PUBLIC STIGMA TOWARD HOUSING APPLICANTS WITH PSYCHIATRIC DISABILITIES

A Thesis
Presented to the
Faculty of
San Diego State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology

by
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Summer 2012
SAN DIEGO STATE UNIVERSITY

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DEDICATION

This thesis is dedicated to anyone who has ever suffered from housing discrimination and homelessness. May we someday live in a world where all people are, at the very least, given the ability to have their basic human needs met.
The current research investigated the effects of a psychiatric disability (PD) and treatment support services on housing discrimination. Mental health research has identified stable and supportive housing as an important aspect in recovery from psychiatric disabilities. Public policies and programs have been created to offer people with PD resources and treatment support to help people obtain and maintain housing of their choice. Support services offered through these programs vary from psychiatric care to more intense “wraparound” services in which multiple service providers collaborate to provide care to clients. Despite these supportive efforts, research demonstrates that public stigma towards people with psychiatric disabilities continues to act as a barrier to gaining access to adequate and affordable housing. It is important to determine the process by which this stigma occurs and if housing discrimination is influenced by knowledge that an applicant participates in support programs.

Two studies were conducted. The first study evaluated discrimination towards a housing applicant with a PD and the extent to which that discrimination depended on the amount of support the applicant receives. Support was manipulated in 3 conditions: No Support, Psychiatric Care, and Psychiatric Care with Wraparound Services. Participants evaluated two rental applications, one of which contained the manipulation and one that operated as a control that was constant across conditions. For applicants with a PD, the “No Support” condition did not evidence any support, the “Psychiatric Care” condition explained that the applicant was under the care of a psychiatrist, and the “Psychiatric Care with Wraparound” condition explained that the applicant received several, integrated support services in addition to being under the care of a psychiatrist. The second study extended the first by examining the impact of support services on housing discrimination against people with two specific disorders: schizophrenia (SZ) and major depressive disorder (MDD). Based on evidence from related research into public stigma of PD and employment assistance programs for underrepresented groups (i.e., Affirmative Action programs), we predicted that awareness of support services provided to a person with PD may have unintended negative consequences for public acceptance and assistance. It may be that the receipt of support services makes an individual’s functional impairment seem more extreme, thus, reducing the likelihood that a person would rent an apartment to him/her. Consistent with the Stereotype Content Model (SCM), perceptions of competence and warmth were evaluated to determine their possible mediating effects of treatment support on housing discrimination against applicants with PD. This research has both theoretical and real-world
implications in that it sheds light on the process by which public stigma occurs and how receptive the public is to housing and support services for people with psychiatric disabilities.
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I would especially like to thank my advisor, Dr. Melody Sadler, for her constant support and encouragement throughout this process. Dr. Sadler has always been there to support me and challenge me, emphasizing strict adherence to the scientific process, a strong theoretical understanding of the subject matter, and thorough statistical analyses, all qualities essential to succeeding and thriving in any research-related field. I couldn’t have asked for a better role model and support system during my time at San Diego State University. I would also like to thank Dr. Allison Vaughn, who offered invaluable insights into my research and has also been a great professional role model. I would also like to thank Dr. Sally Mathiesen, who has been extremely supportive of my thesis and has provided me with an important perspective on the real-world implications and applications of my research. My lab and classmates have also been an invaluable resource in this endeavor, both in their personal support and support of my research, spending countless hours listening to me talk about my research and offering me sound advice. In particular I would like to thank Will Stewart, Meghan McDonald, Adam Beavers, Marisa Crowder, Ryan Stolier, and Brad Weisz. Also, data analyses for this thesis would not have possible without the help of the Sadler lab research assistants, including Miriam Munoz and Matt Evans, who deserve much thanks for all their hard work and dedication. Lastly, I would like to thank my parents, James and Susan Kaye, for always being there when I needed them, and Benjamin Bailey for his constant positive outlook and unwavering support throughout this process.
CHAPTER 1

INTRODUCTION

Today in America, roughly 26% of the population suffers from a Psychiatric Disability (PD; Kessler, Chiu, Demler, & Walters, 2005). Many of these individuals are unable to secure adequate housing, resulting in either substandard living conditions or homelessness (Kyle & Dunn, 2008; Mojtabai, 2005; O’Hara, 2007). Of the homeless population in America in 1996, over half had suffered a PD (Mojtabai, 2005). The most commonly reported reasons for loss of housing among people with psychiatric disabilities include socio-environmental factors such as financial problems, lack of employment, and interpersonal problems (Forchuk, Nelson, & Hall, 2006; Kloos, & Shah, 2009; Mojtabai, 2005). In addition, research has shown that public stigma, or prejudiced attitudes and discriminatory behaviors expressed by the lay public (Dovidio, Major, & Crocker, 2000), acts as a barrier to people with a PD obtaining and maintaining independent housing (Corrigan, Markowitz, & Watson, 2004; Newman & Goldman, 2009).

The purpose of the current research was to examine if housing discrimination varies with the type of assistance a person with a psychiatric disability receives. As the empirical evidence base builds for the benefits of independent, community-based housing on mental health outcomes for people with PD, mental health services are increasingly oriented towards this goal (Kloos & Shah, 2009; Muir, Fisher, Dadich, & Abello, 2008; Rog, 2004). However, community support of these programs is essential to their success, thus, the current research evaluated if the type of treatment programs a person receives impacts the likelihood that the public would endorse housing for that individual.

THE IMPORTANCE OF INDEPENDENT HOUSING

Historically, mental health systems have failed to address housing needs and choices for people with PD (Newman & Goldman, 2009; O’Hara, 2007; United States Department of Health and Human Services [USDHHS], 1999). The squalid environments of state psychiatric hospitals in which a large population of people with mental illness were housed...
from the 18th century through the mid-20th century were shunned by many mental health care advocates, and sparked the movement toward deinstitutionalization (Deutsch, 1948). Deinstitutionalization brought thousands of people from state hospitals back into the community, simultaneously creating a prominent need for housing among these populations (Fakhoury, Murray, Shepherd, & Priebe, 2002). This shift towards community integration highlighted the issue of housing obtainment as a major hurdle facing people with PD.

Today, research has confirmed that safe, adequate, and supportive housing is a crucial part of recovery, health, community integration, and identity development apart from a person’s mental illness (Harkness, Newman, & Salkever, 2004; Kyle & Dunn, 2008; Muir et al., 2008). Although housing alone is not a panacea for mental illness, decent and affordable housing is a necessary step in dealing with homelessness and substandard living conditions (Newman & Goldman, 2009). Adequate housing can, at the very least, supply people with one of their most basic necessities. Further, stable housing creates an environment that can foster adaptive functioning and afford people with PD the ability to focus on their treatment and recovery (Kyle & Dunn, 2008; O’Hara 2007).

Recent meta-analyses have examined the relative impact of different housing programs for people with PD and various mental health and community outcomes. Leff, et al. (2009) examined three housing models and compared their impact on functioning for people with chronic mental illness. The researchers classified housing programs into residential care, residential continuum, and permanent supportive housing models. Residential care models include group homes and similar facilities in which support staff and treatment are provided onsite. In residential continuum models, people with PD “graduate” between housing models based on their level of rehabilitation and commute to support services. Finally, permanent supportive housing allows people with a PD to live in a community setting that they choose and “wraparound” support services come to their home to aid in recovery and housing stability. Leff et al. (2009) found that there was a significant reduction in repeat hospitalizations among people with chronic mental illness when they lived in permanent supportive housing with wraparound services, moreover, this type of housing program showed the largest effect sizes across studies. However, housing models also depend on community support, raising the specter of housing discrimination as an obstacle to their success.
Research has found that the level of community acceptance and support within an individual’s housing environment has a large impact on mental health outcomes, and thus on the success of housing programs in general (Kloos & Shah, 2009; Sylvestre, Nelson, Sabloff, & Peddle, 2007). Three main types of housing environment that affect adaptive functioning, health, and recovery for people with PD have been identified: physical environment, social environment, and interpersonal relationships (Kloos & Shah, 2009; Newman & Goldman, 2009; Wright & Kloos, 2007). Physical environments include the quality of the housing and physical characteristics of the neighborhood. Social environments consist of experiences within a housing community and neighborhood. Interpersonal environments include relationships with landlords, neighbors, or other community members with whom the individual commonly interacts (Kloos, Zimmerman, Scrimenti, & Crusto, 2002). Research comparing the differential impact of these environments on mental health outcomes found that while all types of housing environments were positively associated with mental health outcomes, one’s social environment, including perceptions of belongingness, safety, and discrimination, had the most prominent impact on mental health outcomes (Phelan, Link, & Tehranifar, 2010; Wright & Kloos, 2007).

