

THE IMPACT OF METAPHOR IN MENTAL ILLNESS STIGMA

by

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Abstract

A growing body of research indicates that differing metaphors can influence perception and effectively shape the way we think about the world around us (Lakoff, 2012; Panzeri & Paula, 2020; Thibodeau et al., 2009; Vallis & Inayatullah, 2001). The present study investigates whether different metaphors can influence perceptions of mental illness, specifically in regards to Schizophrenia. Participants were instructed to read a short vignette depicting a diagnosis of a Schizophrenic patient in terms of either a “battle” with the illness or a “journey”. In order to obtain results, we measured dependency, preference for social distance, fear response, empathy/ emotional response, and anger. Results of the present study indicated that there was no significant relationship between metaphor and perceptions of a Schizophrenia diagnosis. With this being said, there was a significant effect of gender identity on perceptions of the patient. Men displayed more stigma towards patients with Schizophrenia than did women. Based on the findings of this study, future researchers may want to hone in on gender differences in perception of mental illness and further the existing research on metaphor as it pertains to mental illness.

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The Impact of Metaphor on Mental Illness Stigma

As the mental health crisis has been gaining traction in media and news sources, a variety of metaphors have been used to explain how dire the problem is. A New York Times (2021) article declared ‘Schizophrenia is a terrible thief of independence’. Does the word ‘thief’ have a psychological reality in the way we perceive Schizophrenia after reading this? Generally, thieves steal something from you, and leave you with less than you had before. Is a thief an appropriate or accurate way to describe someone with Schizophrenia?

Research has been conducted in order to understand the influence of framing and metaphor on how we perceive the world around us, either implicitly or explicitly. For example, previous research has explored if and how metaphors can persuade people to solidify or change their perceptions of crime, healthcare, and many other socio-political topics (Lakoff, 2012; Panzeri & Paula, 2020; Thibodeau et al., 2009; Vallis & Inayatullah, 2001). The overwhelming majority of research has indicated that indeed, metaphors do hold the capacity to shift the way we perceive the world around us, as well as change our behavior towards the aforementioned topics. While the impact of metaphor on thought has been broadly researched, research on mental illness pertains more to labeling and stigma rather than metaphor.

There has been a mental health crisis, with mental illness at the forefront of reporting in news and media. With increased representations in the media, both positive and negative attitudes towards the mentally ill have surfaced, creating misconceptions about the realities of psychopathology (Klin & Lemish, 2008). This has resulted in the stigmatization of mental illness, specifically in regards to illnesses that have been perceived to be potentially dangerous such as Schizophrenia (Angermeyer & Matschinger, 2003; Howe, 2018 ; Klin & Lemish, 2008). While

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research on the stigmatization of Schizophrenia is plentiful, there is little research on the specific impact of metaphor, and how metaphor may feed into attitudes towards those afflicted by this diagnosis. This paper aims to fill the gap in the literature by examining the effects of metaphor on the way people perceive Schizophrenia.

Metaphor and Knowledge Structures

Language is constantly evolving as new terms and vocabulary are learned and embedded into memory. Some concepts or ideas are more difficult to comprehend than others, especially when a concept is abstract. Ideas without a concrete existence are more difficult to conceive, which is where metaphor in language can have the greatest impact (Crawford, 2014; Kalyuga & Kalyuga, 2008; Thibodeau & Boroditsky, 2008). Metaphors hold the capacity to simplify complex ideas by relating them to ideas that are more concrete and easier to grasp.

When a metaphor is used, it relates two concepts and equates them. Knowledge structures that already exist for the concrete domain are applied to the abstract, more complex domain, forming new associations. These associations are sometimes implicit, as we are not consciously aware that we have developed a schema to better understand the complex concept. For example, crime is an abstract, complicated concept that we can use metaphor to think about. We talk about being “hard” or “soft” on crime. We “fight” crime. Metaphors capitalize on structural similarity between the abstract and concrete domains and help us to implicitly overlap them, therefore allowing us to draw new inferences about what crime is (Thibodeau & Boroditsky, 2008). Our brains are constantly making implicit connections to better understand the world around us.

Effects of Metaphor on Thought

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Relating concepts through metaphor may not only help with understanding, but can also skew how we draw inferences about and respond to these concepts (Lakoff, 2012; Thibodeau et al., 2009). In language, crime rates are often compared to diseases, viruses, beasts, and attacks (Chiappe, 2007; Thibodeau & Boroditsky, 2011). Can these comparisons influence how we would go about resolving a crime problem? In one study, researchers looked into metaphors in relation to crime (Thibodeau & Boroditsky, 2011). Participants read one of two vignettes either framing crime as a virus or a beast. Following this task, they were then instructed to answer questions about how to reduce crime. When comparing a crime to a virus through metaphor, we think of what a virus is and how to solve a virus problem. The commonalities between crimes and viruses are that they take place in the environment and are both solved by treating the root of a problem. In comparing a crime to a beast, we connect that both crimes and beasts are individual problems and capturing or entrapping the perpetrators are the proposed solutions to both of those problems. Accordingly, participants who read the story that compared crime to a beast or attack were more likely to choose enforcement options, consistent with how one may respond to a beast or attack problem. Conversely, participants who read the story that compared crime to a virus were more likely to believe reform may be a more appropriate method to combat crime, consistent with how one might solve a virus or disease problem. We typically face virus problems by using preventative measures, while we face beast problems using reactive measures.

