

UCLA

UCLA Electronic Theses and Dissertations

Title

The Health and Social Implications of Stigmatization for Individuals with Concealable Stigmas: Using Survey and Experimental Methods to Build Theory

Permalink

<https://escholarship.org/uc/item/8h29f61m>

Author

Wong, Lauren Hitomi

Publication Date

2012

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Los Angeles

The Health and Social Implications of Stigmatization for Individuals with Concealable Stigmas:
Using Survey and Experimental Methods to Build Theory

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Psychology

by

Lauren Hitomi Wong

2012

© Copyright by
Lauren Hitomi Wong
2012

ABSTRACT OF DISSERTATION

The Health and Social Implications of Stigmatization for Individuals with Concealable Stigmas:
Using Survey and Experimental Methods to Build Theory

by

Lauren Hitomi Wong

Doctor of Philosophy in Psychology

University of California, Los Angeles, 2012

Professor Christine Dunkel Schetter, Chair

Two distinct studies investigated the effects of stigmatization and coping on health and social outcomes for individuals with concealable stigmas. Study 1 investigated rape in South Africa. Specifically, it examined the effect of public stigma and self-stigma on PTSD and depressive symptoms, and the role of approach and avoidance coping as mediators of these relationships. A total of 173 women aged 17 to 50 who reported rape within the past 6 months were interviewed at two sites in the Limpopo and Northwest Province of South Africa. Results revealed that greater perceptions of self- and public stigma were related to higher levels of both PTSD and depressive symptoms. Greater coping through avoidance fully mediated the relationship between higher levels of public stigma and PTSD symptoms, and partially mediated the relationship between higher levels of self-stigma and PTSD symptoms. Approach coping was not significantly associated with either PTSD or depressive symptoms. These findings provide

insight into the experiences and effects of stigma for this vulnerable population and have important implications for interventions aimed at improving post-assault recovery. Study 2 was a laboratory study on disclosing concealable stigmas. Disclosing a concealable stigma may benefit individuals by soliciting social support from others, but such disclosure may also engender prejudice and discrimination. One disclosure strategy that may increase the likelihood of receiving social support is the provision of emotional information. In the present study, participants heard a pre-recorded interview of a confederate disclosing either breast cancer or genital herpes and providing either (a) information about the stigmatized condition only, or (b) information about the stigmatized condition plus the associated emotional experience. Results revealed that in the information-only condition, disclosing genital herpes elicited greater rejection and less support compared to disclosing breast cancer. However, in the information plus emotion condition, disclosure of genital herpes received greater positivity, yielding no difference in support or rejection compared to disclosure of breast cancer. Analysis revealed that positive impressions of the target's personal characteristics (as more responsible, warm, etc.) mediated this effect for the genital herpes condition. In sum, emotional expression may decrease negative reactions to disclosure of stigmatized conditions.

The dissertation of Lauren Hitomi Wong is approved.

Gail E. Wyatt

Hector F. Myers

David O. Sears

Christine Dunkel Schetter, Committee Chair

University of California, Los Angeles

2012

*I dedicate this dissertation to my parents, Shirley and Harvey Wong, and also to my family,
Cami, Greg, and Chase.*

Contents

1. Study 1: Rape Stigma in South Africa	1
1.1. Introduction	3
1.2. Methods	15
1.3. Results	22
1.4. Discussion	28
1.5. Tables	44
1.6. Figures	50
1.7. Appendix	60
1.8. References	71
2. Study 2: Lab Study of Concealable Stigmas	86
2.1. Introduction	88
2.2. Methods	99
2.3. Results	102
2.4. Discussion	106
2.5. Tables	116
2.6. Figures	117
2.7. Appendices	121
2.8. References	124

Acknowledgements

I would like to express my deepest appreciation to my Committee Chair, Christine Dunkel Schetter for her helpful comments and suggestions. I am also sincerely grateful to the other members of my dissertation committee, Gail Wyatt, Jenessa Shapiro, Hector Myers, and David Sears. Without your constant encouragement and insightful comments, I could not have completed these studies.

I would also like to thank my many colleagues at UCLA who have been such an inspiration to me and provided endless entertainment while completing these studies, among them Liana Epstein, Kathryn Brooks, Emily Falk, Curtis Yee, Tage Rai, Natalya Maisel, Diana Ichpekova, Matt Gottfried, Ron Gurantz, Jonathan Schettino, Saviz Sepah, Ajay Sapute, and Vani Murugeson. I am very grateful to the comments and suggestions made in Chris and Jenessa's labs. Finally, I would like to sincerely thank the participants at UCLA, and especially at the Donald Frazier Clinic and Mafikeng Clinic in South Africa, without whom this research would not be possible.

V I T A

EDUCATION

Ph.D., Social Psychology, minor in Quantitative and Health Psychology University of California, Los Angeles	May 2012
M.A., Social Psychology University of California, Los Angeles	2008
B.A., Psychology (<i>Summa Cum Laude</i> and Honors), minor in Spanish Lit University of California, San Diego	2005
Universitat de Barcelona, Spain: Education Abroad Program	2002-2003

HONORS AND AWARDS

Society for Personality and Social Psychology Student Travel Award	2012
UCLA Graduate Division Award Fellowship	2011-2012
UCLA AIDS Institute Travel Grant	2011
Summer Fellow, Society of Australasian Social Psych Summer Program: University of Queensland, Australia	2010
National Science Foundation Travel Award	2010
Summer Fellow, Summer Institute in Social Psych: Northwestern University	2009
National Science Foundation (NSF) Graduate Research Fellow	2007-2011
UCLA AIDS Institute Seed Grant Award	2007-2008

PUBLICATIONS

- Epstein, L. M., Goff, P. A., Huo, Y. J., & Wong, L. H. (in press at *Political Psychology*).
A taste for justice: Unpacking identity politics in a nascent democracy.
- Sumner, L. A., Wong, L. H., Dunkel Schetter, C., Meyers, H. F., Rodriguez, M. (July 18, 2011). Predictors of PTSD symptoms among low income Latinas during pregnancy and postpartum. *Psychological Trauma: Theory, Research, Practice, and Policy*. Advance online publication. doi: 10.1037/a0023538.
- Wong, L. H., Van Rooyen, H., Modiba, P., Richter, L., Gray, G., McIntyre, J., Dunkel Schetter, C. & Coates, T. (2009). Test and tell: Correlates and consequences of HIV disclosure in South Africa (HPTN 043 Project Accept). *Journal of Acquired Immune Deficiency Syndrome*, 50, 215-222.
- Wong, L. H. (2005) Cross-racial eyewitness identification accuracy as determined by DNA evidence: An archival analysis of rape cases. *Triton Psychology Report*, 1, 16-21.

PRESENTATIONS

- Wong, L. H., Shapiro, J., & Dunkel Schetter, C. (2012, January). *Compensatory Strategies in Stigma Disclosure*. Poster at Society of Personality and Social Psychology, San Diego, CA.

- Wong, L. H. (2010, October). *An Overview of Quantitative Statistical Analysis for Health Sciences*. Presentation at the University of Mafikeng, Northwest Province, South Africa.
- Wong, L. H., Fernandez, J., McNeill, K., & Sheeran, N. (2010, February). *The effect of intergroup threat and emotions on willingness to share resources*. Presentation at the Society for Australasian Social Psychologists, Queensland, Australia.
- Wong, L. H., Frain, A., Sheeran, N., & Hehman, E. (2010, February). *Frameworks in Intergroup Emotions*. Presentation at the Society for Australasian Social Psychologists, Queensland, Australia.
- Wong, L. H. et al. (2010, Feb). *A theoretical model of HIV disclosure in South Africa*. Poster presented at Society for Personality and Social Psychology, Las Vegas, NV.
- Wong, L. H., Blanch, D., & Meltzer, A. (2009, July). *The influence on perceived threat on implicit and explicit attitudes and behaviors*. Presentation at the Summer Institute in Social Psychology, Chicago, Illinois.
- Wong, L. H. et al. (2008, June). *Disclosure of HIV status in South Africa*. Paper presentation at HIV/AIDS Research Symposium, Vulindlela, South Africa.
- Wong, L. H. et al. (2008, April). *An psychosocial model of HIV disclosure in South Africa*. Poster presented at CHIPTS HIV Research: The Next Generation conference, Los Angeles, CA.
- Wong, L. H. et al. (2008, April). *HIV disclosure in South Africa: A public health perspective*. Poster presented at Unite for Sight conference, New Haven, CT.

TEACHING EXPERIENCE

<i>Teaching Assistant:</i> University of California, Los Angeles	
Advanced Psychological Statistics	Summer 2011
Health Psychology Laboratory	Winter 2010
Health Psychology Laboratory	Winter 2009
Mass Media and Violence Against Women (Dept of Communications)	Summer 2008
Introductory Psychology	Spring 2008
Social Psychology Laboratory	
Summer 2007	

PROFESSIONAL MEMBERSHIPS AND SERVICE

American Psychological Association	2007-2012
▪ Division 38 Health Psychology Student Representative	2007-2010
Society for Personality and Social Psychology	2007-2012
Ad-hoc peer reviewer	2009-2012
<i>Health Psychology</i> Journal Review Committee	2007-2010
Diversity Issues Committee, UCLA	2006-2010
Biological Science Counsel Committee Representative	2009-2010
UCLA Psychology Graduate Student Association (PGSA)	2006-2010
▪ PGSA Vice President and Community Service Coordinator	

Stigma, Coping, and Mental Health for Survivors of Recent Rape in South Africa

Lauren H. Wong

University of California, Los Angeles

Abstract

Stigmatization following rape is a frequent and devastating occurrence that may impact a women's recovery long after the actual assault. The purpose of the present study was to investigate the effect of public stigma and self-stigma on PTSD and depressive symptoms, and the role of approach and avoidance coping as mediators of these relationships. A total of 173 women between the ages of 17 and 50 who had reported a rape within the past 6 months were interviewed by trained staff at two sites in the Limpopo and Northwest Province of South Africa. Results revealed that greater perceptions of self- and public stigma were related to higher levels of both PTSD and depressive symptoms. Greater coping through avoidance fully mediated the relationship between higher levels of public stigma and PTSD symptoms, and partially mediated the relationship between higher levels of self-stigma and PTSD symptoms. Approach coping was not significantly associated with either PTSD or depressive symptoms. These findings provide insight into the experiences and effects of stigma for this vulnerable population in this part of the world and have important implications for interventions aimed at improving post-assault recovery.

Keywords: stigma, coping, rape, PTSD, depression, South Africa

Stigma, Coping and Mental Health for Survivors of Recent Rape in South Africa

Rape is an unfortunate reality for hundreds of women in every nation. Rape¹ is defined for research and policy as penetrative, nonconsensual sex that is enacted with some degree of force (physical or verbal) or threat of violence that may be perpetrated by a stranger, family member, significant other, or other associates (e.g. teachers, coworkers) (Berger, Searles, & Neuman, 1988; Wood, Lambert, & Jewkes, 2008). South Africa has one of the highest rates of rape in the world with approximately 56,272 cases reported to the police in 2010 (South African Police Services, 2011). To put this figure into perspective, South Africa had 123 women report rape per 100,000 when compared to 28.6 in the US, 81 in Australia and 44 in Zimbabwe (United Nations, 2003). National cross-sectional surveys of South African women have found that the prevalence of rape ranges from 5% to 40%, depending on the region and the characteristics of the women (Jewkes, Penn-Kekana, Levin, Ratsaka, & Schreiber, 2001; Kalichman et al., 2005; King et al. 2004). Actual rates of rape are likely higher than most statistics reflect because South African women report being afraid to admit they were raped, they often see the incident as a private matter, or may even view their experiences as “normal” (Allison & Wrightsman, 1993; Wood, Maforah, & Jewkes, 1998).

Rape is considered one of the most severe among all types of trauma and may result in depression or post-traumatic stress disorder (PTSD) (Breslau, Davis, Andreski, & Peterson, 1991; Campbell, Dworkin, & Cabral, 2009). PTSD is diagnosed with three symptom clusters: numbed responsivity and avoidance of situations or people that trigger memories of the assault, increased arousal such as hypervigilance or exaggerated startle response, and involuntary re-experiencing of the trauma through intrusive thoughts or nightmares (Ozer & Weiss, 2004).

PTSD is the most commonly reported psychological problem following rape, with 6.2 to 10 times higher rates of PTSD among interpersonal violence survivors compared to other types of traumatic events (Breslau, Chilcoat, Kessler, & Davis, 1999; Kessler, Sonnega, Bromet, Hughes, & et al., 1995; Kilpatrick, Edmunds, & Seymour, 1992; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). One review found that on average 33% to 45% of survivors report experiencing PTSD symptoms (Campbell et al., 2009). In contrast, depression is characterized by a depressed mood and/or lack of pleasures or interests, and is accompanied by other symptoms such as thoughts or feelings of worthlessness, decreased energy, or changes in sleep, weight, or appetite (Kessler et al., 2003). Research reveals that approximately 13% to 51% of rape survivors develop symptoms of depression following the assault and these women demonstrate higher acute and chronic depressive symptoms rates compared to the general population (Atkeson, Calhoun, Resick, & Ellis, 1982; Campbell et al., 2009; Frank & Stewart, 1984; Kilpatrick, Saunders, Veronen, Best, & Von, 1987; Koss, Bailey, Yuan, Herrera, & Lichter, 2003; Mackey et al., 1992; Miller, Monson, & Norton, 1995).

Thus, rape is not an isolated incident that ends with the assault. In addition to enduring cognitive and emotional effects, an assault could also have a significant impact on how a survivor is perceived and treated by her community, and how she subsequently views herself. Rape victims may report experiencing stigmatization or feeling treated as devalued and tainted following the assault (Abrahams & Jewkes, 2010; Devine, 1989; Goffman, 1963; Jones et al., 1984; Major & O'Brien, 2005). This stigmatized condition is theorized to lead to status loss and the potential for discrimination, social exclusion, and even negative mental health repercussions (Leary & Schreindorfer, 1998; Link & Phelan, 2001; Major & Eccleston, 2004; Miller & Kaiser, 2001; Parker & Aggleton, 2003). However, little systematic research has been conducted to

examine how rape stigma affects survivors' mental health and recovery, and the majority of this research has been conducted in U.S. populations. The present research is one of the first empirical studies to examine experiences of stigma in South Africa, a country with high rates of rape and strong endorsement of traditional gender norms and rape myths that may perpetuate stigmatizing attitudes towards survivors (Jewkes, Dunkle, Nduna, & Shai, 2010).

When survivors of rape experience stigmatization, what can they do in order to mitigate its negative impact on mental health? The ways in which an individual copes have been identified as important in the post-assault recovery process (Burt & Katz, 1987; Cohen & Roth, 1987; Frazier & Burnett, 1994; Frazier, Klein, & Seales, 1995; Meyer & Taylor, 1986; Santello & Leitenberg, 1993). One focus of the current study is on coping mechanisms because they may be taught or modified in order to curb the negative psychological sequelae that follow sexual victimization and stigma (Frazier, Mortensen, & Steward, 2005; Manne, Babb, Pinover, Horwitz, & Ebbert, 2004).

