

BRIEF REPORT

Is Stigma Internalized? The Longitudinal Impact of Public Stigma on Self-Stigma

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Stigma is considered an important barrier to seeking mental health services. Two types of stigma exist: public stigma and self-stigma. Theoretically, it has been argued that public stigma leads to the development of self-stigma. However, the empirical support for this assertion is limited to cross-sectional data. Therefore, the goal of this research was to examine the relationship between public stigma and self-stigma over time. Perceptions of public and self-stigma were measured at Time 1 (T1) and then again 3 months later at Time 2 (T2). Using structural equation modeling, we conducted a cross-lag analysis of public stigma and self-stigma among a sample of 448 college students. Consistent with assertions that public stigma leads to the development of self-stigma, we found that public stigma at T1 predicted self-stigma at T2, whereas the converse was not true. These findings suggest that if self-stigma develops from public stigma, interventions could be developed to interrupt this process at the individual level and reduce or eliminate self-stigma despite perceptions of public stigma.

Keywords: public stigma, self-stigma, internalized stigma, help seeking, cross-lag

According to the National Institute for Mental Health (NIMH), in any given year, a quarter of the American population is experiencing at least one diagnosable mental illness (NIMH, 2005). However, despite the consistent finding that psychological treatments are effective for a broad range of mental health concerns (Lambert & Ogles, 2004), approximately three fourths of Americans affected by a mental illness never seek treatment, and many of those who do drop out of treatment early (NIMH, 2005). Researchers have noted that concerns about stigmatization are one of the primary factors inhibiting mental health service utilization and treatment adherence (Corrigan, 2004; Zartaloudi & Madianos, 2010). Specifically, greater concerns about stigma have been linked with decreased initial intentions to seek therapy (Vogel, Wade, & Hackler, 2007) and, once in therapy, with decreased compliance with therapeutic interventions (Fung, Tsang, Corrigan, Lam, & Cheng, 2007; Sirey, Bruce, Alexopoulos, Perlick, Friedman, & Meyers, 2001), missed appointments (Vega, Rodriguez, & Ang, 2010), early termination of treatment (Sirey, Bruce, Alexopoulos, Perlick, Raue, et al., 2001), and less intention to return for subsequent sessions (Wade, Post, Cornish, Vogel, & Tucker, 2011). As a result, there is a clear mandate to better understand the factors involved in the development of stigma in order to improve interventions that decrease stigma and increase people's willingness to seek help when experiencing psychological distress.

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Public and Self-Stigma

Past research has demonstrated the existence of two types of stigma associated with mental health and psychological services: public stigma and self-stigma (Corrigan, 2004). Public stigma refers to the stigmatizing perception, endorsed by the general population, that a person who seeks mental health services is undesirable or socially unacceptable (Vogel, Wade, & Haake, 2006). Consistent with this, people labeled as having received counseling services were rated less favorably and treated more negatively than those who were not treated (Sibicky & Dovidio, 1986). Similarly, individuals described as seeking help for depression are rated as more emotionally unstable, less interesting, and less confident than those individuals seeking help for back pain (Ben-Porath, 2002). The public also associates the utilization of psychological services with not being in control of one's emotions (Oppenheimer & Miller, 1988).

This public stigmatization can be problematic as large-scale negative perceptions about a group can lead to stereotyping, prejudice, and discrimination (Corrigan, 2004). Researchers have suggested that beliefs and stereotypes about those who seek help for mental illness often lead to various forms of discrimination such as avoidance, lack of opportunity, and loss of self-determination (Corrigan & Shapiro, 2010). In fact, those who have sought mental health treatment report higher levels of perceived discrimination than do those who have not received treatment (Jorm & Wright, 2008). Additional research has suggested that perceived public stigma results in lower prospects for recovery (Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001; Perlick et al., 2001; Wright, Gronfein, & Owens, 2000).

