Perceived Causes of Mental Illness and Stigma by Association

Undergraduate Research Thesis

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by

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Abstract

People linked with stigmatized others often face similar social and psychological effects to those with whom they are tied. This phenomenon is referred to as *stigma by association*. Previous research demonstrates spreading of general negative attitudes accompanying stigmatized people to those with whom they are associated. In the current study, I examined stigma by association regarding people with mental illness and their friends and family. Research participants were given information highlighting either a genetic cause for Schizophrenia, an environmental cause, or neither. Then, participants evaluated someone described as linked to a person with Schizophrenia but with varying degrees of environmental and genetic closeness (e.g., an identical twin versus a friend). The study results indicated that the strength of perceived stigmatized qualities in neutral targets can be affected by alleged causes of the disorder and the relationship of the target to the stigmatized person. Consistent with holding a default view of Schizophrenia as being caused by genetics, participants who received information describing an environmental cause (and as a result may believe in two causes: genes and environment) were especially likely to view a target person as possessing stigmatized qualities (e.g., aggressiveness) when the target shared both genetics and environment with the person with Schizophrenia. Associative stigma for this shared-genetics-and-environment target exceeded that for targets sharing just one cause (e.g., genetics or environment). This suggests that stigma by association increases when a target is connected to a stigmatized person in multiple ways when those connections relate to the perceiver's beliefs about causes of the stigmatizing disorder. This work will impact the field of mental health by

addressing how education on the true causes of mental disorders might affect stigma by association.

Introduction

Stigmatized individuals are often subject to the social pain associated with social exclusion and ridicule. Social dynamics can be influenced by both implicitly- and explicitly-held stigmas, and being on the receiving end of these stigmas may understandably cause psychological distress. Likewise, people linked with stigmatized individuals can often endure similar social consequences. When two items are in some way related in a person's mind, their attitude towards one often spreads to the other through the process of evaluative conditioning (Staats & Staats, 1958; Walther, 2002). As applied to people, evaluations of individuals have been affected by attitudes towards those with whom they are associated. For example, Mehta and Farina (1988) found that college students with a depressed, incarcerated, or alcoholic father were perceived to have more life difficulty than those whose fathers were old, often absent, or had only one leg, thus demonstrating that attitudes toward the student varied with characteristics of the father. One way to understand these tendencies would be as stigma associated with illness or criminality extending to family members. When the target's father had a condition that appeared to be out of his control, such as missing a leg, the target received less stigmatization. In these conditions, the target was rated to have less life difficulty in areas such as school and family. This supports the idea that attitudes toward the students were associated with stigma toward the father rather than just the difficulty of the father's situation.

Unfortunately, the effects of stigma appear to be asymmetric. Whereas stigma by association generally devalues those associated with the stigmatized individual, associating with a non-stigmatized other does little to improve views of the stigmatized person. For example, in the case of stigma toward homosexuals, heterosexuals who interacted with them experienced stigma by association (Neuberg et al., 1994). These consequences occurred regardless of the subject's own perceived similarity to the heterosexual target. However, there was no evidence that the homosexual individual's interaction with the heterosexual target had any positive effect on perception of the homosexual individual (Neuberg et al., 1994).

This phenomenon has been established in a variety of contexts and within many different populations. Stigma by association effects occur in various conditions of perceived closeness, be it a profound relationship or a simple matter of proximity. Hebl and Mannix (2003) demonstrated this in a study that showed that male job applicants were evaluated more negatively when seated next to an overweight woman. Interestingly, it did not matter whether the applicant was perceived to be in a meaningful relationship with the overweight woman or not. He was devalued regardless. Additionally, stigma by association is predicted well by both implicit (association-based) and explicit (direct self-report) measures of attitudes when considering close relationships, but in coincidental relationships, stigma by association may be predicted better by more association-based (implicit) measures of attitudes (Pryor et al., 2012). Research has also demonstrated the spread of non-evaluative attributes. That is, not only positive or negative evaluations spread by association but also specific traits of individuals (Förderer & Unkelbach, 2011). Furthermore, stigma by association can also affect an individual's closeness to the

stigmatized other. For instance, family members of people with mental illness who experience stigma by association tend to express less perceived closeness to the stigmatized other as well as a high level of psychological distress (Van der Sanden et al., 2013).