Politics have also been researched in terms of the impact of metaphor on thought processes. Politics as a subject is relatively abstract or difficult to comprehend. To enhance understanding of controversial political issues - such as policing, war justification, and abortion rights - metaphors are commonly used to invite comparisons (Howe, 1988; Lakoff, 2012; Thibodeau & Flusberg,

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2017). Policing and law enforcement metaphors may compare officers to warriors or guardians, effectively influencing what it means to be an officer, and what law enforcement represents to their respective communities. Framing officers as warriors causally creates negative attitudes towards these members, as warriors are perceived as violent and unrelenting. Framing police officers as guardians creates positive attitudes since guardians are protectors of their people (Thibodeau & Flusberg, 2016). Politically fueled metaphors also hold the capacity to appeal towards specific groups. In describing various political ideas such as campaigning, war, and propaganda, metaphors have been used to appeal to some subjects of the population while excluding others (Howe, 1988; Lakoff, 2012). By using team or war metaphors in these subject areas, various politicians have been able to draw in male supporters, and exclude their female counterparts. By using metaphors with stereotypically male dominated ideas, many women have been cut out of political discourse throughout history.

Effects of Metaphor on Attitudes Towards Illness

Illness is another subtopic in which figurative language, specifically metaphor, shapes beliefs, reactions, and emotional attitudes towards the subject. The most researched areas regarding the relationship between metaphor and physical illness are in relation to COVID-19 and cancer (Chapman & Miller, 2020; Harrington, 2012; Hendricks et al., 2018; Panzeri, 2020; Stanley et al., 2021). News sources have often framed the COVID-19 pandemic as a war, which has influenced public attitudes towards how to combat the virus. An adverse effect of equating the pandemic to a war is public perception of authoritarianism and the endorsement of limiting freedoms. Research has shown that while the war metaphor increases subjects' ability to take the pandemic seriously, there has been notable spillover to an increased endorsement of militarism

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(Chapman & Miller, 2020; Panzeri, 2020). To investigate this claim, researchers used two vignettes, one neutral description of the pandemic, and one framing COVID-19 as a war that we must wage. They found that the war metaphor leads participants to believe that authoritarian solutions were justifiable as opposed to the neutral condition. On the other hand, metaphor holds the capacity to increase feelings of community in those directly affected by COVID-19 (Stanley et al., 2021). COVID-19 patients have been subjected to an unprecedented pandemic, which has instilled fear of the unknown. Metaphors can be used to effectively communicate these emotions, and form a collective consciousness to decrease feelings of fear and lack of safety. By relating the unknown to the known, a well-formed understanding can have a positive impact on those afflicted.

By using metaphors to invoke thoughts of war or journeys, ideas and even emotions about cancer diagnoses can be influenced. Metaphors can influence both ideas about cancer diagnoses, and also inflict different levels of emotional response. Research has shown that common terminology related to cancer influences how people react to the diagnosis and whether they believe remission is likely or possible (Harrington, 2012; Hendricks et al., 2018). Two common metaphors have saturated news and media pieces; the war metaphor and the journey metaphor. Research has indicated that framing cancer as a war or battle, in which an arsenal is used to combat the disease, leads people to take the illness more seriously than if cancer is framed as a journey. On the other hand, war metaphors result in reasoning that recovery is not likely, promoting negative attitudes towards it. It is the person against the illness, and remission is seen as a triumph against the ailment. If recovery is not possible or granted, there is a mentality of defeat, which negatively impacts healing, specifically the emotional aspect of healing. The journey

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metaphor has different connotations attached to it. Framing cancer as a journey rather than a battle promotes emotional healing. If the diagnosed person were to never recover, the journey metaphor has been linked to acceptance of this, as well as acceptance of the original diagnosis (Hendricks et al., 2018). The way we view illness can influence not just cognition, but emotion as well.

Mental Illness Stigma

While research has evaluated the impact of metaphor on physical illness, there is less research relating metaphor to mental illness. Research into the impact of metaphor on depression has indicated that there is a similar impact on emotional response to the impact of metaphor in terms of cancer, and metaphors about antidepressants can influence how beneficial people find antidepressants in treatment (Hendricks et al., 2018, Keefer et al., 2014). Furthermore, using metaphors can benefit mental health by reducing stigma associated with getting help (Lazard et al., 2016).

Stigmatization of mental illness has contributed to afflicted members failing to seek treatment, negatively influencing public attitudes towards people with mental disorders, and false narratives created by media representations of the mentally ill (Klin & Lemish, 2008). Mental illness stigma has even been found to increase suicide rates amongst those who fall into diagnostic categories. The distortion of what it means to be mentally ill has been furthered by dramatization in films and television (Klin & Lemish, 2008). Major Depression and Schizophrenia have stigma attached for various reasons. Depression, although more common than Schizophrenia, has led the afflicted to believe they are being neurotic or will be pitied if diagnosed. This is more prominent amongst males, as depressed males are more stigmatized than their female counter-

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parts (Klin & Lemish, 2008). Schizophrenia has been reasoned to be perceived as dangerous, and those diagnosed will suffer not only mentally, but socioeconomically (Klin & Lemish, 2008).

