). Furthermore, intergroup dynamics can foster or diminish trust through affect. For example, violation of in-group norms can result in negative emotional interactions with out-group violators (Brewer, 2001). These types of interactions with out-group individuals can translate into stereotyping and stigmatization of the group as a whole, such as those diagnosed with mental illness (Easgly, Mladinic & Otto, 1994; Esses, Haddock, & Zanna, 1993; Jackson, Hodge, Gerard, Ingram, Ervin, & Sheppard, 1996). These negative experiences or emotions can further feelings of distrust with the group as a whole, through response to emotional interactions (Hewstone, Rubin, & Willis, 2002).

1.4 Emotions, Trust, and Affect

Several studies indicate that the state of an individual's mood plays a role in their perceptions of others (Clore, Schwarz, & Conway, 1994; Bless & Fiedler, 2006; Bodenhausen, Mussweiler, Gabriel, & Moreno, 2001; Forgas, 2006; Schwarz & Clore, 2007). It is also beneficial to the understanding of the current study to mention the differences between integral and incidental affect. Integral affect is provoked by a stimulus within the context, whereas incidental affect occurs from stimuli outside of the context (Bodenhausen, 1993; Lerner & Ketner, 2000). The current study builds on Rice, Richardson, and Kraemer (2014) by looking deeper into affect and determining which of the six universal emotions has the strongest mediating effect in trustworthiness of individuals with mental health.

In Rice, Richardson, and Kraemer (2014) affect was found to be a mediating factor in the evaluation of trust in persons described as having mental illness. The study indicated that those individuals with a known mental illness, specifically depression or anxiety disorder, are perceived as less trustworthy and are considered less dangerous than individuals with substance dependency issues. The study also notes the rate of contact with various mental illnesses in relation to levels of trust. For example, members of society are better acquainted with symptoms and treatment for anxiety and depression but less likely for more severe disorders, such as schizophrenia. This lack of knowledge and contact further perpetuates fear and distrust of the identified individual.

1.5 The Six Universal Emotions

The idea of innate and universal facial expressions as having links to human emotions was noted by Darwin in the late 1800's (Izard, 1994). Aristotle cataloged on how a person's physical facial appearance could reveal deeper characteristics, such as a smile indicating happiness (Russell, 1994). Izard (1994) indicated that "specific expressions may be either signs or symbols of specific feelings and intentions" (p. 288). For example, a facial expression of anger may convey that the person displaying the angry emotion is upset about a situation in their direct environment and intends to do something to correct the situation. Including anger and happiness, there are six emotions that are universally recognizable to almost every culture.

The six universal emotions as described by Ekman and Friesen (1971), include happiness, sadness, anger, fear, surprise, and disgust. Through studies using both preliterate and literature cultures with varying degrees of exposure to Western media (Ekman & Friesen, 1969; Ekman, Sorenson, & Friesen, 1969; Izard, 1968, 1969) Ekman and Friesen established that "particular facial behaviors are universally associated with particular emotions" (p. 128). Taking into account the rates of depression prevalent among many cultures today, this study considers the mediating effects of the six universal emotions on individuals described as having depression.

2. Current Study

Previous research has shown that when a person is stigmatized with a mental illness, then others feel more negatively towards that person and tend to trust her or him less. While this same research has also shown that affect mediates the relationship between mental illness and

trust (Rice, Richardson & Kraemer, 2014), there is a missing gap in the literature that is filled by the current study. Specifically, it is unknown what type of emotion mediates the relationship between mental illness and trust. While it is useful to know that affect, in general, has this mediating effect, it would be much more useful to know which emotion plays the strongest role in that mediation. The current study employs the six universal emotions described by Ekman and Friesen (1971) to accomplish this goal. For our purposes, we chose depression as the mental illness described in our target individual. We did this because of the common nature of the illness and the potential stigma that this illness has on those who suffer from it.

