

Exploring Relationships between Perceptions of Psychology as a Science, Mental Illness Stigma,  
and Self-Stigma

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Abstract

The current study explored relationships between mental illness stigma, self-stigma, and perceptions of psychology as a science. Stigma can negatively impact the lives of people with mental illness, and mental illness is a psychological phenomenon. Thus, the hypothesis predicted that people would report less self-stigma as they perceive psychology as more scientific. Participants ( $N = 77$ ) indicated their responses about self-stigma, stigma, and perceptions of psychology as a science. Results indicated that people reported less self-stigma when they perceived psychology as more scientific, thus supporting the hypothesis. Exploratory analyses revealed that people partially stigmatized mental illness more as they perceived psychology as less of a science as well as differences in gender and previous help-seeking behavior in relation to perceptions of psychology as a science. These results raise questions about the promotion of psychology in regards to mental health; however, future research should test for causation between the variables assessed.

Mental illness is a relatively psychological phenomenon associated with abnormal behavior and cognition. People with mental illness are at risk of experiencing stigma, which can have negative impacts on their daily lives. Thus, it is essential to discover factors that contribute to stigma to develop preventative measures. Perhaps, beliefs about psychology as a science relate to mental health stigma. People who believe that psychology is not a science might assume that mental illness is also not empirically based, potentially forming an association with stigma towards those with mental illness and the willingness to seek help for those with mental illness.

### **What is Stigma?**

Hinshaw and Stier (2008) define stigma as “the majority’s tendency to distance from and limit the rights of those in disparaged groups, the global nature of the aspersions cast, and the potential for internalization of such degraded status by those who are discredited.” Mental illness can have negative effects on clinical populations. In reference to other groups in society, people hold more negative views towards people with mental illness compared to individuals with physical illness (Socall & Holtgraves, 1992) and individuals without any known illness (Sibicky & Dovidio, 1986), therefore suggesting that mental illness stigma is a relevant societal issue. Typically, stigma leads to social consequences such as social rejection (Sibicky & Dovidio, 1986; Socall & Holtgraves) and avoidance (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003), as well as personal consequences such as self-stigma (Vogel, Bitman, Hammer, & Wade, 2013). In addition, public stigma contributes to feelings of fear and anger (Corrigan et al., 2003) as well as stereotypes of unpredictability (Socall & Holtgraves, 1992) and incompetence (Sibicky & Dovidio, 1986). Fortunately, research indicates that education about mental illness reduces stigma (Ahuja, Dhillon, Juneja, & Sharma, 2017; Watson et al., 2004). Overall, the literature

suggests that mental health stigma remains a significant public issue that negatively impacts those with mental illnesses.

### **Self-Stigma**

Individuals with mental illness might also internalize stigma and place those views upon themselves in the form of self-stigma. Self-stigma can result in personal consequences such as low self-esteem (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001) and empowerment (Corker, Brown, & Henderson, 2016). More importantly, research suggests that self-stigma can decrease a person's willingness to seek psychological help (Tay, Alcock, & Scior, 2018; Topkaya, 2014; Vogel, Wade, & Hackler, 2007). In addition, gender differences emerge in research on self-stigma; men are more likely than women to experience self-stigma (Topkaya, 2014; Vogel et al., 2007). These findings suggest that self-stigma negatively influences personal worth and willingness to seek help in fear of social repercussions that may result from seeking help.

### **Beliefs about Causes of Mental Illness as it Relates to Stigma**

In order to understand stigma, it is important to examine people's beliefs about the causes of mental health disorders. Research suggests that people hold more negative beliefs toward mental illness when they believe that it is caused by nonscientific factors such as religion or God's will rather than scientific factors (Gureje, Olley, Olusola, & Kola, 2006; Lincoln, Arens, Berger, & Rief, 2007). However, the literature provides mixed results between endorsement of biological models and psychological models of mental illness. For instance, Goldstein and Rosselli (2003) found that endorsement of biological models of mental illness led to decreased stigma; on the other hand, Lincoln et al. (2007) found that neither model alone predicted stigma.