Studies have also delineated a construct that is separate from but related to public stigma called self-stigma. In the literature, self-

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stigma is defined as the reduction in a person's self-esteem or sense of self-worth due to the perception held by the individual that he or she is socially unacceptable (Vogel et al., 2007). Self-stigma is thought to occur when people experiencing a mental illness or seeking help self-label as someone who is socially unacceptable and in doing so internalize stereotypes, apply negative public attitudes to themselves, and suffer diminished self-esteem and self-efficacy (Corrigan & Shapiro, 2010). Research has shown that individuals who experience self-stigma suffer from lowered self-esteem (Link et al., 2001), increased depression (Manos, Rusch, Kanter, & Clifford, 2009), negative attitudes toward psychological treatment (Conner et al., 2010), and lower treatment compliance (Fung et al., 2007). Common demonstrations of self-stigma include feeling shame and limiting integration with others (Kranke, Floersch, Kranke, & Munson, 2011). Researchers have also noted that individuals who self-stigmatize may avoid seeking psychological services to avoid being labeled as having a mental illness (Link et al., 2001). Studies have also shown that those who endorse greater self-stigma associated with seeking help are less willing to return for subsequent sessions (Wade et al., 2011). In other words, self-stigma plays a powerful and unique role in attitudes toward mental illness and seeking psychological services.

The Relationship Between Public and Self-Stigma

Modified Labeling Theory (MLT) has frequently been used to explain the effects of stigma and the relationship between public and self-stigma (e.g., Link, Cullen, Struening, Shrout, & Dohrenwend, 1989). According to the theory, negative external perceptions such as public stigmatization can have a harmful impact on a person's internal sense of self. In other words, self-stigma is explained as a person's internalization of public stigma (Vogel et al., 2007). Several researchers have reported results consistent with the assertion that people internalize negative perceptions of mental illness (Link & Phelan, 2001; Vogel et al., 2007). For example, Vogel and colleagues (2007) examined the influence of public stigma and self-stigma on attitudes and intentions toward seeking individual counseling. Consistent with the hypothesized relationship between public and self-stigma, the researchers found that perceived public stigma was positively related to self-stigma and that self-stigma was then negatively associated with attitudes toward counseling. When accounting for the role of self-stigma, no direct link between public stigma and attitudes remained. That is, public stigma appeared to lead to an internalization of negative external messages, and it was these internal messages that predicted subsequent help-seeking decisions. In similar studies, the relationships between public stigma, self-stigma, and attitudes toward counseling were demonstrated for different forms of therapy such as career counseling (Ludwikowski, Vogel, & Armstrong, 2009) and group counseling (Vogel, Shechtman, & Wade, 2010). These findings have led researchers to assert that public stigma is internalized as self-stigma.

However, the evidence that public stigma is internalized as self-stigma is not as strong as past studies have postulated. This is, in large part, due to the fact that previous research on the stigma of help seeking is mostly cross-sectional in nature. Cross-sectional designs, although often easier to conduct, are limited in that they can explain correlations only based on data gathered at a single point in time, even when structural models are conducted. Thus,

they do not allow researchers to rule out the possibility that the theorized criterion variable causes the predictor variable. Because published studies to date have not investigated the impact of public stigma on self-stigma over time, it is not yet known if public stigma is internalized as self-stigma, as suggested by MLT. For effective interventions to be developed, it is essential that research investigate the direction of the relationship between public and self-stigma, in order to confirm that stigma internalization does function as theorized. A better understanding of how these constructs relate to each other across time will provide essential information and guidance for designing interventions at the individual and societal level aimed at reducing stigma associated with mental illness and seeking help.

The Current Study

The goal of the present study was to test the assertion of MLT (Link et al., 1989) by examining the relationship between public stigma and self-stigma using a cross-lagged panel design within a structural equation model (SEM) framework. Cross-lag analysis allows for an examination of the relative likelihood of differing causal relationships over time (Huck, Cormier, & Bounds, 1974). For example, counseling researchers Martens and Haase (2006) stated that "by comparing . . . two cross-lagged relationships, the researcher is able to determine the variable that is a stronger temporal predictor of the other, which can be considered evidence that one variable is a more likely cause of the other" (p. 881). Therefore, we used the cross-lag analysis to test the hypothesis, based on MLT, that the relationship between public stigma at Time 1 (T1) and self-stigma at Time 2 (T2) is larger than the relationship between self-stigma at T1 and public stigma at T2. In other words, we predicted that public stigma would be a stronger temporal predictor of self-stigma than the reverse.

Method

Participants and Procedures

Perceptions of public and self-stigma were measured at T1 and then again 3 months later (T2). Participants were 448 individuals (67% women) from a large midwestern university. Participants were predominantly European American (85%; African Americans [1%], Asian Americans [4%], Latino/a Americans [2%], Multi-Racial American [3%], and International [5%]), which was similar to the demographic makeup of the university student body. Fifty-one percent were first-year students, 27% were second-year students, 15% were third-year students, and 7% were fourth-year or beyond. Participants were recruited through a psychology department's subject pool, which consisted of students majoring in various fields of study who were enrolled in an introductory psychology or communication studies course. Participants were invited to confidentially complete the survey online and received course credit for their participation. University Human Subjects approval was obtained before data collection began.