Given the role that the social environment plays in improving mental health outcomes, it is important to understand how the public perceives people with PD who receive varying levels of supportive programs. To the extent that support services serve their purpose to improve functioning of people with PD, a rational public should be more likely to rent to people with PD who are receiving support, and especially likely to rent to them as the degree of support increases. However, given the seemingly ubiquitous public stigma toward people with PD, it is likely that the effect of support services on housing obtainment is not this straightforward.

**Housing Discrimination and Psychiatric Disabilities**

There are reasons to suspect that the receipt of supportive services by people with a PD may not improve their chances of obtaining housing; such support may even be detrimental to that endeavor. The first reason is the pervasiveness of housing discrimination against people with PD within our society. Among persons with serious mental illness who report experiences with discrimination, approximately one-third occurred within the domain
of housing (Corrigan et al., 2003). In an experimental study, Page (1977) found clear evidence of discrimination based on a psychiatric disabilities label. The researcher recorded landlord reactions to housing inquiries allegedly from patients discharging from a mental hospital, people being released from jail, or a control condition with no identifying information. Results showed that landlords were far less likely to report a room being available to rent to a person labeled as a psychiatric patient than the control inquiry, and the amount of housing discrimination towards psychiatric patients was equivalent to those labeled as criminals. Thus, how entrenched housing discrimination is in our society is not likely to be easily undone by mention of the support services a person with a PD receives.

A second reason to suspect that support programs may not ameliorate public stigma comes from the fact that several programs intended to counteract stigma of PD have been ineffective or even harmful. Mental health care advocates have designed campaigns and interventions to combat the negative impact of discrimination against people with PD, including anti-stigma campaigns, legal policies, and support programs that recompense for the lack of opportunities created by discrimination (Pescosolido, Martin, Lang, & Olafsdottir, 2008). Anti-stigma campaigns have made attempts to educate the public, protest the media, and increase positive contact with people with PD (Corrigan & Penn, 1999; Corrigan, Watson, Warpinski, & Garcia, 2004). Legal policies have been enacted to make discrimination based on a PD illegal and to require “reasonable accommodation” for people with PD in employment and housing (Newman & Goldman, 2009; O’Hara, 2007; Petrila & Ayers, 1994). Support programs, while not primarily focused on decreasing discrimination, nonetheless are intended to increase opportunities not otherwise obtained by people with PD in part due to public stigma (Morrow, Wasik, Cohen, & Perry, 2009; Muir, et al., 2008).

Research into changes in public opinion related to increased public knowledge of the biological nature of mental illness demonstrated that while educational efforts did alter public opinion in some respects, patterns of discrimination towards people with PD continued (Pescosolido et al., 2010; Schnittker, 2008). Pescosolido et al. (2010) found that the campaign to identify psychiatric disabilities as a disease of the brain influenced the public to perceive people with mental illness as less responsible for their condition, but simultaneously increased perceptions of people with PD as dangerous and unpredictable. Further, these attitudes manifested into more public support of coercive treatment, and a stronger desire for
The failure of educational campaigns led the U.S. Surgeon General to conclude: “Stigma was expected to abate with increased knowledge of mental illness, but just the opposite occurred: stigma in some ways intensified over the past 40 years even though understanding improved” (USDHHS, 1999).

Programs intended to support people with PD, and counteract the stigma they endure, may additionally backfire because of the unintended consequences they have on the characteristics people with PD are perceived to possess. Research from a related field of job discrimination based on race and gender demonstrates that support programs intended to combat discrimination can go awry (Heilman, Lucas, & Block, 1992; Major, Feinstein & Crocker, 1994; Resendez, 2002). Affirmative action programs enacted to bolster opportunities for underrepresented groups instead often led to detrimental effects, increasing prejudice and discrimination toward those groups seen as receiving preferential treatment (Harrison, Kravitz, Mayer, Leslie, & Lev-Arey, 2006). It was found that perceivers attributed the reason why an underrepresented group member held a job to enrollment in an affirmative action program rather than to characteristics of the person himself/herself. Thus, affirmative action backfired leading to perceptions of the incompetence of its recipients, despite their actual level of work-related abilities (Heilman et al., 1992; Resendez, 2002). Further, in the case of PD, perceptions of the social skills of an applicant affect endorsement of support in gaining employment. Corrigan, Larson, and Kuwabara (2007) found that the more people perceived a job applicant as dangerous, the more they feared him, and objected to programs meant to help him get or keep a job. Based on this research, it may be that people with PD who are receiving various levels of support services are less likely to be leased an apartment because they are deemed as even less competent and/or socially skilled than their counterparts who do not receive such services.

**Stereotype Content Model: A Theoretical Framework to Predict Housing Discrimination**

It is evident from the failure of many well-intended anti-stigma campaigns and supportive efforts that research is needed into possible unanticipated negative consequences of such programs before they are widely implemented (Corrigan & Penn, 1999). The current research employed a theoretical model of stigma, the Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002), to examine the extent to which perceptions of the...
competence and social skills of a housing applicant mediate the impact of varying types of support programs on housing discrimination against a person with PD.

The SCM is a social-psychological framework that examines the process by which stereotypes can systematically predict emotional prejudice and discriminatory behaviors in inter-group relations (Fiske et al., 2002). The SCM model is relevant for the current research because of its central tenets regarding competence and warmth. The SCM posits that ascriptions of warmth, or the extent to which a group’s (or individual group member’s) intentions are seen as friendly or malevolent, and competence, or how capable that group (or group member) is of carrying out their intention, underlie stereotypes across cultures and contexts (Cuddy et al., 2009; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005). Crucially, it is the combination of perceptions on competence and warmth that predicts differential emotional reactions and discriminatory behavior toward social groups according to the Behaviors from Intergroup Affect and Stereotypes model (Cuddy, Fiske, & Glick, 2007), a theoretical extension of the SCM.

The BIAS map classifies behaviors by their intention and effort. Intention is divided into facilitation (pro-social, helping behaviors) and harm (anti-social, coercive behaviors). Level of effort is conceptualized as the extent to which a behavior is directed towards the target: active behaviors are meant to have a direct impact on the target whereas passive behaviors reflect a separate goal that has indirect repercussions for the target. Combining both dimensions creates four types of behaviors: active facilitation (acting for), passive facilitation (acting with), active harm (acting against), and passive harm (acting without). The BIAS map posits that stereotypes regarding warmth comprise the causal mechanism behind active behaviors and stereotypes regarding competence provide the causal mechanism for passive behaviors.

Classification of the behavior of housing discrimination into the BIAS map framework is to date unclear, as no one has examined whether such discrimination is a passive behavior or an active behavior. The act of leasing (or not leasing) a property to someone could be classified as an active behavior because it can be conceptualized as intended to act either on behalf of or against the applicant. This idea would be consistent with applied research into the importance of collaboration with landlords in promoting housing success for people with PD which describes the ideal landlord as taking an active, supportive
role in facilitating the housing success of tenants with PD (Kloos et al., 2002). However, the act of leasing a property could also be seen as directed towards goals of a landlord that are separate from those of the applicant, such as meeting job performance expectations or generating revenue. From this perspective, leasing an apartment to someone with a PD would be classified as a passive behavior because it was not enacted for the applicant, and has only indirect repercussions for him or her. The SCM and Bias map frameworks were utilized in the current research to determine the degree to which support services impact perceptions of competence and warmth perceptions which, in turn, are responsible for rental behaviors. The relative ability of competence versus warmth stereotypes to predict housing discrimination will be used to infer the classification of rental behavior as active or passive.

**CURRENT RESEARCH**

The current studies examined the influence of support services on leasing behaviors towards people with a PD (Study 1) and if this effect differs as a function of the particular diagnosis (Study 2). The current research expands previous research on housing discrimination against people with a PD by using a theoretical framework (SCM and Bias map) to understand the process by which such discrimination occurs. Study 1 manipulated the type of information provided about PD Support services (None, Psychiatric Care, Psychiatric Care plus Wraparound Services) an applicant with PD receives. Wraparound services were chosen to represent housing support programs because of the success and popularity of this type of treatment in mental health care (Leff et al., 2009). Study 2 determined if the effect of support type on stigma differs depending on whether the housing applicant is described as having schizophrenia (SZ) or major depressive disorder (MDD). Research on differences in stigma against people with a PD has provided evidence that people with SZ are discriminated against more than people with MDD, possibly due to being perceived as more dangerous and incompetent (Crisp, Gelder, Rix, Meltzer, & Rowlands, 2000; Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999; Sadler, Meagor, & Kaye, 2012).

In both studies, participants rated two housing applicants on likelihood of renting as well as stereotypic traits of competence and warmth. One application served as a control while the other disclosed a PD and contained one of three support conditions. Because we
recognized that gender could also influence perceptions and likelihood of leasing to an applicant with PD, both applications were made to be male. Although we expect discrimination against applicants with PDs overall when compared to an applicant without a PD, we are particularly interested in the extent to which stating that a person receives wraparound support services over and above psychiatric treatment affects public stigma. It is possible that the addition of information regarding treatment and supportive services available to an applicant with a PD will lead people to be more likely to rent an apartment to him/her. However, based on evidence from research into the public backlash against Affirmative Action programs and their recipients (Harrison et al., 2006), we expected that awareness of a person with PD receiving supportive services would lead to greater attributions of incompetence and dangerousness, thereby reducing the likelihood that a person would rent an apartment to him/her.