Indeed, people with mental illness are a population of particular importance when discussing stigma. Mental illness has been shown to predict social rejection. In particular, the level of social rejection appears to follow most from perceived personal responsibility, dangerousness, and rarity of the illness (Feldman & Crandall, 2007). When an individual is perceived to be responsible for their condition, they elicit a lower level of sympathy and consequently experience higher stigmatization. Also, people are more inclined to reject someone with mental illness who appears to pose a threat to them or who has a more rare diagnosis. Therefore, people tend to attribute certain factors to mental illness, and they judge people with those illnesses accordingly. These judgments are widely known, and this presents problems with treatment. People want to avoid being stigmatized and, therefore, may avoid treatment because they are afraid of being judged (Corrigan, 2004). Public stigma and self-stigma have been tied to attitudes toward help seeking and, consequently, intentions to seek counseling (Bathje & Pryor, 2011). It is reasonable to assume that these factors are preventing many people from seeking treatment that could be crucial to their recovery. If significant others are also aware of stigma by association, it also seems possible that these others might discourage or at least fail to support treatment seeking on the part of people with mental illnesses. Thus, it seems crucial to learn more about factors that influence stigma by association and, eventually, how one might overcome such effects.

The purpose of this study is to examine stigma by association effects in the context of people with mental illness. In particular, I investigated whether stigma by association with people diagnosed with Schizophrenia is moderated by the perceived cause of the disease and the nature of the relation between the associated target person and the person with Schizophrenia. I predicted that participants who receive information emphasizing a cause that matches the relationship between the two individuals would a) be more inclined to attribute the development of Schizophrenia to the given cause and b) evaluate the associated target person more negatively.

Method

Participants

I recruited 204 undergraduate students at the Ohio State University through the Research Experience Program.

Materials

Data was collected through a computerized survey. Information on the etiology of Schizophrenia was taken from a Mayo Clinic resource and from schizophrenia.com (Mayo Clinic Staff; Schizophrenia). Each vignette combined the "normal person" vignette used by Eker (1989) and the one depicting a person with Schizophrenia used by Breheny (2007). Participants completed a scale of social distance based on the one developed by Bogardus (1933). Additionally, they evaluated the target on traits related to likeability taken from Anderson (1986) and on traits associated with mental illness stigma (Angermeyer & Dietrich, 2006; Bennett & Stennett, 2015).

Procedure

I used a 2 X 3 between-groups experimental design. The independent variables were the type of causal information given about Schizophrenia and the relationship of the target to a person with Schizophrenia. The dependent variables were ratings of positive and negative traits of the target, ratings of traits related to Schizophrenia stigma, and desired social distance from the target.

Participants were randomly assigned to receive either information highlighting a genetic cause of Schizophrenia or an environmental cause. Both types of information were accurate depictions of current understandings of Schizophrenia, but one emphasized solely the genetic components and the other emphasized only the environmental components. Then, participants read a vignette depicting a "normal" person who happens to be related to a person with Schizophrenia (see Appendix A). The type of relation to the target varied across conditions. In one condition, the target and stigmatized other were identical twins raised together (i.e., sharing genetics and environment). In other conditions, the two people were identical twins raised apart (sharing genetics but not environment), or childhood best friends (sharing environment but not genetics). Next, participants' attitudes toward the "normal" target in the vignette were evaluated along several dimensions. Participants completed a social distance scale, ratings of positive and negative traits, and ratings of traits related to Schizophrenia stigma. They also answered three questions which acted as manipulation checks (see Appendix B). Finally, participants indicated their perception of the likelihood that the target develops Schizophrenia in the future.

Results

Manipulation Checks

The manipulation checks indicated that each type of information about causes of Schizophrenia significantly influenced participants' perceptions of the causes. That is, participants receiving environmental cause information rated Schizophrenia as significantly more environmentally caused than those receiving genetic information ($t(202) = -6.335$, $p < 0.001$). Similarly, participants receiving genetic cause information rated Schizophrenia as significantly more genetically caused than those receiving environmental information ($t(202) = 2.827$, $p = 0.005$). As expected, neither relationship type nor the interaction of relationship and cause information significantly affected ratings of the extent to which Schizophrenia is caused genetically and environmentally (*Fs < 1*). Across all participants, Schizophrenia was rated as significantly more caused by genetics than environment (*$t(203) = 5.007$, $p < 0.001$*), suggesting that participants held a default belief in Schizophrenia as caused by genetics.