The breadth of research has pinpointed labeling as a main contributing factor in how stigma has influenced perceptions of mental illness, specifically diagnoses of Major Depressive Disorder and Schizophrenia. The effects of labeling have been examined in regards to how labeling has contributed to the stigmatization of mental illness (Angermeyer & Matschinger, 2003; Klin & Lemish, 2008; Oexle et al., 2017; Rosenhan, 1973). Labeling occurs when someone assigns a title to something, in this case a person. If someone thinks another person as erratic or has frequent mood swings, they may label that person as bipolar. Research has found that labeling endorses negative stereotypes towards people with mental illness and increases their preference for social distance from the afflicted person (Angermeyer & Matschinger, 2003).

Labeling in mental illness is also thought to be a positive thing for some. People who are labeled with a mental disorder can be categorized neatly and appropriately in order to be properly treated by their respective healthcare providers (Angermeyer & Matschinger, 2003; Oexle et al., 2017). This helps psychologists, psychiatrists, and licensed mental health counselors as they use different psychoactive drugs and therapies for different disorders. Labeling can also positively contribute to the patients and their families by reducing their sense of uncertainty about what they are facing or struggling with. In terms of the justice system, being labeled with a Psychiatric disorder can provide financial assistance depending on the nature of the disorder as well as the degree that the disorder interferes with the afflicted person's quality of life. Furthermore, people may have an increased emotional response to those suffering from mental illness, namely depression and schizophrenia (Angermeyer & Matschinger, 2003; Oexle et al., 2017). There is general-

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ly an increase in feelings of sympathy and empathy directed towards people who have been labeled as mentally ill.

Schizophrenia Stigma

The stigmatization of Schizophrenia can be particularly detrimental to the community. Portrayal of Schizophrenia in mass media has been a major contributor to the spreading of misinformation and false narratives (Angermeyer & Matschinger, 2003; Klin & Lemish, 2008; O'Connor et al., 2022, Oexle et al., 2017). Perceived dangerousness of schizophrenic patients is at a high, with various film and television characters consistently perpetrating violent acts. Labeling has contributed to negative perceptions of this illness, as creating labels activates specific knowledge structures, effectively influencing cognition. Furthermore, when someone applies the label of Schizophrenia to a set of symptoms, it directly influences how the person views the patient, under the lens of someone who is mentally ill. This was a key finding in Rosenhan's (1973) groundbreaking experiment. Rosenhan had nine confederates enter 12 psychiatric hospitals under the guise that they had been hearing voices, and all were instructed to act normal upon admittance. All of the confederates were diagnosed with Schizophrenia. After being admitted, hospital staff viewed all of the confederates' behavior as symptoms of their psychosis. Instead of viewing them as a person with schizophrenia, there is a tendency to view all of the person's actions and behavior under the umbrella of the diagnosis. The activation of certain thoughts, feelings, and perceptions of people with schizophrenia is present by merely applying the label. Labeling someone as schizophrenic has causally influenced people to view that person as incapable of making their own decisions regarding their lives. Furthermore, the label increases emotional response, as people feel an increased sense of pity for the person when the label is applied

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(Angermeyer & Matschinger, 2003; Klin & Lemish, 2008). A key finding is the relationship between the label of schizophrenia and perceived dangerousness. When the label of schizophrenia is applied, people view the person as more dangerous than when the label is not applied. This creates a preference for social distance. People prefer to distance themselves from potentially dangerous people, and since the diagnosis of schizophrenia creates feelings of wariness and perceived dangerousness, there is a need to avoid the danger.

The Present Study

The present study seeks to combine previous research on the impact of metaphor and apply it to the stigmatization of mental illness, specifically schizophrenia. While a great amount of research has found a causal relationship between metaphor framing and thought, its application to mental illness has been minimal, namely the increased stigmatization of mental illness. As research has deemed schizophrenia to have the most stigma attached to it in terms of mental illness, it may be fruitful to analyze whether metaphors can shape this phenomenon. The present study focuses on paranoid schizophrenia as it is the most well known and represented subtype of the disorder. Paranoid schizophrenia is characterized by positive symptoms such as paranoia, delusions, and hallucinations. Two vignettes were presented using two common researched metaphors that have been modified for the present study. The vignettes framed the diagnosis and progression of schizophrenia either as a journey or as a battle, following Hendricks et al. (2018). Then, a questionnaire assessed people's perceptions of the person described in the vignette. People rated their emotional response to the person, the perceived dependency of the individual, and the perceived dangerousness of the patient. We hypothesized that the type of metaphor used to frame schizophrenia will influence participants' perceptions and emotions towards the diagnosis,

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consistent with findings related to other topics such as crime, politics, and physical health.