Similarly, because evidence has shown that people with psychotic disorders are stereotyped as less capable and more dangerous than people with mood disorders, we predicted that the detrimental impact of support services on renting behavior would be greater for applicants with SZ than MDD. Finally, we examined if perceptions of competence and warmth mediate the effect of type of support services on the likelihood a person will rent to an applicant with PD (Study 1), and to an applicant with SZ compared to an applicant with MDD (Study 2).
CHAPTER 2

STUDY ONE

In Study 1 we examined if revealing a psychiatric disability would lead to a lower likelihood of receiving a lease and more negative perceptions of competence and warmth. Primarily, we were interested in the impact of revealing enrollment of support services on leasing behaviors. We divided support into three categories representing either no support, psychiatric care, or psychiatric care with the addition of wraparound services. Wraparound support services promote individualized mental health services and stability of one’s home environment. However, based on research on the public backlash to Affirmative Action programs, awareness of a person with PD’s enrollment in support services, especially wraparound services, may unfortunately have a negative impact on perceptions of that individual’s competence, warmth, and likelihood of receiving the lease.

METHOD

For the present study two housing applications, one of which disclosed a PD, were evaluated by participants as to how they would be perceived by landlords and the likelihood they would receive the lease. The purpose of the study was to determine if revealing a PD would be detrimental to the applicant’s chance of receiving the lease and if the level of treatment support would impact the level of detriment they faced.

Participants

One hundred seventy-eight adults were recruited through Amazon Mechanical Turk (Mturk), an online forum where workers complete surveys in exchange for payment. Four participants failed to correctly answer any items on the attention check and were excluded, resulting in 174 participants in analyses. Participants were all above 18 years old and were located across the United States (19.5% Southwest; 16.1% Northwest; 21.8% Southeast; 42.5% Northeast). Participants were paid $0.50 for their participation, based on a typical rate of 1 - 3 cents per minute. Past research has found that Mturk participants offer high-quality data and are more diverse than most college student and internet samples (Buhrmester,
Kwang & Gosling, 2011). The demographics of this population were approximately 63.2% female, 83.9% Caucasian, 53.8% Christian, with 90.3% reporting at least some college education.

**Design**

This study examined the impact of receiving treatment support services for a PD on public perceptions of, and discrimination against, a housing applicant. Type of Support services included three conditions: None, Psychiatric Care, or Wraparound (psychiatric care plus wraparound services). All participants were exposed to two rental applications, one of which revealed that the applicant had a PD via an accommodation request letter accompanying the housing application and a second, control application to provide a baseline comparison for the manipulation (Güngör & Biernat, 2009; Masser, Grass & Nesic, 2007;). One of the applicants was identified as James, the other was identified as David, and whether the applicant with a PD was revealed to be either James or David (Assignment) was counterbalanced across participants. The order in which the applications were presented (Order) was also counterbalanced across participants. Assignment was not found to have any main or interactive effects on leasing behaviors and was thus collapsed in the reported analyses.

**Materials**

Each participant was presented with two housing applications. One of the housing applications revealed a PD and one of three Support conditions within an accommodation request.

**HOUSING APPLICATIONS**

Two fictitious housing applications were presented to participants (see Appendix A). To be sure that the housing applicants were perceived as equally qualified for the lease and were matched on non-experimental variables, we conducted two pretests of the application materials. The first pretest was used to determine employment information for the applications that would make the qualities of warmth and competence salient. We conducted a survey in which participants rated numerous occupations on how competent (competent, capable, intelligent, confident) and warm (warm, friendly, good-natured, honest) people who
hold them are perceived to be in American society. In addition, we asked participants to report the average salary they believed people who held these jobs would earn. We focused on jobs that were above the average rating on both competence and warmth, and were rated similarly for both applicants and across both dimensions. Based on these criteria, the jobs chosen were bank teller and photographer. To be sure that the applicants would be perceived as financially secure and capable of paying for the cost of living in the apartment, both applicants said that they had been working at their current place of employment for a little over two years and their salaries were between 43,000 and 46,000 dollars. Both salaries were within one standard deviation of the perceived average salary for the jobs as reported in the pretest. Additionally, we chose salaries in this range because landlords typically recommended that an applicant should be able to cover their cost of living with no greater than 30% of their salary (O’Hara, 2007).

In addition to employment, the applications contained information typically found on rental applications, with any “identifying” information, such as last name of applicant, social security number, and street addresses, redacted. Both applicants were male and they were matched in terms of age (31 and 32 years old), credit score (690 and 675), and residence history. To ensure that participants would be able easily remembered and distinguished from one another, we identified them as James and David (see Study Materials in Appendix A).

To establish that the applicants were perceived as equal prior to our manipulation, we conducted a second pretest of the applications on all measures of renting behaviors and stereotypes that were to be used in the studies reported herein. The design and procedure of the pretest was similar to Study 1 in every way except that it did not include our Disability and Support manipulations (see Questionnaire in Appendix B). Our purpose was to determine if there were any differences in ratings of leasing behaviors, stereotypes of competence, or stereotypes of warmth between the two applications. Results showed that there were no significant differences between applicants in regards to endorsement of leasing behaviors, stereotypes of competence, or stereotypes of warmth. Additionally, there was no impact of Order on either of these measures.1

1 To determine that the applicants were perceived similarly we analyzed a 2 (Applicant: James, David) X 2 (Order: James 1st, David 1st) mixed-model ANOVA with Applicant varying within-participant and Order
**DISABILITY AND SUPPORT SERVICES**

In all conditions, the housing application containing the PD Support manipulation included an accommodation request, a method used in examinations of employment discrimination against people with disabilities (Dalgin & Bellini, 2008). Within this request, all conditions revealed that the applicant was requesting an alteration to the lease agreement and stated a PD as the reason for the needed accommodations. In the “None” condition, the applicant was the sole requester of the accommodation and did not reference any involvement in treatment. In the “Psychiatric Care” condition, the accommodation request referenced that the applicant is under the care of a psychiatrist and currently taking medication for his symptoms. In the “Wraparound” condition the accommodation request referenced receipt of several other support services in addition to psychiatric care. Full text of the PD Support manipulation can be found in Appendix B.

**Measures**

For each application, participants completed a questionnaire in which they reported typical renting behaviors toward, and stereotypic perceptions of, the applicant (see Appendix C for all measures). Participants were asked to respond from the perspective of a landlord in charge of leasing the apartment, which allowed us to assess awareness of culturally shared beliefs and to decrease social desirability concerns (Fiske et al., 2002).

**BEHAVIORS**

Leasing behaviors were evaluated using a scale adapted from employment research (Phelan, Moss-Racusin, & Rudman, 2008) and adapted for a housing context (e.g., lease the varying between-participant. As predicted, pretest results revealed that endorsement of leasing behaviors toward each applicant was significantly above the mid-point for both James (M = 4.24, SD = 0.63) and David (M = 4.32, SD = 0.57), F(1,29) > 70, ps < .001. There were no significant differences in ratings due to Applicant, F(1, 29) = 1.62, n.s., Order, F(1, 29) = 0.55, n.s., or the interaction of Applicant with Order, F(1, 29) = 1.97, n.s. Stereotypes of competence were significantly above the mid-point for both applicants (James: M = 4.18, SD = 0.52; David: M = 4.21, SD = 0.52), Fs(1, 29) > 85, p < .001 and there were no significant differences in competence ratings due to Applicant, Order, or their interaction, all Fs(1, 29) < 1, n.s. Finally, ratings for warmth were also significantly above the mid-point for both applicants, (James: M = 3.87, SD = 0.51; David: M = 3.89, SD = 0.518), Fs(1, 29) > 60, p < .001 and there were no significant differences in warmth ratings based on Applicant, Order, or their interaction, all Fs(1, 29) < 1.30, n.s.
Behaviors represented calling, interviewing, showing the apartment, and leasing to the applicant (see Appendix C). For each of the housing applicants, participants rated the likelihood a landlord would engage in these behaviors on a 5-pt likert scale where 1=“not at all likely” and 5=“extremely likely”. The items were found to be reliable (Control: $\alpha = .86$; PD: $\alpha = .89$) and thus a composite for leasing behaviors was created by averaging across them.