Sexual assault is a serious and detrimental life event, and understanding the factors that may minimize the impact of stigmatization has the potential for real world impact on the daily quality of life for survivors of sexual assault. Therefore, the aim of the present study is to explore the effect of stigmatization on mental health among survivors of recent rapes in South Africa and investigates the role of coping as a potential mediator of this relationship.

Cultural Context of South Africa

Before exploring the research literature on stigma and rape, it is first important to consider the social and cultural context of sexual violence in South Africa. In South Africa, the term "rape" is used primarily to describe the actions of strangers or especially violent sexual acts, such as gang rapes (Jewkes & Abrahams, 2002; Wood & Jewkes, 2001; Wood, et al., 1998). A

study of young South African women found that while only 10% reported having been raped, approximately 66% reported being forced to have sex against their wishes—which is the legal definition of rape (Jewkes, Vundule, Maforah, & Jordaan, 2001).

Research suggests that several factors may place South African women at particularly high risk for sexual violence, stigma, and subsequent mental health problems. In South Africa, victimization, crime, and violence have grown out of the racialized social policies and practices of Apartheid. As a society, South Africa has remained very tolerant of violence despite efforts towards peace post-Apartheid (CIET-Africa, 2000; Dawes, 1990; Wood & Jewkes, 2001). All forms of interpersonal violence are common, and physical violence is present in sexual relationships from the beginning of dating during adolescence (Jewkes, Vundule, et al., 2001; Wood et al., 1998). Similarly, the patriarchal nature of South African society may allow for power imbalances and culturally-sanctioned gender norms to be enforced through the use of violence, discrimination, or stigmatization (Farmer, Connors, & Simons, 1996; Jewkes, Penn-Kekana, et al. 2001; Morrell, 2002; Pitcher & Bowley, 2002; Wood & Jewkes, 2001). The burden of harsh economic circumstances may lead some women to engage in sex to meet survival needs, which could also contribute to the high risk of sexual violence and stigma (Seedat & Stein, 2000).

Stigma, Coping and Mental Health

The current study merges lines of research on stigma, in particular, psychological experimental work and coping research with mental health perspectives. Increasingly, stigma scholars have used theoretical models of stress and coping responses to conceptualize stigma as a social stressor for victims of traumatic events such as rape (Major & Eccleston, 2004; Miller & Kaiser, 2001; Miller & Major, 2000). Several models characterize two primary processes: 1) an

initial response, conceptualized as stressors such as stigma, and 2) a secondary response conceptualized as coping responses to the stressor (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001; Lazarus & Folkman, 1984; Miller & Kaiser, 2001). Conceptualizing stigma as a social stressor connects it to the broader health psychology literature in which there is extensive research supporting the association between stress and psychological distress (Brown, 1993; Compas et al., 2001; Dohrenwend, 2000; Hatzenbuehler, 2009). The following sections will elaborate three components of the proposed mediation framework: stigma as a stressor, mental health effects of stigmatization, and coping as a mediator of stress-mental health linkages.

Stigma as a Stressor

A stressor can be conceptualized as a demand that taxes or exceeds the adaptive internal or external resources that an individual has available (Lazarus & Folkman, 1984). For sexual assault, it is necessary to differentiate between the stress of the actual rape incident and the post-assault experience of stigmatization as a rape victim. The latter, or effects of rape stigma, are the primary focus of the present study. From this perspective, having a stigmatized social identity can be seen as similar to other acute and chronic life stressors (Major & Eccleston, 2004). However, processing stigma is a unique form of stress because unlike many other types of stressors, it is related to an individual's social standing in their network, their social identity, and potential as a target of prejudice and discrimination, over and above the stress caused by any health complications caused by the actual assault (Crocker et al., 1998; Miller & Kaiser, 2001; Miller & Major, 2000; Smart Richman & Leary, 2009).

Sexual assault research has identified several factors that may contribute to the stress of having a stigmatized or devalued social status. Widespread endorsement of rape myths such as that a woman cannot be raped against her will, women secretly want to be raped, or most

accusations of rape are fabricated, appear to lead societies, cultures, communities, and individuals to blame survivors for the assault and exacerbate stigmatization (Allison & Wrightsman, 1993; Burt, 1980; Estrich, 1987; Ullman, 1996a). Research has found that in many societies, blaming the survivor for the cause of the assault is a legitimate and acceptable assertion or belief (Burt, 1998; Lonsway & Fitzgerald, 1994). Indirectly, we know that survivors of rape are stigmatized through the propagation of these myths and patriarchal gender norms endorsed by both men and women (Lonsway & Fitzgerald, 1994). In South Africa, the rise in prevalence of HIV/AIDS could also be associated with increased rape stigma because HIV is stigmatized and is associated with groups of low social status such as women who exchange sex for resources and drug users (Christofides et al., 2005).

Survivors of rape have to deal not only with the potential physical and emotional effects of the rape, but also the social repercussions when others find out about the incident (Major & O'Brien, 2005; Miller & Kaiser, 2001). Following an assault, survivors may report “second injury” or “secondary victimization” which is rejection, lack of support, minimal help, and blame from their communities, families, and friends (Burgess & Holmstrom, 1979; Herbert & Dunkel-Schetter, 1992; Symonds, 1980). In the social psychological literature, these negative reactions from the general population toward a rape survivor would be considered “public stigma.” Public stigma has been conceptualized as a community or social network member’s negative stereotypes, emotional reactions, and/or behavioral reaction toward a stigmatized group (Corrigan & Watson, 2002). These stigmatizing reactions from the community may be in the form of verbal and nonverbal behaviors directed toward the survivor of rape or they can be the anticipated stigmatizing reactions that a survivor expects from their social network. In order to

understand the broader social context of a survivor's experience with stigmatization, the present study will explore both actual and anticipated experiences of public stigmatization.

A rape survivor may face stigmatizing attitudes and treatment from others in her social network, but may also internalize these same stigmatizing attitudes towards herself in the form of self-stigma. Women living in a culture that accepts stigmatizing beliefs about rape victims may accept these beliefs and see herself as different from other women, as an outsider. Self-stigma has been conceptualized as an individual's endorsement of negative beliefs about themselves, and negative emotional and behavioral reactions toward their stigmatized identity (Miller & Kaiser, 2001). Most research on self-stigma has largely developed out of literature on stigma of minorities groups and mental illness stigma, and very little has been conducted on victims of sexual assault (Crocker, 1999; Crocker & Major, 1989; Crocker, Major, & Steele, 1998; Corrigan & Watson, 2002). The current study will explore self- and public stigma separately in order to determine differential impact on psychological health.

Stigma and Mental Health

The stress ensuing from stigma (public or self) may be directly related to higher psychological distress such as PTSD or depressive symptoms (Campbell et al., 2009). These two conditions have been identified as the prominent psychiatric paradigms used to evaluate psychological functioning in survivors of rape (Koss, Bailey, Yuan, Herrera, & Lichter, 2003). Existing research suggests that PTSD and depression are often predicted by distinct, but related outcomes with potentially different predictors (e.g. Sumner, Wong, Dunkel Schetter, Myers, & Rodriguez, 2011). At a broader level, many studies have found a moderate positive relationship between greater stigma and negative mental health outcomes for a wide variety of stigmatized

conditions (e.g. race, gender, mental illness), but fewer investigated traumas such as rape (Mak, Poon, Pun, & Cheung, 2007; Pascoe & Smart Richman, 2009; Quinn & Chaudoir, 2009).

A small segment of research on rape related to self-stigma is that on self-blame, defined as the belief that one is responsible or somehow blameworthy for a negative outcome (Janoff-Bulman, 1992; Tennen & Affleck, 1990; Ullman et al., 2007). Self-stigma and self-blame have been conceptualized separately but are interconnected constructs. For example, a woman might recognize that she is publically a stigmatized individual and face mistreatment as a result, but not necessarily blame herself for the actual assault. Similarly, self-blame occurs even in the absence of any stigmatization by an immediate social network. Research has found that strong self-blame leads to worse mental health symptoms, such as PTSD and depression for victims of sexual trauma (Boesch, Koss, Figueredo, & Coan, 2001; Filipas & Ullman, 2006; Frazier, 1990; Frazier & Schauben, 1994; Hill & Zautra, 1989; Joseph, Yule, & Williams, 1993; Meyer & Taylor, 1986; Najdowski & Ullman, 2009; Wyatt, Guthrie, & Notgrass, 1992).

Similar to public stigma, researchers have examined the effect of negative social reactions, conceptualized as the adverse responses that rape survivors report following disclosure (Ullman, 2000). These responses range widely and may include blaming the victim, distracting them, reacting so strongly that the focus is shifted away from the survivor, taking control of the survivors' decisions, and treating them differently (e.g. stigmatization) (Ullman, 2000). Prior research has found that these negative social reactions from network members were associated with greater psychological problems such as PTSD (Ullman & Filipas, 2001b) and general psychological distress (Ullman, 1996b). However, negative social reactions cover a very broad spectrum of responses, and previous work with this concept does not fully differentiate the impact of stigmatizing responses (e.g. being treated differently or blamed) from general negative

responses that may not be derived from stigma (e.g. taking control of survivor's decisions). Furthermore, these negative social responses are measures of actual experiences of stigma that survivors report. The present study will extend this line of research by measuring public stigma explicitly through inclusion of actual experiences of stigmatization (instead of negative reactions generally), fears or concerns regarding anticipated stigma, and the survivor's perceptions of how much the community blames them for the assault. Given prior research, it is therefore hypothesized that regardless of the level of trauma caused by the rape, the stigmatization (both self- and public) that happens after the assault is a powerful stressor that will be related to greater psychological distress.

Coping as a Mediator

Coping is defined as the process of managing the internal or external demands of a situation or condition which is perceived as exceeding or taxing one's resources (Lazarus & Folkman, 1984). Distinguishing patterns in coping strategies could be important for determining how stigma could be related to psychological outcomes. An extensive psychological literature on stress and coping has found that people have a wide variety of physiological, cognitive, affective, and behavioral responses to stress (Holahan, Moos, & Schaefer, 1996; Miller & Kaiser, 2001). More recently, stigma scholars have adapted this research to examine coping processes in relation to socially stigmatized identities. Research suggests that the coping strategies used by victims following rape have a strong impact on post-assault mental health and recovery (Arata, 1999; Gibson & Leitenberg, 2001; Littleton, Horsley, John, & Nelson, 2007). In 2001, Miller and Kaiser proposed a general model of coping with stigma that outlines engagement or approach coping (e.g. problem solving, cognitive restructuring, acceptance) and disengagement or avoidance coping (e.g. avoidance, denial, wishful thinking) (see also Compas et al., 2001).

Reviews of rape research corroborate these primary distinctions and identified the approach-avoidance paradigm as one of the most viable models in describing survivor's post-assault recovery (Neville & Heppner, 1999).

Approach coping. Approach coping is characterized as a way that survivors engage in thought processes and/or behaviors which orient them to dealing directly with the trauma or stress, such as coping by mobilizing resources or developing a plan to deal with the stressor or problem (Neville & Heppner, 1999). It is anticipated that in response to rape stigmatization, survivors should be less likely to use approach coping strategies. That is, if a survivor is experiencing high stigmatization from their community (public stigma) or are cognitively burdened with self-stigmatizing thoughts or blame (self-stigma), she will most likely engage in fewer approach-oriented coping techniques such as making plans, because these approach-oriented actions could intensify stigma received from others. Taking action against stigma may reveal her status to others who may not know about the incident which could incite further stigmatization and discrimination. Also, given that the focus of the present study is on recent rapes (within the past 6 months), it is possible that women may not have had time to develop an active approach coping strategy.

Research has produced mixed findings with regard to approach coping and psychological outcomes. Prior cross-sectional studies have found that approach coping was associated with higher levels of distress (Burt & Katz, 1988; Cohen & Roth, 1987; Najdowski & Ullman 2009), lower distress (Meyers & Taylor, 1986), or unrelated to symptomatology (Littleton et al., 2007). However, acknowledging and accepting the reality of the trauma is seen as a critical component of recovery, and thus it is anticipated that approach coping should be associated with more positive mental health (Resick & Schnicke, 1993; Roth & Cohen, 1986; Snyder & Pulver, 2001).

Therefore, it is expected that higher perceived stigma would be associated with less use of approach coping and greater negative psychological symptoms.

Avoidance coping. Avoidance coping emphasizes a voluntary and conscientious turning one's attention away from the stressor by denying the stressor, distraction, disengaging feelings and thoughts, or withdrawing from others. It is theorized that some individuals engage in avoidance coping as a way of minimizing the negative consequences caused by the stressor (Miller & Kaiser, 2001). One of the few studies that has examined this relationship found that stigmatization was a significant predictor of engaging in greater avoidance coping in a cross-sectional study of 106 undergraduate women in the U.S. who had reported sexual assault (Gibson & Leitenberg, 2001).

Generally, research with survivors of rape has found that avoidance coping strategies are also related to greater psychological distress such as PTSD, depression, and extended recovery time (Arata, 1999; Burt & Katz, 1988; Frazier et al., 2005; Gibson & Leitenberg, 2001; Meyer & Taylor, 1986; Ullman et al., 2007; Valentiner et al., 1996). This finding is consistent with research and meta-analyses on avoidance coping for other forms of trauma (e.g. severe injury or interpersonal violence; Holahan et al., 1996; Zeidner & Endler, 1996; Littleton et al., 2007) and child sexual abuse (e.g. Coffey, Leitenberg, Henning, Turner, & Bennett, 1996; Johnson & Kenkel, 1991; Leitenberg, Greenwald, & Cado, 1992). Therefore, it is anticipated that higher perceived stigma would be associated with greater use of avoidance coping and thus greater negative psychological symptoms.

Overview of Study

The detrimental effects of rape on mental health are often compounded by the negative post-assault stigma of being a victim of rape. Given that distress is often highly prevalent among

rape survivors, the present framework emphasizes the potential impact of stigmatization on mental health following the assault (Campbell et al., 2009). More specifically, the current study examines how self-stigma and public stigma influence PTSD and depressive symptoms, and has indirect effects through avoidance and approach coping among victims of sexual assault in South Africa. The present study fills an important gap in the rape literature regarding whether self- and public stigma are related to mental health outcomes, and is the first empirical study to examine rape stigma in South Africa, a country where sexual violence is an epidemic. To what extent do these women see themselves as victims of stigma? Do they believe others see them as stigmatized? How does social stigma effect how women cope in the aftermath of rape? In order to address these questions, three primary hypotheses were tested:

Hypothesis 1: Higher levels of stigma, both self and public perceptions, among survivors of rape will be directly associated with higher levels of PTSD and depressive symptoms.