Specifically, we predicted that framing schizophrenia as a battle will cause people to view the person in the vignette as more dangerous but perhaps less dependent on others. This is due to battles being perceived as dangerous situations, but also because people in battles tend to depend on themselves to conquer their enemies and require some agency. Previous work has shown that invoking agency can make people seem more to blame for their actions (Fausey and Boroditsky, 2010). On the other hand, we hypothesized that those assigned to the journey condition would view someone diagnosed with Schizophrenia as less dangerous and have less agency over their diagnosis. Journeys might be viewed as less dangerous but more dependent on surrounding factors, as journeys tend to follow a pre-existing path and have less aggressive connotations. This research may aid in understanding whether metaphors can influence how people think about mental illness, and how metaphors may contribute to the stigmatization of schizophrenia.

Methods

Participants

Four hundred thirty eight participants were recruited from [amazon.com](https://www.amazon.com) Mechanical Turk and Cloud Research. Participants were monetarily compensated for their time, and were paid the federal minimum wage (\$7.25), prorated for their time spent completing the study. All subjects were 18 years of age or older, and had access to a computer as the study was conducted online. Participants ranged in race, background, and gender. There were 321 white participants (80.05%), 42 black/ African American participants (10.47%), 22 Asian/ Native Hawaiian/ Pacific Islander participants (5.46%), 11 Hispanic/ Latino participants (2.74%), 4 participants who identified with another race (1.00%), and 1 American Indian/ Alaskan Native participant (.24%).

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There were 221 male participants (50.46%) and 180 female participants (41.10%). The remainder either reported a non-binary gender or preferred not to say (8.45%). Participants were also native speakers of English.

Stimuli

Participants were split into two conditions. The first condition framed Schizophrenia as a battle that needs to be combated while the second condition framed Schizophrenia as a journey that will have a long path to be followed. The first condition had a vignette that read, “Joe was just diagnosed with Schizophrenia. He knows that for the foreseeable future, every day will be a “battle against” the disease. The “battle” he has to “fight” will not always be an easy one. Many people have written about their experiences on the “battlefield,” and he can turn to those for consolation. His friends and family want him to know that he will not be alone in his “battle.” Even though sometimes he might not feel like talking, other times he may want to share stories of his “battle” with others, and they will be there for those moments.” The participants in the journey condition read a similar vignette that stated, “Joe was just diagnosed with Schizophrenia. He knows that for the foreseeable future, every day will be a “journey with” the disease. The “road” he has to “travel” will not always be an easy one. Many people have written about their experiences on the “path,” and he can turn to those for consolation. His friends and family want him to know that he will not be alone on his “journey.” Even though sometimes he might not feel like talking, other times he may want to share stories of his “journey” with others, and they will be there for those moments.” These vignettes were adapted and modified for the current study from the Hendricks et al. (2018) research study.

Procedure

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Participants first read and signed a consent form in order to be made aware of their rights and have access to the rest of the study. The consent form provided a brief indication of the overall purpose of the study, listed possible trigger warnings by taking part in the study, provided information about anonymity given participation, and detailed that participants can exit the study at any time. After electronically signing the consent form, participants were then directed to the rest of the study. Here, the participants were randomly assigned to read either the battle vignette or the journey vignette.

Following this, participants completed a questionnaire measuring their attitudes about Joe using a 5-point Likert Scale with responses ranging from “definitely true” to “definitely not true.” The scale was adapted from Angermeier and Matschinger (2003). The items related to how dangerous they found Joe to be (Joe is unpredictable, Joe lacks self-control, Joe is aggressive, Joe is frightening, Joe is dangerous), how dependent they found Joe to be (Joe is needy, Joe is in control of his diagnosis, Joe is helpless), and their emotional response to Joe (Joe makes me feel uneasy, I am sad for Joe, I empathize with Joe, I want to help Joe, I am angry at Joe). Next participants completed a modified Bogardus Social Distance Scale (Angermeier & Matschinger, 2003). Preference for social distance was measured based on a number of questions (How would you feel about moving next door to Joe, how would you feel about spending an evening socializing with Joe, how would you feel about making friends with Joe, how would you feel about marrying Joe into your family, and how would you feel about working closely on a job with Joe?). Participants responded using a 4-point scale that ranged from definitely unwilling to definitely willing. Following this, participants answered a comprehension question about the

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vignette, ensuring they understood what they had read. The comprehension question asked, “What was Joe diagnosed with?,” and participants chose from a set of four response options.

Then, for exploratory analysis, participants completed two randomly-selected, open ended questions from the following list: (a) What do you imagine about Joe’s day-to-day experience? (b) Why does Joe have Schizophrenia? (c) How will this experience affect Joe’s relationships? (d) Please describe the mindset you imagine Joe has. (e) Biologically, what is going on in Joe’s body? (f) What are Joe’s prospects for recovery?.