**Stereotypes**

Stereotype ratings were assessed on the dimensions of competence and warmth within a housing context (see Appendix C). Items were adapted from a measure of workplace competence and warmth (Krings, Sczesny, & Kluge, 2011) to include traits specific to apartment renting (e.g., get along with neighbors, keep the apartment in good condition), as well as general stereotype content items (e.g., friendly, capable; Fiske et al., 2002). Participants evaluated all stereotype items on 5-pt Likert scales where 1=“not at all likely” and 5=“extremely likely”. Reliability was high on both the competence (Control: $\alpha = .86$; PD: $\alpha = .88$) and warmth (Control: $\alpha = .89$; PD: $\alpha = .89$) stereotype scales. A composite stereotype rating was created separately for each dimension by reverse scoring negative items and averaging over the relevant items.

**Procedure**

After participants read the informed consent and agreed to participate, they were presented with study instructions informing them that they would be evaluating two housing applications for one apartment. They were instructed to respond to each of the housing applications separately, based not on their personal opinions, but as if they were the person making decisions about the apartment. Before looking at the applications, participants were given a short description of the apartment for rent, which stated that the rent was $1,150 per month, and that this amount is typical for this size apartment in the geographic area (San Diego).

Participants were then randomly assigned to one of three Support conditions: None, Psychiatric Care, or Wraparound. Additionally, participants were also randomly assigned to one of two Order conditions: Control First or PD First. Finally, to ensure that no variation between applicants besides the manipulation could influence participants’ perceptions
(Ahmed & Hammarstedt, 2009), participants were also randomly assigned to one of the two Assignment conditions: James or David.

Participants were exposed to one applicant first, after which they completed measures of leasing behaviors and stereotypes (i.e., competence and warmth). The order in which behavior and stereotype measures were completed was counterbalanced across participants. In addition, items within each measure were randomized per applicant rating. Once participants responded to items for one applicant, they were presented with the second applicant and completed the same measures again (although randomized in a different order). Once participants had evaluated each application, they were asked a series of questions comparing the two applications. Participants also completed 4 attention check items (see Appendix C) and demographic questions. Finally, participants were given the chance to add any additional comments and were then thanked and received payment.

**RESULTS**

In Study 1, the likelihood that a landlord would lease the apartment to a housing applicant and perceived stereotypes were analyzed as a function of Disability, Support, and Order.

**Leasing Behaviors**

We expected to find evidence of housing discrimination based on Disability such that the control applicant would be more likely to receive the lease than the applicant with a PD. Based on previous evidence of public backlash to Affirmative Action Support programs implemented with the intention of improving circumstances for underrepresented groups (Harrison et al., 2006; Heilman et al., 1992), our primary hypothesis in Study 1 was that the discrepancy between likelihood of receiving a lease based on having a PD or not would be worse when the PD applicant received support services, especially when the support included wraparound services compared to psychiatric treatment alone. The composite score of leasing behavior items was analyzed as a function of a 2 (Disability: Control, PD) X 3 (Support: None, Psychiatric Care, Wraparound) X 2 (Order: Control 1st, PD 1st) mixed-model factorial ANOVA in which Disability varied within-participants and Support and Order varied between-participants. Planned contrasts were implemented to examine specific hypotheses regarding the 3-level Support variable. The first Support contrast (Support v. None)
compared the “None” condition with the average of both “Psychiatric Care” and “Wraparound” conditions. The second planned contrast for Support (Wrap v. Psych) compared the “Psychiatric Care” condition to the “Wraparound” condition. Interactions of each contrast and the remaining variables in the design were included.

When assessing leasing behaviors on average across both the control and the PD applicants, there were no main effects of Order, Support contrasts, or their interactions (all $F$s < 2.19, n.s.). As expected, there was evidence of housing disadvantage via a main effect of Disability, $F(1,168) = 281.59, p < .001, R^2 = .63$. Leasing to the control applicant was endorsed significantly more than leasing to the applicant who disclosed a PD. The magnitude of this effect reveals a high level of public awareness of housing disadvantage based on a PD. Unexpectedly, results also revealed an interaction of Disability with Order, $F(1,168) = 6.67, p = .01, R^2 = .038$. The preference to lease to the control applicant over the PD applicant was significantly larger when the Control applicant was presented first compared to the PD applicant first. In other words, it appears that participants were less likely to endorse leasing to the PD applicant if they were first exposed to the control applicant.

Regarding the influence of Support on housing discrimination, results did not reveal the predicted interaction of the Support contrasts with Disability, both $F$s(1, 168) < 1.783, n.s. However, some evidence for our hypothesis was found within a significant 3-way interaction of Disability, Order, and Support v. None, $F(1,168) = 5.04, p = .026, R^2 = .029$. As shown in Figure 1, Appendix C, if the control applicant was evaluated first, the housing disadvantage toward the PD applicant was significantly greater in the Support conditions compared to the No Support condition, $F(1,168) = 5.44, p = .02, R^2 = .03$. However, if participants evaluated the PD applicant first, the discrepancy in leasing to the control over the PD applicant was not influenced by Support, $F(1,168) < 1, n.s.$

**Stereotypes**

We expected that revealing a PD would cause a housing applicant to be stereotyped as both less competent and warm than a control applicant. Our main objective, however, was to determine if a housing applicant’s receipt of Support services would exacerbate this effect of a Disability on stereotypes. Replicating previous findings for individual-level trait perceptions (Judd et al., 2005; Russell & Fiske, 2008), we found that competence and
warmth composite ratings were highly positively correlated both for the control, \( r (172) = .72, p < .001 \), and PD applicant, \( r (172) = .71, p < .001 \). To isolate the unique influence of each, we conducted an analysis on each stereotype dimension that controlled for the other dimension. The analyses were analogous to a 2 (Disability) X 3 (Support) X 2 (Order) mixed-model ANCOVA including the covariate stereotype dimension (centered), and interactions of the covariate with the remaining independent variables to obtain unbiased estimates (Yzerbyt, Muller & Judd, 2004). In the first such analysis, competence served as the dependent variable and warmth served as the covariate. In the second analysis, the roles of competence and warmth were reversed.

**COMPETENCE**

There was a significant effect of the Support v None contrast on competence, revealing that competence ratings were higher overall in the Support conditions than the No Support condition, \( F(1, 162) = 4.86, p = .029, R^2 = .029 \). Comparing ratings of the Control and PD applicant, there was a significant main effect of Disability in which the PD applicant was perceived as significantly less competent than the control applicant, \( F(1, 162) = 642.30, p < .001, R^2 = .80 \). There was also an interaction of Order with Disability, \( F(1, 162) = 6.14, p = .014, R^2 = .037 \). The extent to which the PD applicant was stereotyped as incompetent was greater when the control applicant was presented first compared to when the PD was presented first. This interaction was qualified by a 3-way interaction of Disability, Order, and Wrap v. Psych Support, \( F(1,162) = 3.96, p = .05, R^2 = .02 \) (see Figure 2 in Appendix C).

When the control applicant was presented first there were no significant differences in ratings of competence for the PD and control applicant between Psychiatric Care and Wraparound, \( F(1,162) < 1, n.s. \). However, when the PD applicant came first, the discrepancy in ratings of competence for the PD versus control applicant was significantly smaller in the Wraparound than Psychiatric Care condition, \( F(1, 162) = 4.56, p = .03, R^2 = .03 \).

These results suggest that disclosure of a PD through an accommodation request can cause a housing applicant to be negatively stereotyped as less capable than an applicant without a PD, despite similar qualifications. Additionally, the effect of Wraparound versus Psychiatric Care appears to be qualified by the Order in which applications are evaluated.
WARMTH

On average across both applicants, warmth ratings did not differ based on Support, Order, or their interaction, all $F_{s}(1, 162) < 1.79$. Results once again revealed a significant main effect of Disability, $F(1, 162) = 204.33, p < .001, R^2 = .56$. Revealing a PD through an accommodation request is associated with lower perceptions of warmth compared to a control applicant. In support of our predictions, Study 1 results revealed that the effect of Disability on warmth was influenced by Support v. None, $F(1, 162) = 188.47, p < .001, R^2 = .54$ (See Figure 3 in Appendix C). In general, the PD applicant was stereotyped as less warm than the control applicant, and this difference was significantly greater when the PD applicant revealed enrollment in any support services, $F(1, 162) = 177.90, p < .001, R^2 = .52$, compared to when no support services were revealed, $F(1, 162) = 42.57, p < .001, R^2 = .21$. This effect suggests that disclosure of support, be it psychiatric treatment or wraparound support services, may further exacerbate negative stereotypes of dangerousness for a person with PD.

Stereotypes and Leasing Behaviors

Although we had expected the interactive effect of Disability by Support on leasing behaviors to be mediated by competence and/or warmth, a case of mediated moderation, the requirements for such an effect were not met in the results for leasing behaviors and stereotypes. The focal Disability by Support interaction was not found on leasing behaviors and, as such, cannot be mediated by stereotypes. There was a significant three-way interaction of Disability by Support v. None by Order on leasing behaviors, however, a parallel three-way interaction was not observed on either competence or warmth. Thus, analyses for mediated moderation were not conducted.