In the first study, participants were asked to rate how they felt about a university student who was described as having severe and chronic depression. In a control condition, no information was provided about the student's mental health. Participants were then asked to provide ratings of trust in the target individual. This study was meant to provide a conceptual replication of previous findings in order to set the stage for the second study. In the second study, participants were asked to rate how they felt about the target individual along six axes: 1) Anger, 2) Disgust, 3) Fear, 4) Happiness, 5) Sadness, and 6) Surprise. These six universal emotions were taken from Ekman and Friesen's (1971) seminal work. Participants were then asked to rate their trust in the target individual. We hypothesized the following:

- 1) That affect ratings in Study 1 would become more negative for the target individual identified as suffering from depression.
- 2) That trust ratings in Study 1 would decrease for the target individual identified as suffering from depression.
- 3) That affect, in general, would mediate the relationship between the condition and trust in Study 1.
- 4) That ratings of the six universal emotions in Study 2 would differentially decrease for the target individual identified as suffering from depression.
- 5) That there would be differential mediation effects in Study 2 of the six universal emotions on the relationship between condition and trust; that is, not all of the emotions would mediate that relationship equally. We did not specifically predict which emotions would mediate that relationship given the lack of literature on the topic.

3. Study 1

3.1 Method

3.1.1 Participants

One hundred and forty-four (58 females) participants from the United States were recruited via a convenience sample using Amazon's® Mechanical Turk® (MTurk). MTurk provides participants who complete human intelligence tasks in exchange for monetary compensation. Prior research shows that data from MTurk is as reliable as normal laboratory data

(Buhrmester, Kwang, & Gosling, 2011; Germine, et al., 2012). The mean age was 33.87 ($SD = 10.59$).

3.1.2 Materials and Procedure

Participants first signed an electronic consent form. They were then given instructions about the study. Following this, they were presented with a scenario about a university student named Aarav. Specifically, they were asked to “*Imagine that you met a person named Aarav recently. You know that he goes to university. You also know that in the past 6 months, he has had a chronic and severe period of low mood (depression).*” In a separate control condition, they were simply told that Aarav goes to university.

Next, participants were asked to rate how they felt about this on three separate 7-point Likert-type scales ranging from “extremely negative/bad/unfavorable” to “extremely positive/good/favorable” with a neutral choice of zero. Following this, trust in the target individual was measured using two statements. The statements were, “*I think Aarav is a trustworthy person*” and “*I would trust Aarav*” Participants rated their trust in the target and the trustworthiness of the target on two 5-point bipolar Likert scales from -2 (strongly disagree) to +2 (strongly agree). They were allowed to pick a Neutral option with a zero value. To avoid reverse causal effects, the mediating variable was presented temporally prior to the outcome variable (Kenny, 2011). Lastly, participants were asked basic demographics questions, debriefed, and paid for their time.

3.2 Results

3.2.1 Affect Measures

Prior to conducting analyses on the affect data, the three measures of affect were subjected to a Cronbach’s Alpha test to measure internal consistency. The scores ranged from .80 to .94. Thus, all affect measures were combined for the following analyses. A t-test between the two conditions revealed that affect differed as a function of the condition, $t(142) = 17.40, p < .001, d = 2.92$, indicating that participants felt more negatively about the target individual who suffered from depression ($M = -1.19, SD = .76$) than his counterpart ($M = 1.25, SD = .91$).

3.2.2 Trust Measures

Prior to conducting analyses on the trust data, the two measures of trust were subjected to a Cronbach’s Alpha test to measure internal consistency. The scores ranged from .92 to .95. Thus, both trust measures were combined for the following analyses. A t-test between the two conditions revealed that trust differed as a function of the condition, $t(142) = 5.97, p < .001, d = 1.00$, indicating that participants trusted the target individual who suffered from depression ($M = -0.19, SD = .82$) less than his counterpart ($M = 0.56, SD = .68$).