Measures

Stigma Scale for Receiving Psychological Help (SSRPH; Komiya, Good, & Sherrod, 2000). Public stigma was assessed using the SSRPH, which contains five items rated on a Likert scale

from 1 to 5, with higher scores reflecting greater perceptions of public stigma. A sample item is "Seeing a psychologist for emotional or interpersonal problems carries social stigma." The internal consistency for the measure was .73. The SSRPH has been found to correlate with attitude toward seeking therapy (Komiya et al., 2000). However, the wording of one item ("It is a sign of personal weakness or inadequacy to see a psychologist for emotional or interpersonal problems") seems to assess a concept more similar to self-stigma than public stigma. Therefore, to avoid artificially inflating the construct overlap between the two measures, we dropped this item. The correlation between the four-item and five-item versions was .96. The internal consistency of the four remaining items in this sample was similar to that in previous studies (.72).

Self-Stigma of Seeking Help scale (SSOSH; Vogel et al., 2006). Self-stigma was measured using the SSOSH, which contains 10 items rated on a Likert scale from 1 to 5, with higher scores reflecting greater reports of self-stigma. A sample item is "I would feel inadequate if I went to a therapist for psychological help." Estimates of the internal consistency range from .86 to .90, and the 2-week test-retest reliability has been reported to be .72 (Vogel et al., 2006). The SSOSH has been shown to correlate with attitudes toward and intention to seek therapy and to differentiate those who sought services from those who did not (Vogel et al., 2006). The internal consistency of the scale in this sample was .90.

Results

We conducted a cross-lag analysis (see Martens & Haase, 2006) using the full-information maximum likelihood method in Lisrel 8.8 to examine the effects of public stigma on self-stigma (see Figure 1) across two time points. Cross-lag analysis using a structural equation model (SEM) framework allows researchers to determine the relationships between variables of interest after accounting for a number of factors in the model that could otherwise bias the results. These include (a) the overlap between latent variables measured at the same time (i.e., the relationship between public stigma and self-stigma at T1 as well as public stigma and self-stigma at T2), (b) the correlations in the error terms in the observed indicators from T1 to T2, and (c) the invariance in factor loadings between T1 and T2 observed indicators and latent vari-

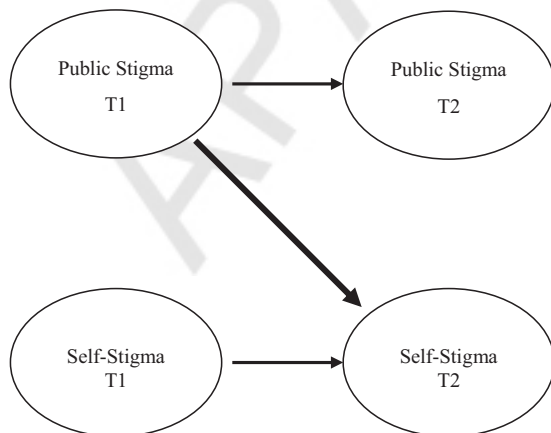


Figure 1. Hypothesized cross-lag paths. T1 = Time 1; T2 = Time 2.

ables (Martens & Haase, 2006). For example, controlling for the correlations in latent variables measured at the same time helps to control effects that might be accounted for by an unmeasured third variable (Anderson & Williams, 1992). In addition, the error terms of an assessed variable measured at two or more time points should be consistent across assessment points, and therefore specifying them as equivalent can help reduce bias in the cross-lag estimates (Anderson & Williams, 1992). Additionally, equivalence in the factor loadings of the latent variables across T1 and T2 assessments can be implemented to ensure similarity in measurement across time points (i.e., longitudinal invariance), which if not present can lead to difficulties in interpreting cross-lag correlations (Horn & McArdle, 1992). As such, we controlled for each of these in the subsequent models.