Hypothesis 2: Approach coping will mediate the relationship between stigma and mental health outcomes such that higher levels of self- and public stigma will be associated with less use of approach coping, which in turn will be associated with higher levels of PTSD and depressive symptoms.

Hypothesis 3: Avoidance coping will mediate the relationship between stigma and mental health outcomes such that higher levels of self- and public stigma will be associated with greater use of avoidance coping, which in turn will be associated with higher levels of PTSD and depressive symptoms.

The present study will test direct and indirect effects using multivariate modeling with cross-sectional survey data from South African women attending a trauma clinic for a rape in the past 6 months.

Methods

Participants

The present study examined 173 treatment-seeking Black South African women. Participants were recruited from two separate public trauma clinics: the Thohoyandou Victim Empowerment Programme (TVEP) clinic in the town of Venda in the Limpopo Province (N=61) and the Donald Fraser Clinic in the town of Mafikeng in the North West Province (N=112). Women were eligible to participate if they: were between 17 and 50 years of age, reported a rape incident within the last six months, and spoke one of the local languages. The demographic characteristics of the participants are provided in Table 1. The average age was 25 years (SD=7) and most women ethnically identify as Tswana (54%) or Venda (33%). The majority of women had never been married (86%) but had a regular partner (69%) and most had at least one child (57%). On average they had less than a high school education (55%), were not employed (63%) and had a low income of 0 to 500 South African Rand (approximately \$0-61 U.S. dollars) per month (63%).

Procedure

The present study was conducted as part of a larger longitudinal study called *Project Fulefelo (Hope)* led by Dr. Gail Wyatt and Dr. Mashudu Maselesele and conducted in conjunction with services provided to sexual assault survivors at each respective clinic. The TVEP and Donald Fraser clinics are both connected to local hospitals and specialize in providing sexual assault services. They are both open during the daytime and TVEP provides some night services. The staff includes a social worker or counselor that works in conjunction with the local police and medical doctors from the hospital to provide services. Clients are provided psychological support from an assigned counselor, or if necessary are referred to the

hospital psychiatric services. Counselors also help clients with court preparation and legal services. There are no other trauma services supporting rape survivors in either town. Most clients come from backgrounds of poverty and unemployment. Participation in the study did not interfere with any aspects of the survivor's standard care (e.g. counseling, legal referrals, etc.). Permission to conduct the study was granted by the Internal Review Board at UCLA, the University of Venda, the North West University, and relevant local health authorities.

The manner in which rape survivors were admitted to both clinics was similar. Following standard care procedures, rape victims were interviewed upon arrival to the clinic in a private room by designated clinic staff. Victims then received a standard medical examination using a rape crime kit to collect medical evidence for forensic analysis. They also provided a formal statement to a police officer. After the routine clinic assessments, the woman would then return to her home. Approximately a week later, a counselor assigned from the clinic would make a home visit as part of standard clinic procedure.

During the home visit, the women were informed of the current study and asked to participate if they met eligibility criteria. If a woman agreed to participate, the counselor would read the consent form to her and she was given the choice complete the interview during that home visit or schedule for a later date, either at home or at the clinic. The survey protocol had qualitative and quantitative behavioral, psychological, and health measures that took approximately 2 hours to complete. Two surveys were available to women, one survey in English and one in Tshivenda, a local language in South Africa. The survey in Tshivenda was translated by a local translator and the local study coordinator at the Mafikeng clinic to create a written translation. The survey was administered as an interview by a trained counselor to each woman in a private location and in the woman's language of choice. The counselors were trained

to give follow-up explanations for any questions that were unclear. If at any time during the interview the participants felt uncomfortable, the section was skipped and the participant debriefed. Thus, women had the option to discontinue the interview at any time without any negative consequences to their care or compensation for participation. Following the interview, the women were thoroughly debriefed and compensated for participation with basic hygiene health kits and food vouchers.

Measures

Demographics and description of the rape incident. Participants provided background demographic information regarding their age, province of origin, marital and relationship status, number of children, education, work status, and income (see Table 1). Participants answered open-ended questions to provide qualitative data including brief verbal descriptions regarding the rape incident, how they felt after the assault, and how their community treated them following the assault. They also answered questions regarding the number of perpetrators, type of perpetrator (e.g. parent, stranger, etc.), perpetrator gender, amount of time since the assault occurred at the time of the interview, location of assault (e.g. in a public place, at the victim's home, etc.), number of times they were raped during the assault, amount of physical force used during the assault, injuries inflicted, how many people they had told about the assault in their social network (network disclosure), and number of times raped in their lifetime. The action taken by the survivor during the assault was dichotomized as either physical (ran away or fought back) versus non-physical (did nothing, non-verbal or verbal).

Stigma. Two separate measures were developed to examine self-stigma and public stigma (see Table 3 for all stigma items). All stigma questions were set on a Likert scale ranging from 1 (*not at all*) to 5 (*very much*), with higher scores indicating higher stigma. Self-stigma was

measured using 2-items from a stigma measure that had been previously tested with adult female sexual assault survivors (Gibson & Leitenberg, 2001; see also Coffey et al., 1996). This measure included items regarding how much they felt personally to blame for the assault (e.g. “How much do you feel that you were personally to blame for what happened?”) and how their self-perception changed as a result of the assault (e.g. “How much do you think you are different from other women because of this experience?”). In the present study, since these two items were conceptually similar—self-directed thoughts and cognitions regarding the survivor’s identity and role in the assault—and were highly statistically correlated ($r=.724, p<.001$), they were combined into one composite index by averaging these two items ($M=1.86, SD=1.10$).

Public stigma was measured using a combination of items from two scales. Two items from Gibson and Leitenberg’s stigma scale (2001) measured how much blame participants expected from community members, as well as how concerned they were about facing stigmatizing attitudes in their community (e.g. “How concerned are you about people not respecting you as much if they were to find out what happened?”). A second set of 4 items from the Social Reactions Scale examined actual negative reactions participants experienced when interacting with their social network (Ullman, 2000). Two subscales were examined: 1) experiences of blame (e.g. “Told you that you could have done more to prevent this experience from occurring”) and, 2) experience of being treated differently (e.g. “Acted if you were damaged or somehow different now”). All 6 items were averaged to create a composite score with acceptable internal consistency ($M=1.62, SD=.61, \alpha=.620$).

These two stigma measures were correlated ($r=.52, p<.01$). Different ways of scoring these items were considered, but for theory testing purposes the best two measures were the

subset of items included above. One additional stigma item was not included in the scales because it tapped into both self- and public stigma.

Approach and avoidance coping. Coping was assessed using the Brief COPE, a self-report scale (Carver, 1997) which asked participants to report the “ways [you] might have felt or behaved after the rape.” It is important to note that the prompt was open to the ways in which a participant coped with any post-assault stressors, including the stress of stigmatization. The Brief COPE is comprised of several subscales, each with two items measured on a Likert scale ranging from 1 (*I haven't been doing this at all*) to 4 (*I've been doing this a lot*). The COPE has been broadly used in stressed populations and has been found to have acceptable test-retest reliability and internal consistency reliability.

Approach coping was measured using three subscales of two items each which tap into the positive steps that the participant may have taken following the rape: acceptance (e.g. “learning to live with it”), making plans (e.g. “thinking hard about what steps to take”), and taking action (e.g. “taking action to make the situation better”). The composite for approach coping was created by averaging these six items into a scale with acceptable reliability ($M=2.12$, $SD=.66$, $\alpha=.79$).

Avoidance coping was constructed from three subscales of two items each measuring different aspects of avoidance coping: denial (e.g. “refusing to believe that it has happened”), self-distraction (e.g. “turning my mind to work or other thing activities to take my mind off things”), and behavioral disengagement (e.g. “giving up the attempt to cope”). The composite for avoidance coping was created by averaging these six items into a scale with acceptable reliability ($M=1.99$, $SD=.59$, $\alpha=.713$). The approach and avoidance coping measures were correlated ($r=.72$, $p<.01$).

Mental health. Post-traumatic stress disorder was measured using the 17-item Posttraumatic Stress Diagnostic Scale (PDS; Foa, 1995), a measure that has shown reasonable internal and external validity in populations of women who have experienced trauma (Foa, Cashman, Jaycox, & Perry, 1997). The PDS was developed based on Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria and includes questions regarding avoidance/numbness, physiological arousal, and re-experiencing/intrusive thoughts (e.g. “did you relive the traumatic event, acting or feeling as if it were happening again?”). Participants were asked to rate how often each symptom had bothered them in the past month on a 4-point Likert scale from 0 (*not at all*) to 3 (*almost always*). Scores on each item were summed to create a composite with a range of 0 to 44 ($M=20.1$, $SD=11.41$). The traditional cutoffs for symptom severity ratings are 0 no rating, 1-10 mild, 11-20 moderate, 21-35 moderate to severe, and over 36 severe. Thus, the majority of the participants in the present study would be diagnosed with moderate to severe PTSD at the time of the interview. This scale demonstrated excellent internal consistency with an alpha of .915.

Given the potential overlap between items on the avoidance of reminders subscale of the PTSD measure and the avoidance coping scale, analysis was conducted excluding the two items on the PTSD that appeared to have the most conceptual similarity to avoidance coping. These two items were only moderately correlated with the avoidance coping scale “Did you try not to think about, talk about, or have feelings about the traumatic event?” ($r=.242$, $p<.01$) and “Did you try to avoid activities, people or places that remind you of the traumatic event?” ($r=.426$, $p<.01$). Analysis suggested that excluding these two items from the PTSD scale did not result in changes in significance for any of the tests run for the three hypotheses. Thus, these two PTSD

items were kept in the full PTSD measure for the final analysis so that findings could be compared to prior research that used these two measures (e.g. see Ullman et al., 2007).

Depressive symptoms were measured using the Beck's Depression Inventory (BDI), a widely used instrument designed to assess the intensity of depression in normal and clinical populations (Beck, Steer, & Brown, 1996). This 21-item scale contains items which list four statements arranged in increasing severity about a specific symptom of depression. The scale measures a range of depressive symptoms in line with criteria from the DSM, including items on loss of pleasure, sadness, agitation, and changes in appetite or sleeping patterns. Cutoff values for depressive symptoms for this scale are: 0-13 minimal, 14-19 mild, 20-28 moderate, 29-69 severe. In the present sample, BDI scores ranged from 0 to 42 with an average of 8.843 ($SD=9.80$), indicating minimal levels of depressive symptoms. Given that the distribution of responses had a strong positive skew, a square root transformation was used to normalize the data. Reliability in the sample was high, with an alpha of .923.

Means, standard deviations, ranges, and alphas are provided for all variables of interest in Table 4. Table 5 provides a correlation table of the primary variables of interest. See the Appendix for a list of all the relevant measures used in this study.

Analysis

Hypothesis 1 was tested using linear regression and Hypotheses 2 and 3 were tested using the Hayes (2012) mediation Process macro. The following conditions must be met to establish and test mediation: (1) The predictor variable (self- or public stigma) must be associated with the outcome variable (PTSD or depressive symptoms); (2) the predictor variable must be associated with the mediator (approach or avoidance coping); (3) the mediator must be associated with the outcome variable, after controlling for the relationship between the predictor and outcome; and

4) the addition of the mediator variable must significantly decrease the association between the predictor and the outcome variable (Kenny, Kashy, & Bolger, 1998).

Results

Description of Assault

Table 2 provides a description of assault-related variables. A total of 31% of participants reported that more than one perpetrator was involved in the assault and 19% of participants had been assaulted by the same perpetrator more than once (range 1-10 times). Only 2 cases involved a female perpetrator. Approximately half of the assaults were cases of stranger rape (45%). Significant amounts of force such as hitting, slapping, choking, threatening or use of a weapon occurred in more than half of the assaults. During the assault 33% of women took physical actions (ran away or fought back) and 12% of women reported major injuries following the assault. More than 1 out of 10 participants reported that they had been sexually assaulted previously (prior to this rape). As a result of the rape, 4 participants became HIV positive and 16 were newly infected with a sexually transmitted infection. On average, survivors reportedly told approximately 10 people about their assault ($SD=9$) with a range of 0 to 50. Participant also reported the most traumatizing incident that had ever occurred to them in their lifetime: 84% (145) of the women chose the sexual assault that brought them into the clinic and others chose traumatizing incidents such as accidents and life-threatening diseases.

Control Variables

All demographic and assault-related variables were examined at the bivariate level using Pearson correlation coefficient and independent t-tests to determine their significance with the two primary dependent variables of interest, PTSD and depressive symptoms. The following variables were not significantly related to either mental health indicator at the bivariate level:

age, education, income, gang vs. individual rape, stranger vs. known rape, whether or not the perpetrator had previously assaulted the survivor, time since rape, how well the participant knew the perpetrator, and number of times raped during the assault.

However, the amount of physical force used during the assault was correlated at the bivariate level with each of the dependent variables. More force was correlated with higher levels of depressive symptoms ($r=.211, p=.005$), but with lower levels of PTSD symptoms ($r=-.170, p=.026$). The number of people that the survivor disclosed to (network disclosure) after the rape was correlated with PTSD only ($r=.218, p=.004$), such that higher disclosure was associated with more PTSD symptoms. An independent t-test revealed that having taken physical action was related to higher PTSD symptoms ($M=23.5, SD=8.82$) compared to non-physical action ($M=18.34, SD=12.16, t(169)=-2.83, p=.005$). The amount of injury inflicted was positively correlated with depressive symptoms only ($r=.190, p=.013$). Thus, physical force used during the assault, physical action taken by the survivor during the assault, and network disclosure were entered as control variables for PTSD symptoms, and physical force used during the assault and injury inflicted were entered as control variables for depressive symptoms in all subsequent analysis.

Hypothesis 1: Effect of Stigma on Mental Health

Hypothesis 1 predicted that higher levels of perceived self- and public stigma would be directly related to greater PTSD and depressive symptoms. Bivariate Pearson correlation coefficients were computed to examine the uncontrolled relationships, and linear regression analysis was used to examine these relationships controlling for severity of the rape, network disclosure (for PTSD only), actions taken by survivor (for PTSD only), and injury inflicted (for

depression only). Given that the relationships were consistent for both the bivariate and multivariate analyses, the multivariate analysis with control variables are reported here.

PTSD symptoms. Supporting Hypothesis 1, linear regression analysis revealed that self-stigma was related to more reported PTSD symptoms ($\beta=.390, p<.001$), controlling for physical force used during the assault ($\beta=-.180, p=.009$), network disclosure ($\beta=.261, p<.001$), and physical actions taken by victim during the assault ($\beta=.208, p=.003$). The full model accounted for 26% of the total variance on PTSD with self-stigma alone accounting for 15% of the total. Similarly, perceptions of public stigma were also related to higher levels of PTSD symptoms ($\beta=.266, p<.001$), controlling for physical force used during the assault ($\beta=-.208, p=.004$), network disclosure ($\beta=.225, p=.002$), and physical action taken by the victim during the assault ($\beta=.206, p=.005$). The full model accounted for 19% of the total variance on PTSD with public stigma alone accounting for 7% of the total.

