

Relationship Between the Public's Belief in Recovery, Level of Mental Illness Stigma, and Previous Contact

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Received: 8 November 2012 / Accepted: 15 July 2014 / Published online: 23 July 2014
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Abstract Disbelief exists that individuals who have a mental health condition are able to recover and fully function in life. This study analyzed 1,437 adults from the 2006 General Social Survey. Structural equation modeling (1) examined the relationship between respondents' level of prejudicial attitudes and social distance (i.e., stigma) toward individuals who have a mental health condition and their belief in the potential of recovery (2) tested whether previous contact with an individual who received treatment was a mediator. Findings indicated that the belief in recovery led to lower levels of social distance. Prejudicial attitudes were found to be a predictor of one's level of social distance. Previous contact was not a mediator however; males, minorities and those with less education were less likely to have had previous contact. Results indicated a need to emphasize the probability of recovering from a mental health condition when developing target-specific stigma reducing strategies.

Keywords Stigma · Recovery · Social distance · Prejudicial attitudes

Introduction

While mental health conditions are highly prevalent in the United States (Kessler et al. 2005; U.S. Department of Health and Human Services 1999b), individuals who have a mental health condition have the ability to recover. In fact, the range and effectiveness of treatments for the

majority of mental health conditions have been continuously improving (U.S. Department of Health and Human Services 1999a). Recovery has been conceptualized in various ways (Barber 2012). Clinical recovery focuses on the remission of symptoms or the cure of the illness (Slade 2009). Illness management recovery focuses on the adherence to treatment in order to minimize symptoms and relapses (Mueser et al. 2002). Finally, personal recovery focuses on moving beyond the role of a patient who has a mental illness to a person who functions fully in society despite ongoing symptoms (Onken et al. 2002; Slade 2009). These three conceptualizations are not mutually exclusive and while an individual who has a mental health condition strives for remission (clinical recovery) it is likely that treatments will be sought to minimize symptoms (illness management recovery) and assist the individual toward higher levels of functioning (personal recovery) (Barber 2012).

Despite the improved treatments available for individuals who have a mental health condition (U.S. Department of Health and Human Services 1999a), it is estimated that two-thirds of those with a diagnosable mental health condition do not seek mental health treatment; and stigma is one of the major contributing factors that deters seeking treatment (Scheffer 2003; U.S. Department of Health and Human Services 1999b). Link and Phelan (2001) define stigma as the existence of power (political, economic, and social) and the converging of four components. These include: the labeling of human differences, the association of the labeled individual with undesirable characteristics, the separation of "us" and "them" (i.e., those who are labeled), and the loss of status for those labeled. Convergence of these four components may result in rejection of or social distancing from the person with a mental health condition (Breheny 2007; Link et al. 1999). Misunderstandings about mental

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health conditions, such as the belief that individuals with schizophrenia are dangerous and unpredictable, result in the stigma that exists in society (Rüsch et al. 2005).

A connection has been established between the level of belief in a person's ability to recover from a mental health condition and stigma. It has been found that the public has disbelief that individuals who have a mental health condition are able to make autonomous decisions in regards to their own finances and treatment exists, even among those individuals who do recover from their mental health condition (Pescosolido et al. 1999). Prejudicial attitudes such as this have been found to increase the likelihood of a person socially distancing themselves from individuals with mental health conditions (Corrigan et al. 2001). Believing a person cannot recover from a mental health condition may also lead an individual to socially distance themselves from that person (Adewuya and Makanjuola 2008). While this evidence exists, little is known about factors that may change the relationship between the belief in the potential of recovery and level of mental illness stigma.

Previous contact with persons who have a mental health condition is one of these factors however; research in this area is limited. Ogedengbe (1993) studied the effects of previous contact in Nigeria by looking at two groups of respondents, one of which had previous contact with individuals who had a mental health condition and another that had not. Of the respondents who had previous contact, significantly more (75 %) believed mental health conditions to be curable, or clinically recovered, compared to those without previous contact (5.4 %). Previous contact, also known as retrospective contact, with individuals who have mental health conditions has also been shown to result in less stigmatizing views (Brockington et al. 1993), an increase in the favorability an individual feels towards that person (Homans 1951), fewer negative emotions (Arikan et al. 1999), less social distance (Corrigan et al. 2001), and a lower rating of dangerousness (Couture and Penn 2003).