Furthermore, Watson et al. (2004) demonstrates that an educational campaign for children that promoted the science of mental illness by utilizing both psychological and biological explanations led to decreased stigma and better attitudes towards help-seeking. The research indicates that it is important to promote a scientific understanding of mental illness to decrease stigma, but the research remains inconsistent about the correct scientific factors to promote.

### **Perceptions of Psychology as a Science**

People typically view mental illness as a psychological condition which begs the question: is psychology viewed as a science? The idea that psychology is a science is typically viewed with some skepticism. For instance, undergraduate students enrolled in psychology courses (Janda, Lovejoy, & Drury, 1998) and psychology professors (Howell, Collisson, & King, 2014) as well as members of the general public and university faculty (Amsel et al., 2009) possess ambiguous attitudes about the science of psychology. Furthermore, people typically view psychology as less scientifically grounded than natural sciences (Collisson, Kellogg, & Rusbasan, 2015; Howell et al., 2014; Krull & Silvera, 2013). The tendency to see psychology as a science increases when students enrolled in psychology classes possess a higher need for cognition and higher interest in science (Holmes & Beins, 2009) or judge psychology from their professor's perspective (Amsel et al., 2009). It also remains unclear if the tendency to view psychology as a science changes with more education in psychology. Holmes and Beins (2009) found that students' views on psychology's scientific component did not change with continued education; however, Provost et al. (2011) noted that students' viewed psychology as more scientific within a few weeks of college. Nonetheless, perceiving psychology as scientific might provide benefits. For instance, Friedrich (1996) found that beliefs in psychology as a science

leads to a higher belief in the effectiveness of psychotherapy and greater willingness to seek psychological help.

## **The Current Study**

It is important to discover factors related to stigma to develop preventative measures. Perhaps, beliefs in psychology as a science relates to mental illness stigma. Although the literature suggests that negative attitudes about mental illness are associated with nonscientific causal beliefs (Gureje et al., 2006; Lincoln et al., 2007), there is relatively little research that relates stigma to perceptions about psychology as scientific. However, based on previous literature on help seeking and perceptions about psychology (Friedrich, 1996), there is evidence to suggest that perceptions in psychology as a science will correlate with self-stigma. Because previous research examined an effect of stigma on self-stigma (Vogel et al., 2013), I am including stigma as a main variable in this study. Thus, the current study explores relationships between stigma, self-stigma of help seeking, and perceptions of psychology as a science.

In this study, participants reported their attitudes about mental illness and psychological help-seeking as well as their perceptions in psychology as a science. The hypothesis predicted that people would exhibit less self-stigma when they hold a higher belief in psychology as a science. Additionally, exploratory analyses examine relationships between stigma, help-seeking behavior, and gender with perceptions of psychology as a science.

## **Method**

### **Participants**

Recruitment of participants ( $N = 77$ ) occurred through convenience sampling at a small Midwestern University. Participants volunteered for a study about psychology, mental illness,

and help-seeking. The sample was mostly female (68.80%) and white (94.80%) with a mean age of 19.48 ( $SD = 1.26$ ). In addition, 35.10% of participants reported seeking professional psychological help in their lives, and 18.40% of participants indicated their major as psychology.

### **Materials and Procedure**

I asked participants to fill out a paper and pencil survey. Participants completed three scales in random order to reduce possible order effects. The Psychology as Science (PAS) scale included 20 items ( $\alpha = .70$ ) that evaluated beliefs about psychology as a scientific discipline (Friedrich, 1996). Participants indicated their responses on a 7-point scale ranging from *strongly disagree* to *strongly agree*. Sample items included “An undergraduate degree in psychology should be a Bachelor of Science rather than a Bachelor of Arts degree” and “Courses in psychology place too much emphasis on research and experimentation.” Previous research demonstrates that the PAS is a valid measure that predicts people’s attitudes towards psychology as a scientific discipline as well as academic performance in psychology courses (Friedrich, 1996).