Depressive symptoms. Self-stigma was related to higher levels of depressive symptoms ($\beta=.314, p<.001$), controlling for physical force used during the assault ($\beta=.151, p=.061$) and injury from assault ($\beta=.124, p=.122$). The full model accounted for 14.2% of the total variance on depressive symptoms with self-stigma alone accounting for 10% of the total. Finally, public stigma was significantly related to more depressive symptoms ($\beta=.277, p<.001$), controlling for physical force used during the assault ($\beta=.088, p=.282$) and injury from assault ($\beta=.141, p=.085$). The full model accounted for 13% of the total variance on depressive symptoms with public stigma alone accounting for 7% of the total.

In sum, results supported Hypothesis 1 and indicated that both types of stigma were related to greater PTSD and depressive symptoms, over and above physical force used during the

assault, network disclosure, physical actions taken by the survivor during the assault, and the injuries inflicted.

Mediational Analysis of Coping

All mediation analyses confirmed the direct effects of self- and public stigma on PTSD and depressive symptoms as reported for Hypothesis 1 above. Thus, the first criterion of mediation was fulfilled and these analyses are not repeated. All analysis controlled for all variables that were correlated at the bivariate level with the outcome of interest. Figures 1 through 8 displays mediation analyses with all coefficients and standard deviations for significant (solid lines) and non-significant (dashed lines) pathways, including controls.

Hypothesis 2: Approach Coping as a Mediator

Hypothesis 2 predicted that approach coping would mediate the relationship between stigma (self or public) and mental health (PTSD or depressive symptoms), controlling for all relevant variables. As shown in Figures 1 through 4, none of the tested models supported approach coping as a mediator, due in part to a lack of relationship between approach coping and PTSD or depressive symptoms (violation of mediation criteria 3). However, one significant pathway revealed by this analysis was the relationship between higher levels of public stigma and greater use of approach coping.

In sum, results did not support Hypothesis 2. Approach coping did not mediate the relationship between either self- or public stigma and PTSD or depressive symptoms. The only significant finding for approach coping was that greater perceptions of public stigma were associated with greater use of approach coping.

Hypothesis 3: Avoidance Coping as a Mediator

Hypothesis 3 stated that avoidance coping would mediate the relationship between stigma (self or public) and mental health (PTSD or depressive symptoms), controlling for all relevant variables.

PTSD symptoms. Mediation analysis revealed that high levels of self-stigma were related to more avoidance coping ($B=.11, SE=.04, p=.0077$). Avoidance coping, in turn, was associated with greater PTSD symptoms ($B=7.28, SE=1.26, p<.001$). The relationship between self-stigma and PTSD was partially mediated by the addition of avoidance coping into the model ($B=3.24, SE=.66, p<.001$). Bootstrap analysis of 1000 samples found that avoidance coping conveyed a significant indirect effect of public stigma on PTSD symptoms, $B=.79, SE=.34, 95\%$ CI [.16, 1.52]. The results of the full mediation analysis are displayed in Figure 5.

Mediation was also tested for perceptions of public stigma. Results revealed that higher levels of public stigma were associated with higher levels of avoidance coping ($B=.34, SE=.07, p<.001$). Avoidance coping, in turn, was directly related to greater PTSD symptoms ($B=7.66, SE=1.40, p<.001$). The relationship between public stigma and PTSD was fully mediated by the addition of avoidance coping into the model ($B=2.41, SE=1.33, p=.07$). That is, participants who reported higher levels of public stigma also reported greater use of avoidance coping, and also reported greater PTSD symptoms. Bootstrap analysis of 1000 samples confirmed that the avoidance coping mediator conveyed a significant indirect effect of public stigma on PTSD symptoms, $B=2.58, SE=.74, 95\%$ CI [1.29, 4.31]. The results of the full mediation analysis are displayed in Figure 6.

Depressive symptoms. Mediation results revealed that self-stigma ($B=.13, SE=.041, p=.0015$) and public sigma ($B=.34, SE=.071, p<.001$) were significantly related to avoidance

coping (see Figures 7 and 8). However, although avoidance coping was significantly related to depressive symptoms at the bivariate level ($r=.175, p=.021$), once placed in the Hayes mediation model with self- and public stigma as predictors, this relationship became non-significant, and thus, mediation analysis was no longer appropriate (violation of mediation criteria 3).

In sum, avoidance coping was a mediator of the relationship between public stigma and PTSD symptoms, and was a partial mediator of the relationship between self-stigma and PTSD symptoms. However, avoidance coping did not mediate the relationship between either public or self-stigma and depressive symptoms.

Post-hoc Analysis of Stigma and Mental Health

Post-hoc analyses were conducted to determine which form of stigma accounted for more variance in the PTSD and depression measures. Self-stigma and public stigma were entered simultaneously as predictors for PTSD and depressive symptoms in separate linear regression equations with appropriate controls also in the models. For PTSD, results indicated that self-stigma ($\beta=.35, p<.001$) was a significant predictor of PTSD controlling for force used ($\beta=-.19, p=.006$), network disclosure ($\beta=.261, p<.001$), and actions taken by survivor during the assault ($\beta=.21, p=.002$). Public stigma did not predict PTSD symptoms independently ($\beta=.08, p=.30$). A total 27% of the variance was accounted for by this set of variables in PTSD (see Figure 9). For depressive symptoms, findings indicated that public stigma ($\beta=.235, p=.006$), but not self-stigma ($\beta=.15, p=.08$), predicted depressive symptoms, controlling for force used ($\beta=.141, p=.08$) and injury inflicted ($\beta=.106, p=.19$). This relationship accounted for 17% of the total variance (see Figure 10). For both models, tolerance was over .90, indicating that there was no problem with multicollinearity among the two types of stigmas.

Discussion

The present study was the first to empirically test the effects of two forms of stigma on mental health among survivors of rape and to test the indirect effect of coping. This research was conducted in South Africa, a setting in which rape is highly common and too often accepted. As such, it is one of the very few investigations to examine the experiences of trauma and stigma among this hidden population that is in great need but is often difficult to access. Earlier research often used vignettes in experimental studies to examine rape survivors from an outsider's perspective, but did not ask the survivors themselves directly to what degree they view themselves as having a stigmatized identity (Bell, Kuriloff, & Lottes, 1994; Buddie & Miller, 2001; Schwarzer & Weiner, 1991). By using standardized measures and trained interviewers, it provided rigorous evidence on these issues. Furthermore, the current research included women who reported very recent experiences of rape (within the past 6 months), compared to prior studies which have much later and broader time frames ranging from an average of 5.1 years (Zoellner, Goodwin, & Foa, 2000), 10 years (Ullman et al., 2007), 17 years (Frazier et al., 2005), or an unknown amount of time (Frazier et al., 2005; Littleton & Radeki Breitkopf, 2006; Ullman 1996b). These wide time frames are more susceptible to recall bias and are not focused on PTSD and depression as consequences of sexual assault.

In this study, two types of stigma perceptions were conceptualized and measured (public and self-stigma) and two related but distinct indicators of mental health were examined (PTSD and depressive symptoms) in separate models. Two primary forms of coping were also investigated, approach and avoidance coping. As anticipated, self-stigma and public stigma each had significant associations with PTSD and depressive symptoms. Post-hoc analysis revealed that when both forms of stigma were used to predict each mental health outcome, they were

differentially predictive; that is, self-stigma was a stronger predictor of PTSD symptoms and public stigma was a stronger predictor of depressive symptoms. Women who experienced more public stigma were more likely to respond by approach coping, such as making plans and taking action. However, approach coping was not a mediator of the relationship between both forms of stigma and mental health. As predicted, avoidance coping fully mediated the association between public stigma and PTSD symptoms, and partially mediated the relationship between self-stigma and PTSD symptoms. Women who felt targeted by the negative judgments and beliefs of others were more likely to use avoidant strategies in response to the rape and the stigma, which appeared to exacerbate PTSD symptoms, although results were cross sectional with causal inference not possible as discussed further below.

Prevalence of Stigma

How prevalent were reports of stigma in this study? The present study had levels of self-stigma ($M=1.86$) and public stigma ($M=1.62$) comparable to those found in female college undergraduate students ($M=2.84$; Gibson and Leitenberg; 2001), and samples of community women in U.S. studies using similar scales ($M=7.6-7.9$; Ullman et al., 2007). Standard deviations were also comparable. Qualitative data in this study also support the finding that survivors of rape experience stigmatization. When participants were asked an open-ended question about how they felt following the assault, approximately 33% spontaneously reported feeling either self-stigma, public stigma, or both. With regards to self-stigma, participants reported feeling “dirty,” “ashamed,” or “blaming myself.” One participant expressing self-stigma stated that following the rape, “I felt hurt, dirty, worthless. I just wanted to stay inside the water and cry. I was scrubbing myself over and over again.” Similarly, some participants expressed feeling public stigma, for instance one participant stated that some community members, “are no longer talking to me.

They call me with names.” Another reported feeling dehumanized by her community, “I feel like I am no longer a human being in this world because I feel the whole world knows about it.” Participants were also asked how they were treated by their community following the assault. One participant reported that “they treat me like [I’m] dirty, it’s like I am a stranger to them. I really don’t know why and it makes me sick.” This qualitative data gives survivors a voice to speak out about the stigma they have experienced. These examples and the findings from the quantitative analysis further illustrate the pervasive nature of rape stigma in South Africa both by social networks and the victims themselves, and emphasize the powerful effect that stigma can have on a woman’s well-being and life. Forthcoming research from this project will conduct in-depth analysis of these qualitative findings.

By definition, rape is a discrete event that is out of the victim’s control. However, unlike nearly all other crimes (e.g. burglary) or traumas, the burden of responsibility for sexual assault is often placed on the survivor (McCaul, Veltum, Boyechko, & Crawford, 1990). The uncontrollable nature of the circumstances should foster support and sympathy for survivors, yet these findings suggest that both community members and even the stigmatized individuals themselves continued to hold stigmatizing views. Being held responsible for an uncontrollable and undesired assault is a traumatizing additional source of stress for survivors. These results reveal the extremely high cost that stigmatizing views can have on the mental health and functioning of victims. As previously discussed, stigma scholars continue to debate the nature of the connection between concealable stigmas and mental health disorders (Mak et al., 2007). The current data supports this association and brings needed attention to a stigmatized group that has not received as much consideration in stigma literature.

PTSD and Depressive Symptoms among Rape Survivors

The present study examined PTSD and depressive symptoms, two important diagnosable mental health disorders that can have substantial and lasting effects on a woman's quality of life and recovery from the assault (Campbell & Wasco, 1995). In this sample, PTSD and depressive symptoms were moderately correlated, reflecting distinct but related psychological distress outcomes. A total of 24% of women in this sample reported depressive symptoms greater than "minimal" according to the BDI cutoffs. Studies in the U.S. examining depression immediately following sexual assaults have found that it is common and often severe in the first two months (e.g. 44% to 56% 1 month post-assault) but then diminishes to normal levels after that time (Frank & Stewart, 1984; Neville & Heppner, 1999). Studies on the general population in South Africa have found rates of major depressive disorder around 10% for both men and women in a large scale health survey (N=4351) (Stein et al., 2008). Thus, the rates of depressive symptoms in this sample are relatively low compared to samples of assault victims in the U.S. but are more than double estimates for the general population in South Africa.

In comparison, approximately 79% of women in the present sample reported moderate to severe PTSD symptoms according to scale cutoffs. Research conducted in the U.S. on PTSD has found rates ranging from 94% (2 weeks post-assault) to 47% (3 months post-assault) (Rothbaum et al., 1992). Prior research from a representative national study of South Africans (N=2550 females) found that among all the forms of violence they measured (e.g. childhood sexual abuse, physical abuse by an intimate partner) rape had the strongest association with PTSD among the women sampled. Of the 94 women who reported rape, approximately 5% of them reported lifetime PTSD due to rape, which the researchers estimated to be about 0.2% in the general population (Kaminer, Grimsrud, Myer, Stein, & Williams, 2008). Thus, the PTSD rates in the

present sample were comparable to rates found in U.S. samples immediately following the assault, but were substantially higher compared to the general population of South Africa.

The high prevalence of psychological distress in this sample reflects a considerable need for psychiatric services. Unfortunately, there is a significant lack of parity between the high amount of need in these South African communities compared to the low availability of mental health services, particularly for women of low socioeconomic status (Seedat et al., 2004; Christofides et al., 2005). One obstacle to treatment for these women is that some health care providers do not see rape victims as high priority. A study conducted in South Africa among 124 health care workers at 31 hospitals across the country found that a third of health workers in hospitals did not consider rape as a serious medical condition and only a third had received any training on how to provide services to survivors (Christofides et al., 2005). Finally, many of the women attending public clinics are poor and don't have the economic or psychological resources to deal with this trauma in addition to the other traumas and stressors they may have in their lives.

Associations of Stigma with Mental Health

The present study was the first to empirically demonstrate the direct associations between any form of stigma and adverse mental health in a non-US sample and in South Africa. These findings suggest that PTSD and depressive symptoms may be affected by how the survivor views or blames herself (self-stigma) or how she is treated by her community and social network members (public stigma). As such, the results are consistent with recent qualitative analysis conducted with 29 South African women seeking sexual assault services after rape (Abraham & Jewkes, 2010) in which women reported that fear of rape stigma interfered with their adherence to HIV prevention treatment, and that being blamed and not receiving social support led to

greater psychological distress. Prior sexual assault studies on self-blame and negative social reactions have found similar effects of these factors with adverse mental health outcomes (Frazier, 2005; Ullman 1996; Ullman et al., 2007). However, the present study extends previous research by providing a more comprehensive and direct test of the effects of two types of stigmatization using standardized measures of mental health outcomes. Expanding upon prior research, the present study explored self-stigma by including self-blame and also incorporating more general stigmatizing view of the self, such as idea that the survivor sees herself as changed or different as a result of the rape (Janoff-Bulman, 1992). In contrast to previous rape research on social reactions, the current study was able to isolate the specific effects of public stigmatization by examining only social reactions from others that were rooted in the prejudicial beliefs and actions of others—as opposed to other more egocentric motivations (Ullman, 2000).

Notably, post-hoc analyses determined that when the contributions of self- and public stigma to PTSD and depressive symptoms were compared, they were differentially predictive with self-stigma only predicting PTSD symptoms and public stigma only predicting depressive symptoms. These differences in the predictive power of each form of stigma on specific aspects of mental health soon after a sexual assault are new and intriguing findings. Perhaps PTSD, which is likely to occur sooner after an assault, is a more intrapersonal process of cognitions and emotions that is especially sensitive to feeling badly about one's self following an assault, whereas depression is likely to be a slower evolving response to assault and involve feelings of helplessness and loss of hope which may be more sensitive to reactions of others, both positive and negative. That is, depressive symptoms may also be more susceptible to supportive efforts whereas PTSD may require more than just social support.