DISCUSSION

Study 1 demonstrated that revealing a PD in an accommodation request increases the preference given to a control compared to a PD housing applicant. Despite being highly qualified for the apartment, and laws to ensure people with a disability will have an equal opportunity for housing, this study revealed that a person with a PD is less likely to be rented an apartment, and less likely to be perceived as competent or warm, than another applicant who did not reveal a PD. It is important to note that these effects emerged despite the fact
that the information presented both applicants with equivalent qualifications with respect to employment history and salary, as well as professions that were perceived similarly on the stereotype dimensions of competence and warmth.

Study 1 results suggest that awareness that someone participates in support programs intensifies negative reactions to people with PD, although the presence or type of support producing such effects varied across measures. Disclosing either type of support—psychiatric care or psychiatric care with wraparound services—had more detrimental effects on the chances of receiving a lease than not disclosing support, but only when participants had first read and evaluated a similarly qualified applicant with no mention of a PD or request to make accommodations to the lease. Differences in evaluations of competence based on an applicant with disability compared to a control were also sensitive to order and support manipulations, but in a different pattern than that observed for leasing behaviors. Impressions of competence were impacted by disability and support type only when the PD applicant was evaluated first and in the opposite direction than predicted such that psychiatric care support was more detrimental to perceptions of competence than wraparound services. Finally, stereotypes about the PD applicant’s lack of social skills or warmth compared to the control applicant were more negative with disclosure of being the recipient of support compared to when no support was disclosed. Because support impacted stereotype and behavior measures differently, results from Study 1 do not suggest that perceptions of competence and warmth are the causal mechanisms by which awareness of support influences likelihood of leasing to a person with a PD.

Our primary hypothesis, that wraparound support programs would be more detrimental to perceptions of people with a PD than psychiatric care alone, was not supported. If anything, there was evidence that knowledge a person with PD participated in a wraparound program helped to diminish the perceived discrepancy in his competence compared to a control applicant, at least when information for the applicant with PD was reviewed first. Variation in reactions to support and their implications for our predictions across leasing behaviors and stereotype dimensions could be due to at least two factors. First, because we failed to conduct a manipulation check of the accommodation request letters, it could be that participants overlooked the differing information about support within the accommodation letter. That wraparound services versus psychiatric care conditions yielded
different results on competence, may make this alternative less likely. However, to address this concern, we conducted a pretest prior to Study 2 to confirm that people notice the pertinent information. Second, it could be that referencing a psychiatric disability is overly general and could be interpreted as any number of disorders. For example, two widely-studied disorders, SZ and MDD, have been shown to have different profiles of public stigma and discriminatory experiences within the community. It is plausible that the amount of backlash that will occur in response to support programs may differ depending on the particular disorder an individual has and how much of a threat they are thought to pose. In Study 2, we specify the disorder for which the applicant with PD is requesting accommodations in order to address this limitation.
CHAPTER 3

STUDY TWO

In Study 2 we examined if the effects of support services on leasing behavior depend on the particular diagnosis an applicant has, specifically SZ or MDD. We chose these disorders as they represent two major categories of mental illness: psychotic and mood disorders. Previous research has shown that stereotype content varies across mental illnesses subgroups (Sadler et al., 2012). Mental illness subgroups associated with psychosis are perceived as incompetent and hostile whereas subgroups associated with mood dysfunction are perceived as about average on competence and warmth. Thus, it may be that the impact of supportive services on housing disadvantage for someone with a PD may be more pronounced when an applicant reveals that he has been diagnosed with SZ than MDD.

METHOD

The current study aimed to expand the findings of Study 1 to the specific PDs of SZ and MDD. The purpose was to determine if the pattern of discrimination based on presenting a PD and support services would differ depending on whether the applicant was presented as having SZ of MDD.

Participants

Two hundred and eighty-five workers from Mturk participated and were paid $.50, based on the typical rate of 1-3 cents per minute. Five participants failed to correctly answer any of the attention check items and were excluded from analyses. Two participants were categorized as outliers based on studentized deleted residual values greater than 3.40 (Judd, McClelland, & Ryan, 2008) and were also dropped from analyses. Thus, the final number of participants included in analyses was 278. The sample consisted of adults from across the United States (12.8% Southwest; 18.8% Northwest; 21.1% Southeast; 47.4% Northeast), who were 59.9% female, 83.8% Caucasian, 34.9% Christian, and 87.9% having completed at least some college education.
Design

The design for Study 2 was identical to Study 1 with the addition of Diagnosis as another independent variable in which the applicant with a PD revealed that they had either SZ or MDD. Diagnosis had two levels (SZ, MDD) and varied between-participants. The design was a 2 (Disability: PD, Control) X 3 (Support: No Support, Psychiatric Care, Wraparound) X 2 (Diagnosis: SZ, MDD) X 2 (Order: Control 1\textsuperscript{st}, PD 1\textsuperscript{st}) X 2 (Assignment: James, David) with Disability varying within-participants and the remaining variables varying between-participants. As in Study 1, assignment was not found to impact leasing behaviors and was therefore collapsed in the reported analyses.

Materials

The application materials remained the same as in Study 1, with one modification. For Study 2, the accommodation letter accompanying the application of the person with PD also revealed one of two Diagnoses (SZ or MDD) in addition to one of three Support manipulations (None, Psychiatric Care, Wraparound). Diagnosis information was embedded immediately after the applicant revealed that he had a psychiatric disability, where the applicant stated that they had either “schizophrenia” or “major depressive disorder” (see Appendix B).

Due to concerns that participants in Study 1 may not have attended to the information presented in the accommodation request, a pretest was conducted prior to Study 2. We chose one application (bank teller named David) for the pretest and we manipulated whether the accommodation request revealed the applicant had SZ or MDD and the type of Support he received. Results showed that 96% of the fifty-seven participants correctly said there were supplemental materials to the application. In an open-ended follow-up question, almost all participants recalled the accommodation request letter, although the level of detail generated by participants varied. About one quarter simply referenced that there was a letter (27%), whereas the remaining participants mentioned the PD, that accommodations were requested, or both. In a separate query, one hundred percent of the participants correctly affirmed that the applicant had a PD and they subsequently labeled the PD either generally, as a mental illness, or more specifically, as SZ or MDD (88% and 77%, respectively).
Finally, we asked participants about components of the Support variable. Within both support conditions, 80% of participants correctly recalled that the applicant took medications as part of their treatment. Participants also responded to a question regarding who served as the mental health care provider for the applicant, a psychiatrist, a case worker, both a psychiatrist and case worker, or the option “no information was provided”. Although the percentage of participants answering correctly was somewhat lower on this measure, correct endorsement rates were similar across conditions (69% to 77%). One critical feature of wraparound services is the ability of support services to be provided in the person’s home. Ninety-one percent of participants in the Wraparound condition correctly answered that the applicant received in-home care.

**Measures**

All measures used in Study 1 were included in Study 2. Leasing behaviors were measured with the same items (Control: $\alpha = .87$; PD: $\alpha = .89$), as were stereotypes of competence (Control: $\alpha = .82$; PD: $\alpha = .86$) and warmth (Control: $\alpha = .83$; PD: $\alpha = .87$). Three additional questions in Study 2 regarded the perceived severity, controllability, and functional impairment of the disorder to which they were exposed to rule out a potential alternative explanation for Study 2 effects. The items gauged how severe the illness was perceived to be, if daily functioning was impaired, and if symptoms could abate with treatment (reverse-scored). All items appeared on 5-pt scales ranging from 1 = “not likely” to 5 = “extremely”. The items were reasonably inter-correlated ($\alpha = .65$), reverse-scored as appropriate, and averaged.

**Procedure**

Participants completed the informed consent, read through a series of instructions, and separately evaluated two housing applications. One of the applicants, named either James or David, acted as a control while the other applicant revealed that they had a PD, one of two Diagnoses (SZ or MDD), and one of three levels of Support (No Support, Psychiatric Care, Wraparound Support). As in Study 1, Order and Assignment of applicants were counter-balanced across participants; however, Assignment had no effects and is not included in reported analyses. Participants rated applicants on leasing behaviors, competence, and warmth. The presentation of stereotype dimensions was counterbalanced across participants.
as was the order of items within all scales. Finally, participants completed severity items, 4 attention-check questions (see Appendix C), and demographics, then were thanked and paid for their participation.

**RESULTS**

In Study 2, the likelihood a landlord would lease the apartment to a housing applicant and perceived stereotypes were analyzed as a function of Disability, Support, Diagnosis, and Order.