To measure self-stigma, participants completed the Self-Stigma of Seeking Help scale (Vogel, Wade, & Haake, 2006). The self-stigma scale includes 10 questions ( $\alpha = .85$ ) related to people’s self-confidence in regards to seeking psychological help. Participants indicated their responses utilizing a 5-point scale ranging from *strongly disagree* to *strongly agree*. Sample items included “I would feel inadequate if I went to a therapist for psychological help” and “I would feel worse about myself if I could not solve my own problems.” The self-stigma scale demonstrates validity in that it predicts people’s willingness to seek psychological help (Vogel et al., 2006).

In addition, participants completed a modified version of the Attribution Questionnaire, which originally measured nine areas of public stigma (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). For this study, participants completed nine questions pertaining to three areas of stigma: dangerousness ( $\alpha = .79$ ), personal responsibility ( $\alpha = .69$ ), and avoidance ( $\alpha = .73$ ). I chose these areas for exploratory purposes. Participants rated their responses on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items included “I would feel unsafe around a person with mental illness” (dangerousness), “Mental illness is controllable” (personal responsibility), and “I would share a car pool each day with a person with mental illness” (avoidance). Previous studies successfully measured public stigma by utilizing the scale (Corrigan et al., 2003; Lammie, Harrison, Macmahon, & Knifton, 2010).

Finally, participants completed a demographic section including basic demographic questions of age, gender, and ethnicity. In addition, participants responded to questions about their year in college, number of psychology classes taken, and college major. Furthermore, participants indicated *yes* or *no* if they had ever sought psychological help.

## **Results**

The hypothesis predicted that self-stigma would negatively correlate with perceptions of psychology as a science. A Pearson’s correlation examined the relationship between self-stigma ( $M = 24.68$ ,  $SD = 7.43$ ) and psychology as science ( $M = 72.34$ ,  $SD = 8.90$ ). The analysis revealed a significant negative correlation between the variables,  $r = -.37$ ,  $p = .001$ . Therefore, these results support the hypothesis that self-stigma would negatively correlate with perceptions of psychology as a science.

Furthermore, exploratory analyses explored relationships between the stigma dimensions of avoidance, dangerousness, and personal responsibility with perceptions of psychology as a science. Pearson's correlations examined relationships between the variables. The analyses revealed that psychology as science significantly negatively correlated with avoidance ( $M = 5.53$ ,  $SD = 2.36$ ),  $r = -.31$ ,  $p = .007$ , and dangerousness ( $M = 5.62$ ,  $SD = 2.41$ ),  $r = -.24$ ,  $p = .033$ . However, the correlation between perceptions of psychology as a science and personal responsibility ( $M = 5.09$ ,  $SD = 2.39$ ) was not significant,  $r = -.154$ ,  $p = .181$ . These results indicate that perceptions of psychology as a science correlate with specific stigma dimensions (avoidance, dangerousness), but not others (personal responsibility).

A second set of exploratory analyses examined previous helping seeking behavior and perceptions of psychology as a science. Previous help-seeking (had sought help, had not sought help) served as the independent variable, and psychology as science served as the dependent variable. An independent samples  $t$  test revealed that individuals who had sought psychological help ( $M = 75.81$ ,  $SD = 8.53$ ) perceived psychology as more scientific than individuals who had not sought help ( $M = 71.56$ ,  $SD = 7.79$ ),  $t(72) = 2.16$ ,  $p = .034$ . Thus, exploratory analyses indicate that individuals who have sought psychological help perceive psychology as more scientific than individuals who have not sought help.

A final set of exploratory analyses examined gender differences with perceptions of psychology as a science. In an independent samples  $t$  test, gender (male, female) served as the independent variable and perceptions of psychology as a science served as the dependent variable. The analysis revealed that females ( $M = 73.72$ ,  $SD = 7.78$ ) perceived psychology as a science more than males ( $M = 69.29$ ,  $SD = 10.54$ ),  $t(75) = 2.06$ ,  $p = .043$ . Therefore, exploratory



analyses indicate that gender differences emerge when perceiving psychology as scientific; females perceive psychology as more scientific more than males.

