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The relationship of individual therapy to depressive symptoms among treatment-seeking homeless men

Adam Joy

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Graduate School of Education and Psychology

THE RELATIONSHIP OF INDIVIDUAL THERAPY TO DEPRESSIVE SYMPTOMS

AMONG TREATMENT-SEEKING HOMELESS MEN.

A dissertation submitted in partial satisfaction

of the requirements for the degree of

Doctor of Psychology in Clinical Psychology

by

Adam Joy, M.A.

June, 2013

Cary Mitchell, Ph.D. – Dissertation Chairperson

This clinical dissertation, written by

Adam Joy, M.A. Student

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

Doctoral Committee:

Cary Mitchell, Ph.D., Chairperson

Stephanie Woo, Ph.D.

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DEDICATION

The people I have met in my professional and personal life have had a significant impact on my development as a person, and as a professional. In particular, the individuals I have had the opportunity to provide services to. Being allowed to enter and discuss the intimate details of a person's life is a challenging, but extremely rewarding privilege. I hope this work can in some way represent the courage of the people I have worked with, in particular, the individuals who sought services at the Union Rescue Mission. It was my time spent working with those individuals that opened my worldview and allowed me to begin seeing similarities before differences. The men and women I met faced a myriad of daunting challenges, yet, continued to maintain hope to survive, and live a better life. Their resiliency to work for a better life is inspirational for me.

I also owe an immense debt of gratitude to my family, friends, and classmates, as their support has enabled me the privilege to contribute to the field of clinical psychology. The sacrifices they made on my behalf are beyond words. I am forever grateful and appreciative for what has been provided to me. I hope to be able to give back to each and every person I encounter, the unconditional love and patience I have received. I would like to dedicate this body of work to them as a small token of thanks for all they have done and continue to do. I can only hope to some day to have the fortitude and constitution that they embody within each and every one of them. With love, thank you.

Adam Michael Joy, M.A.

EDUCATION

2008-2012 Psy.D. Clinical Psychology, Pepperdine University, Los Angeles, CA

APA accredited, Practioner-Scholar model program

- Colleagues Grand Scholarship
- Hilton Fellowship 2008-2009
- Clinical Competency Examination: Passed 9/2010
    - Dissertation Title: The Relationship of Individual Therapy to Depressive Symptoms among Homeless Men Dissertation Chair: Dr. Cary Mitchell Ph.D.

2006-2008 M.A. Psychology, Pepperdine University, Los Angeles, CA

APA accredited, 3.79 G.P.A., Graduated with Honors

- *Inducted*, Psi Chi, National Honor Society for Psychology Students
- Vice President of the Student Government Association
    - Elected as a 3 year class representative

2001-2005 B.A., Psychology, Michigan State University, 2005

- Volunteered in 3 psychological labs as a research assistant
    - Qualitative study on the effects of witnessing domestic violence on aggression (2005-2006)
    - Qualitative study on gendered bullying in middle school students (2004-2004)
    - Quantitative study on individual performance relative to small group performance (2003-2003)

SUPERVISED CLINICAL EXPERIENCE

Internship

2011-2012, CAPIC Accredited Internship
The Center for Autism and Related Disorders, Tarzana, CA
Supervised by Dr. Evelin Garcia Ph.D.

- Administered and score clinical assessments measures to children with Developmental disorders and their parents
- Performed diagnostic batteries including measures such as: WISC-IV, NEPSY-II, PLS-4 & 5, Vineland, Berry-VMI, Roberts, ADOS, among others
- Provided assessment feedback to families and other professionals
- Provided in home Applied Behavioral Analysis treatment to children with developmental disorders according to their treatment plan
- Lead small social skills groups for children
- Supervised practicum students on clinical assessment and individual intervention
- Attended clinical team meetings for clients
- Attended weekly group and individual supervision

Practicum Experience

2010-2011, Practicum Student

Metro State Hospital, Norwalk, CA

Supervised by Dr. A. Lite Ph.D.

- Provided clinical assessments to forensic and non-forensic psychiatric inpatients
- Conducted cognitive, academic, and focused diagnostic assessments such as: WASI, WRAT-4, RBANS, MMPI-2, MCMI-III, among others.
- Conducted individual therapy
- Collaborated with an interdisciplinary treatment team
- Conducted therapy groups including "Substance Recovery" and "Managing symptoms" weekly
- Wrote integrative reports for Department of Mental Health
- Attended weekly team treatment teams
- Attended weekly group and individual and group supervision

2009-2010, Practicum Student

Santa Monica College Psychological Services, Santa Monica, CA

Supervised by Dr. S. Rowe Ph.D.

- Provided individual therapy to a diverse student population
- Crisis intervention
- Determine appropriateness of services and referrals when necessary
- Weekly crisis-walk in hour
- Participate in weekly individual and group supervision
- Conduct intakes with new clients
- Kept weekly progress notes

2008-2011, Developmental and Behavioral Interventionist

Building Bridges, Santa Monica, CA

Supervised by Dan Banitius LMFT

- Provide individual therapy to children and adolescent with autism utilizing Applied Behavioral Analysis, and Developmental techniques to modify behavior and increase social-emotional skills
- Consulted with parents on appropriate interventions and how to help their child generalize their skills
- Involve parents with interventions
- Attended seminars to enhance learning
- Complete weekly progress notes
- Attend weekly individual supervision

2008-2009, Practicum Student

Union Rescue Mission, Los Angeles, CA

Supervised by Dr. A. Aviera Ph.D. & Dr. C. Mitchell Ph.D., Group Supervision by Dr. Stephen Strack

- Selected from cohort to participate as a Hilton Fellowship
- Conduct individual therapy with homeless men and women with diagnosis such Substance Dependence, Antisocial Personality Disorder, Depression, dual diagnosis, among others
- Created and facilitated a Bereavement group
- Completed intakes for new clients
- Conduct assessments such as the MMPI-2, BDI-II, BAI, PAI, and MCMI
- Collaborated with Chaplin's to optimize care

RELEVANT EMPLOYMENT EXPERIENCE

2006-2008, Behavior Supervisor

Carousel School, Los Angeles, CA

- Supervised a staff of 75 at a K-12 non-public school for children with moderate to severe developmental disabilities
- Developed a behavioral program utilizing Applied Behavioral Analysis, and floortime methodology
- Hired and trained new staff members
- Conducted monthly staff training
- Provided crisis intervention during behavioral crises
- Provided individual therapy to students

2006-2006, Behavior Interventionist

Intercare Therapy, Los Angeles, CA

- Provided Therapy to a moderately autistic fourth grade student in a public school classroom.
- Trained in ABA, positive reinforcement and play therapy methods.
- Completed weekly progress notes

2004-2005 Group Leader

Ele's Place, Lansing, MI

- Acted as a group lead & facilitator for a small group (6-8) of elementary aged children focusing on bereavement issues
- Designed and implemented weekly activities
- Attended weekly supervision and consultation with the treatment team

RESEARCH EXPERIENCE

September 2005 – January 2006 Research Assistant to Dr. Bogat

Michigan State University, East Lansing, MI

- Acted as a research assistant in a quantitative study focusing on ratings of aggression as correlated with self report of witnessing domestic violence
- Acted as a confederate while collecting data
- Collected data
- Responsible for setup of research materials for trials
- Attended weekly research team meetings
- Kept track of research conditions

January 2004 – December 2004 Research Assistant to Dr. NiCole Buchanan,

Michigan State University, East Lansing, MI

- Acted as a research assistant for a qualitative study focusing on gendered bullying in middle school students
- Collected literature and prepared literature reviews using online data bases like PsyINFO
- Transcribed qualitative interviews
- Attended weekly treatment team meeting

August 2003 – December 2003 Research Assistant to Dr. Kerr,

Michigan State University, East Lansing, MI

- Acted as a research assistant for a quantitative experiment examining the impact of small group performance on individual effort.
- Administered research trials in which deception was used
- Maintained record of experimental conditions
- Entered data into SPSS
- Attended weekly research team meetings