Association of Approach Coping and Stigma

Using a stress and coping approach to understanding indirect effects of stigma on mental health, the present study tested whether coping mediated the effects of stigma on mental health symptoms following an assault (Miller & Kaiser, 2001; Hatzenbuehler, 2009). In this study, approach coping did not mediate the relationship between stigma and mental health. More specifically, approach coping was not found to be directly related to either PTSD or depressive symptoms and therefore, could not be mediating effects of stigma on mental health. This finding is consistent with some trauma literature, which has had mixed findings regarding this issue (Littleton et al., 2007; Ullman, 1996b). One possible explanation for this result could be that if the rape was very recent and a woman is still experiencing ongoing trauma or violence, she may not have been able yet to utilize approach coping strategies such as taking action to deal with the trauma. Another explanation is that approach strategies are not possible for some women in this setting and sample. In the current sample 19% of women were assaulted on separate occasions by the exact same perpetrator and 55% were assaulted by someone they knew, including husbands and boyfriends with whom they probably still live or see. If the perpetrators were still present in their lives, it would make it difficult for participants to begin to use active coping methods because of fear of the perpetrator. Future research would benefit from examining how ongoing threat, danger, and chronic stress might impact a survivor's coping strategies following the assault. Past research on battered women provides some insight into inability to remove one's self from a violent relationship (Herbert & Dunkel-Schetter, 1992).

Although approach coping was not associated with indicators of mental health, it was significantly associated with higher degrees of public stigma. Thus, individuals who perceived more stigma reactions in their communities were also more likely to report using approach

coping techniques. This finding ran counter to the initial expectation that any form of stigma would be associated with lower approach coping. One possibility is that participants may be angered, frustrated, or saddened by the actual or perceived negative reactions of others, and this may spur them to take action to remedy their situation (Miller & Kaiser, 2001). Alternatively, it is also possible that individuals who are using more approach coping methods may be making their condition more public in the process, which may garner more stigmatizing reactions in their communities. However, longitudinal data would be needed to draw out these distinctions and determine the causal direction of this effect.

Indirect Effects of Avoidance Coping

The use of avoidance coping techniques completely mediated the relationship between public stigma and PTSD symptoms, and partially mediated the relationship between self-stigma and PTSD symptoms. In other words, one reason why women who report greater stigma also report greater PTSD symptoms may be due in part to their withdrawal from others. This finding is consistent with a study of 155 female sexual assault survivors in the U.S. which found that avoidance coping effectively mediated the relationship between negative social reactions and psychological distress (Ullman, 1996b). Along similar lines, a longitudinal study with 171 female sexual assault survivors also found that social withdrawal and problem avoidance effectively mediated the relationship between behavioral self-blame and psychological distress (Frazier et al., 2005). Thus, the findings on avoidance coping in the present study based in South Africa are consistent with findings conducted among survivors of rape in the U.S. which provides greater generalizability of the effects. This study also expands upon prior studies by distinguishing self- and public stigma and examining mental health screeners, as opposed to general scales of psychological distress.

Intuitively, it makes sense that some women may choose to withdraw in order to avoid negative interactions when faced with stigmatizing reactions in the community. Several qualitative reports from the present study support this interpretation. When asked how she was being treated by the community following the rape, one participant reported that the people in her social network were “gossiping, so I decided to stay indoors to avoid them.” Indeed, following the assault, a woman may choose to withdraw, as a way of drawing less negative attention to herself and the incident. Similarly, rape survivors who blame themselves or see themselves as stigmatized individuals may also choose not to talk with others about their condition and risk the possibility of being blamed or stigmatized (Frazier et al., 2005). Experimental research corroborates this interpretation and has found that victims who engage in self-blame are actually perceived to be more at fault (Thorton et al., 1988).

In the mediation model, withdrawal, in turn, was associated with greater PTSD symptoms. Research has demonstrated that coping by avoiding the stressor may have negative psychological consequences because in order to process the assault it may be important to acknowledge the trauma and discuss it with others (Resick & Schnicke, 1993; Roth & Cohen, 1986; Snyder & Pulver, 2001; Wegner, Schneider, Carter, & White, 1987). In this light, it is possible that stigma led women in our sample to withdraw socially, preventing them from cognitively and emotionally processing the event through social interaction, and thus exacerbating their PTSD symptoms.

This indirect association, however, must be interpreted with caution because of the cross-sectional nature of the current study. It is conceivable that survivors who used more avoidance coping strategies or those who were displaying more signs of psychological distress were actually eliciting greater public stigma. Research has demonstrated that both coping strategies

and psychological adjustment influence treatment by community members (Dunkel Schetter, Folkman, & Lazarus, 1987; Silver, Wortman, & Crofton, 1990; Winkel & Koppelaar, 1991). For example, if survivors cope poorly or demonstrate signs of psychological distress that are perceived as upsetting or threatening to social network members, it may lead them to avoid the survivor or treat them negatively (Ullman, 1999).

Approach and avoidance coping were positively correlated in this sample indicating that survivors were using both sets of strategies. Prior research has also found that survivors may use any number of different coping strategies, either in tandem or switching back and forth depending on the situational demands of the stressor or the resources they have available during the recovery process (Campbell et al., 2009). Coping strategies vary in their adaptiveness depending on the point in time when they are used following the assault (Ullman, 1996b). In this study, participants reported actively attempting to deal with the stigma and stress of the assault by taking action but also coping by withdrawing from others. This pattern of coping could indicate that the women themselves were not sure what to do and may have been trying different techniques. Prior research has found that when survivors use more coping strategies, it is indicative that they are not yet recovered because they are still trying to actively cope with the trauma (Burt & Katz, 1987).

Sexual Assault in South Africa

In some ways, these findings are remarkable mainly because of the context of the investigation. Investigating sexual assault in South African in these communities is both very difficult to do and at the same time, critical to study. For these reasons, the findings are almost uninterpretable without considering the specific context in which these women experienced rape and stigmatization which is quite different from the U.S. where most observational studies like

this have been done. Many women in this sample experienced very violent assaults with 54% involving major physical violence and 12% resulting in serious injury. Qualitative data from this sample provides deeper insight into the actual experiences of women who report stigma. For example, one participant reported a gang rape, “They were three. I was coming from a nearby shop when the incident happened...They took me by force and went to the nearby house, where there’s no one inside and teared my clothes. They started assaulting me sexually one-by-one...” Another participant reported rape by a partner, “He was the father of my child. He came and asked me to go with him to his house to collect food for our baby. We went there... he told me to undress. I refused and that’s when he started assaulting me physically and sexually for 3 days.” Indeed, it is also essential to consider this trauma in light of other struggles and traumas these women may be facing. For example, HIV is often linked to rape victims because of the higher rate of seroconversion caused by the physical trauma and tearing that occurs during sexual assault (Gostin et al., 1994). This link may create additional stigma for these victims, as illustrated by one participant who stated that community members “don’t treat me well because they think I have HIV.” These quotes were chosen from many similar stories of violence and dramatically highlight the social context of the present findings.

Limitations

A few limitations to this research should be addressed. Chief among them is that the present study was cross-sectional in nature which makes it difficult to disentangle the causal directions between stigma, coping, and mental health. In order to address this issue, data from the larger parent study, *Project Hope*, will be used to conduct longitudinal analysis to examine how these factors change and affect women over a 12-month follow-up period. Second, given ethical and logistical concerns regarding the length and content of the questionnaire, additional

details in measures regarding stigma were not included such as items to differentiate between the various forms of stigmatization, such as feelings of self-stigma, self-blame, blame from others, and anticipated and experienced stigma in the community. Future studies can also explore how participants were actually treated by different members of their community (e.g. neighbors, police officers, medical professionals, etc.).

Third, the public stigma measure had a lower alpha compared to the self-stigma measure. One reason for this lower alpha could be because public stigma covers a wider range of stigmatizing reactions including anticipated stigma, experienced stigma, and community blame. Given this broader spectrum, it is possible that a woman could be concerned about stigmatizing reactions (anticipated stigma) but not experience any actual stigma in the community. Fourth, the coping measures in the study were originally developed for Western populations. Thus, it is unlikely that these scales were able to fully capture how low income women in South Africa cope under these stressful circumstances. Although neither of the coping strategies measured in this study led to more favorable outcomes in the time immediately following rape on average less than 2 months ago, it is worthwhile to continue investigating other coping mechanisms, such as religious coping or support seeking. Until coping scales are further validated for use in this language and this population, we cannot be sure that there aren't other forms of coping that are effective in the period immediately post-rape. Both stigma and coping strategies are modifiable factors—as opposed to characteristics of the person or assault that cannot be changed—and knowledge regarding the relation of these teachable factors and recovery can suggest specific intervention strategies (Frazier et al., 2005).

Given the wide range of outcomes among survivors, focusing only on clinical diagnoses creates too narrow a focus (Neville & Heppner, 1999). Assessing psychological disorders is

useful for determining next steps in clinical treatment, but this diagnosis may have little consequence for women who are still trapped in ongoing violent relationships (Koss et al., 2003). Practical measures to ensure women's immediate safety and well-being would be essential for creating an environment for treatment. Future research should also examine the effect of stigma on other mental health phenomena (e.g. anxiety), other aspects of a survivor's recovery such as the effect on specific types of social relationships (e.g. partners, family members, etc.), changes in identity formation, physical health effects, treatment outcomes, and even legal outcomes. It would also be important to determine the role that stigma might play in risky health behaviors. For instance, some research in South Africa has suggested that a history of sexual assault is associated with greater use of injection drug use, alcohol consumption, lower rates of protected sex, and more exchanged sex to meet survival needs (Kalichman & Simbayi, 2004). The consequences of rape and stigma can be very far reaching and severe, as illustrated by one participant who stated that, "I was evicted from the village because I opened a case against the perpetrator."

Conclusions

The present study was the first empirical study to examine how women in South Africa react to the stigma they face in the immediate time following a traumatizing sexual assault. Compared to the majority of sexual assault studies in the US, the current study included women of low socioeconomic status, which may allow for greater generalizability to a wider range of women and to other resource-poor countries with high rates of violence or oppression. The findings illustrate the importance of examining the fine details of post-assault social and psychological context, specifically the possible detrimental impacts of both self- and public stigma on victims of rape. In the current study, none of the demographic variables and only a few

of the assault-related variables (severity of assault, network disclosure, physical actions taken by survivor during the assault, and injuries inflicted) were significantly related to PTSD or depressive symptoms. In line with some prior research, analysis revealed that self- and public stigma remained strongly linked to mental health after controlling for typical demographic and assault-related factors (see Ullman et al., 2007). These findings emerged despite the fact that these stigma measures were newly developed and novel in the South African context and were therefore subject to potential translation error or misunderstanding and weaker internal consistency. The results indicate that a woman's treatment, social experiences, and psychological state following the rape may have as great an impact on her recovery as pre-rape risk factors or the severity of the rape itself. In order to provide the most effective care, it is essential that both researchers and practitioners have an understanding these factors which may hinder the post-assault recovery process.

However, this research is just a snapshot of where women may be when they begin the process of recovery, not where they may eventually end up. It also raises several important questions such as: following an assault, what are the ways a woman can react that would result in the least stigma, minimal mental health problems, and the best recovery? How do communities expect women to deal with the trauma and subsequent stigmatization? What are the ways a survivor can cope that would be acceptable to both the community and to the woman herself? Answers to these questions are essential for clinical and community interventions with assault survivors. But before such interventions can be developed and implemented, it is necessary to have a clear understanding of the frequencies and correlates of stigmatizing reactions, how these reactions affect the individual, and to clarify at which point in the psychological aftermath would be the most effective and appropriate to intervene. The present study is one step toward

understanding these factors and has important implications for the survivor, their social support networks, their communities, and for policy development.

Footnotes

¹Note that the terms “rape” and “sexual assault” are used interchangeably throughout the text, given that most sexual violence literature covers both types of assault.

Table 1.

Demographic characteristics of survivors of rape in Limpopo and the Northwest Province, South Africa (N=173).

	Percentage	N
Ethnicity		
Tswana	53.5%	92
Venda	32.6%	56
Other	13.9%	24
Marital status		
Never married	87.2%	150
Married	8.1%	14
Separated/divorced/widowed	4.6%	8
Relationship status		
Have one partner they see regularly	69.2%	119
Have not had a relationship in the past 3 months	22.1%	38
Date more than one person	7%	12
Date occasionally	1.7%	3
Education		
None	2.9%	5
Less than high school	55.2%	95
High school graduate	31.4%	54
University degree or higher	10.5%	18
Employment		
No	63.3%	110
Yes	17.8%	31
Student	19%	33
Number of children		
0	43.5%	74
1	27.1%	46
2	20.6%	35
3+	8.9%	15
Monthly personal income (in South African Rand)		
0-500 ZAR (\$0-61)	62.7%	96
501-900 ZAR (\$62-111)	17.6%	27
901-2999 ZAR (\$112-370)	14.4%	22
\$3000+ ZAR (\$371+)	5.3%	8

Table 2.

Characteristics of the assault for survivors of rape (N=173).

	Percent	N
Time since the rape		
Immediate - 1 week	13.3%	20
2 weeks – 1 month	22.7%	34
2 months	34.0%	51
3 months	19.3%	29
4 – 6 months	10.7%	16
Perpetrator		
Stranger	45%	77
Spouse or partner	7.1%	12
Relative or parent	2.9%	5
Other known person (e.g. friend, acquaintance)	45.3%	78
Number of times raped during the assault		
One time	51.3%	77
More than once	48.7%	68
Location of assault		
In a public place	29.6%	50
At the perpetrator's home	26%	44
On an empty street/in the bush	21.3%	36
At your home	18.9%	32
Other (e.g. at their place of work)	4.1%	7
Amount of force used during the assault		
None	24.9%	43
Verbal threats or used strength to hold down	20.8%	36
Hit, slapped, choked, or threatened/used a weapon	54.3%	94
Actions taken by the survivor during the assault		
Nothing	18.6%	32
Nonverbal (turned cold or cried)	18.6%	32
Verbal (reasoned, pleaded, screamed, or prayed)	31.4%	54
Physical (ran away or fought back)	32.6%	56
Injuries from the assault		
No injuries	45.6%	78
Minor injuries	42.7%	73
Major injuries	11.7%	20
Number of times raped in lifetime		
One time	89.9%	138
More than once	9.8%	15
Depressive symptoms		
Minimal: 0-13	75.6%	131
Mild: 14-19	8.7%	15
Moderate: 20-28	8.1%	14

PTSD symptoms		
Severe: 29-63	7.6%	13
No rating: 0	5.8%	10
Mild: 1-10	15.7%	27
Moderate: 11-20	27.3%	47
Moderate to severe: 21-35	41.9%	73
Severe: >36	9.3%	16

Table 3.

Means and Standard Deviation for Stigma Variables.