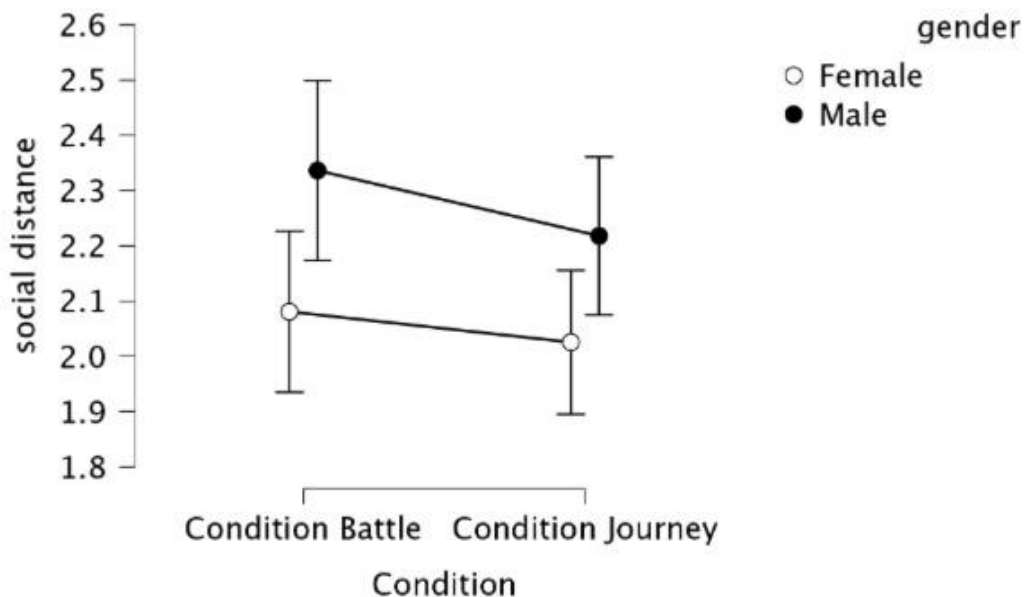
At the end of the study, a debriefing statement was provided to all participants who completed it. The debriefing statement described the exact purpose of the study. The debriefing statement also provided resources in the event that participating in the study was traumatizing or upsetting to participants.

Results

A total of 438 participants completed the study. Of those, 403 of the participants’ data were analyzed. The data were pruned by filtering out participants who were under the age of 18, non-native English speakers, those who answered the comprehension question wrong, and participants who did not identify with a binary gender. Questionnaire items were first separated based on each subcategory and then averaged together to produce data for analyzing dangerousness, dependency, fear, anger, empathy, and preference for social distance. Data was also reverse coded as needed. Social distance measures were coded so that higher numbers mean greater preference for social distance. Similarly, dependency measures were also coded so that higher numbers mean higher dependency levels.

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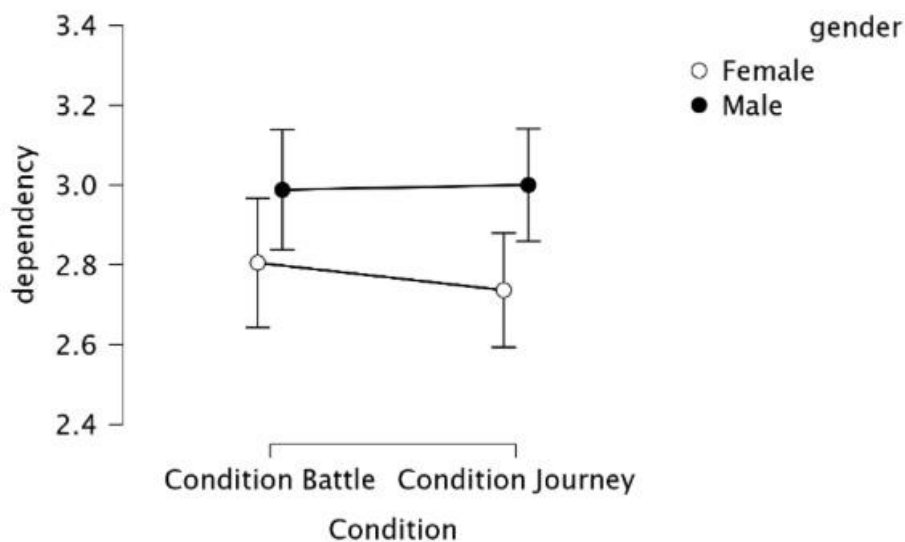
In order to test whether metaphor affected participants' preference for social distance, the data were submitted to a 2(Metaphor: battle vs. journey) x 2(Gender: male vs. female) factorial ANOVA, with social distance scores as the outcome variable. There was no main effect of metaphor, $F(1,397) = 1.33, p = .249, \eta^2 = .003$. There was a main effect of gender $F(1,397) = 8.86, p = .003, \eta^2 = .022$. Overall, men ($M = 2.28, SE = 0.05$) produced higher social distance scores than did women ($M = 2.05, SE = 0.06$). There was no significant interaction between gender and metaphor, $F(1,397) = 0.18, p = .675, \eta^2 < .001$. However, there was a small trend in which the gender gap was greater in the battle condition ($M_{men} = 2.35, SD_{men} = 0.86; M_{women} = 2.08, SD_{women} = 0.71$) than in the journey condition ($M_{men} = 2.28, SE_{men} = 0.76; M_{women} = 2.03, SE_{women} = 0.61$). See Figure 1 for a graph of these means.



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Figure 1. Effects of Metaphor Condition and Gender of the participant on preferred social distance from Joe. Higher numbers reflect greater desire for social distance. Error bars represent confidence intervals.