The purpose of this study is to address two specific aims: (1) to examine the relationship between respondents' level of prejudicial attitudes and social distance (i.e., stigma) toward individuals who have a mental health condition and their belief in the potential of recovery and (2) to test whether previous contact mediates the relationship between respondents' level of prejudicial attitudes and social distance (i.e., stigma) toward individuals who have a mental health condition and their belief in the potential of recovery. Understanding the public's beliefs of the potential of recovery, how it may impact mental illness stigma, and whether previous contact will mediate this relationship will enable researchers to adapt current stigma reducing

strategies that aim to increase the number of individuals who seek mental health treatment.

Methods

The data from this study comes from the 2006 General Social Survey (GSS). The GSS is a longitudinal data set that was created to assess, compare and contrast social change within the United States and with other countries (Davis and Smith 2006; The National Data Program for the Sciences 2010). A total of 4,510 interviews were completed in 2006 (Davis and Smith 2008). A weight is necessary for data collected in 2006 because of the non-responsive sub-sampling design utilized. A random subset of respondents who completed the GSS was administered topical modules on various topics of interest. This study utilized questions from two topical modules in the GSS named the "1996 Topical Module: Mental Health" and the "2006 Topical Module: Mental Health II". Both of these modules focused on mental health issues and were collected in 2006 (Davis and Smith 2006; Schnittker 2008).

Interviewers for the mental health topical modules followed a structured script that presented four vignettes (Davis and Smith 2006). Each vignette depicted an individual with a different mental health condition that was consistent with the DSM-IV criteria (American Psychiatric Association 1994). The vignettes included the following mental health conditions: alcohol dependence, major depression, schizophrenia, and a vignette depicting a "troubled person" that did not meet any diagnostic criteria of the DSM-IV (Pescosolido et al. 2000). The vignettes were not labeled by the mental health condition, but rather described an individual with the DSM-IV symptoms of the specific mental health condition. The Rossi technique, which varies at random the characteristics of individuals depicted in the vignette, was utilized in order to control for the varied characteristics (Pescosolido et al. 2000; Rossi and Nock 1982). The vignettes varied by the person's sex, ethnicity and education. After reading the vignettes, the interviewer gave the respondent the vignette card as a reference and began asking various questions regarding the vignette (Davis and Smith 2006, 2008).

Study Sample

Respondents for the sub-sample of the GSS being utilized were English speaking adults 18 years and older (mean = 47.0, SD + 17.2) from across the United States. Respondents were predominately white (N = 1,076, 74.9 %) and female (N = 806, 56.1 %). In addition, the sample was primarily

composed of individuals who were married ($N = 631$, 43.9 %) and working full time ($N = 736$, 51.2 %).

Measures

Utilizing the GSS, demographic characteristics of a nationally representative sample of respondents were collected included the following: sex (1 = Male, 2 = Female), education (highest year of school completed), and income (1 = under \$1,000, 2 = \$1,000–2,999, 3 = \$3,000–3,999, 4 = \$4,000–4,999, 5 = \$5,000–5,999, 6 = \$6,000–6,999, 7 = \$7,000–7,999, 8 = \$8,000–9,999, 9 = \$10,000–14,999, 10 = \$15,000–19,999, 11 = \$20,000–24,999, 12 = \$25,000 and over). Aside from the demographic information of respondents which was collected in the “core” section of the GSS, variables were collected in the mental health modules. Therefore, each question was asked in relation to the vignettes described above.

Belief in the Potential of Recovery

The variable assessing the belief in the potential of recovery was measured by asking respondents “In your opinion, how likely it is that NAME’s situation will improve with treatment—very likely, somewhat likely, somewhat unlikely, or not likely at all?” (1 = very likely, 2 = somewhat likely, 3 = somewhat unlikely, 4 = not likely at all). Due to the distribution of this variable not being normal, the variable was collapsed and recoded into a dichotomous variable for this dissertation study (1 = very likely, 2 = less than very likely).

Mental Illness Stigma

Public mental illness stigma is described as being composed of three components: stereotype, prejudice and discrimination (Corrigan and Watson 2002). Information on the stereotypical beliefs of respondents was not collected in the GSS. Therefore in this study, mental illness stigma was examined by looking at two of the three components: prejudice and discrimination.