TESTS ADMINISTERED AND SCORED

- Autism Diagnostic Observation Schedule (ADOS)
- Autism Symptom Questionnaire (ASQ)
- Baylee
- Beck Anxiety Inventory (BAI)
- Beck Depression Inventory-II (BDI-II
- Bender Gestalt
- Beery-Buktenica Developmental Test of Visual-Motor Integration, 6th Edition (VMI)
- Brief Symptom Questionnaire
- Millon Clinical Multiaxial Inventory–III
- Minnesota Multiphasic Personality Inventory®-2 (MMPI®-2)
- Mini Mental Status Exam
- A Neuropsychological Assessment-II (NEPSY-II)
- Personality Assessment Inventory (PAI)
- Preschool Language Scale-4 & 5 (PLS-4/ PLS-5)
- Repeatable Battery for the Assessment of Neuropsychological Status
- Rey Auditory Verbal Learning Test (RAVLT)
- Roberts-II
- Rorschach Inkblot Test
- Rey-Osterrieth Complex Figure Test (ROCF)
- Social Skills Improvement System (SISS)
- Thematic Apperception Test (TAT)
- Test of Language Development (TOLD)
- Trail making Test A & B (TMT)
- Vineland-II
- Wechsler Adult Intelligence Scale-III & IV (WAIS-III/IV)
- Wechsler Abbreviated Scale of Intelligence (WASI)

- Wechsler Intelligence Scale for Children-IV (WISC-IV)
- Wisconsin Card Sorting Task (WCST)
- Wide Range Achievement Test-4 (WRAT-4)

GRANTS & HONORS

- Hilton Fellowship
- Pepperdine Colleagues Grant (Pepperdine University Grant)
- Michigan Merit Award (State of Michigan Grant for Academic Achievement in High School)
- Member of Psi Chi Psychology Honors Fraternity

ADDITIONAL TRAININGS, PRESENTATIONS, AND CERTIFICATIONS

- 2009   Existential Theory, Case Consultation, and Supervision Group Dr. David Elkin
- 2010   Administration of Malingering Assessment Measures
- 2010   Trauma Focused Cognitive Behavioral Therapy Certified

ADDITIONAL CREDENTIALS

- Vice President for Pepperdine GSEP Student Government
  - Elected representative
- 3 Year representative in Student Government
- CPR/First Aide Certified
- Pediatric CPR/First Aide Certified
- CPI (Non-violent crisis intervention) Trained

ABSTRACT

The homeless are a vulnerable group, and research has consistently shown that the homeless experience higher rates of mental disorders, substance abuse, and physical illness than housed persons. Depressive disorders are particularly common among the homeless and have been reported at 2 to 4 times the rate found among housed individuals. The purpose of this study was to examine the relationship of individual therapy to depressive symptoms among treatment-seeking, homeless men attending a residential substance abuse recovery program in an inner-city mission. The participants were 81 men with a mean age of 39.95 years. The sample was ethnically diverse and had a modal educational level of at least some high school. All of the participants had voluntarily sought individual psychological services as an optional component of their substance abuse program in this archival study. Depressive symptoms were measured with the Beck Depression Inventory, Second Edition (BDI-II). De-identified demographic and background information was obtained from the clinical intake form used in this setting. BDI-IIs were administered at intake and following approximately 6 sessions of individual therapy for all participants. Therapy services were provided by clinical psychology doctoral students, under the supervision of licensed psychologists. The sample obtained a mean BDI-II score at intake of 21.68, indicating moderate severity of symptoms; internal consistency reliability was .935. The mean BDI-II score following approximately 6 therapy sessions was 16.36, indicating mild severity; the BDI-II internal consistency reliability at follow-up assessment was .923. As predicted, BDI-II scores were significantly lower at retest. For the men in this study, participation in individual therapy was associated with significant reduction of depressive symptoms. Participants with

prominent mood complaints on the clinic intake evaluation form ($n = 38$) had significantly higher BDI-II scores at intake assessment than individuals with other primary complaints ($n = 43$), supporting the validity of the BDI-II as a measure of mood symptoms among homeless men. Other findings, clinical implications, limitations, and suggestions for future research are also explored. The results strongly supported the reliability and validity of the BDI-II as a measure of depressive symptoms and psychological distress among treatment-seeking homeless men.

Introduction

Homelessness is a profound and disturbing phenomenon in the United States. Homelessness affects people from all walks of life and spares no ethnicity, gender, sexual orientation, cultural background, or religious affiliation (National Coalition of the Homeless, 2009b). Homelessness is comprised of a complex web of social, emotional, societal, political, and personal factors, which create a unique challenge to address effectively (National Coalition for the Homeless, 2009c; Nooe & Patterson, 2010). Research has consistently shown that homeless persons experience higher rates of mental illness, substance abuse, and physical health problems than housed individuals (North, Eyrich-Garg, Pollio, & Thirthalli, 2010; Schanzer, Dominguez, Shrout, & Caton, 2007). As may be expected, the homeless often have a difficult time re-integrating into mainstream society, and experience a disproportionate amount of psychological stress and distress (Pluck et al., 2008; Reback, Kamien, & Amass, 2007). The homeless experience depressive disorders at higher rates than domiciled persons, and depression has been referred to as one of the most pervasive but most overlooked mental health problems of the homeless (Wong, 2000). Providing effective treatment for depressive symptoms and psychological distress can contribute to supporting homeless individuals toward leading happier, healthier, and more independent lives.

In attempting to gain an understanding of the prevalence, pervasiveness, and consequences of homelessness, one must first define what it is to be homeless. Researchers have developed several definitions of homelessness. One of the more widely accepted and comprehensive definitions of homelessness is found in the McKinney-Vento Homeless Assistance Act of 1987, which was one of the first federal acts to make

provisions for the homeless. This act (Institute for the Study of Homelessness and Poverty, 2004) defined a homeless person as

> …an individual who lacks a fixed, regular, and adequate night-time residence or a person who resides in a shelter, welfare hotel, transitional program, or place not ordinarily used as regular sleeping accommodations, such as streets, cars, movie theaters, abandoned buildings, etc. (p. 5)

The McKinney-Vento Act also indicates that persons in jail are not considered homeless. Other researchers and policy analysts have broadened the definition of homelessness to include persons precariously housed with friends or acquaintances, or persons about to lose their housing (Institute for the Study of Homelessness and Poverty, 2004). However, no consensus exists on the precise definition of homelessness and homeless counts are often viewed as rough estimates at best.

Studies have found that homeless individuals are more likely than domiciled persons to be psychologically distressed (Berg, Nyamathi, Christiani, Morisky, & Leake, 2005; Pluck et al., 2008). Homeless persons with serious mental illness, including conditions such as depression, have been found to represent one of the most vulnerable and disadvantaged segments of society (Folsom et al., 2005). It is therefore incumbent upon psychologists and other healthcare providers to make addressing the treatment needs of the homeless a priority.

National Homeless Population Statistics

In the United States, homelessness is both a national and local issue (National Coalition for the Homeless, 2009b). Over the past 20 to 25 years there has been a significant increase in the number of homeless (National Coalition of the Homeless,

2009a). The National Coalition for the Homeless (2009c) suggests there are three trends responsible for this increase: (a) an increasing shortage of affordable rental house; (b) simultaneous increase in poverty; (c) a reduction in government assistance. It has been estimated that 3.5 million people experience homelessness in the U.S. in a given year, and up to 744,313 are homeless at any point in time (National Law Center on Homelessness and Poverty, 2007).

Demographic Characteristics of the Homeless

Currently, the adult homeless population in the United States consists of primarily of single adults (National Coalition for the Homeless, 2009b). Of those adult homeless living on the streets, 94% were found to be single adults, 4% were in families, and the remaining 2% were unaccompanied minors. In terms of homeless persons utilizing emergency shelters, 70% were found to be single adults, 29% were part of families, and 1% unaccompanied minors. Of those in transitional housing, 43% were single adults, 56% families, and 1% unaccompanied minors. Previous studies have found that men, compared with women, are at higher risk of homelessness (Folsom et al., 2005). It has been suggested that the homeless consist of approximately two men to every one woman (The National Coalition for the Homeless, 2009b; U.S. Department of Housing and Urban Development, 2007).

Ethnicity

Surveys have indicated that homelessness disproportionately affects ethnic minorities (U.S. Department of Housing and Urban Development, 2007). In general, sheltered homeless persons in the U.S. are estimated to be 42% African-American, 38% Caucasian, 20% Hispanic, 4% Native American, and 2% Asian (National Coalition for

the Homeless, 2009b). The distribution of ethnic groups among the homeless is likely to vary by region of the country and also to reflect patterns of unemployment, under-employment, oppression, marginalization, and other risk factors experienced in various ethnic communities (Folsom et al., 2005).