For each model, parcels of the latent variables of public and self-stigma were created, following the recommendation of Russell, Kahn, Spoth, and Altmaier (1998), by separately fitting a one-factor model using exploratory factor analyses with the maximum likelihood method on the items from each scale. To equalize the average loadings of each parcel on its respective factor, we assigned the highest and lowest ranking items in pairs to a parcel. We chose to parcel these variables in order to reduce the number of parameters that would result from using the individual items, thereby improving the estimation of the effects (see Russell et al., 1998). For the latent variable of public stigma at Time 1 and Time 2, two observed indicators (parcels) from the SSRPH were created. For the latent variable of self-stigma at Time 1 and Time 2, three observed indicators (parcels) from the SSOSH were created. Internal consistency for the parcels was between .62 and .67 for public stigma and between .68 and .78 for self-stigma. Next, we examined the multivariate normality of these observed variables (parcels). The result indicated that the multivariate data were not normal, $\chi^2(2, N = 448) = 190.20, p < .001$. Therefore, the scaled chi-square was used in the subsequent SEM tests (Satorra & Bentler, 2001).

To examine temporal predictions using SEM, Martens and Haase (2006) suggested testing four nested models: (a) an initial model that includes just the autoregressive correlations of the baseline latent variables (e.g., public stigma at T1 \rightarrow public stigma at T2 and self-stigma at T1 \rightarrow self-stigma at T2), (b) a second model that adds the longitudinal prediction of one variable at T1 on the other variable at T2 (e.g., autoregressive paths plus self-stigma at T1 \rightarrow public stigma at T2), (c) a third model that examines the other cross-lag path (e.g., autoregressive paths plus public stigma at T1 \rightarrow self-stigma at T2), and (d) a fourth model with both of the cross-lagged paths and the autoregressive paths. The results and fit indices of these four nested models are presented in Table 1. We conducted chi-square difference tests to examine which of the nested models provided the best fit (see Martens & Haase, 2006). The Self-Stigma \rightarrow Public Stigma model provided no improvement in model fit compared to the baseline model, $\chi^2_{diff}(1) = 0.85, p = .36$. The path from self-stigma at T1 to public stigma at T2 was not statistically significant ($p > .05$) and did not add to overall model fit. However, the Public Stigma \rightarrow Self-Stigma model provided a better fit than did the baseline model, $\chi^2_{diff}(1) = 4.52, p = .03$. Specifically, the added path from public stigma at T1 to self-stigma at T2 was statistically significant ($\beta = .15, p < .05$) and added to the overall model fit. Next, we followed Martens and Haase's (2006) example and compared the

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Table 1
Cross-Lagged Panel Model Summary

Model	scaled χ^2	df	p	CFI	RMSEA	SRMR
Autoregressive	56.15	29	.002	.99	.046	.039
Self-Stigma → Public Stigma	55.29	28	.002	.99	.047	.037
Public Stigma → Self-Stigma	50.64	28	.006	.99	.043	.029
Full cross-lag	50.14	27	.004	.99	.044	.028

Note. CFI = comparative fit index; RMSEA = root-mean-square error of approximation; SRMR = standardized root-mean-square residual.

full cross-lag model to the previous best fitting model (i.e., the Public Stigma → Self-Stigma model). The full cross-lag model (with the addition of the self-stigma → public stigma path) did not show a better fit, $\chi^2_{diff}(1) = 0.44$ $p = .51$, than did the previous model. As such, the Public Stigma → Self-Stigma model provided the most parsimonious results (see Figure 2).¹ Therefore, the results are consistent with previous theoretical assertions that public stigma has a greater influence on future self-stigma than the reverse.²

Discussion

The present study examined the relationship between public stigma and self-stigma over a 3-month time span. Consistent with the hypothesis that public stigma is internalized as self-stigma over time, higher initial public stigma predicted higher subsequent self-stigma, but this was not the case for the reverse. Whereas prior cross-sectional studies could not rule out reverse-causality, the present investigation used a cross-lag model within a structural equation framework to provide evidence for a temporal effect of public stigma on self-stigma. This finding supports previous assertions regarding the role of public stigma on the development (i.e., internalization) of self-stigma. Specifically, results support the theorized relationship between public stigma and self-stigma as posited by MLT and the work of researchers who have argued that people internalize negative perceptions about mental illness (Link & Phelan, 2001; Vogel et al., 2007).

Past studies have highlighted that negative societal perceptions about mental illness and seeking help can have negative consequences, especially for individuals suffering from mental illness. One such example is that individuals with mental illnesses may

avoid seeking treatment for fear of receiving a negative label. Furthermore, the results of this study support the notion that public stigma may serve as a direct barrier to not only seeking treatment but also to people’s ability to form positive and healthy attitudes about themselves and their capabilities (i.e., increased self-stigma). This insidious effect of public stigma can be particularly problematic, as it may not only reduce the likelihood of seeking services but also increase the occurrence of symptoms, relapse, and feelings of distress and hopelessness (Corrigan, 2004).