## **Discussion**

The current study explored relationships between mental health stigma, self-stigma, and perceptions of psychology as a science. The hypothesis predicted that self-stigma would negatively correlate with perceptions of psychology as a science. Results indicated that people were more likely to experience self-stigma when they perceived psychology as less scientific; thus, these results supported the hypothesis. Furthermore, exploratory analyses examined relationships perceptions of psychology as a science with stigma, previous help seeking behavior, and gender. Results indicated that people were more likely to report avoiding people with mental illness and to view people with mental illness as dangerous when they perceived psychology as less scientific. However, no relationship existed between the belief that those with mental illness are responsible for their condition and perceptions of psychology as a science. In addition, individuals who had sought psychological help in the past perceived psychology as more scientific than individuals who had not sought psychology help. Finally, females perceived psychology as a science more so than males.

The findings of the current study align with previous research. This study replicated previous findings that people are more willing to seek help when they perceive psychology as scientific (Friedrich, 1996). While this study is the first known study to examine perceptions of psychology as a science to stigma, the findings remain consistent with past research that people hold more positive attitudes towards mental illness when they perceive that it is caused by scientific factors rather than nonscientific factors (Gureje et al., 2006; Lincoln et al., 2007).

Furthermore, this study has several implications. First, this study introduces a new understanding about mental illness stigma by providing information about how perceptions about psychology relate to attitudes about mental illness and psychological help-seeking. It is possible that this relationship exists because mental illness is typically perceived as a psychological phenomenon. Additionally, this study opens up ideas for future research to determine if perceptions about psychology cause mental health stigma to increase and help-seeking to decrease. Finally, this study raises questions about the way psychology is promoted and viewed. Perhaps, a focus on promoting psychology as a more scientifically based discipline will help decrease the stigma on mental illness and lead to more help-seeking behavior for those with mental illness.

However, it is important to note that the current study has limitations. First, it is impossible to determine causation from the results provided. It is probable to assume that factors outside of the variables assessed caused the provided results. For instance, a person's general personality or level of education might affect their attitudes towards mental illness, help-seeking, and psychology. In addition, it is difficult to generalize the results past the population tested due to the sampling method utilized in this study. It is possible that individuals of different colleges, age groups, geographic regions, and experiences would provide different responses to the survey items. Finally, this study consisted of a small sample of males and individuals who had sought help. Therefore, there it is probable that error caused significant results in these analyses.

Future research should address these limitations. First, future research should replicate this study across different populations to determine the ability to generalize the findings. In addition, future research should examine causal effects of perceptions of psychology as a science on self-stigma and stigma. For instance, it would be interesting to note if individuals stigmatize

mental health more after learning information that promotes a scientific model of psychology in comparison to information that does not promote a scientific model of psychology.

In conclusion, the current study revealed a relationship between individuals' perceptions of psychology as a science, self-stigma, and certain aspects of stigma. Stigma has negative social and personal impacts on the lives of those with mental illness, thus it is important to discover factors that relate to stigma. This study introduced a new understanding about mental illness stigma and help-seeking by discovering a connection to perceptions of psychology.

## References

- Ahuja, K. K., Dhillon, M., Juneja, A., & Sharma, B. (2017). Breaking barriers: An education and contact intervention to reduce mental illness stigma among Indian college students. *Psychosocial Intervention, 26*, 103–109.
- Amsel, E., Johnston, A., Alvarado, E., Kettering, J., Rankin, L., & Ward, M. (2009). The effect of perspective on misconceptions in psychology: A test of conceptual change theory. *Journal of Instructional Psychology, 36*, 289-295.
- Collisson, B., Kellogg, J., & Rusbasan, D. (2015). Perceptions of psychology as a science: The effect of citations within introductory textbooks. *North American Journal of Psychology, 17*, 77–88.
- Corker, E., Brown, J., & Henderson, C. (2016). How does self-stigma differ across people with psychiatric diagnoses and rheumatoid arthritis, and how does it impact on self-esteem and empowerment? *Psychology, Health & Medicine, 21*, 993-1005.
- Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D., & Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health and Social Behavior, 44*, 162-179.
- Friedrich, J. (1996). Assessing students' perceptions of psychology as a science: Validation of a self-report measure. *Teaching of Psychology, 23*, 6-13.
- Goldstein, B., & Rosselli, F. (2003). Etiological paradigms of depression: The relationship between perceived causes, empowerment, treatment preferences, and stigma. *Journal of Mental Health, 12*, 551-563.