Homelessness in Los Angeles

Population and demographics. Homelessness is a problem seen in every major U.S. city, but is a particular problem in Los Angeles, California. In 2006, the mayor of Los Angeles, Antonio R. Villaraigosa, was widely quoted as stating that Los Angeles is "the homelessness capital of America" (Archibold, 2006, p. 1). Archibold (2006) indicated that Los Angeles County has substantially more homeless persons than any other county in the U.S. According to The Greater Los Angeles Homeless Count (2011), Los Angeles County contains approximately 51,340 homeless persons. Of that number in 2011, 62% (31,627) were unsheltered. Further, 79% of the County's homeless were single adults, 20% were families, and 1% were unaccompanied minors.

The homeless population in Los Angeles County is ethnically diverse. The 2011 data indicated that 43.7% were African American, 27.7% were Latino, 24.9% were Caucasian, 2.3% were Asian/Pacific Islander, and 1.4% were American Indian or Alaskan Native. Additionally, 33% were found to experience mental illness, 34% were found to have substance abuse problems, and 22% had physical disabilities (Greater Los Angeles Homeless Count, 2011). Approximately 18% of Los Angeles County's homeless in 2011 were military veterans.

Causes of Homelessness

According to Elliott and Krivo (1991), there are four primary structural factors identified as causes of homelessness. Those factors are: (a) inadequate availability of low cost housing; (b) high rates of poverty; (c) poor economic conditions; (d) a lack of community mental healthcare facilities. These structural factors are not meant to minimize the individual factors that contribute to homelessness; rather, Elliot and Krivo argue that these structural factors exacerbate individual risk factors, thereby affecting the rates of homelessness.

The national decline of public assistance programs is an additional factor contributing to homelessness (Nooe & Patterson, 2010). The decline began in the late 1990s when welfare reform legislation was passed and has continued since. A shortage of affordable housing, specifically affordable rental housing in urban areas, negatively impacts the poor and creates an institutionalized risk factor for homelessness (Elliott & Krivo, 1991; National Coalition for the Homeless, 2009c). The overall lack of affordable housing puts a growing number of people at risk for homelessness. Current supplemental housing programs often have extensive waiting lists and most waiting for housing are forced to stay at shelters for upwards of seven months (Union Rescue Mission, 2011).

Poverty has been found to be "inextricably linked" to homelessness (National Coalition for the Homeless, 2009c, p.1). The poor are frequently unable to pay for basic necessities such as housing, food, education and healthcare. Those without financial resources are at an increased risk of homelessness (Nooe & Patterson, 2010). Often, those living in poverty are faced with deciding whether to pay for housing, or other necessities such food, clothing or medical care (Elliott & Kirvo, 1991). The precarious nature of

federal, state, and local support programs, as well as other economic factors and challenges make it difficult for people in poverty to escape (Elliott & Kirvo, 1991; Shelton, Taylor, Bonner, & van den Bree, 2009). Poverty is a significant risk factor for becoming homeless, but is not independently causal; however, being socioeconomically disadvantaged is a significant influence on a person becoming homeless (Elliott & Kirvo, 1991; Nooe & Patterson, 2010; Shelton et al., 2009).

There is a wide array of factors that influence poor economic conditions including unemployment, low wages, inadequate public benefits, lack of growth opportunities, housing costs and availability, among others (Elliott & Kirvo, 1991; National Coalition for the Homeless, 2009c; Nooe & Patterson, 2010). A common misperception is that unemployment is a ubiquitous cause of homelessness; however, according to Nooe and Patterson (2010), many homeless individuals report being employed or having work occasionally. One struggle from this type of work is lack of adequate wages and benefits to be self-sufficient. Compounding the inconsistent work opportunities, in the United States the minimum wage has not grown at a pace with the overall economic growth. In fact with inflation, the real value of the minimum wage is actually 26% less than in 1979 (Economic Policy Institute, 2005). According to National Institute for the Homeless (2009a), since the start of the recession, an estimated six million jobs have been lost, and the number of mortgage foreclosures has risen by 32%, leaving seven million households nationally living on very low income and at risk of losing their primary residences. At the same time there has been an increase in those who are in need of assistance, there has been a decline in funds and services available for public assistance.

The systematic deinstitutionalization of the mentally ill in the United States that began in the 1960s was generally supported by a belief that those with severe mental illness could live in their communities and be supported by community mental health agencies (Elliott & Krivo, 1991). This resulted in thousands of mentally ill being released into the community as the emphasis in treatment shifted away from hospitalization toward outpatient, community-based care. However, the community agencies did not grow to the level necessary to manage the large need for services (Elliott & Krivo, 1991). The exact degree that deinstitutionalization has played in the increase in homelessness is difficult to confirm, but is widely acknowledged as a factor.

As noted earlier, mental illness is more prevalent in the homeless than among the general, domiciled community. A study by The U.S. Conference of Mayors (2011) found that mental illness was identified as the third largest cause of homelessness. An estimated one-third to one-fourth of adult homeless persons suffers from some form of severe mental illness (Folsom et al., 2005; Shelton et al., 2009). According to Berg et al. (2005), previous research has reported that homeless adults are 2 to 4 times more likely to be depressed than domiciled adults. This equates to rates of depressive disorders at 22% to 74% among the homeless, depending on definition and sampling. Studies define homelessness in a variety of ways. Some study populations are defined in either very specific terms, such as those currently living on the streets, or at times more broadly, such as those living on the streets, shelters, in temporary housing, or in immediate risk to lose housing, creating a heterogeneous group (National Coalition for the Homeless, 2009b). Additionally, some studies will look at particular segments of the homeless population (e.g., Weiser et al., 2006), and may obtain findings that do not generalize to other

segments or subgroups. At this point there is no universally accepted definition of homelessness, creating some variability in the populations studied. In terms of socio-demographic factors thought to contribute to homelessness, several have been identified including: health issues, drug and alcohol use, family issues, housing status, and jail status (Clarke, Williams, Percy, & Kim, 1995; Weiser et al., 2006). For example, cultural and ethnic minorities have commonly been found to be over represented within the homeless population, but this alone is not a risk factor. There appear to be a myriad of factors influencing who is represented in the population, and who exactly is classified as homeless.

The National Coalition for the Homeless (2009b) found that of the homeless population, 24% of adults are likely to have some form of severe and persistent mental illness. Consistent with these national trends, The Greater Los Angeles Homeless Count (2011) found that 33% of the homeless in Los Angeles County were suffering from mental illness. Berg et al. (2005) found that over half of all homeless adults living on Skid Row in downtown Los Angeles met diagnostic threshold for a depressive disorder.

Mental illness, in particular depression, has regularly been found to be significantly more common among the homeless than the general population (La Gory, Ritchey, & Mullis, 1990; Pluck et al., 2008, Wong & Piliavin, 2001). Homeless individuals often have high rates of both self-reported, and clinically assessed, depression (Pluck et al., 2008). A study by Folsom et al. (2005) looked at a sample of 10,340 adults in San Diego, California who were treated for schizophrenia, bipolar disorder, or major depression at the County Mental Health Services from 1999-2000. The authors compared demographic and clinical characteristics of homeless patients utilizing a housing first

program and non-homeless patients who tend to be frequent users of the medical services. The results demonstrated that over 25% of the homeless sample was found to meet criteria for major depression.

Homeless individuals have been found to have significantly higher feelings of helplessness, and beliefs that external forces control their lives, which are considered major components of depression (Pluck et al., 2008). Rokach (2004, 2005) noted that the homeless report high levels of loneliness, when compared with the general population, especially in the realms of having less fulfilling intimate relationships and feelings of being socially marginalized. Homeless individuals have experienced greater marginalization in specific areas including: disaffiliation, health problems, traumatic events, and lifestyle-exposure, which can contribute to increased victimization. Homeless persons with mental illness are especially vulnerable to becoming victimized (Lee & Schreck, 2005). Berg et al. (2005) indicate that clinicians should be aware of the possibility of depression among the homeless, particularly those who did not complete high school, have a history of alcohol or substance dependence, have a physical limitation, engage in high risk sexual behaviors, or receive their primary social support from substance users.

Folsom et al. (2005) found a higher prevalence of substance abuse disorders among homeless compared to non-homeless. Substance abuse and dependence represent significant contributing factors for homelessness (Nooe & Patterson, 2010; Pluck et al., 2008). The causal relationship between addiction and homelessness is controversial and complex. While many with addiction never become homeless, those who have predisposing factors for homelessness, such as poverty, are at higher risk for becoming

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homeless (National Coalition for the Homeless, 2009c). In one study of over 300 homeless persons, 19% indicated that drug abuse was the primary reason for their homelessness (Lawless & Corr, 2005). According to a recent survey of mayors in 29 major cities in the U.S., substance abuse was cited as the fourth leading cause of homelessness among single adults (The United States Conference of Mayors, 2011). Additionally, substance abuse has been correlated to a higher incidence of depressive disorders and may be a dynamic contributing variable (Benda, Di Blasio, & Pope, 2006). Littrel and Beck (2001) found that with increased stressors, there was an increase in depressive symptoms among the homeless.