The latent variable prejudicial attitude (prejudice) was comprised of two factors: financial decision making abilities and treatment decision making abilities. The disbelief of a person’s ability to make these decisions based solely on their mental health condition enabled the author to assess a level of prejudicial attitude held by the respondents. Financial decision making abilities were determined by respondents’ answers to the following question: “How able is [NAME] to make decisions about managing (their) own money?” (1 = very able, 2 = somewhat able, 3 = not very able, 4 = not able at all). Treatment decision

making abilities were determined by respondents’ answers to the following question: “How able is [NAME] to decide whether or not (he/she) should receive treatment. Would you say...,” (1 = Very able, 2 = somewhat able, 3 = not very able, 4 = not able at all).

To assess respondent’s desire for social distance (discrimination) toward individuals in the vignette a social distance scale was administered by the GSS interviewers. The scale utilized in this study was an adaption of the Social Distance Scale developed over 85 years ago (Bogardus 1925). The adapted scale was treated as a latent variable in the structural equation model. The scale consists of six items which were rated on a four-point scale (1 = definitely willing, 2 = probably willing, 3 = probably unwilling, 4 = definitely unwilling) and will be the indicators of social distance. Respondents were asked how willing they would be to do the following: “To move next door to NAME?”; “To spend an evening socializing with NAME?”; “To make friends with NAME?”; “To have NAME start working closely with you on a job?”; “To have a group home for people like NAME opened in your neighborhood?”; and “To have NAME marry into your family?” Reliability was calculated for this study’s sample with fairly strong results ($\alpha = .86$).

Previous Contact

Previous contact was measured by respondents’ answer to the following question: “Leaving yourself aside, have you personally ever known someone who has received treatment for a mental health situation?” (1 = Yes, 2 = No).

Data Analysis

Structural equation modeling (Newham and Davies 2007) was utilized in this study. SEM uses a confirmatory approach and enables one to examine multiple and inter-related relationships, including indirect effects. SEM also accounts for measurement error, reducing the potential for inaccuracies (Byrne 2001; Hair et al. 1998; Kline 2005). In addition, SEM analyzes observed and latent variables simultaneously (Byrne 2001; Hair et al. 1998).

Sample demographics and descriptive statistics in this study were analyzed with SPSS 17.0 (SPSS 2008). Exploratory factor analysis, confirmatory factor analysis (Munro et al. 2007) and full SEM were conducted using Mplus Version 6. Mplus was chosen due to the program’s ability to account for sampling weights as well as its ability to deal with categorical and dichotomous variables (Muthén and Muthén 1998–2007).

In order to examine the fit of the model, various fit indices were examined (Kline 2005). Model fit was indicated by the model chi square, root mean square error of

Table 1 Model fit indices

	Chi square	RMSEA	TLI	CFI
Excellent fit	Non-significant	<0.05	1.0	1.0
Good fit	Non-significant	<0.05	>0.95	>0.95
Adequate fit	Non-significant	<0.10	>0.90	>0.90
Poor fit	Significant	>0.10	<0.90	<0.90

approximation (RMSEA), comparative fit index (CFI) and Tucker–Lewis index (Judd et al. 2006). The cut-off values for each fit index are provided in Table 1 (Bender 2009; Bentler 1990; Hu and Bentler 1999).

The first step of this analysis was to create and examine the CFA. The CFA included the two latent variables of interest (prejudicial attitudes and social distance). The model was analyzed and model fit was assessed. If good model fit was found, this model would be incorporated into the full structural equation model. If good model fit was not found, modification indices would be examined and adjustments would be made to the model (Byrne 2010).

The next step in the analysis was the creation and examination of the structural equation model for the primary model and the secondary model that had previous contact as a mediating variable. The primary structural equation model was estimated, incorporating in the CFA with the independent variable (belief in the potential of recovery) and the control variables (sex, race, education and income). The model was analyzed and model fit was assessed. If good model fit not found, modification indices would be examined and adjustments would be made to the model (Byrne 2010). Next, the secondary model was estimated which incorporated the CFA with the independent variable (belief in the potential of recovery) the control variables (sex, race, education and income), and the mediating variable (previous contact). The model was analyzed and model fit was assessed. If good model fit was found, this model would be incorporated into the full structural equation model. If good model fit not found, modification indices would be examined and adjustments would be made to the model (Byrne 2010).

Results

A random subset of 1,437 respondents completed the mental health topical modules of the GSS. Respondents for this sub-sample of the GSS were predominately white (74.9 %), female (56.1 %), and had graduated high school (Mean year of school completed = 13.69, SD 2.85). In addition, the majority of respondents (62.8 %) had personally known someone who had received treatment for a mental health situation. Frequencies, means, and standard deviations of all variables utilized in this study are provided in Table 2.