The results from this study provide further corroborating evidence that self-stigma is more proximal to attitudes toward seeking counseling and intention to seek help when experiencing a psychological concern (e.g., Vogel et al., 2007). If public stigma affects self-stigma over time and self-stigma is a stronger predictor of attitudes and intentions, then self-stigma is likely to be the more proximal variable. This does not mean that public stigma is not an important variable. To the contrary, by indicating a longitudinal relationship between public and self-stigma, the present results add support to past research that has found public stigma to be an important obstacle to seeking psychological help (Brown et al., 2010). Furthermore, the results add important information to the way in which public stigma might operate on attitudes and intentions concerning seeking help: through the development of self-stigma.

Implications for Counseling

Whereas public stigma is based on societal factors that can be difficult to change, this study highlights an alternate avenue for reducing the negative effects of stigma: the individual. Changing society’s attitudes toward mental illness and psychological help seeking remains an important step and may be the ultimate goal. However, researchers and clinicians could assist those in need by helping them to interrupt the internalization of public stigma. This could be done by developing interventions that can be applied in clinical settings or by the individuals themselves (e.g., online self-help materials)—interventions that focus on strategies and

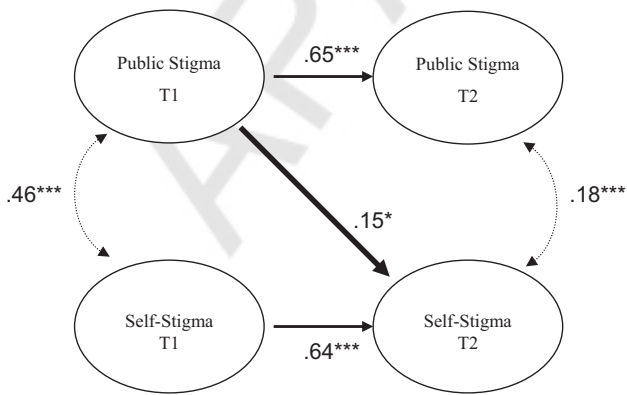


Figure 2. Final cross-lag model results. T1 = Time 1; T2 = Time 2. * $p < .05$. *** $p < .001$.

¹ Although the correlation between the four- and five-item versions of the public stigma scale was .96, we also ran the model with the five-item version to see what effect the removal of the one item may have had on the results. As expected, the results were stronger with the five-item version. In particular, the strength of the relationship between public stigma at T1 and self-stigma at T2 was .21 rather than .15. The link between self-stigma at T1 and public stigma at T2 was the same and nonsignificant.

² The effect of public stigma on self-stigma was found over and above the effect of self-stigma from T1 to T2. Conducting the model without controlling for the effects of T1 public and self-stigma, the relationship between T1 public and T2 public stigma was .82 ($p < .001$) and the relationship between T1 self-stigma and T2 public stigma was .35 ($p < .01$).

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Fn2

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techniques to combat the influence of public stigma and reduce extant self-stigma. For example, borrowing from the social psychological literature, mechanisms known to impact the ways that stigma affects the individual (i.e., expectancy confirmation, stereotype activation, identity threat processes; Major & O'Brien, 2005) could be used to reduce self-stigma. Given the association between stigma and treatment adherence, reducing self-stigma may lead to better treatment adherence and decreased premature termination (Sirey, Bruce, Alexopoulos, Perlick, Friedman, & Meyers, 2001). Ultimately, further research is needed to examine additional variables (e.g., conformity to masculine norms, level of exposure to education about mental illness and its treatment) that may impact the internalization of self-stigma over time. The focus on internal factors as opposed to external factors may provide a more direct way to examine the role of stigma and the magnitude of its impact on help-seeking behaviors of individuals with mental illness.

Additional research is also needed to provide information regarding the efficacy of specific interventions. Some existing evidence suggests that people may feel less self-stigma if their symptoms are normalized and if they are given an explanation for their symptoms (Schreiber & Hartrick, 2002). People tend to view their problems with less shame and guilt when given information that suggests that their problems (a) are not their fault, (b) are reversible (Rosen, Walter, Casey, & Hocking, 2000), and (c) will improve through treatment (Mann & Himelein, 2004). Because most of the problems that psychologists treat meet these three criteria, those in the helping professions have an important opportunity. By communicating with the public that mental health problems do not need to be internalized as personal incompetence or something shameful, counselors might be able to reach more of those who are suffering.