Other studies have contributed to understanding the complex picture of the causes of homelessness. Clarke et al. (1995) identified risk factors in addition to those already discussed. For example, 80% of the homeless in their study indicated they were divorced or had never married, suggesting that being single was a risk factor. Having family problems was also identified as a significant risk factor for becoming homeless.

In addition to the structural factors discussed, other personal factors have been identified in the research that contributes to homelessness. They are: (a) domestic violence; (b) physical health problems, changes in family structure; (c) family instability; (d) discrimination; (e) having been in foster care; (f) being a victim of sexual abuse as a child; (g) and a history of incarceration (National Coalition for the Homeless, 2009c; Nooe & Patterson, 2010). These factors should not be looked at as causal but rather these characteristics are associated with an increased vulnerability to homelessness (Nooe & Patterson, 2010).

The homeless are perhaps the most vulnerable group in society, with high levels of physical health problems, substance abuse, and mental illness. Given that high rates of depression have been found among the homeless, it is essential to have valid and reliable methods for assessing depressive symptomatology with homeless persons seeking mental health treatment services. Providers of mental health services need assessment tools that are useful not only for identifying problem symptoms, but also for tracking symptom change during the course of mental health treatment. The purpose of this study is to examine the usefulness of the Beck Depression Inventory, Second Edition (BDI-II; Beck, Steer, & Brown, 1996), in identifying symptom change in homeless men receiving psychological treatment at a mission in downtown Los Angeles, California.

BDI-II

The primary measure to be used in this study is the Beck Depression Inventory, 2nd Edition (BDI-II; Beck et al.,1996). The BDI-II is a widely used self-report measure with 21 items pertaining to different aspects of depressive symptomology. This measure was created as a tool to help assess severity of depressive symptoms. Questions on the measure relate to a variety of areas related to depression symptoms such as: (a) agitation; (b) irritability; (c) pessimism; (d) sadness; (e) guilt; (f) suicidal ideation; (g) sleep disturbance; (h) loss of appetite (Groth-Marnat, 2009). A fifth or sixth grade reading level is required to comprehend the items adequately. It is appropriate for use with persons aged 13 years and older, and thus is appropriate for use with adolescents and adults (Beck et al., 1996). Completing the BDI-II takes approximately 5-10 minutes for most, but can take longer for the severely depressed.

The BDI-II is the 3rd version of the BDI, which was originally created in 1961 and also consisted of 21 items (Beck et al., 1996). The items were originally constructed from observing and summarizing the typical attitudes and symptoms of depressed psychiatric patients. An amended version of the measure was created in 1979; it included wording changes to eliminate double negatives and the response scale options were reduced to four. The BDI-II revision included changes to make the scale more consistent with the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition definition of Major Depression (DSM-IV; APA, 1994). Since the creation of the original BDI, the measure has become widely used and well studied. In fact, over 1,000 research studies have been performed on it or have utilized the measure (Groth-Marnat, 2009).

Research Questions and Hypotheses

The purpose of this study was to use the BDI-II to measure change in depressive symptoms over multiple individual therapy sessions in a sample of homeless men. A goal of the study was to determine the extent to which the BDI-II might be sensitive to or document the extent to which individual psychological treatment services are associated with reducing distress and depressive symptoms among homeless men engaged in treatment. Most of the participants in the present study were men participating in a residential substance abuse treatment program offered at a Christian mission in central Los Angeles. The research questions were as follows:

1. What are the demographic characteristics of a sample of homeless men engaged in psychological treatment services at a Los Angeles mission?

2. How does this sample of treatment seeking homeless men perform on the BDI-II?

3. Do BDI-II scores improve from intake to the sixth session of individual

    psychotherapy?

4. At intake, do persons with a prominent complaint of mood symptoms obtain

    higher BDI-II scores than persons without prominent complaints of mood

    symptoms?

5. Do persons with a prominent complaint of mood symptoms at intake show greater

    change in BDI-II scores at retesting than persons without a prominent complaint

    of mood symptoms?

It was hypothesized that BDI-II scores at retesting following approximately six individual psychotherapy sessions would be significantly lower than BDI-II scores at intake among homeless men. It was hypothesized that participants with a prominent complaint of mood symptoms at intake would have significantly higher BDI-II scores than individuals with other prominent complaints. It was also hypothesized that participants with prominent mood complaints at intake would display greater reduction in BDI-II scores following approximately six sessions of psychological treatment than would participants without prominent mood complaints at intake.

Method

The research strategy utilized in this study was best conceptualized as a single group pretest-posttest design (Isaac & Michael, 1995), conducted in a real-world setting. For this study, the analysis focused on BDI-II scores collected at two points in time from homeless persons seeking psychological services. The initial BDI-II administration was completed prior to the intake interview at the shelter-based psychological clinic at the Union Rescue Mission (URM) in Los Angeles. It was completed as a part of the intake packet, while the follow-up administration was typically performed after approximately six individual therapy sessions. For this study, because there was variation in the actual number of sessions between BDI-II administrations, a range was utilized in regard to the interval. Specifically, cases were included in the study if the re-administration of the BDI-II took place after no fewer than four and no more than eight sessions; more details are provided later in this chapter. Given the prevalence of depressive symptoms and depressive disorders among the homeless, the researcher sought to determine the extent to which multiple sessions of psychological treatment were associated with any significant reduction in symptoms as measured by the BDI-II.

While some of the participants in this archival study did not have primary complaints of depressive symptoms or mood disorder at the time of seeking psychological treatment, there is evidence that the BDI-II is also sensitive to global psychological distress among homeless persons (Sims, 2010). Therefore, the study was also conducted to shed light on the extent to which psychological treatment is associated with the reduction of global psychological distress among homeless persons seeking psychological services.

Participants

The participants were homeless men seeking psychological services in a shelter-based mental health clinic. They are described in detail in the Results section.

Setting

The de-identified data for this study came from the archives of a university-affiliated mental health clinic that serves homeless men and women at the Union Rescue Mission (URM) in central Los Angeles, California. URM is a Christian based mission that provides services to disenfranchised individuals, primarily the poor and the homeless (Union Rescue Mission, 2011). The subjects for this study received treatment for substance abuse, depressive disorders, anxiety disorders, and a variety of other conditions at the Pepperdine University-run mental health clinic within URM between the years of 2005-2010. The individuals whose data are included in the de-identified database for the study were men, nearly all of whom were involved in a 12-month, residential substance abuse treatment and recovery program at URM. Often, the individuals were referred by chaplains who lead and facilitate the rehabilitation program, but some were self-referred or referred by other staff members. The mental health clinic is staffed by clinical psychology doctoral students from Pepperdine University, working under the direct supervision of licensed psychologists also from Pepperdine University. The clinic runs year round and represents one of the many free support services offered to guests and residents at the mission. Other services available to persons at URM included a primary health center, a dental clinic, a legal assistance center, job training, educational services, recreational services, worship and religious education opportunities, case management, and other programs.

All clinical services provided in the mental health clinic were supervised by licensed psychologists. The primary clinical supervisor utilized an integrative approach to treatment that incorporated psychodynamic, cognitive behavioral, mindfulness, and multicultural models of intervention. Individual treatment plans were developed to address presenting complaints and other goals identified in the intake process. In most cases, individual therapy took place once per week for approximately 50 minutes per session.

<center>**Instruments**</center>

Beck Depression Inventory 2nd Edition

The Beck Depression Inventory, Second Edition (BDI-II) was published in 1996 by Beck, Steer, and Brown and is based on the original BDI. The BDI-II was developed to measure patient reported depressive symptoms in persons 13 years and older, and it consists of 21 self-report items (Beck et al., 1996). The BDI-II generally takes 5-10 minutes to complete for most persons, but can take longer for those with severe pathology or fine motor difficulties. Each question has a statement to consider, and respondents indicate to what degree they have experienced the symptoms described in that statement in the last 2 weeks. They then select one out of the four choices that best applies (Beck et al., 1996). Responses are recorded on a 4 point ordinal scale that ranges from 0 to 3, with higher scores indicating more severe distress or impairment in functioning. As previously mentioned, a fifth to-sixth grade reading level is needed for adults to understand the items on the BDI-II (Groth-Marnat, 2009). For those who have difficulty reading, it is acceptable to read items to administer the measure (Beck et al., 1996). Additionally, the BDI-II is available in multiple other languages as well, including Spanish.