Self-Stigma	Mean	SD
1. How much do you think you are different from other women because of this experience.	1.90	1.225
2. How much do you feel that you were personally to blame for what happened.	1.82	1.152
Public Stigma	Mean	SD
4. How concerned are you about people not respecting you as much if they were to find out what happened.	1.91	1.223
5. How much do you think others will blame you for what happened.	1.86	1.055
6. Acted as if you were damaged or somehow different now.	1.38	.844
7. Avoided talking to you or spending time with you.	1.51	.980
8. Told that you that you could have done more to prevent this experience from occurring.	1.62	1.088
9. Made rude, insensitive or inappropriate remarks about your experience.	1.46	.979

Table 4.

Means, standard deviations, range and coefficient alphas for psychosocial measures.

Measure	M	SD	Actual range	α
Self-stigma	1.86	1.10	1-5	.839
Public stigma	1.62	.61	1-3.67	.620
Approach coping	2.12	.66	1-4	.79
Avoidance coping	1.99	.59	1-3.29	.713
PTSD symptoms	20.1	11.41	0-44	.915
Depressive symptoms	8.84	9.80	0-42	.923

Table 5.

Pearson correlation coefficient matrix for all variables of interest.

	1	2	3	4	5	6	7	8	9
1. Self-stigma									
2. Public stigma	.523**								
3. Approach coping	.114	.300**							
4. Avoidance coping	.208**	.332**	.718**						
5. PTSD symptoms	.321**	.192*	.163*	.428**					
6. Depressive symptoms	.339**	.135*	.086	.175*	.197**				
7. Physical force used	.027	.132+	.022	.017	-.191*	.212**			
8. Network disclosure	.155*	-.083	-.040	.037	.218**	-.139	.018		
9. Victim fight back during assault	-.092	-.126	-.041	-.012	.213*	-.127	-.147	.070	
10. Injury inflicted	-.011	.144	.089	.030	-.017	.191*	.451**	.122	-.004

Note: * $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed)

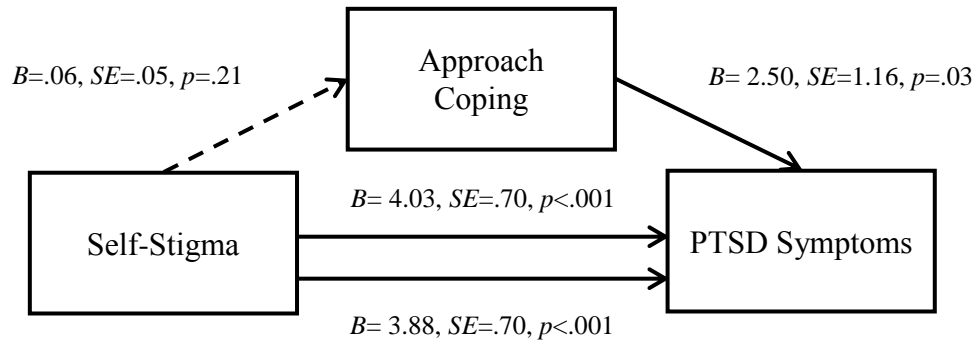


Figure 1. Approach coping as a mediator between self-stigma and PTSD symptoms, controlling for physical force used during the assault, physical action taken by the survivor during the assault, and network disclosure.

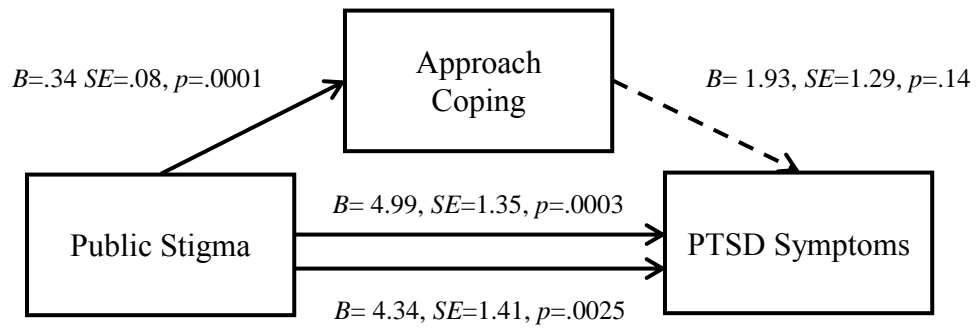


Figure 2. Approach coping as a mediator between public stigma and PTSD symptoms, controlling for physical force used during the assault, physical action taken by the survivor during the assault, and network disclosure.

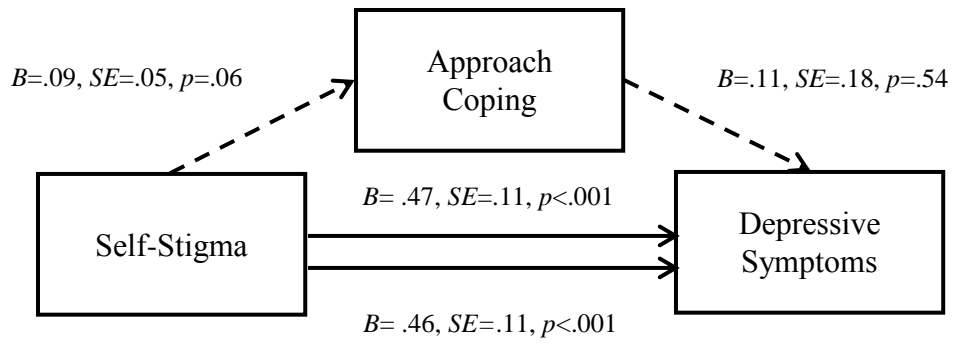


Figure 3. Approach coping as a mediator between self-stigma and depressive symptoms, controlling for physical force used during the assault and injury inflicted.

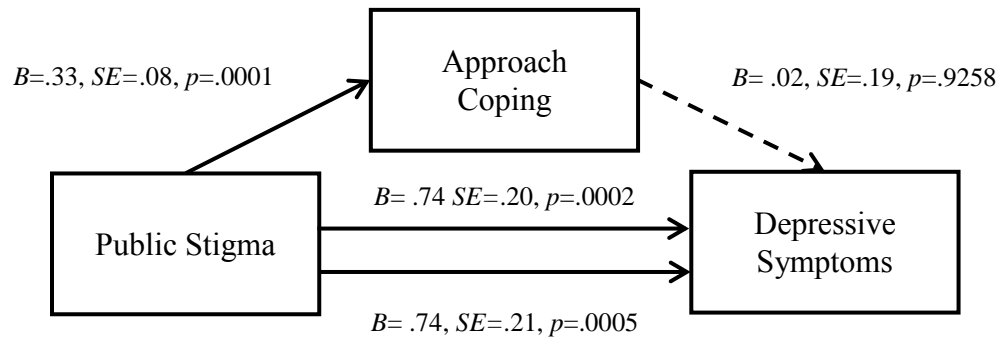


Figure 4. Approach coping as a mediator between public stigma and depressive symptoms, controlling for physical force used during the assault and injury inflicted.

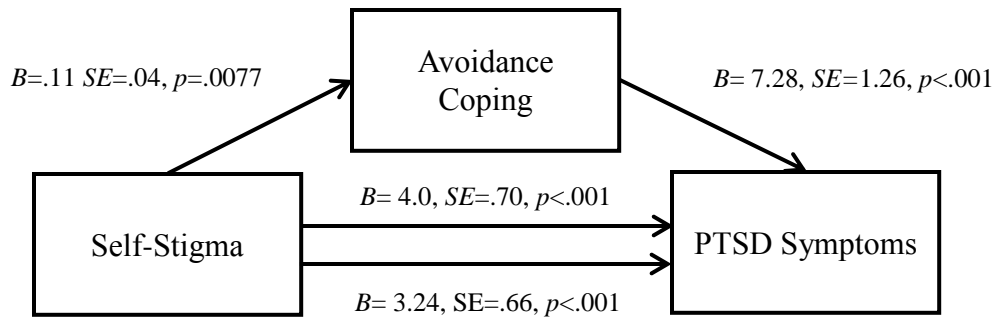


Figure 5. Avoidance coping as a mediator between self-stigma and PTSD symptoms, controlling for physical force used during the assault, physical action taken by the survivor during the assault, and network disclosure.

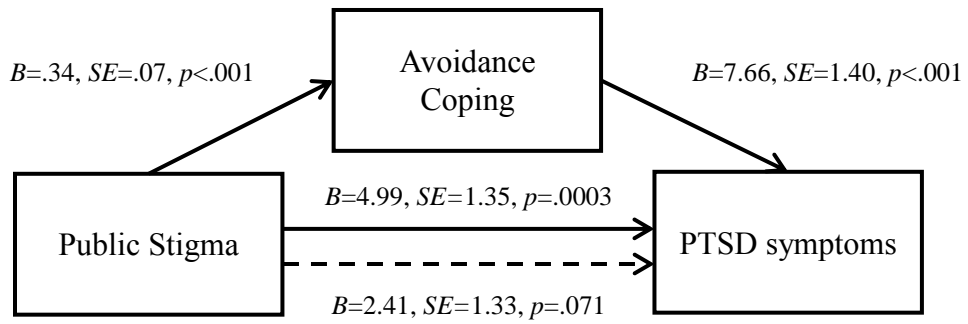


Figure 6. Avoidance coping as a mediator between public stigma and PTSD symptoms, controlling for physical force used during the assault, physical action taken by the survivor during the assault, and network disclosure.

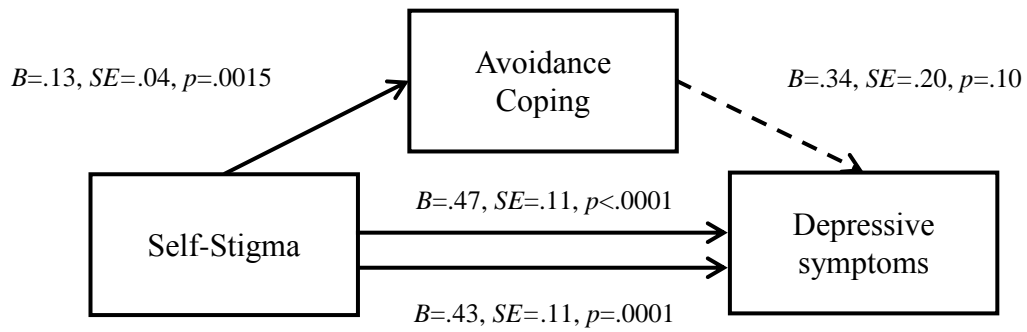


Figure 7. Avoidance coping as a mediator between self-stigma and depressive symptoms, controlling for physical force used during the assault and injury inflicted.

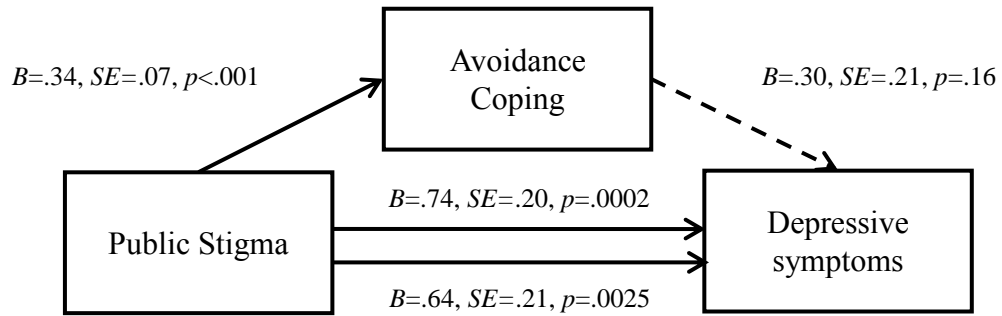


Figure 8. Avoidance coping as a mediator between public stigma and depressive symptoms, controlling for physical force used during the assault and injury inflicted.

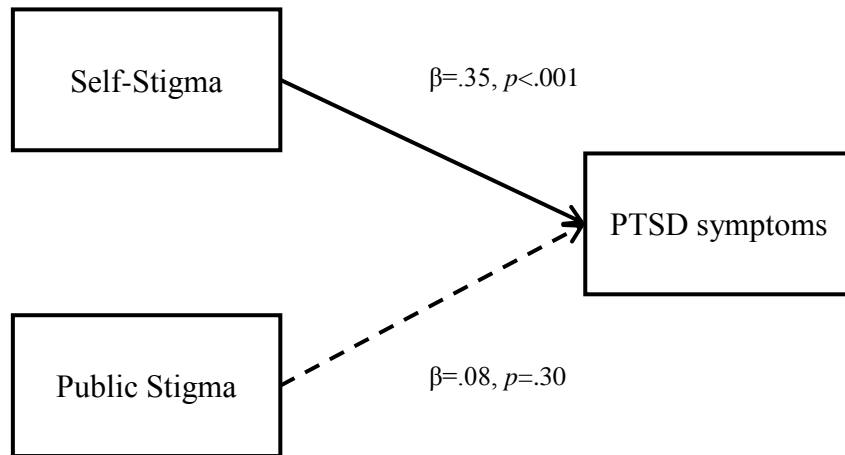


Figure 9. Linear regression predicting PTSD symptoms from self- and public stigma, controlling for physical force used during the assault, physical action taken by the survivor during the assault, and network disclosure.

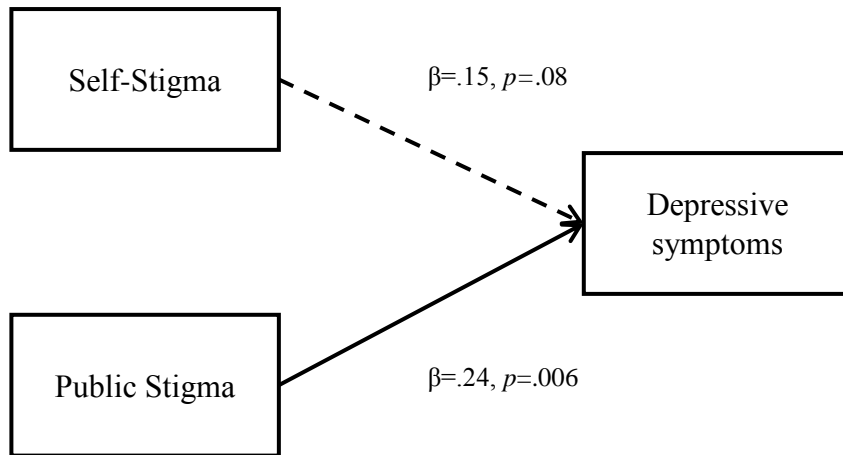


Figure 10. Linear regression predicting depressive symptoms from self- and public stigma, controlling for physical force used during the assault and injury inflicted.