Limitations

It is important to note that this study is not without its limitations. One potential limitation is the use of a general sample of college students. Therefore, the results obtained using the present sample may not suit other populations, such those with less education or those from different age cohorts. The relationship between public and self-stigma could also be different for those experiencing significant difficulties that could have more immediate need of services. As such, whereas some researchers have found similar patterns in reported help-seeking processes of those currently distressed and those not currently distressed (see Vogel, Wade, & Hackler, 2008), researchers may want to directly examine the longitudinal relationships between public and self-stigma among those currently experiencing clinical symptoms of distress. Furthermore, the majority of the sample was European American. Researchers have noted that certain ethnic or racial groups have greater tendencies to avoid seeking help than have European Americans, which may be due to concerns about stigma (Leong, Wagner, & Tata, 1995). Previous research has suggested that the impact of public and self-stigma may differ depending on ethnicity, race, and other cultural factors (Brown et al., 2010; Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011). As a result, future researchers could examine the longitudinal relationship between public and self-stigma for people of diverse ethnicities and from different cultures.

A second limitation of this study is the lack of a true experimental design. Although the current cross-lag design using a

structural equation model framework provides further evidence in the direction of a causal relationship of the two variables over a 3-month time span, future interpretation of causality would be strengthened with experimental designs where public and/or self-stigma are manipulated in the lab (e.g., a confederate who says something negative or positive to the individual about seeking help) to help clarify the relationship between the different types of stigma. In addition, more complex, longer term longitudinal designs (i.e., growth curve models of multiple time points) over the course of 6 months, 1 year, 2 years, or longer would provide additional evidence regarding the stability or instability of these relationships over time (Campbell & Kenny, 1999).

Conclusion

The findings of the present study provide a clearer understanding of the likely temporal relationship between public stigma and self-stigma. A cross-lag design using a structural equation framework has proven to be an effective method for examining directionality of such relationships over time (Martens & Haase, 2006). Results suggest that public stigma predicts future self-stigma across a 3-month time period. Although future research is warranted to expand on these findings, the results obtained in this study add to the existing body of literature by providing evidence supporting MLT's (Link et al., 1989) theoretical assertions of stigma internalization. A better understanding of the influence of public stigma on self-stigma may help guide future research and intervention efforts aimed at reducing the impact of stigma on help-seeking behaviors and ultimately increasing opportunities to help individuals who suffer with mental illness lead more satisfying lives.

References

- Anderson, S. E., & Williams, L. J. (1992). Assumptions about unmeasured variables with studies of reciprocal relationships: The case of employee attitudes. *Journal of Applied Psychology, 77*, 638–650. doi:10.1037/0021-9010.77.5.638
- Ben-Porath, D. (2002). Stigmatization of individuals who receive psychotherapy: An interaction between help-seeking behavior and the presence of depression. *Journal of Social and Clinical Psychology, 21*, 400–413. doi:10.1521/jsocp.21.4.400.22594
- Brown, C., Conner, K. O., Copeland, V. C., Grote, N., Beach, S., Battista, D., & Reynolds, C. F., III. (2010). Depression stigma, race, and treatment seeking behavior and attitudes. *Journal of Community Psychology, 38*, 350–368. doi:10.1002/jcop.20368
- Campbell, D. T., & Kenny, D. A. (1999). *A primer on regression artifacts*. New York, NY: Guilford Press.
- Conner, K. O., Copeland, V. C., Grote, N. K., Koeske, G., Rosen, D., Reynolds III, C. F., & Brown, C. (2010). Mental health treatment seeking among older adults with depression: The impact of stigma and race. *American Journal of Geriatric Psychiatry, 18*, 531–543.
- Corrigan, P. (2004). How stigma interferes with mental health care. *American Psychologist, 59*, 614–625. doi:10.1037/0003-066X.59.7.614
- Corrigan, P. W., & Shapiro J. R. (2010). Measuring the impact of programs that challenge the public stigma of mental illness. *Clinical Psychology Review, 30*, 907–922. doi:10.1016/j.cpr.2010.06.004
- Fung, K. M., Tsang, H. W., Corrigan, P. W., Lam, C. S., & Cheng, W. M. (2007). Measuring self-stigma of mental illness in China and its implications for recovery. *International Journal of Social Psychiatry, 53*, 408–418. doi:10.1177/0020764007078342