Upon completion of the measure, the administrator scores the test by summing the values of the individual items the subject selected on the 21 items. Total scores fall into one of the following four classification categories, according to the manual: 0-13 = Minimal; 14-19 = Mild; 20-28 = Moderate; 29-63 = Severe (Beck et al., 1996). Some studies have suggested that a cut off score of 18 correctly identifies 92% of patients diagnosed with major depressive disorder (Groth-Marnat, 2009). The BDI-II is not

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intended to provide a clinical diagnosis of a depressive disorder, but can be used as a diagnostic measure of depressive symptoms, and a tool for clinicians in determining an appropriate diagnosis. Additionally, the BDI-II has been shown to have two main psychological factors it addresses: a somatic-affective dimension and a cognitive dimension (Beck et al., 1996; Vanheule, Desmet, Groenvynck, Rosseel, & Fontaine, 2008).

The BDI-II, despite its somewhat limited original normative sample, has been found to be a useful and effective assessment measure across a broad range of subjects and settings (Beck et al., 1996). When comparing the BDI, BDI-IA and BDI-II, Groth-Marnat (2009) found responders tended to endorse two more items on the BDI-II than on the previous versions of the measure. Ultimately, however, the BDI-II has been found to be comparable to the previous versions, and therefore the research on the earlier versions may be regarded as generalizable to the BDI-II, with appropriate caution (Groth-Marnat, 2009). In the nearly 50 years of existence of the BDI, it has been used in over 1,000 research studies (Groth-Marnat, 2009). Researchers and clinicians alike therefore have access to a wide range of findings to inform and guide their use of the measure.

The BDI-II is widely used as a screening tool for depressive symptoms among psychiatric patients. One of the reasons the BDI-II is so widely used is because it has been found to be as effective in detecting depression as more costly, and time consuming, structured interviews (Groth-Marnat, 2009).

Validity of the BDI-II. The items for the BDI-II were empirically selected to best assess for depressive symptoms as outlined in the DSM-IV (Beck et al., 1996). The BDI's convergent validity has been established with a number of other measures of

depression symptoms such as the Center for Epidemiologic Studies Depression Scale

(CES-D), the Hamilton Rating Scale for Depression (HRSD), and the Zung Self-Rating

Depression Scale (SDS; Shafer, 2006). As previously mentioned, the various versions of

the BDI, BDI-A, and BDI-II have all been found to be comparable with one another

(Beck et al., 1996). Sims (2010) found the BDI-II to be highly correlated with the BSI

depression and global distress scales in a study conducted at the same location as this

study, suggesting the BDI-II may also give some indication of general well being.

     BDI-II use with diverse populations. The BDI-II's normative sample consisted

of 500 psychiatric outpatients (183 males, 317 females) with a mean age of 37.2 years

(Beck et al., 1996). In regard to ethnicity, the normative sample was 91% Caucasian, 4%

African American, 4% Asian and 1% Hispanic. Beck et al., (1996) found an internal

consistency reliability coefficient of .92 in the psychiatric sample, and as a comparison,

the authors found a coefficient value of .93 among a sample of 120 college students.

These statistics indicated strong internal consistency reliability. Test-retest reliability,

with a 1 week interval, was examined in a sample of 26 outpatients and found to be .93,

indicating impressive temporal stability (Beck et al., 1996).

     According to Groth-Marnat (2009), the BDI-II is an appropriate measure for

diverse ethnic groups, but more research is needed on how different ethnic groups

perform. Most of the published research on the BDI-II has been on Caucasians; so less is

known about the validity and reliability of the measure with ethnically diverse

populations (Grothe et al., 2005). However, the published findings to date have been

encouraging regarding the reliability and validity of the measure when used in diverse

settings with ethnically diverse persons. The BDI-II has been studied in a wide range of

populations including men, women, and numerous ethnic groups, and been found to be a reliable and valid measure despite the fact that the BDI-II has norms that are based on a mostly Caucasian population (Beck et al., 1996; Groth-Marnat, 2009). Previous research has also supported the use of self-report measures, like the BDI-II, in homeless samples (Calsyn, Allen, Morse, & Smith, 1993; Calsyn Morse, Klinkenberg, & Trusty, 1997).

BDI-II and homeless and low income persons. The BDI-II does not have separate norms for homeless or low income persons; however, there have been several studies with samples that show demographic characteristics similar to those often seen among the homeless (e.g., Grothe et al., 2005; Joe, Woolley, Brown, Beck, & Ghahramanlou-Holloway, 2008; Seignourel, Green, & Schmitz, 2008). Grothe et al. (2005) conducted a study examining the validity and reliability of the BDI-II on a sample of low-income, uninsured African Americans within an outpatient medical setting. The authors also sought to examine the factorial validity of the BDI-II with the sample, comparing first order factors of cognitive and somatic factors, to the second order factor of depression. The results indicated strong reliability and validity, comparable to the original BDI-II norms published in the test manual. The authors found support for the two-factor model with this sample, which was actually found to be a better fit for this sample than with the original sample described in the test manual. Grothe et al. found the BDI-II to have strong internal consistency and criterion validity with this sample of low-income African American medical patients. Joe et al. (2008) found similar results with a sample of low-income African Americans who had attempted suicide. In the Joe et al. study, the participants were assessed within 48 hours of presenting at an emergency room after a suicide attempt. The authors confirmed the results of Grothe et al. finding strong

evidence to support the dimensionality, internal reliability, and convergent validity of the BDI-II within an ethnically diverse sample.

Similarly, the BDI-II has been found a valid and reliable measure when examined within a sample of treatment seeking substance users (Seignourel et al., 2008). In this study, non-Hispanic whites showed more clinical depression than other ethnic groups. The authors found support for the use of the BDI-II in screening for depression in substance users when used as a total score. The authors concluded the BDI-II is useful for identifying depressive symptoms among substance abusers in treatment, even when they do not meet criteria for a mood disorder.

Weiser et al. (2006) investigated BDI-II scores in an ethnically diverse sample of 239 homeless and marginally housed HIV+ men in San Francisco. The sample had a mean age of 41.6 years and most of the participants had histories of drug use and incarceration. Over 50% of the sample scored positive for depression (i.e., BDI-II raw scores of 14 or more). Caucasian males ($n = 103$) showed significantly higher levels of depressive symptoms than did ethnic minority males ($n = 136$). Persons who reported heavy alcohol abuse were 5 times more likely to obtain elevated BDI-II scores than persons without heavy alcohol abuse histories.

Sims (2010) examined the Brief Symptom Inventory and its correlation to the BDI-II in a sample of homeless men in psychological treatment at the same shelter where the present study was conducted. She found a strong positive correlation between the BDI-II and the BSI depression scale, which she interpreted as support for the validity of the BSI as a measure of depressive symptoms. The ethnically diverse homeless men in her sample ($N = 100$) had a mean BDI-II score of 18.17 ($SD = 12.07$), indicating a

significant but mild overall level of depressive symptoms (Sims, 2010). Sims concluded that both the BSI and the BDI-II were useful measures for the assessment of depressive symptoms among treatment seeking homeless men.

BDI-II as a general measure of distress. Sims (2010) also investigated the relationship of the BDI-II to general distress among homeless men. Her study examined the correlation between the Global Severity Index score of the BSI and the BDI-II. Sims found a highly significant correlation ($r = .75$, $p < .001$), supporting the impression that elevated scores on the BDI-II are also an indicator of general distress among the homeless. In a study by Swan, Sorrell, MacVicar, Durham, and Matthews (2003) on a sample of patients with treatment refractory depressive symptoms, they found that the BDI-II and BSI were effective in measuring depressive symptoms and other psychological symptoms. The study by Swan and coauthors had a similar structure to the present study, with an initial screening and follow-up assessment, and both the BDI-II and the BSI were found to be useful for documenting therapeutic change. A study by Reback et al. (2007) looked at BDI and BSI scores among substance-abusing homeless men who have sex with men and engage in various risky behaviors. The study found concurrent elevations in BDI and BSI scores in this community sample of homeless men. The BDI-II appears effective as a measure of depressive symptoms and generalized psychological distress among ethnically diverse homeless and low-income persons.