In order to test whether metaphor affected participants' perceived dependency of the diagnosed person, the data were submitted to a 2(Metaphor: battle vs. journey) x 2(Gender: male vs. female) factorial ANOVA, with dependency scores as the outcome variable. There was no main effect of metaphor, $F(1,397) = 0.14, p = .710, \eta^2 < .001$. There was a main effect of gender $F(1,397) = 8.65, p = .003, \eta^2 = .021$. Overall, men ($M = 2.99, SE = 0.05$) produced higher dependency distance scores than did women ($M = 2.77, SE = 0.06$). There was no significant interaction between gender and metaphor, $F(1,397) = 0.16, p = .596, \eta^2 < .001$. However, there was a small trend in which the gender disparity was smaller in the battle condition than it was in the journey condition. See Figure 2 for a graph of these means.



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Figure 2. Effects of Metaphor Condition and Gender of the participant on perceived dependency of Joe. Higher numbers reflect greater desire for social distance. Error bars represent confidence intervals.

In order to test whether metaphor affected participants' perceived dangerousness of the diagnosed person, the data were submitted to a 2(Metaphor: battle vs. journey) x 2(Gender: male vs. female) factorial ANOVA, with dangerousness scores as the outcome variable. There was no main effect of metaphor, $F(1,397) = 0.04, p = .842, \eta^2 < .001$. There was no main effect of gender $F(1,397) = 1.83, p = .177, \eta^2 = .005$. Overall, men ($M = 2.74, SE = 0.05$) produced slightly (but not significantly) higher dangerousness scores than did women ($M = 2.64, SE = 0.05$). There was no significant interaction between gender and metaphor, $F(1,397) = 0.25, p = .620, \eta^2 < .001$.

In order to test whether metaphor affected participants' empathy towards the diagnosed person, the data were submitted to a 2(Metaphor: battle vs. journey) x 2(Gender: male vs. female) factorial ANOVA, with empathy scores as the outcome variable. There was no main effect of metaphor, $F(1,397) = 0.01, p = .946, \eta^2 < .001$. There was no main effect of gender $F(1,397) = 2.32, p = .128, \eta^2 = .006$. Overall, men ($M = 4.01, SE = 0.05$) produced numerically lower empathy scores than did women ($M = 4.12, SE = 0.05$). There was no significant interaction between gender and metaphor, $F(1,397) < .001, p = .988, \eta^2 < .001$.

In order to test whether metaphor affected participants' fear response of the diagnosed person, the data were submitted to a 2(Metaphor: battle vs. journey) x 2(Gender: male vs. female) factorial ANOVA, with fear response scores as the outcome variable. There was no main effect of metaphor, $F(1,397) = 0.07, p = .788, \eta^2 < .001$. There was no main effect of gender $F(1,397) = 1.61, p = .206, \eta^2 = .004$. Overall, men ($M = 2.56, SE = 0.08$) produced numerically

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higher fear response scores than did women ($M = 2.41$, $SE = 0.08$). There was no significant interaction between gender and metaphor, $F(1,397) = 0.02$, $p = .883$, $\eta^2 < .001$.

In order to test whether metaphor affected participants' anger response of the diagnosed person, the data were submitted to a 2(Metaphor: battle vs. journey) x 2(Gender: male vs. female) factorial ANOVA, with anger response scores as the outcome variable. There was no main effect of metaphor, $F(1,397) = 1.54$, $p = .215$, $\eta^2 = .004$. There was no main effect of gender $F(1,397) = 1.96$, $p = .162$, $\eta^2 = .005$. Overall, men ($M = 1.42$, $SE = 0.05$) produced numerically higher anger response scores than did women ($M = 1.31$, $SE = 0.06$). There was no significant interaction between gender and metaphor, $F(1,397) = 0.01$, $p = .905$, $\eta^2 < .001$.

Discussion

The goal of this study was to assess whether metaphor can implicitly shape how we perceive mental illness, namely Schizophrenia. Participants were instructed to read a vignette framing Schizophrenia as either a battle or a journey, and we measured whether the frames differentially affected perceptions of the person in the vignette. We hypothesized that subjects assigned to the battle condition would view someone diagnosed with Schizophrenia as more dangerous and have more agency over their diagnosis (i.e., be less dependent).

The data did not support these hypotheses. Although people (and especially men) were slightly more likely to want to socially distance from Joe after reading the battle metaphor compared to the journey metaphor, this difference was not significant. And although men found Joe to be slightly less dependent in the battle condition than in the journey condition, this effect was not significant, and it went the opposite way for women. Similarly, there was no effect of the metaphor used to describe Joe on how dangerous Joe was perceived to be.

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While there was no effect of metaphor on perceptions of Joe, there was an effect of gender in regards to dependency and preference for social distance. Men tended to think the diagnosed patient was more dependent on others than women did, regardless of which condition they were in. Men also had a greater preference for social distance from the diagnosed than did women, regardless of which condition they were in. While we hypothesized that the journey metaphor would lead people to think the subject lacks agency and would be more dependent on others, we found that for women, the opposite is true. Women thought the patient would be more dependent when placed in the battle condition. This may be due to the idea that battles in a classical sense are not fought alone, like in a war. In all remaining dependent measures, men responded in a way that reflected greater stigma against Joe compared to women, though this difference did not reach significance.