The first step of this analysis was to create and examine the CFA. Reliability scores of the indicators of the two latent variables (prejudicial attitudes and social distance) were calculated. Cronbach's alpha showed very good reliability for prejudicial attitudes (.83) and social distance (.85). The CFA included the two latent variables of interest was then analyzed and demonstrated an adequate fit (χ^2 (19, N = 1,075) = 113.60, $p \leq .001$, CFI = .94, TLI = .92, RMSEA = .07). Given the fit being only adequate, modification indices were examined (Byrne 2010). For statistical (M.I. = 82) and substantive reasons the indicators addressing one's willingness to spend an evening socializing with the person depicted in the vignette and willingness to make friends with the person depicted in the vignette were correlated. The model was then re-estimated. The revised model that will be utilized in the structural equation model had a good fit despite the χ^2 indicating an imperfect fit χ^2 (18, N = 1,075) = 43.89, $p \leq .001$, CFI = .98, TLI = .98, RMSEA = .04. The χ^2 statistic is very sensitive to sample size and with large samples will commonly indicate significant discrepancy between the model and the data even when other fit indices indicate a good fit (Hair et al. 2010).

With a well-fitting CFA, the primary structural equation model was estimated, incorporating in the CFA with the independent variable (belief in the potential of recovery) and the control variables (sex, race, education and income). Model fit was good, χ^2 (48, N = 1,075) = 112.48, $p \leq .001$ despite the significant χ^2 indicating an imperfect fit (Hair et al. 2010). The overall model fit indices including CFI = .97, TLI = .95 and RMSEA = .04 also indicated a good fit (see Fig. 1). Respondents who did not believe the individual in the vignette would be likely to recover from their mental health condition with treatment were more likely to have higher levels of social distance ($\beta = .13$, $p \leq .01$). In addition, as expected, prejudicial attitudes were found to predict social distance ($\beta = .41$, $p \leq .001$). The control variable race was also significant with respondents of minority backgrounds being more likely to have higher levels of prejudicial attitudes ($\beta = .13$, $p \leq .01$).

Next, the secondary structural equation model was estimated where previous contact was added to the model as a mediator. Model fit was good χ^2 (62, N = 1,075) = 147.91, $p \leq .001$, with CFI = .96, TLI = .95 and RMSEA = .04 despite the significant χ^2 , indicating an imperfect fit (Hair et al. 2010) (see Fig. 2). Results showed that respondents who did not believe the individual in the vignette would be likely to recover from their mental health condition with treatment were more likely to have higher levels of social distance ($\beta = .13$, $p \leq .01$). In addition, as expected, prejudicial attitudes were found to predict social distance ($\beta = .43$, $p \leq .001$). It was also

Table 2 Measures of demographic variables, belief in the potential of recovery, mental illness stigma, and previous contact

Name	Values	Range	Frequency/mean (SD) total sample (N = 1,437)
Demographic variables			
Sex	1 = Male	1–2	43.9 %
	2 = Female		56.1 %
Race	1 = White	1–2	74.9 %
	2 = Minority		25.1 %
Education	Highest year of school completed	1–20	13.69 (2.85)
Income	1 = Under \$1,000	1–12	10.96 (2.22)
	2 = \$1,000–2,999		
	3 = \$3,000–3,999		
	4 = \$4,000–4,999		
	5 = \$5,000–5,999		
	6 = \$6,000–6,999		
	7 = \$7,000–7,999		
	8 = \$8,000–9,999		
	9 = \$10,000–14,999		
	10 = \$15,000–19,999		
	11 = \$20,000–24,999		
	12 = \$25,000 and over		
Belief in the potential of recovery	1 = Very likely	1–2	46.8 %
	2 = Not very likely		48.4 %
Mental illness stigma			
Social distance			
Have as neighbor	1 = Definitely willing	1–4	2.18 (.85)
	2 = Probably willing		
	3 = Probably unwilling		
	4 = Definitely unwilling		
Spend time socializing	1 = Definitely willing	1–4	2.34 (.91)
	2 = Probably willing		
	3 = Probably unwilling		
	4 = Definitely unwilling		
Make friends	1 = Definitely willing	1–4	2.11 (.81)
	2 = Probably willing		
	3 = Probably unwilling		
	4 = Definitely unwilling		
Work closely	1 = Definitely willing	1–4	2.60 (.96)
	2 = Probably willing		
	3 = Probably unwilling		
	4 = Definitely unwilling		
Have a group home in your Neighborhood	1 = Definitely willing	1–4	2.30 (.94)
	2 = Probably willing		
	3 = Probably unwilling		
	4 = Definitely unwilling		
Marry into family	1 = Definitely willing	1–4	2.79 (.96)
	2 = Probably willing		
	3 = Probably unwilling		
	4 = Definitely unwilling		