Procedure

The data for the study were drawn from clinical records that were generated as part of the normal procedures at the psychological clinic within URM. As noted earlier, use of the psychological clinic was typically optional for those who were residents or

guests at URM, where the clinic was housed. Those interested in psychological services completed the BDI-II and other measures along with providing personal information about themselves (e.g., demographic information, substance abuse history, mental health treatment history, medical history, legal history, presenting complaints, etc.) as a part of the standard intake procedure. Therapists were not held to one particular therapeutic model or focus of treatment, and given that this was an archival study, the researcher had no control over this aspect of the data. Policy at the clinic was for therapists to re-administer the BDI-II after the sixth treatment session. However, due to a variety of administrative, clinical, or other factors, the interval between administrations of the BDI-II sometimes varied across subjects. The data for the present study were drawn from a de-identified data archive that was assembled by trained research assistants, under the supervision of the clinic director, a psychologist.

Data Analysis Plan

Data analysis for this research was conducted utilizing SPSS version 20.0.0. The researcher utilized a de-identified database for the analyses conducted, which included: descriptive statistics, such as frequencies, means, and standard deviations; repeated measures analysis of variance (ANOVA); and *t* tests. The BDI-II's internal consistency reliability was explored utilizing Cronbach's coefficient alpha. A two-way repeated measures ANOVA was used to determine if participants with prominent mood complaints at intake demonstrated greater therapeutic change in BDI-II scores following approximately six individual therapy sessions than participants without prominent mood complaints at intake. Descriptive statistics were included to illuminate important group characteristics. A paired samples *t*-test was conducted to compare BDI-II scores at intake with the follow-up scores, following four to eight individual therapy sessions, for the entire sample. Another paired samples *t*-test was conducted between participants with prominent mood complaints at intake and those who had other primary complaints. This was done to examine if there was a significant difference in initial scores.

Research Question 1: Participant Demographic Characteristics

The overall sample included 81men, though some participants were missing one or more variables, resulting in some variability in the total number of participants included in each analysis (see Table 1). The participants had a mean age of 39.67 years ($SD = 8.971$); the ages ranged from 23 to 59. Ethnically, the sample was diverse and included 37 African Americans (46%), 24 Hispanics (30%), 11 Caucasians (14%), and 4 who identified as Multiethnic or Other (5%); 5 of the participants (6%) did not report

their ethnicity. In terms of relationship status, just over half of the individuals identified as single (*n* = 43), while 17 (21%) indicated they were divorced, 16 (20%) reported they were separated, and 8 (10%) reported being married. Over half of the participants reported having a high school diploma, GED, or higher level of education (59%). Most of the sample (85%) reported having completed at least some high school. In terms of occupational status at intake, there was a wide array of fields the participants indicated as having been employed in within the last 3 years. Most of the sample (87.5%) indicated some form of employment in the last 3 years. Of those who reported working, the occupational categories most often reported were service, clerical, and miscellaneous at 17%, 15% and 15%, respectively. Additionally, 9.9% of the sample indicated previous military service. In regard to prior treatment, of the 71 men in the sample who responded to this question, 50 (70.4%) reported having previously participated in a substance abuse rehabilitation program. In addition, 27.2% reported prior hospitalizations for psychological treatment. Most of the individuals in the sample, 62.9%, indicated they were either currently taking psychotropic medication or had taken such medication at some point in the past.

Research Question 2: Participants' Scores on the BDI-II

The participants in this study had a BDI-II mean score of 21.68 at intake (*SD* = 14.992; range of 0 to 56). The sample mean of 21.68 at intake fell in the moderate range of depressive symptoms, according to interpretation guidelines of the manual (Beck et al., 1996). The BDI-II retest demonstrated a reduction in scores across the board. The retest mean was 16.36 (*SD* = 12.386), which is classified as being in the Mild range, with a score range of 0 to 50.

Cronbach's alpha was calculated for the BDI-II intake scores ($N = 81$) and found to be .935, indicating excellent internal consistency reliability. Cronbach's alpha was also calculated to examine the internal consistency reliability of the BDI-II at retest and was found to be .923, which likewise demonstrated excellent internal consistency, on a par with the values reported in the BDI-II manual (Beck et al., 1996).

As noted earlier, due to administrative, clinical, or other reasons, there was variability across cases in the original database in terms of how many sessions transpired between administrations of the BDI-II. The general clinic policy was to re-administer after six sessions, so the researcher determined that utilizing a range of plus or minus two sessions would provide a reasonable perspective on the extent to which BDI-II scores changed in association with several sessions of individual therapy. Table 2 indicates the number of participants who were administered the BDI-II following the various intervals. The mean number of actual sessions closely matched the initial target number of six sessions ($M = 6.11$; $SD = 1.255$). Also important to note, the mean number of days between the initial and follow-up administrations of the BDI-II was 70.01 days ($SD = 49.29$). This represented an average of ten weeks between test administrations.

Research Question 3: Change in BDI-II Scores Following Therapy

It was hypothesized that BDI-II scores at retest ($M = 16.36$), following approximately six individual psychotherapy sessions, would be significantly lower than BDI-II scores at intake ($M = 21.68$) among homeless men. Results of the paired samples t test indicated a significant reduction in BDI-II scores from intake to retest $t(80) = 4.118$, $p < .001$. For this paired samples test, Cohen's $d = .457$, representing a small (.20) to medium (.50) effect size. The mean score at retest fell into the Mild range of severity for

depressive symptoms for the entire sample (Beck et al., 1996). This finding represented strong support for the hypothesis and indicated that BDI-II scores following approximately six sessions of individual therapy were significantly lower at retest than at intake.

Research Question 4: Participants with Prominent Mood Complaints Compared to those with Other Complaints

In terms of the primary reasons cited for seeking psychological services, 38 individuals identified a mood symptom or complaint, while 43 identified some other primary symptom or complaint (e.g., alcohol or drug concerns, relationship problems, etc.). It should be noted that about 72% of the sample self-identified as addicts at intake as well. Of those who identified a substance of choice, the modal substance mentioned was alcohol, identified by 25% of the sample. Considering that most of the participants were enrolled in a residential substance abuse recovery program, it was not surprising that over 70% reported histories of addiction. Also important to note, 33.3% of the sample indicated one or more previous suicide attempts.

The nature of a participant's primary complaint or complaints was determined by examining his written responses to the following question on the intake form: "What issues in your life are you seeking help for in the counseling center?" A research assistant then entered the complaints into the database in the order they were listed, up to a maximum total of five complaints per individual. When this question was left blank on the intake form, the research assistant referred to the clinician's intake summary to determine the presenting complaints. A total of 14 categories of presenting complaint were created: (a) Substance Use; (b) Mood; (c) Anxiety; (d) Anger; (e) Psychosis; (f)

Relational; (g) Interpersonal; (h) Identity/Existential; (i) Religious Issues; (j) Somatic

Complaints; (k) Other; (l) None; (m) Grief; (n) Missing Data. The prominent mood

symptoms group consisted of people who had mood symptoms or grief listed among their

top two complaints. The remaining participants had other symptoms or complaints listed

among their top two reasons for seeking therapy.

The two groups, those with ($n = 38$) and without ($n = 43$) prominent complaints of

mood symptoms at intake, showed little variability in regard to demographic

characteristics. The group with prominent mood symptoms had a mean age of 39.63 (*SD*

= 8.713), while the other prominent complaints group had a mean age of 39.67 years (*SD*

= 8.971). Generally similar levels of educational attainment were reported by the two

groups, as can be seen in Table 2. However, 69.8% of the group with primary complaints

other than mood symptoms reported the equivalent of high school educations or beyond,

while just 47.4% of the mood symptoms group reported greater than or equal to a high

school education. This suggested the group with other primary symptoms at intake were

slightly more educated. In terms of ethnic make up for the prominent mood complaint

group, it consisted of: 3 Caucasians, 20 African Americans, 10 Hispanic/Latinos, 2 who

were Multiethnic, 1 who identified as Other, and 2 for whom ethnicity was not reported

(Table 3). The ethnic makeup for the group with other primary complaints was 8

Caucasians, 17 African Americans, 14 Hispanic/Latinos, 1 Multiethnic individual, and 3

for whom ethnicity was not reported (Table 3). In other words, both groups were
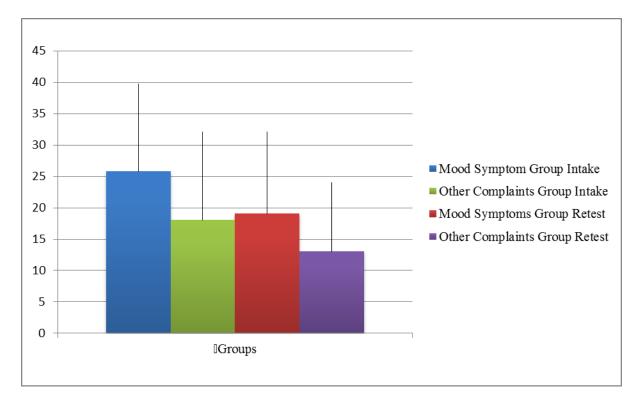
ethnically diverse.