**Leasing Behaviors**

We evaluated leasing behaviors with a 2 (Disability) X 2 (Diagnosis) X 3 (Support) X 2 (Order) repeated-measured ANOVA with the first variable varying within-participants and the remaining variables varying between-participants. As in Study 1, planned contrasts were used for the 3-level Support variable in order to test both Support conditions versus the None condition (Support v. None) and the Wraparound condition versus the Psychiatric Care only condition (Wrap v. Psych). Our primary prediction was that the exacerbating effect of Support services on housing disadvantage against a PD compared to a control applicant would be larger for applicants with SZ compared to those with DP, especially when that Support includes wraparound services in addition to psychiatric care.

A main effect of Diagnosis, $F(1, 266) = 5.83$, $p = .02$, $R^2 = .02$, demonstrated that endorsement of renting, on average across applicants, was higher when the Diagnosis revealed by the PD applicant was MDD compared to SZ. There was also a main effect of Order, $F(1, 266) = 19.51$, $p < .001$, $R^2 = .03$, demonstrating that ratings were lower overall when the Control applicant was presented first compared to when the PD applicant came first.

More interesting are the results that reveal different leasing behaviors for an applicant with a PD versus the control. There was a main effect of Disability, $F(1, 266) = 443.13$, $p < .001$, $R^2 = .63$, such that preference for leasing was given to the control over the PD applicant. There was also a significant Disability x Diagnosis interaction, $F(1, 266) = 5.47$, $p = .02$, $R^2 = .02$. The discrepancy in leasing behaviors between applicants was greater toward SZ applicants, $F(1, 266) = 281.38$, $p < .001$, $R^2 = .51$, than MDD applicants, $F(1, 266) = 170.06$, $p < .001$, $R^2 = .39$. Importantly, results revealed the predicted three-way interaction
of Disorder, Diagnosis and Wrap v. Psych, $F(1,266) = 7.02, p = .01, R^2 = .026$. As shown in Figure 4, Appendix C, the extent to which the discrepancy between applications was different for SZ than MDD is contingent upon the type of Support disclosed. When Wraparound services were disclosed, the extent to which the control was more likely to receive the lease then the PD applicant was significantly worse for people with SZ than people with MDD, $F(1, 266) = 6.91, p = .01, R^2 = .03$. However, when psychiatric care was disclosed, the difference between applications did not differ between SZ and MDD, $F(1, 266) = 1.27, n.s.$

It should be noted that a comparable analysis of the severity composite score (severe, impaired, treatment reverse-scored), revealed no significant effects of disability, diagnosis, and/or support condition, all $F$s$(1, 266) < 2.27$. Thus, the observed effects do not appear to be due simply to perceived differences in the level of function of the applicant based on his diagnosis or level of support.

**Stereotypes**

Analyses of stereotype measures were conducted separately for competence and warmth, parallel to Study 1, with the addition of Diagnosis as a factor. Thus, the analyses involved a 2 (Disability) X 2 (Diagnosis) X 3 (Support) X 2 (Order) repeated-measured ANCOVA with the other stereotype dimension included as a covariate (centered), and interacted with all remaining variables.

**COMPETENCE**

When evaluating average competence ratings across both applicants, there was a main effect of Order, such that the competence was significantly higher when the Control applicant was presented first compared to when the PD applicant came first $F(1, 254) = 17.40, p < .001, R^2 = .06$. Comparing competence ratings between applicants, we again found that the PD

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2 We also evaluated the effects of our support, diagnosis, and order manipulations on each of the severity measure items separately. Regarding how severe the disability was thought to be, a main effect of diagnosis emerged such that participants saw schizophrenia as more severe than major depressive disorder, $F(1, 266) = 11.04, p < .001, R^2 = .04$, all other $F$s $< 1.26$. For the item that asked participants to rate how functionally impairing the PD was, we only found a main effect of order which revealed that when the control came first the disability was thought to be more functionally impairing than when the PD applicant came first, $F(1, 266) = 4.72, p = .03, R^2 = .02$, all other $F$s $< 2.09$. When participants were asked if the PD symptoms could be controlled through treatment there were no significant differences based on support, order, or diagnosis, all $F$s $< 3.62$. 

applicant was rated as significantly less competent than the control, \( F(1, 254) = 897.08, p < .001, R^2 = .78 \). As in Study 1, there was a significant Disability by Order interaction, \( F(1, 254) = 12.11, p = .001, R^2 = .05 \), such that lowered competence ratings of the PD applicant compared to the Control applicant were exacerbated when the Control applicant was presented first, \( (F(1, 254) = 591.79, p < .001, R^2 = .70) \), compared to when the PD applicant was first \( (F(1, 254) = 331.03, p < .001, R^2 = .50) \).

The effect of Disability also interacted with Diagnosis, \( F(1, 254) = 5.60, p = .02, R^2 = .02 \), showing that, on average, the effect of Disability on competence was larger when the applicant had SZ compared to when the applicant had MDD. This was qualified by a 3-way interaction of Disability by Diagnosis by Support v. None, \( F(1, 254) = 6.33, p = .01, R^2 = .02 \). SZ was only found to be significantly more detrimental than MDD in prompting lower competence in the None condition, \( F(1, 254) = 11.69, p < .001, R^2 = .04 \), whereas the effect was not significant for the average of both Support conditions, \( F(1, 254) < 1, n.s. \) (see Figure 5 in Appendix C). Thus, over and above any attributed differences in the applicant’s warmth, we found that SZ had a more negative influence on perceptions of competence than MDD, although only when there was no support.

**WARMTH**

For the average warmth ratings across applicants, results demonstrated a main effect of Order, \( F(1, 254) = 3.93, p = .05, R^2 = .02 \), where warmth ratings were lower when the control applicant came first compared to when the PD applicant came first. The only other effect to emerge was a main effect of Disability, \( F(1, 168) = 532.64, p < .001, R^2 = .68 \), showing that the PD applicant was perceived as significantly less warm than the Control applicant. All other effects were non-significant, \( Fs < 2.56 \) (see Figure 6 in Appendix C).

**Stereotypes and Leasing Behaviors**

As in Study 1, although we had expected stereotypes of competence and warmth to mediate the interactive effect of disability, diagnosis, and support on leasing behaviors, mediated moderation was not tested. In this case, the hypothesized three-way interaction between Disability by Diagnosis by Wrap v. Psych on leasing behaviors was significant, however, its parallel effects on competence and warmth were not, suggesting the stereotype dimensions were not causally involved in the observed effects on leasing behaviors.
DISCUSSION

In line with expectations, Study 2 found that housing applicants with SZ are more likely to experience a housing disadvantage and to be perceived as less competent than people with MDD. This finding replicates previous research showing that people with psychotic disorders are perceived more negatively and experience more discrimination than people with mood disorders (Crisp et al., 2000; Link et al., 1999; Sadler et al., 2012). However, inconsistent with prior research, stereotypes regarding warmth of applicants with SZ and MDD were not found to differ in Study 2. Our results suggest housing discrimination and stereotypes of incompetence are not inevitable, as the extent to which such negative perceptions may be experienced by people with SZ versus MDD varies based on other factors such as the presence or type of support services that they receive.

With respect to leasing behaviors, we found that diagnosis did not explain housing preference if the person with a PD received psychiatric care but did if the person received the more comprehensive wraparound services. When participating in psychiatric care, which entailed weekly meetings with a psychiatrist and medication to manage symptoms, the applicants with SZ and MDD did not differ in how much less likely they would be to receive the lease than the control. In contrast, when participating in wraparound services that added a caseworker, multiple therapies, and in-home care, the extent to which a person with a PD was disadvantaged in receiving a lease was larger for the SZ than the MDD applicant.

Our results also showed that, while an applicant with MDD was perceived to be more competent than an applicant with SZ when no support was disclosed, the addition of any support diminished the differences between perceptions of their competency as a tenant, and did not impact perceptions of their warmth. These results could be due to the fact that we developed housing applicants that were highly qualified and functional within society, information that was most likely counter-stereotypic for a person with SZ and perhaps only somewhat unusual for a person with MDD. Adding in support services to this (counter)stereotypical base may have boosted perceptions of the applicant with SZ such that he was seen as more able to do things like afford rent and follow the apartment regulations. All this being said, it seems that through counter-stereotypic information and perceptions of stability, people with PD may hopefully be able to alleviate some of the public stigma they experience. One must be cautious in this conclusion as the study revealed no support for
competence and warmth as mediators of the interactive effect of disability, diagnosis, and support on leasing behaviors.
CHAPTER 4

GENERAL DISCUSSION

We conducted two studies that evaluated public stigma against people with psychiatric disabilities in a housing context. We examined the manner in which housing is influenced by information about an applicant’s enrollment in support services and their specific psychiatric diagnosis. Consistently, we found a negative impact of revealing a PD on predictions of the likelihood that a landlord would lease an apartment to an otherwise qualified applicant. Furthermore, a housing applicant’s enrollment in support services had the potential to backfire and exacerbate discrimination against people with a PD. However, it is important to consider that the impact of support services on public stigma depends on the type of support and the particular diagnosis. Our second study demonstrated that people predict that a landlord would be less likely to lease to an applicant with SZ than MDD who receive wraparound services but not for applicants in long-term psychiatric care alone.