Table 2 continued

Name	Values	Range	Frequency/mean (SD) total sample (N = 1,437)
Prejudicial attitudes			
Ability to make financial decisions	1 = Very able	1–4	2.27 (.97)
	2 = Somewhat able		
	3 = Not very able		
	4 = Not able at all		
Ability to make treatment decisions	1 = Very able	1–4	2.26 (.96)
	2 = Somewhat able		
	3 = Not very able		
	4 = Not able at all		
Previous contact	1 = Yes	1–2	62.8 %
	2 = No		35.6 %

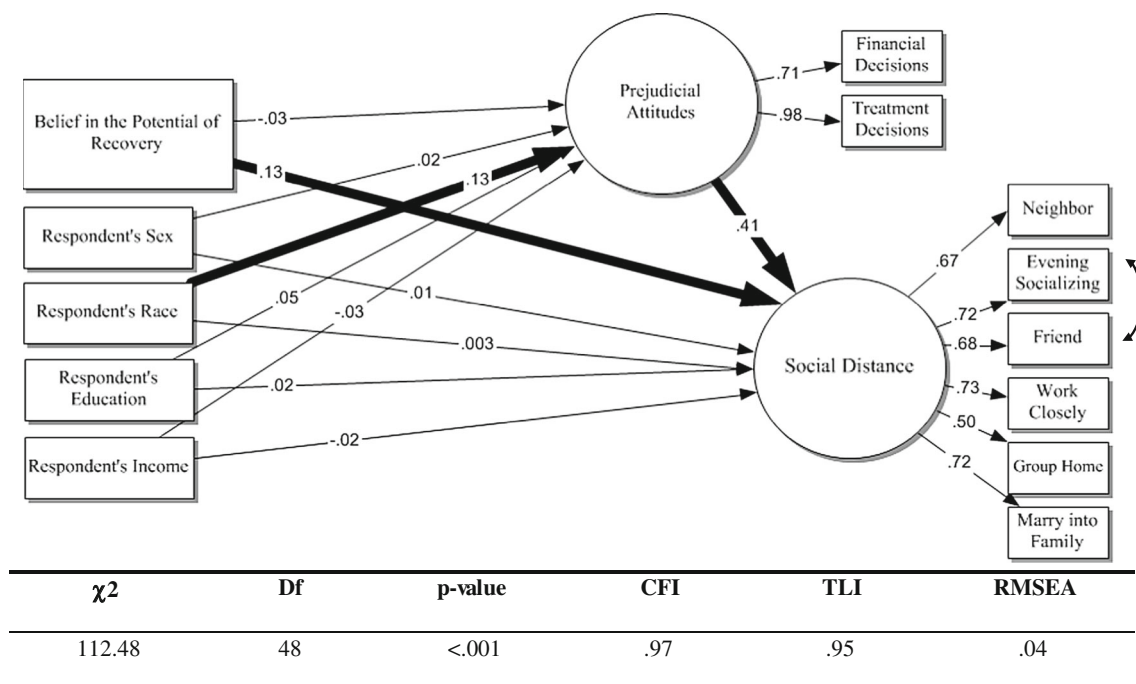


Fig. 1 Structural equation model for primary model

found that male respondents ($\beta = -.12, p \leq .01$), respondents of minority backgrounds ($\beta = .18, p \leq .001$) and respondents with less education ($\beta = -.13, p \leq .001$) were less likely to have had previous contact with an individual who has received mental health treatment. The non-significant indirect effects show no mediation took place with the variable previous contact.