It was hypothesized that persons with prominent mood complaints at intake ($n =$

38) would have a significantly higher mean score on the BDI-II than those individuals

who had other prominent complaints ($n = 43$). The prominent mood complaint group's mean BDI-II score of 25.79 ($SD = 14.66$) was therefore compared to the other group's mean score of 18.05 ($SD = 14.49$). An independent samples t test was conducted and the difference in means was found to be statistically significant, $t(79) = -2.387$, $p = .019$. In terms of effect size, Cohen's $d = .525$, representing a medium-strength effect. As hypothesized, participants with prominent mood complaints at intake did obtain significantly higher BDI-II scores at intake than individuals with other prominent complaints. This supported the validity of the BDI-II for assessing depressive symptoms among the treatment-seeking homeless men in the present sample. However, on retest the groups were not significantly different at the .05 level, $t(79) = -1.888$, $p = .063$, suggesting the two groups had much more similar BDI-II scores following approximately six sessions of individual treatment.

Research Question 5: Differences in BDI-II Score Change Between Groups

It was hypothesized that clients with a prominent complaint of mood symptoms at intake ($n = 38$) would display greater reduction in BDI-II scores following approximately six sessions of psychotherapy than would clients without prominent mood complaints at intake ($n = 43$). A two-way repeated measures ANOVA was conducted which compared BDI-II scores at intake and retest. Box's test of equality of covariance matrices and Levene's test of equality of error variances were nonsignificant, indicating the groups had statistically equivalent variance. There was a main effect for time, $F(1, 79) = 17.414$, $p = .0001$, indicating that for all subjects, BDI-II scores declined significantly at retest. Additionally, there was no interaction effect of time and mood complaint, $F(1, 79) = 1.022$, $p = 0.315$. However the groups differed significantly in their reduction in BDI-II

performance across trials, $F(1) = 5.69$, $p = .01$, with the mood complaint group

demonstrating a greater reduction in BDI-II scores than the group with other primary

complaints.

Figure 1. Group Comparison by BDI-II Mean at Intake and Retest

This pattern could also be seen with *t* test analyses. The group with prominent

mood complaints experienced a significant reduction in mean BDI-II scores from intake

($M = 25.79$; $SD = 14.66$) to retest ($M = 19.08$; $SD = 13.04$), $t(37) = 3.473$, $p = .001$. For

this paired samples test, Cohen's $d = .563$, which represents a medium effect size. The

group with other primary complaints also experienced a significant reduction in BDI-II

scores from intake ($M = 18.05$; $SD = 14.49$) to retest ($M = 13.95$; $SD = 11.395$), $t(42) =$

2.360, $p = .023$. However, this paired samples test indicated an effect size that was in the

small (.2) to medium (.5) range, Cohen's $d = .360$.

Discussion

Homelessness is a complicated and enduring problem in the United States. Those who are homeless have consistently been shown to be at higher risk for substance abuse, physical ailments, and mental health problems, particularly depression (Folsom et al., 2005; National Coalition for the Homeless, 2009c; Nooe & Patterson, 2010). This study examined the relationship of psychotherapy to depressive symptoms in a sample of homeless men at a religiously affiliated mission within a major U.S. city. The purpose of this chapter is to address the findings in detail.

Research Question 1: Participant Demographic Characteristics

The sample consisted of an ethnically diverse group of men who showed demographic characteristics that were similar to what has been reported in the literature for the homeless in Los Angeles (The Greater Los Angeles Homeless Count, 2011). African American ethnic identification was the modal ethnicity reported, which was consistent with the data from the 2011 Greater Los Angeles Homelessness Count. The mean age for the sample was just under 40 years old, with no one younger than 23 or older than 59. Of note, the majority of the sample was not in a relationship, with only 10% reporting being married. The majority of the sample had completed high school or its equivalent and close to 10% reported college degrees. The majority also reported being employed in the previous three years in some capacity, adding credence to the study by Nooe and Patterson (2010) that found the homeless are often part of the working poor with inconsistent or insufficient employment and wages.

Nearly three quarters of the sample identified themselves as having addiction, which was not unexpected given that most of the participants were enrolled in a

residential substance abuse recovery program. Nearly three quarters had previously

attending a substance abuse treatment program prior to coming to URM. Of the 71 men

in the sample who responded to this question, 50 (70%) reported having previously

participated in a substance abuse rehabilitation program. Veterans were also represented

in the sample, with approximately 10% reporting a military background. Overall, the

present sample appeared highly comparable to published reports about the demographic

characteristics of homeless men in Los Angeles County, except with higher incidence of

substance abuse (The Greater Los Angeles Homeless Count, 2011).

Research Question 2: Participants' Scores on the BDI-II

The overall BDI-II score at intake for the sample ($M = 21.68$) was found to be in

the Moderate range in the BDI-II's classification system (Beck et al., 1996). This

suggested the overall sample displayed an elevated number of depressive symptoms,

relative to the normative sample described in the test manual. This score appeared higher

than the mean value of 18.17 that Sims (2010) reported for her sample of 100 homeless

treatment-seeking men. This suggested mildly higher levels of measured depressive

symptoms and psychological distress for the present sample. Sims found a strong positive

correlation between the BDI-II and BSI Global Severity Index, suggesting the BDI-II

may be a good indicator for general level of distress among homeless men. Given this

previous finding, the present results suggest that the men in this study can be viewed as

showing elevated levels of general distress. Overall, the present findings appeared

consistent with previous research showing that the homeless are at increased risk for

depressive symptoms and psychological distress (Folsom et al., 2005; National Coalition

for the Homeless, 2009c; Nooe & Patterson, 2010). However, it is important to

contextualize these findings. Men in this study were homeless individuals participating in a residential substance abuse rehabilitation program and seeking psychological treatment. Therefore, an elevated level of distress could be expected for the sample. Elevated depressive symptoms in a clinic sample cannot be viewed as evidence of elevated depressive symptoms among homeless persons in general. An encouraging finding was that the BDI-II showed excellent internal consistency reliability, both at intake and at retest following approximately six sessions of individual therapy. This was additional evidence of the scale's usefulness as a measure of depressive symptoms among ethnically diverse homeless men.

Research Question 3: Change in BDI-II Scores Following Therapy

It was hypothesized that individuals would demonstrate significant reductions in BDI-II scores between intake and follow-up assessment. The results strongly supported this hypothesis. Results demonstrated a significant reduction in BDI-II scores for the entire sample. Moreover, significant reductions in BDI-II scores were seen both in participants who had prominent mood complaints at intake and in those who had other primary complaints. This suggested that time spent in psychological treatment appears to be associated with positive therapeutic change, reduction in symptoms, and a reduction in psychological distress. As a result of the research design, it is important to note that these findings are correlations and do not imply a causal relationship. Given there was an average interval of 70 days between administrations of the BDI-II, it cannot be ruled out that time alone accounted for the reductions in depressive symptoms. However, these results do suggest that it is likely that homeless men in residential substance abuse recovery programs benefit from individual psychotherapy. It seems reasonable to

conclude that participation in individual therapy was associated with the beneficial effect of a reduction in depressive symptoms for the homeless men in the present sample.

Research Question 4: Participants with Prominent Mood Complaints Compared to those with Other Complaints

The overall sample demonstrated Moderate range depressive symptoms at intake, but when the participants were divided into the two primary groups (prominent mood symptom complaints versus all other presenting complaints), the results were telling. Men who identified mood symptoms as their prominent presenting complaint had significantly higher BDI-II scores than those who identified any other type of prominent complaint. These results strongly supported the validity of the BDI-II as a method to assess mood symptoms in homeless men. One would expect that individuals complaining of depression or sadness at intake should score higher on a measure of depressive symptoms than persons with other primary complaints. This supports previous research that has utilized the BDI-II as a means to measure depressive symptoms among ethnically diverse samples of homeless or poor men (e.g., Shafer, 2006).

Research Question 5: Differences in BDI-II Score Change Between Groups

This study sought to examine if BDI-II scores would improve, that is decline, between intake and approximately the 6th session of individual treatment. In addition, it was hypothesized that those with a prominent complaint of mood symptoms would show elevated initial BDI-II scores, and subsequently, a greater reduction in depressive symptoms between measurement points than participants with other prominent complaints. The hypothesis was again supported by the data. The results demonstrated that overall there was a reduction in depressive symptoms endorsed on the BDI-II, with

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the mean score falling into the Mild range following treatment for the entire sample. The improvement was significant enough that at retest the groups were not statistically different, indicating both groups improved and were classified as having Mild depressive symptoms. While the type of intervention was not controlled for, the results suggest a correlation between psychological intervention and symptom reduction among persons with prominent depressive symptoms.