3.2.3 Mediation Analyses

The paths for the mediation analyses can be found in Figure 1. In order to conduct the mediation analysis, the correlation between Condition and Trust was first found to be significant, $r = .448, p < .001$, showing that the initial variable correlated with the outcome

variable. The standardized path coefficients were: Condition to Affect ($.825, p < .001$); affect to Trust ($.424, p = .001$); Condition to Trust controlling for Affect ($.099, p = .44$). These data show that Affect had total mediation on the relationship between Condition and Trust.

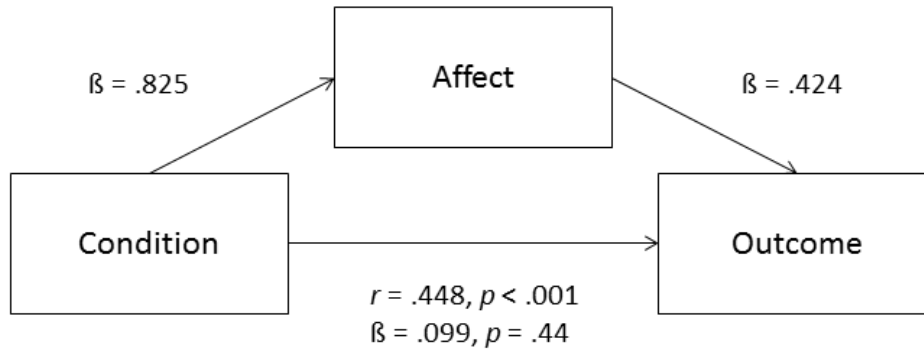


Figure 1. Mediation analysis from Study 1

3.3 Discussion

The purpose of Study 1 was to replicate the findings from previous research that affect mediates the relationship between mental illness and trust (Rice, Richardson & Kraemer, 2014). The results from Study 1 were straightforward. As predicted, the affect ratings did decrease for the target individual identified as suffering from depression compared to the control condition. Again, as predicted, the trust ratings also decreased similarly. Lastly, in line with our third hypothesis, affect had total mediation on the relationship between the condition (mental illness or control) and the outcome variable (trust).

4. Study 2

The purpose of Study 2 was to further the knowledge in the field about the effect that emotion has on ratings of trust when a target individual is described as having a mental illness. While we agree that it is useful to know that affect mediates the relationship between mental illness and trust, we argue that it would be more useful to know which specific emotion has the strongest mediating effect, or if all six of the universal emotions described by Ekman and Friesen (1971) have equivalent mediating effects. Given the nature of the six emotions, we suspected that there would be differential effects of the six emotions on ratings of affect and trust, but were unable to make predictions beyond that.

4.1 Method

4.1.1 Participants

One hundred and forty-four (58 females) participants from the United States were recruited via a convenience sample using Amazon's® Mechanical Turk® (MTurk). The mean age was 31.80 ($SD = 9.70$).

4.1.2 Materials and Procedure

Study 2 was identical to Study 1 with the following important exception. Instead of asking participants to rate how they felt about the target individual based on three Likert-type scales, participants instead were presented with images (see Figure 2) of the six universal emotions (Ekman & Friesen, 1971) and asked to rate “*Based on the scenario above, how strongly do you feel like the image shown?*” Participants manipulated a slider with their computer mouse. The slider had scale ends of “*I do not feel this way at all*” to “*I extremely feel this way*”. The slider scored the responses on a numerical scale from 0 – 100; however, participants were not aware of this. Participants did this for each of the six images.

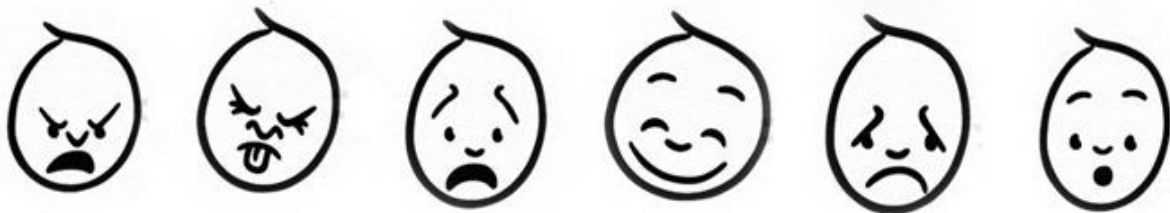


Figure 2. Six emotions from Ekman and Friesen’s (1971) work are represented here with images. These images were validated in a separate pilot study

We wish to note that a separate pilot study was conducted using 78 participants in order to test whether the six images accurately measured the six universal emotions. Participants were asked to identify the emotion that was best expressed in each image. The accuracy rate was 96%.