Stigma-Related Outcomes

I averaged the five stigma-related traits to compute an overall stereotypic "stigma" score for each participant, the positive and negative traits to compute an overall attitude score, and the eight social distance questions to compute a social distance score. Then, I conducted a 2x3 Analysis of Variance (ANOVA) to compare the effects of genetic and environmental causal information on stigma in each these dependent variables. For social distance and overall negative attitude, the interactions were not significant [$F(2, 198) = 0.51$, $p = 0.603$; $F(2, 198) = 1.68$, $p = 0.189$]. For the stigma score, there was a significant interaction between the two factors [$F(2, 198) = 3.14$, $p = 0.046$]. Additionally, in a between-subjects one-way ANOVA test of contrast, only participants who received environmental causal information and read about twins raised

together rated the target with a significantly higher level of stigma [$F(1, 198) = 2.086$, $p = 0.038$]. Therefore, after reading information highlighting an environmental cause of Schizophrenia, participants rated an identical twin target raised with the individual with Schizophrenia higher in stigmatized qualities than the average of the other conditions (none of which differed from one another). The differences among the groups can be seen in Figure 1.

Discussion

In this study, I demonstrated the ability to manipulate the transfer of stigmatized qualities to a neutral individual related to a person with Schizophrenia. In particular, when the target is the twin brother of an individual with Schizophrenia and they were raised together, the target is rated higher in stigmatizing qualities when the participant received information highlighting an environmental cause of Schizophrenia. This effect may run counter to intuition because one might assume that environmental information might have the greatest impact on an environment-only relationship. However, one might explain this by considering each causal belief as contributing to the likelihood of stigma by association. By default, people tend to hold a genetic view of the cause of Schizophrenia (Reavley, 2014; this is also true in my data). By adding environmental information to a situation that is influenced by both causes, participants could be induced to hold beliefs about both causes of Schizophrenia, thereby increasing the spreading of the overall stigmatized beliefs to the associated target. In addition, by showing the transfer of stigmatized qualities, I have demonstrated that the stigma itself is appearing in the neutral target rather than only an overall negative attitude, which adds support to

previous research on the spread of non-evaluative attributes (I did not find differences in overall negativity toward the associated person, though these evaluative reactions might have been more negative than they would have been toward a target totally unconnected from the person with Schizophrenia).

On the other hand, the localized effect of one condition on stereotypic stigmatized beliefs could be a reflection of the particular manipulation used to create a relationship based in both genetics and environment. When a participant reads about identical twins raised in the same household, it may seem like a more typical situation than twins separated at birth or best friends who are essentially siblings. When reading about these situations, the first one likely causes less thought because it is seemingly the most common. Therefore, it might be that the difference in stereotypic judgments comes partly from the typicality of the situation (or lack of typicality in the genetic-only or environment-only conditions). More research is needed to see whether or not different scenarios that create the genetic versus environmental connections between the target and the stigmatized other would produce different results.

The implications of this project are potentially significant in several ways. First, the study adds to an existing collection of support for the stigma by association effect. This phenomenon has been demonstrated numerous times within many populations. As previously mentioned, research exists within the contexts of obesity stigma and sexuality stigma. While a great deal of correlational research exists concerning mental health stigma, it is still relatively rare to see it demonstrated experimentally in the ways that such effects have been demonstrated for other stigmas. Second, this study builds on previous work by examining a causal component to the course of stigma by association

when the stigma regards mental illness. A number of factors have been associated with mental illness stigma and stigma by association. Koschade and Lynd-Stevenson (2011) showed that perceived genetic attribution predicted stigma by association in children of people with mental illness, and this result appeared to be mediated by the perceived likelihood of the child developing the illness. I took these findings further by manipulating the perceived cause of Schizophrenia and the relationship between the two individuals, and examining whether those factors influence on the strength of stigma by association effects.

Third, this research has implications on the field of mental health. Increasing evidence for stigma by association towards children of people with mental illness highlights the danger of such unwarranted judgment. As previously mentioned, being the target of mental illness stigma impairs one's motivation to seek treatment. Additionally, being the relative of a person with mental illness is associated with psychological distress. Therefore, one may assume that having a parent with a stigmatized mental illness could have a detrimental impact on someone's self-concept and intent to seek help if they do in fact develop a problem. Furthermore, being on the receiving end of stigma by association affects how an individual is perceived and, therefore, likely affects how they will be treated. Drawing attention to this issue may compel people to take measures to reduce this bias. In addition, investigating whether attribution has a causal effect on this process helps to identify such perceptions as key points of possible intervention. For example, if people perceive many mental illnesses as more genetically based than they really are, educating people about the role of non-genetic factors might help to reduce the extent of stigma by association effects. On the other hand, according to this study,

emphasizing environmental factors in a situation where both genes and environment are both relevant appears to increase stigma. Thus, I have demonstrated that the strength of mental illness stigma by association can be manipulated, but more work is needed to determine how to decrease the spread of stigma rather than increase it.