It seemed reasonable that symptom reduction would be greater among the therapy clients who were struggling more with the symptoms that the criterion measure, i.e., the BDI-II, was designed to assess. Therefore, the BDI-II may have been more sensitive to, or more attuned to, the symptom change in those participants who were in fact struggling more with depressive symptoms. It may be that six sessions of individual therapy are more helpful in reducing depressive symptoms than it is in reducing other human problems; however, that cannot be determined from the present study since no other criterion measures were used. Whether or not participants were deriving other benefits or whether other symptoms were beneficially affected by treatment, such as a reduction in craving for alcohol or drugs or improved relationships, could not be addressed in the present study. Overall, it seems reasonable to conclude that providing psychological treatment is a means towards improving psychological well being in homeless men engaged in a residential recovery program. And, it may be that those homeless men with prominent mood symptoms experience even more depressive symptom relief than men with other primary complaints.

It was encouraging to note that even those without primary complaints of mood problems at intake experienced significant reductions in their BDI-II scores following

approximately six sessions of individual therapy. It may be that the BDI-II is useful as a general measure of distress and can be used to track symptom change and improvement associated with individual therapy.

Clinical Implications

Overall, the results of this study are suggestive that homeless men in residential treatment programs who seek psychological treatment show a significant reduction in depressive symptoms. For service providers these results indicate that when working with the homeless they need to be attuned to the possibility of depressive symptomology. Subsequently, this study lends credence to utilizing the BDI-II as a screener for depressive symptoms and further suggests the BDI-II may be an excellent, reliable tool for measuring therapeutic change. In an ethnically diverse sample of homeless men, the test displayed excellent internal consistency reliability and there was strong evidence supporting its validity with this population.

Limitations

Because this was an archival study, the researcher did not have the opportunity to include any additional measures or to otherwise modify the data set or procedures. The data for this study were collected in a religiously affiliated (i.e., Christian) mission in Los Angeles. Previous studies have indicated that most of the individuals who seek psychological services at this center identify themselves as Christian (e.g., Moriarty, 2011). The results of the present study may not generalize to homeless persons in other settings and geographic locations. In addition, the results may not generalize to homeless persons with other religious identifications.

Only men were included in the present study and therefore the implications for women are unclear. The amalgamation of program-referred and self-referred clients in the dataset potentially added variability that could have impacted the results in unknown ways. The original data for this study were collected as part of a real-world clinic operation where graduate students, under supervision, served as the primary therapists. There was no manualized treatment protocol and each therapist developed an individual treatment plan for each client, with the assistance of his or her supervisors. Therefore, the extent to which reduction of depressive symptoms was a focus of the treatment may have varied across participants. However, it would seem reasonable to assume that the emphasis on depressive symptom reduction would have been greater with those clients reporting more severe depressive symptoms. Nevertheless, even the group without prominent mood symptoms at intake experienced a significant reduction in BDI-II scores.

The data were not generated as part of a controlled research study. Therefore the sample size consists of the most complete set of data available, and represents a cross section of the participants. Persons who reported to the clinic for an intake but dropped out after one, two, or three sessions would not have been included in the present study.

Additionally, the method for creating the two sub-groups of participants, i.e., those with prominent mood symptoms and those with other primary complaints at intake, relied upon determinations made by the research assistants who created the database. It should not be assumed that individuals in the other complaints group ($n = 43$) were free of depressive symptoms, only that such symptoms did not appear among the first two reasons for seeking therapy among those participants. The fact that there were significant differences in the two groups in their mean BDI-II scores at intake supported the validity

of the classification strategy used. However, other methods could have been utilized to attempt to create meaningful subgroups of participants.

The men of this study were participants in a residential substance abuse program concurrently while receiving psychological treatment. This may act as confounding variable in terms of accounting for the improvement in BDI-II scores. In other words, it cannot be determined whether changes in BDI-II scores were due to the individual therapy, the residential substance abuse program, or other factors. Due to the limitations of the research design, it is unclear, what influence, if any, URM programming, or a variety of other confounding variables (i.e. medication) may have had on the results. A related limitation is that the passage of time alone may have contributed to the reduction of BDI-II scores.

While it seems reasonable to posit that the individual therapy the men in this study received helped account for their improved BDI-II scores at retest, other possibilities must be considered. For example, it may be that individuals who were not benefiting from therapy dropped out after two or three sessions and therefore were not part of the group that was retested with the BDI-II. The persons who remained in individual therapy and therefore were retested with the BDI-II may have had a different level of severity of mood symptoms, or treatment responsiveness than persons who did not remain or continue in therapy after the intake.

Areas for future research

The results of the present study demonstrated a significant reduction in depressive symptoms as measured by the BDI-II among this sample of homeless men engaged in individual therapy and residential substance abuse treatment. However, there are many

questions left unanswered. In particular, research needs to be done on the likely

mechanism for the change. This would require a more experimental style of research

approach. Further research could be done to better understand the relationships among

individual psychological treatment, residential substance abuse treatment, and depressive

symptoms. For example, it would be useful to conduct a study that included all homeless

persons in a residential substance abuse recovery program. BDI-II scores could be

collected on both those who seek individual psychological services and those who do not;

persons who drop out of individual therapy after just a few sessions could also be

included. If all subjects were retested after a designated period of time, and if more

aspects of their engagement in the recovery program were documented and examined, it

would be possible to better understand how BDI-II scores change over time in a treatment

context. This may further illuminate the relationship between psychological treatment

and symptom improvement among homeless men in recovery programs.

Additionally, if more demographic and psychiatric information were available, a

wider spectrum of analysis could be completed, and better illuminate the nuances of the

results. Also, more understanding is needed into the complicated picture of the etiology

of depressive symptoms within the homeless. Questions are still raised whether

homelessness leads to depression, or if depression results in homelessness, or under what

circumstances these pathways interact. Given that the homeless population is

heterogeneous, there are likely a number of factors that influence the occurrence of

depressive symptoms.

Lastly, the BDI-II was demonstrated to be an effective measure of depressive

symptoms within this study, but more research is needed globally, to further establish the

efficacy with the population. For example, it might be helpful if BDI-II norms could be established for different levels of socioeconomic status and for different treatment settings. However, the present findings are consistent with earlier research indicating that the BDI-II appears to be a versatile and useful measure for assessing depressive symptoms and distress among diverse client populations.

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TABLES

Table 1.

Demographics Data

$N = 81$

Ethnicity	Percent
African American	45.7
Hispanic	29.6
Caucasian	13.6
Multiethnic	3.7
Other	1.2
Not Reported	6.2

Marital Status	Percent
Single	53.1
Divorced	21.0
Separated	16
Married	9.9

Education Level	Percent
Elementary School	3.7
Junior High	11.1
Senior High	25.9
High School Diploma/GED	32.1
College	18.5

(continued)

College Degree	8.6

Previous Military Experience	Percent
Yes	9.9
No	85.2
Not Reported	4.9

Occupation Type	Percent
Professional	6.2
Clerical	14.8
Service	17.3
Agricultural	2.5
Processing	2.5
Machine Trade	2.5
Benchwork	2.5
Structural Work	11.1
Miscellaneous	14.8
Disabled	1.2
None	11.1
Not Reported	13.6

Previous Suicide Attempts	Percent
None	66.3
One	22.5
Multiple	11.3

(continued)

Hospitalization for Psychological Reasons	Percent
Yes	27.2
No	63.0
Not Reported	9.8

Table 2.

Group Comparison of Education (highest grade)

N = 81

Years of Education	Mood Symptoms Group	Non-mood Symptom Group
Elementary (1-6)	3	0
Junior High (7-9)	5	4
Senior High (10-12)	12	9
High School Diploma or GED	9	17
Some College (13-16)	4	11
College Degree	5	2
Total	38	43

Table 3.

Group Comparison of Ethnicity

$N = 81$

Ethnic Group	Mood Symptoms Group	Non-mood Symptom Group
Caucasian	3	8
African American	20	17
Hispanic/Latinos	10	14
Multiethnic	2	1
Other	1	0
Missing Data	2	3
Total	38	43

Table 4.

Number of Sessions Between BDI-II Administrations

$N = 81$

Session Number of administration	Number of Participants
4	9
5	19
6	20
7	20
8	13