- Horn, J. L., & McArdle, J. J. (1992). A practical and theoretical guide to measurement invariance in aging research. *Experimental Aging Research, 18*, 117–144. doi:10.1080/03610739208253916
- Huck, S. W., Cormier, W. H., & Bounds, W. G. (1974). *Reading statistics and research*. New York, NY: Harper and Row.
- Jorm, A. F., & Wright, A. (2008). Influences on young people's stigmatizing attitudes towards peers with mental disorders: National survey of young Australians and their parents. *British Journal of Psychiatry, 192*, 144–149. doi:10.1192/bjp.bp.107.039404
- Komiya, N., Good, G., & Sherrod, N. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology, 47*, 138–143. doi:10.1037/0022-0167.47.1.138
- Kranke, D. A., Floersch, J., Kranke, B. O., & Munson, M. R. (2011). A qualitative investigation of self-stigma among adolescents taking psychiatric medication. *Psychiatric Services, 62*, 893–899. doi:10.1176/appi.ps.62.8.893
- Lambert, M. J., & Ogles, B. M. (2004). The efficacy and effectiveness of psychotherapy. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behaviour change* (5th ed., pp. 139–193). New York, NY: Wiley.
- Leong, T. L., Wagner, N. S., & Tata, S. P. (1995). Racial and ethnic variations in help-seeking attitudes. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. Alexander (Eds.), *Handbook of multicultural counseling* (pp. 415–438). Thousand Oaks, CA: Sage.
- Link, B., Cullen, F., Struening, E., Shrout, P., & Dohrenwend, B. (1989). A modified labeling theory approach to mental disorders: An empirical assessment. *American Sociological Review, 54*, 400–423. doi:10.2307/2095613
- Link, B., & Phelan, J. (2001). Conceptualizing stigma. *Annual Review of Sociology, 27*, 363–385. doi:10.1146/annurev.soc.27.1.363
- 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. doi:10.1176/appi.ps.52.12.1621
- Ludwikowski, W., Vogel, D. L., & Armstrong, P. I. (2009). Attitudes towards career counseling: The role of public and self-stigma. *Journal of Counseling Psychology, 56*, 408–416. doi:10.1037/a0016180
- Major, B., & O'Brien, L. T. (2005). The social psychology of stigma. *Annual Review of Psychology, 56*, 393–421. doi:10.1146/annurev.psych.56.091103.070137
- Mann, C. E., & Himelein, M. J. (2004). Factors associated with stigmatization of persons with mental illness. *Psychiatric Services, 55*, 185–187. doi:10.1176/appi.ps.55.2.185
- Manos, R. C., Rusch, L. C., Kanter, J. W., & Clifford, L. M. (2009). Depression self-stigma as a mediator of the relationship between depression severity and avoidance. *Journal of Social and Clinical Psychology, 28*, 1128–1143. doi:10.1521/jscp.2009.28.9.1128
- Martens, M., & Haase, R. (2006). Advanced applications of structural equation modeling in counseling psychology research. *Counseling Psychologist, 34*, 878–911. doi:10.1177/0011000005283395
- National Institute for Mental Health. (2005). *Prevalence of serious mental illness among U. S. adults by age, sex and race*. Retrieved November 26, 2011, from http://www.nimh.nih.gov/statistics/SMI_AASR.shtml
- Oppenheimer, K., & Miller, M. (1988). Stereotypic views of medical educators towards students with a history of psychological counseling. *Journal of Counseling Psychology, 35*, 311–314. doi:10.1037/0022-0167.35.3.311
- Perlick, D. A., Rosenheck, R. A., Clarkin, J. F., Sirey, J. A., Salahi, J., Struening, E. L., & Link, B. G. (2001). Stigma as a barrier to recovery: Adverse effects of perceived stigma on social adaptation of persons diagnosed with bipolar affective disorder. *Psychiatric Services, 52*, 1627–1632. doi:10.1176/appi.ps.52.12.1627
- Rosen, A., Walter, G., Casey, D., & Hocking, B. (2000). Combating psychiatric stigma: An overview of contemporary initiatives. *Australian Psychiatry, 8*, 19–26. doi:10.1046/j.1440-1665.2000.00239.x
- Russell, D. W., Kahn, J. H., Spoth, R., & Altmaier, E. M. (1998). Analyzing data from experimental studies: A latent variable structural equation modeling approach. *Journal of Counseling Psychology, 45*, 18–29. doi:10.1037/0022-0167.45.1.18
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment structure analysis. *Psychometrika, 66*, 507–514. doi:10.1007/BF02296192
- Schreiber, R., & Hartrick, G. (2002). Keeping it together: How women use the Biomedical Explanatory Model to manage the stigma of depression. *Issues in Mental Health Nursing, 23*, 91–105. doi:10.1080/016128402753542749
- 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. doi:10.1037/0022-0167.33.2.148
- Sirey, J. A., Bruce, M. L., Alexopoulos, G. S., Perlick, D. A., Friedman, S. J., & Meyers, B. S. (2001). Stigma as a barrier to recovery: Perceived stigma and patient-rated severity of illness as predictors of antidepressant drug adherence. *Psychiatric Services, 52*, 1615–1620. doi:10.1176/appi.ps.52.12.1615
- Sirey, J. A., Bruce, M. L., Alexopoulos, G. S., Perlick, D. A., Raue, P., Friedman, S. J., & Meyers, B. S. (2001). Perceived stigma as a predictor of treatment discontinuation in young and older outpatients with depression. *American Journal of Psychiatry, 158*, 479–481. doi:10.1176/appi.ajp.158.3.479
- Vega, W. A., Rodriguez, M. A., & Ang, A. (2010). Addressing stigma of depression in Latino primary care patients. *General Hospital Psychiatry, 32*, 182–191. doi:10.1016/j.genhosppsych.2009.10.008
- Vogel, D. L., Heimerdinger-Edwards, S. R., Hammer, J. H., & Hubbard, A. (2011). "Boys don't cry": Examination of the links between masculine norms and help-seeking attitudes for men from diverse cultural backgrounds. *Journal of Counseling Psychology, 58*, 368–382. doi:10.1037/a0023688
- Vogel, D. L., Shechtman, Z., & Wade, N. (2010). The role of public and self-stigma in predicting attitudes toward group counseling. *Counseling Psychologist, 38*, 904–922. doi:10.1177/0011000010368297
- Vogel, D. L., Wade, N., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology, 53*, 325–337. doi:10.1037/0022-0167.53.3.325
- Vogel, D. L., Wade, N., & Hackler, A. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes towards counseling. *Journal of Counseling Psychology, 54*, 40–50. doi:10.1037/0022-0167.54.1.40
- Vogel, D. L., Wade, N., & Hackler, A. (2008). Emotional expression and the decision to seek therapy: The mediating roles of the anticipated benefits and risks. *Journal of Social and Clinical Psychology, 27*, 254–278. doi:10.1521/jscp.2008.27.3.254
- Wade, N. G., Post, B., Cornish, M., Vogel, D. L., & Tucker, J. (2011). Predictors of the change in self-stigma following a single session of group counseling. *Journal of Counseling Psychology, 58*, 170–182. doi:10.1037/a0022630
- Wright, E. R., Gronfein, W. P., & Owens, T. J. (2000). Deinstitutionalization, social rejection, and the self-esteem of former mental patients. *Journal of Health and Social Behavior, 41*, 68–90. doi:10.2307/2676361
- Zartaloudi, A., & Madianos, M. (2010). Stigma related to help-seeking from a mental health professional. *Health Science Journal, 4*, 77–83.