4.2 Results

4.2.1 Affect Measures

The affect data can be found in Figure 3. A two-way mixed ANOVA was conducted on the data, with Condition as a between-participants factor and TypeofEmotion as a within-participants factor. There were main effects of Condition, $F(1, 198) = 32.32, p < .001, partial\ eta\text{-squared} = .14$, and TypeofEmotion, $F(5, 990) = 77.45, p < .001, partial\ eta\text{-squared} = .28$; however, these effects are qualified by a significant interaction between Condition and TypeofEmotion, $F(5, 990) = 139.50, p < .001, partial\ eta\text{-squared} = .41$, revealing that the depression manipulation differentially affected scores as a function of the type of emotion.

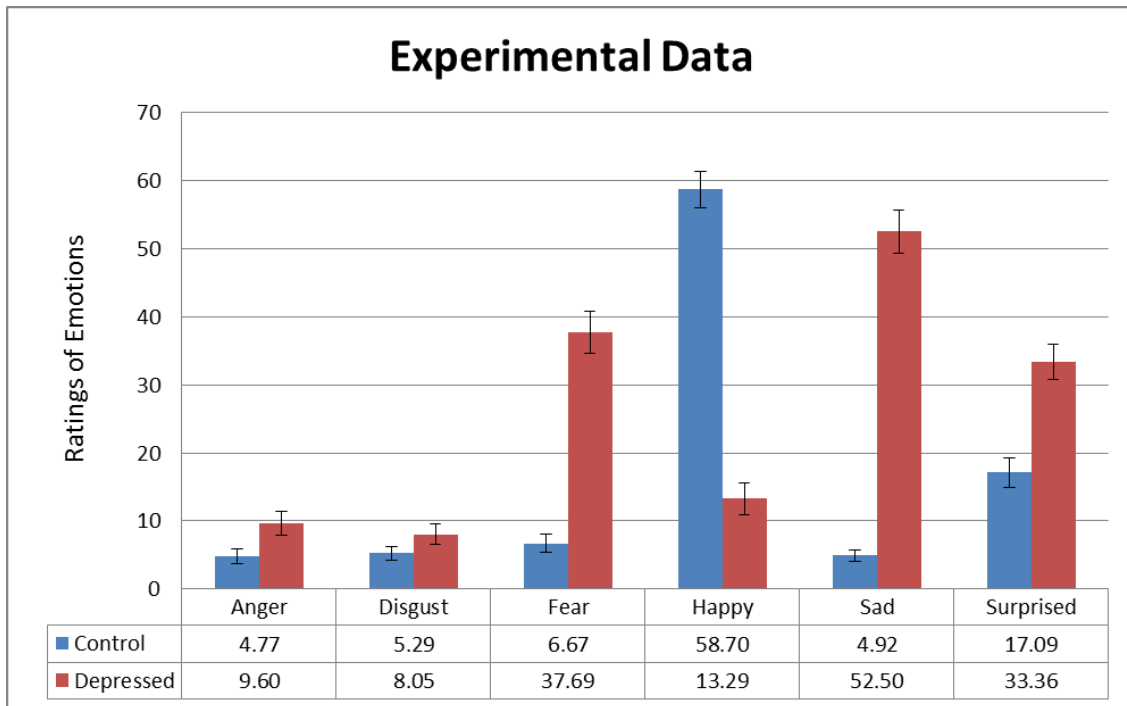


Figure 3. Affect data from Study 2. SE bars are included

4.2.2 Trust Measures

Prior to conducting analyses on the trust data, the two measures of trust were subjected to a Cronbach's Alpha test to measure internal consistency. The scores ranged from .91 to .92. Thus, both trust measures were combined for the following analyses. A t-test between the two conditions revealed that trust differed as a function of the condition, $t(198) = 3.29, p = .001, d = .47$, indicating that participants trusted the target individual who suffered from depression ($M = -0.13, SD = .88$) less than his counterpart ($M = 0.50, SD = .67$).