Appendix

List of all relevant measures

Demographics:

1. How old are you? _____
2. Which province do you current live in?
 1. Northwest Province
 2. KwaZulu-Natal
 3. Western Cape
 4. Limpopo (Venda)
 5. Other: _____
3. How do you describe your ethnicity?
 1. Zulu
 2. Venda
 3. Tsonga
 4. Tswana
 5. Other (specify): _____
4. What is your current marital status?
 0. Never married
 1. Married, living with husband
 2. Married, but not living with husband
 3. Separated
 4. Divorced
 5. Widowed
5. What is your relationship status?
 0. You have not had a relationship in the past 3 months
 1. You live with one partner
 2. You see/date one person regularly
 3. You see, date more than one person regularly
 4. You date occasionally
6. What is your highest level of education?
 0. None
 1. Less than matric
 2. Matric
 3. University degree
 4. Diploma
 5. Other (specify): _____

7. What is your working status?
0. Unemployed
 1. Unable to work
 2. Retired
 3. Homemaker
 4. In school
 5. Working part time
 6. Working full time
 7. Other (specify): _____

8. How many children do you have? _____

9. Which of the following best describes your total monthly personal income?
0. R0 - R500
 1. R500 - R900
 2. R1000 - R2999
 3. R3000 - R5999
 4. R6000 - R8999
 5. R9000+

Assault-Related Descriptions:

I would like to talk to you about the rape incident that brought you to the clinic. Rape is defined as a penis (or object or finger) that forcibly entered your mouth, vagina, or rectum or bottom against your will.

10. Please describe the rape incident that brought you to the clinic. *[open ended]*

11. Do the people in your community treat you differently since you have been raped? How so?
[open ended]

12. How did you feel after the rape? *[open ended]*

13. How long ago has it been since you were raped? *(circle and fill in the amount of time)*

1. Hours _____ 2. Days _____ 3. Weeks _____

4. Months _____ 5. Years _____

14. Was there more than one person involved?

0. No
1. Yes

15. What was the gender of the person(s) involved?

1. Male
2. Female
3. Both

16. Was at least one of those persons? (*Circle all that apply*)

1. A parent
2. A relative
3. Someone else known to you
4. A stranger
5. Husband/partner

Interviewer note: If more than one person was involved, ask the following questions for the oldest person who abused them.

17. How many times has this person raped you before? _____

18. How well did you know the person who raped you?

1. I did not know him at all
2. I knew him to some extent
3. I knew him very well

19. Where did the rape take place?

1. In a public place (e.g. bar, tavern, school, wine shop, concert, in the bush)
2. On an empty street/secluded alley
3. At your home
4. At the perpetrator's home
5. At another location (specify) _____

20. What kind of physical force was used on you? (*Circle all that apply*)

1. No physical force
2. Verbal threats
3. Used their strength by twisting your arm or holding you down to make it hard for you to move
4. Hit, slapped, choked or beaten you
5. Threatened to use or used a weapon

21. How much were you hurt from the incident?

1. I was not hurt
2. Minor injury (bruises)
3. Major injury (bleeding, head trauma, choking until I passed out)

22. How many times were you raped during the assault? _____

23. What did you do during the assault? (*Circle all that apply*)
1. Nonverbal (you turned cold or cried)
 2. Verbal (you reasoned, pleaded, screamed for help, or prayed)
 3. Physical (ran away or fought back)
 4. Nothing
 5. Other (specify): _____
24. As a result of the rape, did you become... (*Circle all that apply*)
1. Pregnant
 2. Infected with HIV
 3. Infected with another sexually transmitted infection or disease
25. Do you know (approximately) how many people you told all together about the rape? (best guess if not sure) _____
26. How many times have you been raped in your lifetime? _____

Perceptions of Stigma:

The following questions ask about how you see yourself and how concerned you are about the opinions of others in your community.

	Not at all (1)	A little (2)	Somewhat (3)	Very much (4)	All the time (5)
27. How concerned are you about people not respecting you as much if they were to find out what happened?					
28. How much do you think others will blame you for what happened?					
29. How embarrassed are you about telling people what happened?					
30. How much do you think you are different from other women because of this experience?					
31. How much do you feel that you were personally to blame for what happened?					
32. Acted as if you were damaged or somehow different now					
33. Avoided talking to you or spending time with you					
34. Told you that you could have					

done more to prevent this experience from occurring					
35. Made rude, insensitive or inappropriate remarks about your experience					

Coping:

We'll now talk about the ways you might have felt or behaved after the rape.

	I haven't been doing this at all (1)	I've been doing this once in a while (2)	I've been doing this some of the time (3)	I've been doing this a lot (4)
Approach Coping				
36. I've been taking action to make the situation better.				
37. I've been concentrating my efforts on doing something about the situation I'm in.				
38. I've been trying to come up with a strategy about what to do.				
39. I've been thinking hard about what steps to take.				
40. I've been accepting the reality of the fact that it has happened.				
41. I've been learning to live with it.				
Avoidance coping				
42. I've been doing something to think about it less, such as going to movies, watching TV, reacting, daydreaming, sleeping or shopping				
43. I've been turning my mind to work or other activities to take my mind off things.				
44. I've been trying to deal with it.				
45. I've been giving up the attempt to cope.				
46. I've been refusing to believe that it has happened.				
47. I've been saying to myself that "this isn't real"				

PTSD Symptoms:

This next section deals with experiences that have bothered or upset you in your lifetime.

<i>In the past month...</i>	Not at all or only one time (1)	Once a week or less / once in a while (2)	2 to 4 times a week / half the week (3)	5 or more times a week / almost always (4)	N/A
48. Did you have upsetting thoughts or images of the traumatic event that came into your mind when you didn't want them to?					
49. Did you have bad dreams or nightmares about the traumatic event?					
50. Did you relive the traumatic event, acting or feeling as if it was happening again?					
51. Did you feel emotionally upset when you were reminded of the traumatic event (for example, feeling scared, angry, sad, guilty, etc.)?					
52. Did you experience physical reactions when you were reminded of the traumatic event (for example, breaking out into a sweat, heart beating fast)?					
53. Did you try not to think about, talk about, or have feelings about the traumatic event?					
54. Did you try to avoid activities, people or places that remind you of the traumatic event?					
55. Were you not able to remember an important part of the traumatic event?					
56. How often have you had much less interest or participated much less often in important activities?					
57. How often have you felt					

distant or cut off from people around you?					
58. How often have you felt emotionally numb, for example, being unable to cry or unable to have loving feelings?					
59. How often have you felt as if your future plans or hopes will not come true, for example, you will not have a career, marriage, children or long life?					
60. How often have you had trouble falling or staying asleep?					
61. How often have you felt irritable or had fits of anger?					
62. How often have you had trouble concentrating, for example, drifting in and out of conversations, lose track of a story on the television, forgetting what you read?					
63. How often have you felt overly alert, for example, checking to see who is around you, being uncomfortable with your back to a door, etc.?					
64. How often have you been jumpy or easily startled, for example, when someone walks up behind you?					

Depressive Symptoms:

*This questionnaire consists of 21 groups of statements. Please listen to each group of statements carefully, and then pick out the **one statement** in each group that best describes the way you have been feeling during the **past two weeks, including today**. If several statements in the group seem to apply equally well, chose the one that fits the closest. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).*

65. Sadness

0. I do not feel sad
1. I feel sad much of the time
2. I am sad all of the time
3. I am so sad or unhappy that I can't stand it

66. Pessimism (negative thoughts)

0. I am not discouraged about my future
1. I feel more discouraged about my future than I used to be
2. I do not expect things to work out for me
3. I feel my future is hopeless and will only get worse

67. Past failure

0. I do not feel like a failure
1. I have failed more than I should have
2. As I look back, I see a lot of failures
3. I feel I am a total failure as a person

68. Loss of pleasure

0. I get as much pleasure as I ever did from the things I enjoy
1. I don't enjoy things as much as I used to
2. I get very little pleasure from the things I used to enjoy
3. I can't get any pleasure from the things I used to enjoy

69. Guilty feelings

0. I don't feel particularly guilty
1. I feel guilty over many things I have done or should have done
2. I feel guilty most of the time
3. I feel guilty all of the time

70. Punishment feelings

0. I don't feel I am being punished
1. I feel I may be punished
2. I expect to be punished
3. I feel I am being punished

71. Not liking yourself

0. I feel the same about myself as ever
1. I have lost confidence in myself
2. I am disappointed in myself
3. I do not like myself

72. Self-criticalness

0. I don't criticize or blame myself more than usual
1. I am more critical of myself than I used to be
2. I criticize myself for all my faults
3. I blame myself for everything bad that happens

73. Suicidal thoughts or wishes

0. I don't have any thoughts of killing myself
1. I have thought of killing myself, but I would not carry them out
2. I would like to kill myself
3. I would like to kill myself if I had the chance

(Note to Interviewer: Fill out referral form for the psychologist in the center if the participant answers 2 or 3)

74. Crying

0. I don't cry any more than I used to
1. I cry more than I used to
2. I cry over every little thing
3. I feel like crying, but I can't

75. Agitation

0. I am no more restless or wound up than usual
1. I feel more restless or wound up than usual
2. I am so restless or agitated that it's hard to stay still
3. I am so restless or agitated that I have to keep moving or doing something

76. Loss of interest

0. I have not lost interest in other people or activities
1. I am less interested in other people or things than before
2. I have lost most of my interest in other people or things
3. It's hard to get interested in anything

77. Having a hard time making decisions

0. I make decisions about as well as ever
1. I find it more difficult to make decisions than usual
2. I have much greater difficulty in making decisions than I used to
3. I have trouble making any decisions

78. Not feeling like I am worth anything
0. I do not feel that I am worthless
 1. I don't consider myself as worthwhile and useful as I used to
 2. I feel more worthless compared to other people
 3. I feel utterly worthless
79. Loss of energy
0. I have as much energy as ever
 1. I have less energy than I used to have
 2. I don't have enough energy to do very much
 3. I don't have enough energy to do anything
80. Changes in sleeping patterns
0. I have not experienced any change in my sleeping pattern
 - 1a. I sleep somewhat more often than usual
 - 1b. I sleep somewhat less than usual
 - 2a. I sleep a lot more than usual
 - 2b. I sleep a lot less than usual
 - 3a. I sleep most of the day
 - 3b. I wake up 1-2 hours early and can't get back to sleep
81. Irritability or being easily annoyed
0. I am no more irritable than usual
 1. I am more irritable than usual
 2. I am much more irritable than usual
 3. I am irritable all the time
82. Changes in appetite
0. I have not experienced any changes in my appetite
 - 1a. My appetite is somewhat less than usual
 - 1b. My appetite is somewhat greater than usual
 - 2a. My appetite is much less than before
 - 2b. My appetite is much greater than usual
 - 3a. I have no appetite at all
 - 3b. I crave food all the time
83. Concentration difficulty
0. I can concentrate as well as ever
 1. I can't concentrate as well as usual
 2. It's hard for me to keep my mind on anything for very long
 3. I find I can't concentrate on anything
84. Tiredness or fatigue
0. I am no more tired or fatigued than usual
 1. I get more tired or fatigued more easily than usual
 2. I am too tired or fatigued to do a lot of things I used to do

85. Loss of interest in sex

0. I have not noticed any recent change in my interest in sex

1. I am less interested in sex than I used to be

2. I am much less interested in sex now

3. I have lost interest in sex completely

References

- Abrahams N. & Jewkes R. K. (2010). Barriers to post exposure prophylaxis (PEP) completion after rape: A South African qualitative study. *Culture, Health & Sexuality: An International Journal for Research, Intervention and Care*, 12(5), 471-484.
- Allison, J. A., & Wrightsman, L. S. (1993). *Rape: The Misunderstood Crime*. Thousand Oaks, CA, US: Sage Publications, Inc.
- Angelou, M. (1997). *Even the Stars Look Lonesome*. New York, NY: Random House.
- Arata, C. M. (1999). Coping with rape: The roles of prior sexual abuse and attributions of blame. *Journal of Interpersonal Violence*, 14, 62–78.
- Arata, C. M. & Burkhart, B. R. (1998). Coping appraisals and adjustment to nonstranger sexual assault. *Violence Against Women*, 4, 224-239.
- Atkeson, B. M., Calhoun, K. S., Resick, P. A., & Ellis, E. M. (1982). Victims of rape: Repeated assessment of depressive symptoms. *Journal of Consulting and Clinical Psychology*, 50(1), 96-102.
- Beck, A., Steer, R., & Brown, G. (1996). *Beck Depression Inventory-II (BDI-II)*. San Antonio, TX: Psychological Corporation.
- Bell, S. T., Kuriloff, P. J., & Lottes, I. (1994). Understanding attributions of blame in stranger rape and date rape situations: An examination of gender, race, identification, and students' social perceptions of rape victims. *Journal of Applied Social Psychology*, 24(19), 1719-1734.
- Berger, R., Searles, P., & Neuman, W. (1988). The dimensions of rape reform legislation. *Law & Society Review*, 22, 329.

- Boesch, L. E., Koss, M. P., Figueredo, A. J., & Coan, J. A. (2001). Experiential avoidance and post-traumatic stress disorder: A cognitive mediational model of rape recovery. *Journal of Aggression, Maltreatment & Trauma, 4*(2), 211-245.
- Breslau, N., Chilcoat, H. D., Kessler, R. C., & Davis, G. C. (1999). Previous exposure to trauma and PTSD effects of subsequent trauma: Results from the Detroit Area Survey of Trauma. *The American Journal of Psychiatry, 156*(6), 902-907.
- Breslau, N., Davis, G. C., Andreski, P., & Peterson, E. (1991). Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry, 48*(3), 216-222.
- Brown, G. W. (1993). Life events and affective disorder: Replications and limitations. *Psychosomatic Medicine, 55*(3), 248-259.
- Buddie, A. M. & Miller, A. G. (2001). Beyond rape myths: A more complex view of perceptions of rape victims. *Sex Roles, 45*(3/4), 139-160.
- Burgess, A., & Holmstrom, L. (1979). Adaptive strategies and recovery from rape. *American Journal of Psychiatry, 136*(10), 1278.
- Burt, M. R. (1980). Cultural myths and supports for rape. *Journal of Personality and Social Psychology, 38*(2), 217-230.
- Burt, M. R., & Katz, B. L. (1988). Coping strategies and recovery from rape. *Annals of the New York Academy of Sciences, 528*, 345-358.
- Campbell, R., Dworkin, E., & Cabral, G. (2009). An ecological model of the impact of sexual assault on women's mental health. *Trauma, Violence, & Abuse. Special Issue: Violence and Women's Mental Health: The Pain Unequalled: A Two Part Special Issue, 10*(3), 225-246.