Discussion

This study examined the relationship between one’s level of mental illness stigma (i.e., social distance and

prejudicial attitudes) and the belief in the potential of recovery from a mental health condition. Higher levels of social distance were found to be more likely when the respondent did not believe in the potential of the individual in the vignette to recover from their mental health condition with treatment. This finding is consistent with previous literature showing that a perception of a poor prognosis is associated with higher levels of social distance when looking at mental health conditions in general (Adewuya and Makanjuola 2008). A respondent’s belief or disbelief in the potential of recovery did not significantly predict prejudicial attitudes and therefore the hypothesis for the first specific aim was not supported. Given that there was a

significant relationship between one’s level of social distance and the belief in the potential of recovery from a mental health condition, future research should examine the way one’s potential of recovery impacts other components of stigma such as attitudes and opinions of individuals with mental health conditions. One significant finding in regards to prejudicial attitudes was that prejudicial attitudes were found to be a predictor of social distance. It was also found that higher levels of prejudicial attitudes were more likely in respondents from minority backgrounds. This is consistent with previous research (Corrigan, Edwards et al. 2001).

When the mediating variable previous contact was added into the structural equation model, no mediation took place. Future research should examine if the person the previous contact occurred with (e.g., relative, friend, co-worker, acquaintance) could impact the relationship between one’s belief in recovery and their level of prejudicial attitudes and social distance (i.e., stigma). It would also be beneficial for future researchers to explore the quality of previous contact as this was not examined. It was found in this model that respondents who did not believe in the potential of recovery for the individual depicted in the vignette were more likely to have higher levels of social distance. In addition, higher levels of social distance were predicted by higher levels of prejudicial attitudes.

Some unique findings also emerged specific to the variable previous contact. Male respondents, respondents of minority background, and those with less education were less likely to have had previous contact with an individual

who has received mental health treatment. Stigma-reducing strategies utilizing contact have shown to improve attitudes toward individuals with mental health conditions (Corrigan and Penn 1999; Couture and Penn 2006; Reinke et al. 2004) and have resulted in a reduction of stigmatizing attitudes. Therefore, these populations may particularly benefit from this strategy given the fact they are less likely to have had previous contact in their day to day life with an individual who has received treatment.

The findings of this study can contribute to the development of stigma reducing strategies in other ways as well. For example, the results suggest that the belief in recovery reduces the likelihood of having high levels of social distance from individuals with a mental health condition. Therefore, when utilizing stigma reducing strategies with an educational component, emphasis should be placed on educating the public about the probability of recovery. This can be done by utilizing a number of methods including websites, books, videos, slides, flyers, movies, and other visual aids. All of these methods have been effectively used to disseminate information about mental health conditions (Corrigan and Gelb 2006; Corrigan and Penn 1999; Lipczynska 2005; Thornton and Wahl 1996).

Another important finding from this study was the variations that existed when looking at the relationship between demographic characteristics, prejudicial attitudes and social distance. Higher levels of prejudicial attitudes were found to be more likely in respondents of minority status. Given differences found in the respondents, target-specific programs may be the most effective way to reduce