4.2.3 Mediation Analyses

Mediation analyses were conducted on each of the six emotions. The six paths for the mediation analyses can be found in Figure 4. As can be seen in the figure, only Happiness resulted in a significant mediation between the condition and trust. The rest of the paths were either insignificant statistically (Disgust, Fear, Sad, Surprised) or in practicality (Anger).

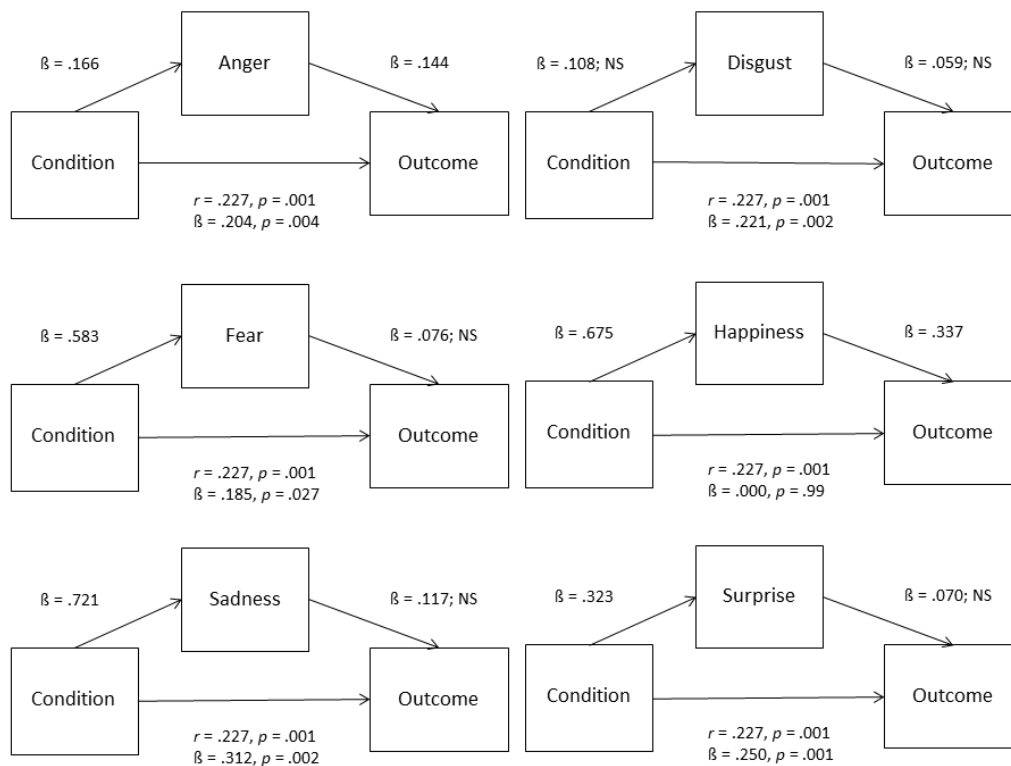


Figure 4. Mediation analyses from Study 2 as a function of the type of emotion. NS = Not Significant

In order to conduct the mediation analysis on the Happiness emotion, the correlation between Condition and Trust was first found to be significant, $r = .227, p = .001$, showing that the initial variable correlated with the outcome variable. The standardized path coefficients were: Condition to Happiness (.675, $p < .001$); Happiness to trust (.337, $p < .001$); Condition to Trust controlling for Happiness (.000; $p = .99$). These data show that Happiness had total mediation on the relationship between Condition and Trust, and that none of the other six universal emotions had any meaningful mediation on that relationship.