Mainly, the current study found that gender differences can determine the public's perception of mental illness. Since men held a tendency to hold more stigma against Schizophrenia across all measures, it seems likely that there is a reason for this. Perhaps men are socialized to feel less empathy for mental illness, or perhaps they are generally made to fear mental illness more than women. This implication is consistent with the previous research that found an appearance of a gender disparity on the impact of war metaphors (Panzeri & Paula, 2020). More research is needed to better tease apart long-term effects of metaphor use on society and effects of metaphor in the context of a study.

Previous research has indicated that metaphor can influence thought across many different topics and ideas (Panzeri & Paula, 2020; Thibodeau et al., 2009; Lakoff, 2012; Vallis & Inayatullah, 2001). By using different metaphors, peoples' beliefs can be shifted. This phenomenon

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can be seen in studies involving crime, politics, and even cancer research. There are possible limitations which may have affected our ability to detect an effect of metaphor in present study. For one, people tend to have preconceived notions of Schizophrenia which may be more crystalline than existing ideas about other forms of mental illness. Since Schizophrenia is linked with violence in media sources, participants may not be easily swayed by metaphors as much. Further, the study did not gather personal information about whether each participant had past experiences with Schizophrenia, or perhaps had been diagnosed themselves. If some participants had previous intimate exposure to the disease, the metaphors may not have worked as well. The metaphors could also be limited, as they may not be apt enough to accurately capture the experience of a Schizophrenia diagnosis. We modified the metaphors from a study about cancer and depression, and apt metaphor frames in those contexts might not be apt in the context of Schizophrenia. Furthermore, the vignettes could have been balanced better. The battle vignette did not have as many synonyms for battles as the journey vignette had for journeys, so it may have created a demand characteristics that participants noticed (indeed some commented on the use of the metaphor in the battle condition but not the journey condition). While we hypothesized that the journey metaphor would be perceived as having less agency, it may in fact be a more autonomous than a battle. In a battle, there is agency to fight, but there are also lots of other forces outside of a person's control, like what the others in the battle are doing. We could have also conducted another ANOVA to see if there was an overall effect between metaphor and stigma, along with the division of subcategories. We could have potentially detected more of an effect by simplifying our dependency measures. Finally, although we included a comprehension question

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to check whether participants read the paragraph, it was an easy question which we could have made more nuanced to weed out participants who were not fully engaged in the study.

There are many possible future directions to take this study. The present study did not ask questions about participants' current beliefs surrounding mental illness, which would have been valuable to know. If people were to be evaluated first on their opinions of mental illness, we could see if these opinions contribute to how well the metaphors work. It would also be interesting to examine whether political beliefs factor into the patterns we found. It may be that people on different ends of the political spectrum are ingrained in their beliefs about schizophrenia to different degrees. Therefore, liberals and conservatives may be differentially influenced by metaphor frames in the context of mental illness.

It may also be fruitful to assess different disorders besides Schizophrenia. Certain disorders such as Narcissistic or Borderline Personality disorders may have more stigma attached to them than mood disorders such as Anxiety or Depression, which may make participants less susceptible to framing. Evaluating these differences using metaphor may give a more encompassing idea of how metaphor may impact stigma of mental illness. Another avenue may be to provide more information about Schizophrenia before introducing metaphor. Little is known about Schizophrenia in terms of the general public, such as the differences between positive or negative symptoms and how effective medications can be. By providing crucial information, we could have a more encompassing picture of how the disease is perceived and see how that may affect the stigma associated with it.

Considering the main effect that was found on gender, future research could be conducted on why these gender differences occur in regards to views and stigma attached to Schizophrenia.

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Since males tended to have more stigma against Schizophrenia, we could enhance our understanding of why this occurs. It could also be fruitful to analyze gender differences across multiple mental illnesses in terms of gender to see if this phenomenon applies to more than just Schizophrenia.

Hopefully, with more research on how mental illness is perceived, as well as how metaphor can be applied to mental illness, the psychological community can spread awareness of how people's views are distorted by the language we encounter on a daily basis. In the future, news sources and media can attempt to amend how they pass information by being more careful in the metaphors they use. In doing so, we can mitigate the stigma associated with mental illness and perhaps stop the spread of fearing those diagnosed with these illnesses.