When we examined the influence of type of support—psychiatric compared to wraparound—on leasing behavior, an applicant who disclosed a PD but did not specify the particular diagnosis, was expected not as likely to receive a lease. This effect was not found to differ based on whether the applicant disclosed psychiatric care support or wraparound support. When the diagnosis was specified, however, the type of support became relevant to the amount of leasing behaviors that would ensue, indicating that different types of support have varying implications for specific diagnoses. Study 1 showed some influence of support services on negative perceptions and leasing toward people with PD in general, but it wasn’t until we specified that the disability was SZ or MDD that we were able to evaluate how leasing behaviors and negative stereotyping, at least for perceptions of competence, can be influenced by the type of support services one has and how acceptable it is for that disorder.

In both studies, there was a consistent interaction of order and disability for measures of leasing behaviors and competence which showed that the effect of disability on these measures was significantly larger when the control applicant was presented first. The influence that order had on the effect of support did, however, vary across studies. In Study 1
the order in which the applications were presented had an influence on how participants responded to the support information, but when specific diagnosis information was added in Study 2, the order in which the applicants were evaluated no longer impacted the effect of support on leasing behaviors or competence. We think the varying role of order across studies may have been due in part to the surrounding judgmental context. In Study 1 there was less information provided on which participants could base their judgments, hence, they appeared to be more sensitive to the judgment context and responded to the order of applicant presentation. Once Diagnosis information was introduced, however, participants may have relied less on order because they based their judgments in part on presumptions about a particular diagnosis.

Similarly, differences in the effect order on competence across studies may also be due to the addition of specific disorders, which allowed participants new information about the specific disorder the applicant has by which to make judgments about the applicant’s competence. It is also relevant that the disorders we specified, SZ and MDD, have preconceived stereotypes about their competence and warmth, with MDD perceived to be higher on both dimensions (Sadler et al., 2012). Because we created applicants that were counter-stereotypic, more so for SZ than MDD, there may have been an influence of counter-stereotypic information leading to a contrast effect and more positive judgments. We also recognized that the gender of a person with a PD can be influential in the stigma and housing discrimination they will experience. Stereotypes of people with schizophrenia portrayed in the media are often male whereas stereotypes of people with major depression are often portrayed as female. In addition to this, it is often the case that males are less likely to be rented to than females with the same qualifications. Because our study presented only males, we have no way of knowing if gender could have played a role in our findings. Future research should evaluate is the impact of support for different PDs may differ depending on one’s gender.

Finally, in Study 1 we found that any support compared to none could have a detrimental effect of perceptions of the warmth for PD overall, whereas in Study 2 there were no differences of warmth due to either type of support or specific diagnosis. According to research conducted on group-level perceptions, we should have found that MDD was perceived as warmer than SZ. It is possible that a lack of effects on warmth could be for
different reasons for an applicant with MDD and SZ. Our well-qualified, well-written housing applications were not reflective of typical stereotypes of “violent schizophrenics” often displayed in the mass media, and may not be priming participants to consider dangerousness as much in their evaluations of the housing applicant. Whereas for MDD, low warmth could be more reflective of introversion and sadness.

Our results were not consistent with either the SCM or BIAS map frameworks (Cuddy et al., 2007; Fiske et al., 2002;). Both models assume that stereotypes regarding an individual’s or a group’s intentions, and the capability they have to carry out such intentions, are predictive of emotional prejudice and (potentially discriminatory) behaviors. We found no evidence of competence or warmth mediating the effects of support (Study 1 and Study 2) or diagnosis (Study 2). Similar to the reasoning given above regarding different expectations for what warmth represents, the lack of causal role for stereotypes could have been due to the differences in how (counter)stereotypic the applicant was for each of the disorders. It is also the case that the SCM and BIAS findings are generally measured at the group level whereas we measured them at the individual level, i.e., via a single group member. The relationship between competence and warmth has been shown to differ at these two levels of judgment (Judd et al., 2005). At an intergroup level, competence and warmth are often negatively related whereas at the interpersonal level they are often strongly positively correlated, as they were in these studies. Because of this, once we controlled for the other stereotype dimension there was little unique variance left for our other factors to explain. Perhaps our extensive pretesting to ensure job information provided on both applications conveyed warmth and competence may have in fact hindered our investigation of differences in perceptions of the stereotype dimensions.

LIMITATIONS AND FUTURE DIRECTIONS

The goal of the current studies was to determine if there could be a public backlash to knowledge that a person with a PD is enrolled in supportive treatment programs and if this backlash would vary based on perceptions of specific psychiatric disorders, resulting in an even greater barrier to housing. Due to PD being an “invisible” disability, we had to present it through some kind of manipulation, and given the housing context and the disability law, a request for a housing accommodation was a reasonable option. However, because we
presented the PD in this manner, we are unable to disentangle completely which of the factors—a PD, perceived effort to make accommodations, or support—may have ultimately been responsible for our effects, although we suspect that it was most likely all working in concert. Future research could systematically vary presentation of PD, support services, or the how the information about a PD that accompanies a housing application is presented in order to better understand the importance of each parcel of information to housing decisions. In the current research we compared the person with a PD asking for an accommodation to an applicant that did not require an accommodation. Future research could create a comparison application that also requests the same accommodation as the person with a PD, although for different reasons. For example, we could ask people to evaluate to two housing applicants that are both requesting an exception to a no pet policy, however, one person requires the animal for emotional support due to their PD whereas the other applicant requires a service animal for a physical disability. Another research design could involve two applicants requesting that they can break lease with no penalty, but one is asking in case of psychiatric hospitalization and the other is asking in case of military deployment. By comparing the applicant with a PD to another applicant asking for the same accommodation, future research will be able to isolate the impact of having a PD on the extent to which someone would be disadvantaged in receiving a lease.

In real-life it is not the case that everyone with a PD will disclose information about their disability, however, they may not have a choice if they require an accommodation or have recently been hospitalized which would be revealed in information on one’s prior residence. Research that evaluates how people will respond to a person with a PD if they choose to (or have no choice but to) disclose their disability can help us to understand the process of stigma and allow insight into what the most beneficial way to present that information may be.

Another potential factor underlying a backlash to support programs for people with PD could lie with increased perceptions of severity of the disorder. Severity is often referenced in discussions of psychiatric disorders and how detrimental a particular illness may be to the adaptive functioning of a person. If our support manipulation is thought to be an indicator of how much assistance a person with SZ or MDD requires, it might make sense that discrepancies in severity between the disorders would mediate the effect of support on
leasing. However, when we evaluated a measure of severity in Study 2, there was no impact of support or diagnoses on perceptions of severity. Our measure, however, was limited in that it was a three-item measure with only adequate reliability, thus, future research could evaluate severity more stringently in order to determine whether the lack of differences in severity we observed represent replicable null effects or limited power.

Explicit measures and social desirability concerns make measuring prejudice and discrimination very difficult, as people are often unwilling to admit to, or are unaware of, their prejudices. Some research has demonstrated that projections about others’ attitudes and behaviors map onto one’s own (Krueger, 1996). The current research was interested in establishing if there is a consensus among the public that individuals with a PD are less likely to be leased to then someone without a PD, despite how qualified they might be. Also, we were primarily interested in if such housing disadvantage would systematically differ by an applicant’s level of treatment support and specific diagnosis. The extent to which landlords would actually respond in this manner is up for debate, as it could be that people have negative expectations of the way a landlord would behave and that their responses are not reflective of what a landlord would actually do. Additionally, landlords will have a better knowledge base and understandings of fair housing laws, which may make them more inclined to respond to the PD applicant’s request and possibly offer them the lease. In either case, at the very least we believe we assessed cultural values and practices regarding stigma of people with psychiatric disabilities in the domain of housing, an important step in determining the process by which stigma towards people with psychiatric disabilities occurs and what causal mechanisms may be involved.

CONCLUSIONS

We demonstrated that the success of housing support programs, like comprehensive wraparound services, in part depends on the degree to which the general public is receptive to housing applicants with PD. Because our results suggest that public stigma may cause a backlash against people with PD who are involved in supportive services, such programs should focus on ways to effectively prevent or mitigate negative reactions in order that people with PDs can have some success integrating into the community. Research evaluating public receptiveness and stigma should be designed alongside developing treatment programs
so that they are better able to effectively and successfully treat those in need, hopefully with
the acceptance and support of the community. The more we understand the sources and
processes involved in public stigma, the more we can build means to counteract it.