4.3 Discussion

The purpose of Study 2 was to extend the knowledge provided in previous research that was replicated in Study 1. Our goal was to provide more detailed information about which types of emotions mediated the relationship between mental illness and trust. Using Ekman and Friesen's (1971) six universal emotions, we had participants rate their feelings towards target individuals along the six axes. We predicted that there would be differential effects of the emotions on ratings of trust, and that each emotion would differential mediate the relationship between mental illness and trust.

The affect data revealed some interesting trends that supported our hypothesis. In general, it appeared that Fear, Happiness, Sadness and Surprise were influenced more strongly by the

description of the target individual compared to Anger and Disgust. It also appeared that the biggest differences between conditions (mental illness versus control group) were in those four categories. We also note that only one emotion decreased as a result of the target individual being described as having severe and chronic depression (Happiness). Overall, it is clear that people are able to differentiate between what types of emotions are affected when they are presented with hypothetical scenarios about mental illness. The trust data replicated the findings from Study 1. Trust in the target individual decreased as a result of that person being described as having depression.

The mediation analyses provided a fresh perspective on the relationship between affect and trust. In this case, only Happiness significantly (and meaningfully) mediated the relationship between mental illness and trust, while the other five emotions were not significant mediators. We discuss these implications in more detail in the general discussion.

5. General Discussion

The purpose of this research was twofold. First, we wanted to replicated previous findings that affect mediates the relationship between mental illness and trust; that is, when a target individual is described as having depression, trust in that person drops due to emotional triggers. Second, we wanted to provide more detail about what type of emotions is mediating this relationship. We hypothesized that: 1) affect ratings in Study 1 would decrease for the target individual identified as suffering from depression; 2) trust ratings in Study 1 would decrease for the target individual identified as suffering from depression; 3) affect, in general, would mediate the relationship between the condition and trust in Study 1; 4) ratings of the six universal emotions in Study 2 would differentially decrease for the target individual; and 5) not all of the emotions would mediate that relationship equally.

Our first hypothesis was supported in both studies. Affect ratings clearly dropped across the board when the target individual was described as having depression. This decrease was strongest for Fear, Happiness, Sadness and Surprise. Our second hypothesis was also supported by the data in both studies; that is, trust ratings dropped significantly when the target individual was described as having depression. This replicates findings that trust is negatively affected by the stigma of mental illness (Rice, Richardson, and Kraemer, 2014).

Our third hypothesis was supported in both studies as well. In Study 1, affect had total mediation on the relationship between mental illness and trust. This replicates findings from Rice, Richardson and Kraemer (2014), who found similar mediation when comparing a target individual with an undefined mental illness to a control individual. Our fourth hypothesis was tested in Study 2 when we had participants rate their emotions along six different axes. There were differential effects of the experimental manipulation on each of the emotions, as can be seen in Figure 3.

Our fifth, and last, hypothesis was that the six different universal emotions described by Ekman and Friesen (1971) would differentially mediate the relationship between mental illness and trust. In this case, only Happiness significantly (and meaningfully) mediated the relationship between mental illness and trust. Not only that, but there was total mediation;

that is, the beta weight for Condition to Trust controlling for Happiness was zero. It appears that when a person is described as having depression, participants felt less happiness towards that person and this affected how much they trusted them. It is interesting to note that sadness, which is sometimes claimed to be the opposite of happiness, did not have similar mediating effects. We are not sure why this is the case, but suggest that future research examine this more closely to see if these are indeed bipolar emotions, or if their mediating power is not a bipolar construct.

5.1 Theoretical Contributions

The current study contributes to the literatures on mental illness, affect and trust. Mental illness is a highly researched area of psychology, sociology, education, and other fields. It is well known that mental illness can produce a stigma on the person suffering from the illness, in that others tend to treat them differently and often in a negative fashion (Kasow & Weisskirch, 2010). The data here shows that this effect remains strong despite many attempts by experts and counselors to lessen the stigmatization effect on society (Link & Phelan, 2006).