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References

- Angermeyer, M. C., & Matschinger, H. (2003). The stigma of mental illness: Effects of labeling on public attitudes towards people with mental disorders. *Acta Psychiatrica Scandinavica*, 108(4), 304–309. <https://doi.org/10.1034/j.1600-0447.2003.00150.x>
- Chapman, C. M., & Miller, D. S. (2020). From metaphor to militarized response: The social implications of “we are at war with COVID-19” – crisis, disasters, and pandemics yet to come. *International Journal of Sociology and Social Policy*, 40(9/10), 1107–1124. <https://doi.org/10.1108/IJSSP-05-2020-0163>
- Crawford, L. E. (2014). The role of conceptual metaphor in memory. In *The power of metaphor: Examining its influence on social life* (pp. 65–83). American Psychological Association. <https://doi.org/10.1037/14278-004>
- Fausey, C., Long, B., Inamori, A., & Boroditsky, L. (2010). Constructing Agency: The Role of Language. *Frontiers in Psychology*, 1. <https://www.frontiersin.org/articles/10.3389/fpsyg.2010.00162>
- Harrington, K. J. (2012). The Use of Metaphor in Discourse About Cancer: A Review of the Literature. *Clinical Journal of Oncology Nursing*, 16(4), 408–412. <https://doi.org/10.1188/12.CJON.408-412>
- Hendricks, R. K., Demjén, Z., Semino, E., & Boroditsky, L. (2018). Emotional Implications of Metaphor: Consequences of Metaphor Framing for Mindset about Cancer. *Metaphor and Symbol*, 33(4), 267–279. <https://doi.org/10.1080/10926488.2018.1549835>

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- Howe, L., Tickle, A., & Brown, I. (2014). 'Schizophrenia is a dirty word': Service users' experiences of receiving a diagnosis of schizophrenia. *The Psychiatric Bulletin*, 38(4), 154–158. <https://doi.org/10.1192/pb.bp.113.045179>
- Howe, N. (1988). Metaphor in Contemporary American Political Discourse. *Metaphor & Symbolic Activity*, 3(2), 87. https://doi.org/10.1207/s15327868ms0302_2
- Kalyuga, M., & Kalyuga, S. (2008). Metaphor awareness in teaching vocabulary. *The Language Learning Journal*, 36(2), 249–257. <https://doi.org/10.1080/09571730802390767>
- Keefer, L. A., Landau, M. J., Sullivan, D., & Rothschild, Z. K. (2014). Embodied metaphor and abstract problem solving: Testing a metaphoric fit hypothesis in the health domain. *Journal of Experimental Social Psychology*, 55, 12–20. <https://doi.org/10.1016/j.jesp.2014.05.012>
- Klin, A., & Lemish, D. (2008). Mental Disorders Stigma in the Media: Review of Studies on Production, Content, and Influences. *Journal of Health Communication*, 13(5), 434–449. <https://doi.org/10.1080/10810730802198813>
- Lakoff, G. (2012). Metaphor and War: The Metaphor System Used to Justify War in the Gulf. *Cognitive Semiotics*, 4(2), 5–19. <https://doi.org/10.1515/cogsem.2012.4.2.5>
- Lazard, A. J., Bamgbade, B. A., Sontag, J. M., & Brown, C. (2016). Using Visual Metaphors in Health Messages: A Strategy to Increase Effectiveness for Mental Illness Communication. *Journal of Health Communication*, 21(12), 1260–1268. <https://doi.org/10.1080/10810730.2016.1245374>
- O'Connor, C., Brassil, M., O'Sullivan, S., Seery, C., & Nearchou, F. (2022). How does diagnostic labelling affect social responses to people with mental illness? A systematic review of

METAPHOR AND MENTAL HEALTH STIGMA

- experimental studies using vignette-based designs. *Journal of Mental Health*, 31(1), 115–130. <https://doi.org/10.1080/09638237.2021.1922653>
- Oexle, N., Rüschi, N., Viering, S., Wyss, C., Seifritz, E., Xu, Z., & Kawohl, W. (2017). Self-stigma and suicidality: A longitudinal study. *European Archives of Psychiatry and Clinical Neuroscience*, 267(4), 359–361. <https://doi.org/10.1007/s00406-016-0698-1>
- Panzeri, F., Paola, S. D., & Domaneschi, F. (2020). *Does the COVID-19 war metaphor influence reasoning?* PsyArXiv. <https://doi.org/10.31234/osf.io/q5d48>
- Rosenhan, D. L. (1973). On being sane in insane places. *Science*, 179(4070), 250–258. <https://doi.org/10.1126/science.179.4070.250>
- Stanley, B. L., Zanin, A. C., Avalos, B. L., Tracy, S. J., & Town, S. (2021). Collective Emotion During Collective Trauma: A Metaphor Analysis of the COVID-19 Pandemic. *Qualitative Health Research*, 31(10), 1890–1903. <https://doi.org/10.1177/10497323211011589>
- Thibodeau, P. H., & Boroditsky, L. (2011). Metaphors We Think With: The Role of Metaphor in Reasoning. *PLOS ONE*, 6(2), e16782. <https://doi.org/10.1371/journal.pone.0016782>
- Thibodeau, P. H., Crow, L., & Flusberg, S. J. (2017). The metaphor police: A case study of the role of metaphor in explanation. *Psychonomic Bulletin & Review*, 24(5), 1375–1386. <https://doi.org/10.3758/s13423-016-1192-5>
- Thibodeau, P., McClelland, J. L., & Boroditsky, L. (2009). Proceedings of the Annual Meeting of the Cognitive Science Society. *When a bad metaphor may not be a victimless crime*, 809-814 <https://escholarship.org/content/qt5448914z/qt5448914z.pdf>
- Vallis, R., & Inayatullah, S. (2016). Policy metaphors: From the tuberculosis crusade to the obesity apocalypse. *Futures*, 84, 133–144. <https://doi.org/10.1016/j.futures.2016.04.005>