APPENDIX A

STUDY MATERIALS
Housing Applications

Parkside Manor Apartments
Rental Application

Today's date: December 20, 2011
Lease start: January 15, 2012
Monthly Rent: $1150
Security Deposit: $1000

Personal Information

James
First name
A.
Middle Initial
Last name

March 10, 1981
Birth date

Social Security #

Driver's License #

Phone #

Email Address

Residential History

Oceanside
City
CA
State
92058
Zip

2 years, 3 months
Length of Residency
Rent or Own
Rent

Flagstaff
City
AZ
State
86001
Zip

Reason for leaving?
Landlord/Mortgage Name and Address

2 years
Length of Residency
Rent or Own
Rent

Moved to southern California

Reason for leaving?

Employment Status

Reyman Photography
Current Employer

San Diego
City
CA
State
92104
Zip

Photographer
Address
2/10/2010 - Current
Date of Employment
$45,000/year
Salary

Reference Information

Brother
Name
29
Relationship
Years Known
Phone #

Employer
Name
5
Relationship
Years Known
Phone #

Tuscon
City
AZ
State
93307
Zip

Emergency Contact:

Name

Phone #

Address

General Information

690
Credit Score

No
Have you ever filed for bankruptcy?

Do you have any additional income? (If yes, please indicate amount and source)

No

No

Have you ever been party to an eviction?

Do you own a pet?

Do you have any water filled furniture?

Is there anything else you would like us to know before we consider this application?

No

Parkside Manor is a 100% smoke-free environment.

Do you understand that you and your guests may not smoke in your apartment or anywhere on the premises? Yes

Signature

12/20/2011

Date

Applicant represents that all the above statements are true and correct and hereby authorizes verification of the above items including, but not limited to, the obtaining of a credit report and agrees to furnish additional credit references upon request. Applicant consents to allow Owner/Agent to disclose tenancy information to previous or subsequent Owners/Agents.
### Parkside Manor Apartments

**Rental Application**

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<th>Today’s date:</th>
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<td>January 15, 2012</td>
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<tr>
<td>Monthly Rent:</td>
<td>$1150</td>
</tr>
<tr>
<td>Security Deposit:</td>
<td>$1000</td>
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#### Personal Information

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<th>S.</th>
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<tbody>
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</tr>
<tr>
<td>Social Security #</td>
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</tr>
<tr>
<td>Driver’s License #</td>
<td></td>
</tr>
<tr>
<td>Phone #</td>
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<td>Email Address</td>
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#### Residential History

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<tr>
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<td>Monthly payment</td>
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<tr>
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</tr>
<tr>
<td>Rent</td>
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<td>Rent or Own</td>
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<tr>
<td>Monthly payment</td>
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<td></td>
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#### Employment Status

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<td></td>
</tr>
<tr>
<td>Salary</td>
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</tr>
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<td>Current Employer</td>
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<td>Salary</td>
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#### Reference Information

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<td>Name</td>
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<tr>
<td>Uncle</td>
<td></td>
</tr>
<tr>
<td>Relationship</td>
<td>Years Known</td>
</tr>
<tr>
<td>Name</td>
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</tr>
<tr>
<td>Uncle</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Emergency Contact: Name</th>
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<td>Address</td>
<td>City</td>
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<tr>
<td>Sacramento</td>
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#### General Information

<table>
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<tr>
<th>Credit Score</th>
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<tr>
<td>Have you ever filed for bankruptcy?</td>
<td>No</td>
</tr>
<tr>
<td>Have you ever been convicted of a felony?</td>
<td>No</td>
</tr>
<tr>
<td>Do you have any additional income? (If yes, please indicate amount and source)</td>
<td>No</td>
</tr>
<tr>
<td>Do you own a pet?</td>
<td>No</td>
</tr>
<tr>
<td>Do you have any water filled furniture?</td>
<td>No</td>
</tr>
</tbody>
</table>

**Is there anything else you would like us to know before we consider this application?**

**No**

---

Parkside Manor is a 100% smoke-free environment.

Do you understand that you and your guests may not smoke in your apartment or anywhere on the premises? Yes X No

---

Applicant represents that all the above statements are true and correct and hereby authorizes verification of the above items including, but not limited to, the obtaining of a credit report and agrees to furnish additional credit references upon request. Applicant consents to allow Owner/Agent to disclose tenancy information to previous or subsequent Owners/Agents.

<table>
<thead>
<tr>
<th>Signature</th>
<th>12/19/2011</th>
</tr>
</thead>
</table>
Accommodation Requests

No Support Condition
I am applying to live at Park Manor Apartments. I am a qualified individual with a psychiatric disability, as defined by the Fair Housing Amendments Act of 1988 (42 U.S.C. 3601, et seq.). Due to my [Study 1: disability; Study 2: major depressive disorder or schizophrenia], I would like to request some general accommodations to the lease agreement that will assist me greatly in living through the functional impairments and troubles that I face every day. I would like to meet with you to discuss these accommodations, as they will enable me to have an equal opportunity to live in and enjoy this residence.

Psychiatric Care Support Condition
I am applying to live at Park Manor Apartments. I am a qualified individual with a psychiatric disability, as defined by the Fair Housing Amendments Act of 1988 (42 U.S.C. 3601, et seq.). Due to my [Study 1: disability; Study 2: major depressive disorder or schizophrenia], I would like to request some general accommodations to the lease agreement that will assist me greatly in living through the functional impairments and troubles that I face every day. I would like to meet with you to discuss these accommodations, as they will enable me to have an equal opportunity to live in and enjoy this residence.

For the past 5 years I have been under the care and supervision of my psychiatrist, Dr. _______. I have weekly treatment meetings and take medications to manage my symptoms.

Please contact me to discuss this issue. You may also contact my psychiatrist at his office phone, ____________ if you have any questions or concerns regarding my illness or treatment. I look forward to your response and appreciate your attention to this matter.

Wraparound Services Support Condition
I am applying to live at Park Manor Apartments. I am a qualified individual with a psychiatric disability, as defined by the Fair Housing Amendments Act of 1988 (42 U.S.C. 3601, et seq.). Due to my [Study 1: disability; Study 2: major depressive disorder or schizophrenia], I would like to request some general accommodations to the lease agreement that will assist me greatly in living through the functional impairments and troubles that I face every day. I would like to meet with you to discuss these accommodations, as they will enable me to have an equal opportunity to live in and enjoy this residence.

For the past 5 years I have been enrolled in a wrap-around treatment program for my disability. This program allows me the support of holistic, individualized services including case management, psychiatric treatment, cognitive-behavioral therapy, emergency services, and financial support. At least once a week I meet with my caseworker and therapist in my home, and I take medications to manage my symptoms.

Please contact me to discuss this issue. You may also contact my caseworker at his office phone, ____________ if you have any questions or concerns regarding my illness or support services. I look forward to your response and appreciate your attention to this matter.
APPENDIX B

QUESTIONNAIRE
**Leasing Behaviors**

How likely is it that a landlord would call this housing applicant?
How likely is it that a landlord would show the apartment to this housing applicant?
How likely is it that a landlord would interview this applicant for the apartment?
How likely is it that a landlord would lease the apartment to this housing applicant?

**Competence Stereotype Items**

Would a landlord perceive this applicant as competent?
Would a landlord perceive this applicant as capable?
Would a landlord believe that this applicant would keep the apartment in good condition?
Would a landlord believe that this applicant would be able to afford rent?
Would a landlord believe that this applicant would keep up on paying his/her utility bills (e.g., electric)?
Would a landlord think that this applicant would follow the apartment rules and regulations?
Would a landlord perceive this applicant as lazy?
Would a landlord assume that this applicant is dependent on others?
Would a landlord be concerned that this applicant would be unable to live on his/her own?

**Warmth Stereotype Items**

Would a landlord perceive this applicant as warm?
Would a landlord perceive this applicant as good-natured?
Would a landlord perceive this applicant as friendly?
Would a landlord believe that this applicant has good intentions towards other people?
Would a landlord think that this applicant would get along with his/her neighbors?
Would a landlord perceive this applicant as cold?
Would a landlord perceive this applicant as hostile?
Would a landlord be concerned that the applicant could be a danger to others?

**Attention Check Items**

What was James’ employment position?
What was David’s employment position?
What was the name of the apartment complex in which the apartment was located?
What was the monthly cost of rent for the apartment being rented?
APPENDIX C

FIGURES
Figure 1. Study 1 Leasing behaviors as a function of Disability, Support, and Order.

Figure 2. Study 1 Competence ratings as a function of Disability, Support, and Order, controlling for warmth (centered) and its interactions.
Figure 3. Study 1 Warmth ratings as a function of Disability and Support, averaging across Order, and controlling for competence (centered) and its interactions.

Figure 4. Study 2 Leasing behaviors as a function of Disability, Diagnosis, and Support.
Figure 5. Study 2 Competence ratings as a function of Disability, Diagnosis, and Support, controlling for warmth (centered) and its interactions.

Figure 6. Study 2 Warmth ratings as a function of Disability, Diagnosis, and Support, controlling for competence (centered) and its interactions.