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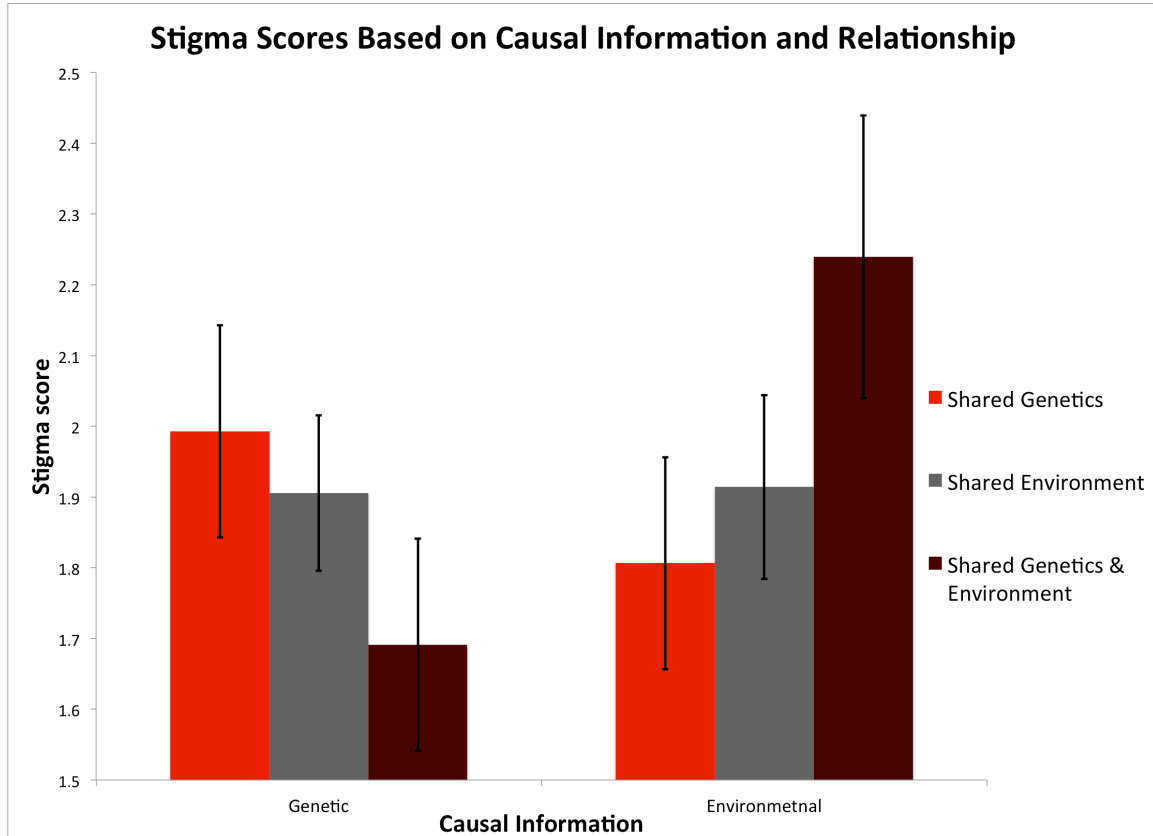
Figures

Figure 1.

Appendix A

Causal Information

Genetics:

Many people are affected by a condition called Schizophrenia.

What is Schizophrenia?

- Schizophrenia is a brain disorder in which individuals perceive reality in an abnormal way.

- Possible symptoms include hallucinations, delusions, disorganized thinking and behavior, and a decreased ability to carry out daily functions.

- **Onset of Schizophrenia has been shown to be strongly influenced by genetic factors.** For example, twin studies demonstrate that having an identical twin with Schizophrenia puts an individual at a 50% risk of developing the disorder.

Environment:

Many people are affected by a condition called Schizophrenia.

What is Schizophrenia?

- Schizophrenia is a brain disorder in which individuals perceive reality in an abnormal way.

- Possible symptoms include hallucinations, delusions, disorganized thinking and behavior, and a decreased ability to carry out daily functions.