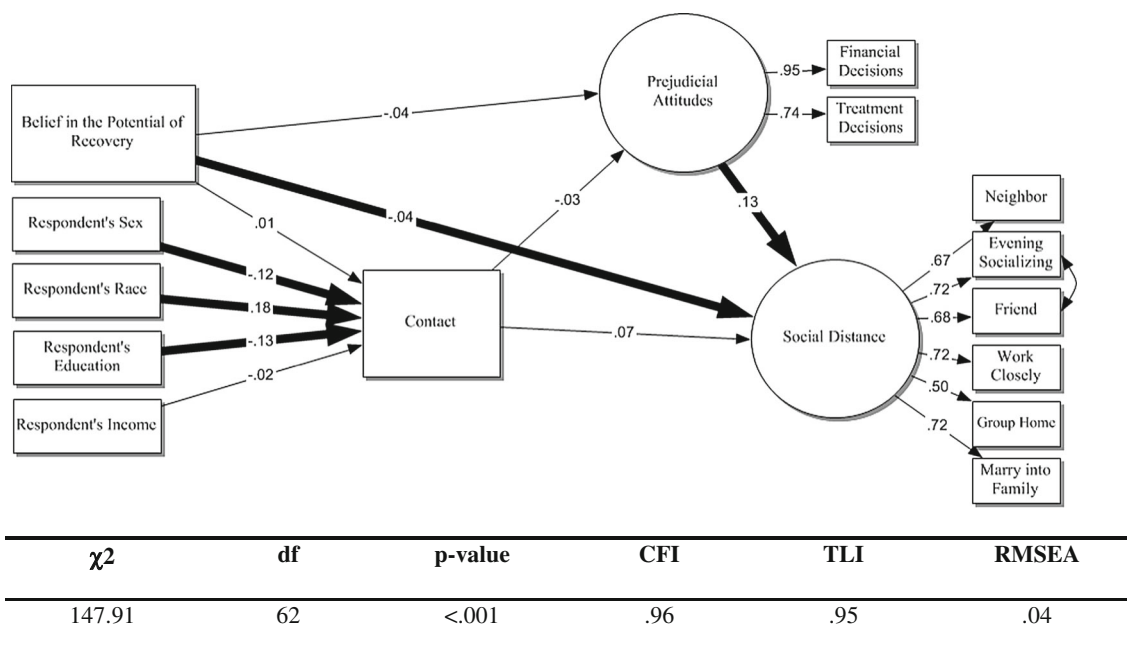


Fig. 2 Structural equation model for secondary model

mental illness stigma. Target-specific programs refer to stigma reducing strategies aimed at a specific group of individuals. For example, target-specific programs have focused on individuals who are seen as having power in the lives of persons with mental health conditions such as employers, landlords, health providers, policy makers, the media or employees of the criminal justice system (Corrigan 2004). The findings from this study suggest that target-specific programs should also be directed toward specific ethnic groups. Target-specific programs may be improved further if they are part of a community-based initiative to reduce stigma. Community-based initiatives focus on activities, such as local speakers' bureaus, that foster direct contact with individuals who have mental health conditions and the individuals in the general public (Substance Abuse and Mental Health Services Administration 2006). The combination of these strategies could prove to be effective at both encouraging contact with individuals who have mental health conditions and specifying the contact toward groups with higher levels of prejudicial attitudes.

Limitations

The limitations of this study should be considered when interpreting the findings. First, this study was a secondary data analysis. When utilizing data collected previously from an outside source, the researcher is unable to control the methodology. Some methodological limitations existed including the use of quota sampling. While multi-stage area probability sampling was used in this study, quota sampling with quotas based on age, sex and employment status was used at the block level in large part due to the considerably lower cost than full probability sampling. Utilizing quota sampling increases the likelihood of sampling biases as residents would not be included into the study sample if they were not home when the interviewer knocked on their door. Precautionary measures were taken to reduce this likelihood as interviewers were instructed only to approach a home after 3:00 pm in order to increase the likelihood of the homeowner being present (Davis and Smith 2006). However, it is still a limitation that must be taken under advisement.

It should also be noted that the variable measuring previous contact in this study was unable to assess various factors that could have made an impact on the relationship between the respondent's belief in recovery and their level of prejudicial attitudes and social distance (i.e., stigma). One example of a potential factor that should be further examined is whether the type of mental health condition the person received treatment for could impact the relationship. It is possible that if the respondent knows a person who received treatment for a mental health conditions with

less socially acceptable symptoms, such as a person with schizophrenia talking to herself/himself, different views of recovery could exist when compared to a person with more socially acceptable symptoms, such as a person with alcohol dependency drinking a large amount of alcohol in public. In addition, the quality of previous contact was also not examined. If the respondent only came into contact with the individual who has received treatment for a mental health condition during psychotic episodes, their views of recovery may differ than if the individual was always asymptomatic when the contact occurred. These examples provide various avenues for researchers to continue examining how previous contact may impact the relationship between one's belief in recovery and his/her level of prejudicial attitudes and social distance (i.e., stigma).

In addition, interviews used self-report instruments which can increase the likelihood of social desirability bias. Given the increase in stigma reducing strategies implemented in the U.S., respondents completing measures such as the social distance scale may be hesitant to provide their true responses in fear of looking callous (Link et al. 2004). However, to counter this limitation, the vignette strategy was utilized which aims to reduce the likelihood of social desirability by having respondents answer questions about a fictitious character.

Conclusions

Despite these limitations, this study was consistent with prior research and found that respondents who did not believe in the potential of recovery were more likely to have higher levels of social distance. In addition, prejudicial attitudes, while not a significant predictor of respondent's belief or disbelief in the potential of recovery, was a predictor of one's level of social distance. Finally, while previous contact was not found to be a mediating variable, it was found that male respondents, respondents of minority background and those with less education were less likely to have had previous contact with an individual who has received mental health treatment. The results from this study can be utilized to enhance existing stigma reducing programs by placing more emphasis on the probability of recovering from a mental health condition and developing target-specific stigma reducing strategies.

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