- Gureje, O., Olley, B. O., Olusola, E. O., & Kola, L. (2006). Do beliefs about causation influence attitudes to mental illness? *World Psychiatry, 5*, 104-107.
- Hinshaw, S. P., & Stier, A. (2008). Stigma as related to mental disorders. *Annual Review of Clinical Psychology, 4*, 367–393.
- Holmes, J. D., & Beins, B. C. (2009). Psychology is a science: At least some students think so. *Teaching of Psychology, 36*, 5-11.
- Howell, J. L., Collisson, B., & King, K. M. (2014). Physics envy: Psychologists' perceptions of psychology and agreement about core concepts. *Teaching of Psychology, 41*, 330–334.
- Janda, L. H., England, K., Lovejoy, D., & Drury, K. (1998). Attitudes toward psychology relative to other disciplines. *Professional Psychology: Research and Practice, 29*, 140–143.
- Krull, D. S., & Silvera, D. H. (2013). The stereotyping of science: Superficial details influence perceptions of what is scientific. *Journal of Applied Social Psychology, 43*, 1660–1667.
- Lammie, C., Harrison, T. E., Macmahon, K., & Knifton, L. (2010). Practitioner attitudes towards patients in forensic mental health settings. *Journal of Psychiatric and Mental Health Nursing, 17*, 706-714.
- Lincoln, T. M., Arens, E., Berger, C., & Rief, W. (2007). Can anti-stigma campaigns be improved? A test of the impact of biogenetic vs psychosocial causal explanations on implicit and explicit attitudes to schizophrenia. *Schizophrenia Bulletin, 34*, 984-994.

- Link, B. G., Struening, E. L., Neese-Todd, S., Asmussen, S., & Phelan, J. C. (2001). Stigma as a barrier to recovery: The consequences of stigma for the self-esteem of people with mental illnesses. *Psychiatric Services, 52*, 1621-1626.
- Provost, S. C., Martin, F. H., Peacock, A., Lipp, O. V., Bath, D., & Hannan, G. (2011). University students' views on the nature of science and psychology. *Psychology Learning and Teaching, 10*, 128–145.
- Sibicky, M., & Dovidio, J. F. (1986). Stigma of psychological therapy: Stereotypes, interpersonal reactions, and the self-fulfilling prophecy. *Journal of Counseling Psychology, 33*, 148–154.
- Socall, D. W., & Holtgraves, T. (1992). Attitudes toward the mentally ill: The effects of label and beliefs. *The Sociological Quarterly, 33*, 435–445.
- Tay, S., Alcock, K., & Scior, K. (2018). Mental health problems among clinical psychologists: Stigma and its impact on disclosure and help-seeking. *Journal of Clinical Psychology, 74*, 1545–1555.
- Topkaya, N. (2014). Gender, self-stigma, and public stigma in predicting attitudes toward psychological help-seeking. *Educational Sciences: Theory and Practice, 14*, 480-487.
- Vogel, D. L., Bitman, R. L., Hammer, J. H., & Wade, N. G. (2013). Is stigma internalized? The longitudinal impact of public stigma on self-stigma. *Journal of Counseling Psychology, 60*, 311–316.
- Vogel, D. L., Wade, N. G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology, 53*, 325–337.

Vogel, D. L., Wade, N. G., & Hackler, A. H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology, 54*, 40–50.

Watson, A. C., Otey, E., Westbrook, A. L., Gardner, A. L., Lamb, T. A., Corrigan, P. W., & Fenton, W. S. (2004). Changing middle schoolers' attitudes about mental illness through education. *Schizophrenia Bulletin, 30*, 563-572.