- **Onset of Schizophrenia has been shown to be strongly influenced by environmental factors** such as place of birth and stress in daily life.

<div align="center">Relationship Vignettes</div>

Shared genetics and environment:

Imagine a person named Bob. Usually Bob gets along well with his family and coworkers. He enjoys reading and going out with friends. Bob can easily express his feelings and thoughts among those close to him, although he sometimes gets anxious while talking in a group consisting of strangers. He gets along all right with his family most of the time and it is easy to understand that they love each other.

When Bob's identical twin brother, Jeff, was in his late twenties, he started thinking that people were spying on him and trying to hurt him. Jeff became convinced

that people could hear what he was thinking. He also heard voices when no one else was around. Sometimes he even thought people on TV were sending messages especially to him. After living this way for about six months, Jeff was admitted to a psychiatric hospital.

Generally, Bob gets along all right with other people and they seek his company. When compared to those of his own age, his life can be considered organized. That is, one can say that he established a good balance between his social life and studying. In summary, Bob is generally an optimistic and happy person.

Shared Genetics Only:

Imagine a person named Bob. Usually Bob gets along well with his family and coworkers. He enjoys reading and going out with friends. Bob can easily express his feelings and thoughts among those close to him, although he sometimes gets anxious while talking in a group consisting of strangers. He gets along all right with his family most of the time and it is easy to understand that they love each other.

Bob has an identical twin brother named Jeff. As infants, Bob and Jeff were adopted into two different families, and thus, were raised in two different households. When Jeff was in his late twenties, he started thinking that people were spying on him and trying to hurt him. Jeff became convinced that people could hear what he was thinking. He also heard voices when no one else was around. Sometimes he even thought people on TV were sending messages especially to him. After living this way for about six months, Jeff was admitted to a psychiatric hospital.

Generally, Bob also gets along all right with other people and they seek his company. When compared to those of his own age, his life can be considered organized. That is, once can say that he established a good balance between his social life and studying. In summary, Bob is generally an optimistic and happy person.

Shared Environment Only:

Imagine a person named Bob. Usually Bob gets along well with his family and coworkers. He enjoys reading and going out with friends. Bob can easily express his feelings and thoughts among those close to him, although he sometimes gets anxious while talking in a group consisting of strangers. He gets along all right with his family most of the time and it is easy to understand that they love each other.

Bob has a close friend named Jeff who grew up in the house next door to him. As a child, Bob played with Jeff every day, and their relationship was like that of two brothers. When Jeff was in his late twenties, he started thinking that people were spying on him and trying to hurt him. Jeff became convinced that people could hear what he was thinking. He also heard voices when no one else was around. Sometimes he even thought people on TV were sending messages especially to him. After living this way for about six months, Jeff was admitted to a psychiatric hospital.

Generally, Bob gets along all right with other people and they seek his company. When compared to those of his own age, his life can be considered organized. That is, one can say that he established a good balance between his social life and studying. In summary, Bob is generally an optimistic and happy person.

Appendix B

Social Distance Questions

1. Would you be willing to work with Bob?

2. Would you be willing to move in next door to Bob?

3. Would you be willing to make friends with Bob?

4. Would you be willing to rent a room to Bob?

5. Would you be willing to recommend Bob for a job?

6. Would you like your child to marry Bob?

7. Would you trust Bob to take care of your child?

8. Would you be willing to introduce Bob to a friend?

Answers: Definitely Unwilling, Probably Unwilling, Neutral, Probably Willing, Definitely Willing

Positive/Negative Trait Questions

Rate the extent to which you agree with the following statements about Bob.

1. Bob is cold-hearted.

2. Bob is sincere.

3. Bob is kind.

4. Bob is mean.

5. Bob is intelligent.

6. Bob is selfish.

7. Bob is lazy.

8. Bob is mature.

9. Bob is dishonest.

10. Bob is trustworthy.

11. Bob is clean.

12. Bob is dependable.

Answers: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat

disagree, Strongly disagree

Schizophrenia Stigma Trait Questions

Rate the extent to which you agree with the following statements about Bob.

1. Bob is dangerous.

2. Bob is violent.

3. Bob is unpredictable.

4. Bob is personally responsible for his circumstances.

5. Bob is aggressive.

Answers: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat

disagree, Strongly disagree

Manipulation Checks

1. What is the likelihood that Bob develops Schizophrenia in the near future?

2. To what extent is onset of Schizophrenia caused by genetics?

3. To what extent is onset of Schizophrenia caused by environment?