The affect literature is widely researched as well, with many studies showing that emotions affect attitudes, intentions and behaviors (Brewer, 2001). There is less research that examines the relationship between affect and mental illness (e.g. Rice, Richardson & Kraemer, 2014), and particularly how affect mediates the relationship between mental illness and trust. The current study adds to this literature by examining how different types of emotions have differential effects on the relationship between mental illness and trust.

The trust literature is yet another area that is widely researched, including within the mental illness field. Previous studies have shown that stigmatization of persons with mental illnesses results in loss of trust (Link, Struening, Rahav, Phelan & Nuttbrock, 1997). This loss of trust often has an exacerbating effect on the sufferer, and sometimes leads them to hide their illness for fear of losing the confidence of their friends, colleagues and family (Hewstone, Rubin & Willis, 2002). In the current study, we add to this knowledge by showing that trust is indeed negatively affected by descriptions of mental illness in a target individual, and that this effect is largely due to an emotional response rather than a cognitive one.

5.2 Practical Implications

There are practical implications in this research for both sufferers of mental illness and practitioners of mental health therapy. From the viewpoint of the sufferer, it is important for them to realize that they may be stigmatized by others and that this stigmatization may result in loss of trust. It is also important for them to know that the response is largely, if not completely, due to an emotional response. Once a person begins to think more rationally about the sufferer's condition, it may be the case that trust is not negatively affected, or less so. From the perspective of the practitioner, it is helpful for them to know how to address these issues when counseling both the patient and the family and friends of the patient. This knowledge may help the practitioner to develop methods to ease the stigmatization and loss of trust.

5.3 Methodological Contributions

The current study uses a unique methodology to examine the differential effects of different emotions on loss of trust. The value of this new approach is seen when examining Figures 3 and 4. In these figures, we see that measuring affect on six different axes is beneficial in determining which emotions are in play, and how strongly they are present in the data. It also allows us to conduct separate mediation analyses on the different emotions in order to see which ones actually mediate the relationship between mental illness and trust, and which ones do not.

5.4 Delimitations and Limitations

There were several delimitations and limitations of the current study. First, we only chose to examine the six universal emotions described by Ekman and Friesen (1971) and not another batch of emotions. We recognize that there is disagreement in the literature about which emotions are universal, but for our purposes, we did not see this as a fatal flaw in the current study.

Second, we chose depression instead of other types of mental illness. We did this for convenience sake, and because depression is one of the most common types of mental illness in the American society. We also recognize its stigma and felt that it would be a strong experimental manipulation. Furthermore, we could have chosen other types of mental illness as well, but did not for the sake of brevity and resources. We hope that future research examines these other stigmatized mental illnesses as well.

Third, we used a convenience sample from Amazon's® Mechanical Turk® (MTurk). MTurk provides participants who complete human intelligence tasks in exchange for monetary compensation. While prior research has shown that data from MTurk is as reliable as normal laboratory data (Buhrmester, Kwang, & Gosling, 2011; Germine, et al., 2012), we recognize that any convenience sample negatively affects external validity, thus preventing us from making universal generalizations about the data.

Lastly, we only chose American participants for our study. We recognize that WEIRD (Western, Educated, Industrialized, Rich and Democratic) data is not necessarily representative of the entire world (Henrich, Heine & Norenzayan, 2010a; 2010b); however, we felt that we had to start somewhere and this data was easily accessible. Furthermore, we did not look at gender, age, ethnicity, or other demographic differences. We hope that future research addresses this limitation and analyzes the effects found in this paper across the different types of demographics.

5.5 Conclusion

The primary goal of the current study was to determine which emotion(s) had a mediating effect on the relationship between mental illness and trust. In two studies, we were able to conclude that affect and trust are both negatively affected by the stigmatization of depression. Furthermore, affect, and more specifically, happiness, had a total mediation effect on the

relationship between mental illness and trust. We hope that future research both replicates and expands upon these findings.

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