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AUTHOR QUERIES

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1

AQau—Please confirm the given-names and surnames are identified properly by the colors.

■ = Given-Name, ■ = Surname

The colors are for proofing purposes only. The colors will not appear online or in print.

AQ1—Author: Concerning the two Sirey et al. references, ‘a’ and ‘b’ are used with the date only if every author in the references match exactly in name and order. If not, then in all instances of the citations we list as many as are needed until the references can be distinguished from each other.

AQ2—Author: Please provide a reference for Lisrel 8.8, unless it is a standard software /programming language that does not require one.

AQ3—Author: Concerning the fourth model, as written with “of” in the phrase, “both” refers to only the cross-lagged paths. Without “of” in the phrase, “both” refers to cross-lagged paths and autoregressive paths. Please advise.

AQ4—Author: Original said 1995 for Major & O’Brien, but reference list and Internet search show 2005.

AQ5—Author: Is there any thanks or funding information to add to the author note?

AQ6—Author: In footnote 2, concerning the phrase “the relationship between T1 public and T2 public stigma was .82”: Should it be “T1 public stigma and T2 self- stigma”?

AQ7—Author: Concerning the Figure 2 caption: 1. Please provide text explaining the arrows with dotted, regular, and thick lines. 2. * $p < .05$. *** $p < .001$. was added to the caption. Is this correct? 3. Definitions of T1 and T2 were added to both figure captions.