- Campbell, R. & Wasco, S. M. (2005). Understanding rape and sexual assault: 20 years of progress and future directions. *Journal of Interpersonal Violence, 20*, 127-131.
- Carver, C. (1997). You want to Measure Coping But Your Protocol s Too Long: Consider the Brief COPE. *International Journal of Behavioral Medicine, 4*(1), 92-100.
- Christofides, N. J., Jewkes, R. K., Webster, N., Penn-Kekana, L., Abrahams, N., & Martin, L. J. (2005). 'Other patients are really in need of medical attention': The quality of health services for rape survivors in South Africa. *Bulletin of World Health Organisation, 83*(7), 495–502.
- CIET Africa. (2000). *Beyond Victims and Villains. The Culture of Sexual Violence in South Johannesburg*. Johannesburg: CIET Africa.
- Coffey, P., Leitenberg, H., Henning, K., Turner, T., & Bennett, R. T. (1996). The relation between methods of coping during adulthood with a history of childhood sexual abuse and current psychological adjustment. *Journal of Consulting and Clinical Psychology, 64*(5), 1090-1093.
- Cohen, L. J. & Roth, S. (1987). The psychological aftermath of rape: Long-term effects and individual differences in recovery. *Journal of Social and Clinical Psychology, 5*(4), 525-534.
- Compas, B., Connor-Smith, J., Saltzman, H., Thomsen, A., & Wadsworth, M. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127*(1), 87-127.
- Corrigan, P. W. & Watson, A. C. (2002). The paradox of self-stigma and mental illness. *Clinical Psychological Science Practices, 9*, 35-53.

- Crocker, J. (1999). Social stigma and self-esteem: Situational construction of self-worth. *Journal of Experimental Social Psychology*, 35(1), 89-107.
- Crocker, J., & Major, B. (1989). Social stigma and self-esteem: The self-protective properties of stigma. *Psychological Review*, 96(4), 608-630.
- Crocker, J., Major, B., & Steele, C. (1998). Social stigma. In D.T. Gilbert, S. T. Fiske, & L. Gardner (Eds.), *The Handbook of Social Psychology*, (4th ed.) New York, NY: McGraw-Hill.
- Dawes, A. (1990). The effect of political violence on children a consideration of South African and related studies. *International Journal of Psychology*. 25(1), 13-31.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology*, 56(1), 5-18.
- Dohrenwend, B. P. (2000). The role of adversity and stress in psychopathology: Some evidence and its implications for theory and research. *Journal of Health and Social Behavior*, 41(1), 1-19.
- Dunkel-Schetter, C., Folkman, S., & Lazarus, R. S. (1987). Correlates of social support receipt. *Journal of Personality and Social Psychology*, 53(1), 71-80.
- Estrich, S. (1987). *Real Rape*. Harvard Univ Press.
- Farmer, P., Connors, M., & Simmons, J. (1996). *Women, Poverty and AIDS: Sex, Drugs and Structural Violence*. Monroe: Common Courage Press.
- Filipas, H. H., & Ullman, S. E. (2006). Child Sexual Abuse, Coping Responses, Self-Blame, Posttraumatic Stress Disorder, and Adult Sexual Revictimization. *Journal of Interpersonal Violence*, 21(5), 652-672.

- Foa, E. B. (1995). *The Posttraumatic Diagnostic Scale (PDS) Manual*. Minneapolis, MN: National Computer Systems.
- Foa, E. B., Cashman, L., Jaycox, L. H., & Perry, K. (1997). The validation of a self-report measure of PTSD: The PTSD Diagnostic Scale (PDS). *Psychological Assessment, 9*, 445-451.
- Frank, E., & Stewart, B. D. (1984). Depressive symptoms in rape victims: A revisit. *Journal of Affective Disorders, 7*(1), 77-85.
- Frank, E., Turner, S. M., & Duffy, B. (1979). Depressive symptoms in rape victims. *Journal of Affective Disorders, 1*, 269-277.
- Frazier, P. A. (1990). Victim attributions and post-rape trauma. *Journal of Personality and Social Psychology, 59*(2), 298-304.
- Frazier, P. A., & Burnett, J. W. (1994). Immediate coping strategies among rape victims. *Journal of Counseling & Development, 72*(6), 633-639.
- Frazier, P., Klein, C., & Seales, L. (1996). A longitudinal study of causal attributions, perceived control, coping strategies, and post-rape symptoms. *Unpublished manuscript*.
- Frazier, P. A., Mortensen, H., & Stewart, J. (2005). Coping Strategies as Mediators of the Relations Among Perceived Control and Distress in Sexual Assault Survivors. *Journal of Counseling Psychology, 52*(3), 267-278.
- Frazier, P. A., & Schauben, L. J. (1994). Causal attributions and recovery from rape and other stressful life events. *Journal of Social & Clinical Psychology, 13*(1), 1-14.
- Gibson, L., & Leitenberg, H. (2001). The impact of child sexual abuse and stigma on methods of coping with sexual assault among undergraduate women. *Child Abuse & Neglect, 25*(10), 1343-1361.

- Goffman, E. (1963). *Notes on the management of spoiled identity*. Stigma, Englewood Cliffs, New Jersey.
- Gostin L. O., Lazzarini, Z., Alexander, D., Brandt, A. M., Mayer, K. H., & Silverman, D. C. (1994). HIV testing, counseling, and prophylaxis after sexual assault. *Journal of American Medical Association*, 271(18), 1436-1444.
- Grant, K. E., Compas, B. E., Stuhlmacher, A. F., Thurm, A. E., McMahon, S. D., & Halpert, J. A. (2003). Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. *Psychological Bulletin*, 129, 447–466.
- Hatzenbuehler, M. L. (2009). How does sexual minority stigma “get under the skin”? A psychological mediation framework. *Psychological Bulletin*, 135(5), 707-730.
- Hayes, A. F. (2012). An analytical primer and computational tool for observed variable moderation, mediation, and conditional process modeling. *Manuscript submitted for publication*
- Herbert, T. B., & Dunkel-Schetter, C. (1992). Negative social reactions to victims: An overview of responses and their determinants. In L. Montada, S. H. Filipp, & M. J., Lerner *Life Crises and Experiences of Loss in Adulthood*, Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Herman, J. L. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, 5(3), 377-391.
- Hill, J. L., & Zautra, A. J. (1989). Self-blame attributions and unique vulnerability as predictors of post-rape demoralization. *Journal of Social & Clinical Psychology*, 8(4), 368-375.

- Hodson, G., Dovidio, J. F., & Gaertner, S. L. (2004). The aversive form of racism. In J. L. Chin, *The Psychology of Prejudice and Discrimination: Racism in America, Volume 1*. Westport, CT, USA: Greenwood Publishing Group.
- Holahan, C., Moos, R., & Schaefer, J. (1996). Coping, stress resistance, and growth: Conceptualizing adaptive functioning. *Handbook of Coping: Theory, Research, Applications*, 24-43.
- Janoff-Bulman, R. (1992). *Shattered Assumptions: Towards a New Psychology of Trauma*. New York, NY, US: Free Press, 256.
- Jewkes, R., & Abrahams, N. (2002). The epidemiology of rape and sexual coercion in South Africa: An overview. *Social Science & Medicine*, 55(7), 1231-1244.
- Jewkes, R., Dunkle, K., Nduna, M., & Shai, N. (2010). Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: A cohort study. *Lancet*, 376, 41-48.
- Jewkes, R., Penn-Kekana, L., Levin, J., Ratsaka, M., & Schreiber, M. (2001). Prevalence of emotional, physical and sexual abuse of women in three South African provinces. *South African Medical Journal*, 91(5), 421-428.
- Jewkes, R., Vundule, C., Maforah, F., & Jordaan, E. (2001). Relationship dynamics and teenage pregnancy in South Africa. *Social Science & Medicine*, 52(5), 733-744.
- Johnson, B., & Kenkel, M. (1991). Stress, coping, and adjustment in female adolescent incest victims. *Child Abuse & Neglect*, 15(3), 293-305.
- Jones, E., Farina, A., Hastorf, A., Markus, H., Miller, D., & Scott, R. (1984). *Social Stigma: The Psychology of Marked Relationships*: WH Freeman, New York.

- Joseph, S., Yule, W., & Williams, R. (1993). Post-traumatic stress: Attributional aspects. *Journal of Traumatic Stress, 6*(4), 501-513.
- Kalichman, S. & Simbayi, L. (2004). Sexual assault history and risks for sexually transmitted infections among women in an African township in Cape Town, South Africa. *AIDS Care: Psychological and Socio-medial Aspects of AIDS/HIV, 16*(6), 681-689.
- Kalichman, S., Simbayi, L., Kaufman, M., Cain, D., Cherry, C., Jooste, S., et al. (2005). Gender attitudes, sexual violence, and HIV/AIDS risks among men and women in Cape Town, South Africa. *Journal of Sex Research, 42*(4), 299-305.
- Kamir, D., Grimsrud, A., Myer, L., Stein, D. J., & Williams, D. R. (2008). Risk for post-traumatic stress disorder associated with different forms of interpersonal violence in South Africa. *Social Science and Medicine, 67*, 1589-1595.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The Handbook of Social Psychology* (4th ed., pp. 233–265). New York: Oxford University Press.
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Koretz, D., Marikangas, K. R., et al. (2003). The epidemiology of major depressive disorder: Results from the national comorbidity survey replication (NCS-R). *Journal of American Medical Association, 289*(23), 3095-3103.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & et al. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52*(12), 1048-1060.
- Kilpatrick, D., Edmunds, C., & Seymour, A. (1992). *Rape in America: A report to the nation*. Arlington, VA: National Victim Center & Medical University of South Carolina.

- Kilpatrick, D., Saunders, B., Veronen, L., Best, C., & Von, J. (1987). Criminal victimization: Lifetime prevalence, reporting to police, and psychological impact. *Crime & Delinquency*, 33(4), 479.
- King, G., Flisher, A., Noubary, F., Reece, R., Marais, A., & Lombard, C. (2004). Substance abuse and behavioral correlates of sexual assault among South African adolescents. *Child abuse & neglect*, 28(6), 685-698.
- Koss, M. P., Bailey, J. A., Yuan, N. P., Herrera, V. M., & Lichter, E. L. (2003). Depression and PTSD in survivors of male violence: Research and training initiatives to facilitate recovery. *Psychology of Women Quarterly*, 27(2), 130-142.
- Lazarus, R., & Folkman, S. (1984). Coping and adaptation. *The Handbook of Behavioral Medicine*, 282-325.
- Leary, M. R., & Schreindorfer, L. S. (1998). The stigmatization of HIV and AIDS: Rubbing salt in the wound. In V. J. Derlega & A. P. Barbee (Eds.). *HIV and Social Interaction*. Thousand Oaks, CA: Sage Publications.
- Leitenberg, H., Greenwald, E., & Cado, S. (1992). A retrospective study of long-term methods of coping with having been sexually abused during childhood. *Child Abuse & Neglect*, 16(3), 399-407.
- Link, B. G., & Phelan, J. C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27, 363-385.
- Littleton, H., Horsley, S., John, S., & Nelson, D. V. (2007). Trauma coping strategies and psychological distress: A meta-analysis. *Journal of Traumatic Stress*, 20(6), 977-988.
- Lonsway, K. A., & Fitzgerald, L. F. (1994). Rape myths: In review. *Psychology of Women Quarterly*, 18(2), 133-164.

- Mackey, T., Sereika, S. M., Weissfeld, L. A., Hacker, S. S., & et al. (1992). Factors associated with long-term depressive symptoms of sexual assault victims. *Archives of Psychiatric Nursing, 6*(1), 10-25.
- Mak, W. W. S., Poon, C. Y. M., Pun, L. Y. K., & Cheung, S. F. (2007). Meta-analysis of stigma and mental health. *Social Science & Medicine, 65*(2), 245-261.
- Manne, S., Babb, J., Pinover, W., Horwitz, E., & Ebbert, J. (2004). Psychoeducational group intervention for wives of men with prostate cancer. *Psycho Oncology, 13*(1), 37-46.
- Major B. & Eccleston C. P. (2004). Stigma and social exclusion. In D. Abrams, J. Marques, & M. A. Hogg (Eds.), *Social Psychology of Inclusion and Exclusion*, New York, NY: Psychological Press.
- Major, B., & O'Brien, L. T. (2005). The Social Psychology of Stigma. *Annual Review of Psychology, 56*, 393-421.
- McCaul, K. D., Veltum, L. G., Boyechko, V., & Crawford, J. J. (1990). Understanding attributions of victim blame for rape: Sex, violence, and foreseeability. *Journal of Applied Social Psychology, 20*(1), 1-26.
- Meyer, C., & Taylor, S. (1986). Adjustment to rape. *Journal of Personality and Social Psychology, 50*(6), 1226-1234.
- Miller, C. T., & Kaiser, C. R. (2001). A theoretical perspective on coping with stigma. *Journal of Social Issues. Special Issue: Stigma: An Insider's Perspective, 57*(1), 73-92.
- Miller, C. T., & Major, B. (2000). Coping with stigma and prejudice. In T. F. Heatherton, R. E. Kleck, M. R. Hebl, & J. G. Hull, *The Social Psychology of Stigma*. New York, NY: The Guilford Press.

- Miller, B., Monson, B., & Norton, M. (1995). The effects of forced sexual intercourse on white female adolescents. *Child Abuse & Neglect, 19*(10), 1289-1301.
- Morrell, R. (2002). Men, movements, and gender transformation in South Africa. *Journal of Men's Studies, 10*(3), 309.
- Najdowski, C., & Ullman, S. (2009). PTSD symptoms and self-rated recovery among sexual assault survivors: The effects of traumatic life events and psychosocial variables. *Psychology of Women Quarterly, 33*(1), 43-53.
- Neville, H. A., & Heppner, M. J. (1999). Contextualizing rape: Reviewing sequelae and proposing a culturally inclusive ecological model of sexual assault recovery. *Applied & Preventive Psychology, 8*(1), 41-62.
- Ozer, E. J. & Weiss, D. S. (2004). Who develops Posttraumatic stress disorder? *Current Directions in Social Psychology, 13*(4), 169-172.
- Parker, R., & Aggleton, P. (2003). HIV and AIDS-related stigma and discrimination: A conceptual framework and implications for action. *Social Science & Medicine, 57*(1), 13-24.
- Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin, 135*(4), 531-554.
- Pitcher, G., & Bowley, D. M. G. (2002). Infant rape in South Africa. *The Lancet, 359*(9303), 274-275.
- Quinn, D. M., & Chaudoir, S. R. (2009). Living with a concealable stigmatized identity: The impact of anticipated stigma, centrality, salience, and cultural stigma on psychological distress and health. *Journal of Personality and Social Psychology, 97*(4), 634-651.

- Resick, P. A., & Schnicke, M. K. (1993). Cognitive processing therapy for rape victims: A treatment manual. *Interpersonal Violence: The Practice Series*, 4(178).
- Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E., & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology*, 61(6), 984-991.
- Rothbaum, B. O., Foa, E. B., Riggs, D. S., Murdock, T., & et al. (1992). A prospective examination of post-traumatic stress disorder in rape victims. *Journal of Traumatic Stress*, 5(3), 455-475.
- Santello, M. D. & Leitenberg, H. (1993). Sexual aggression by an acquaintance: Methods of coping and later psychological adjustment. *Violence and Victims*, 8(2), 91-104.
- Schwarzer, R., & Weiner, B. (1991). Stigma controllability and coping as predictors of emotions and social support. *Journal of Social and Personal Relationships*, 8(1), 133-140.
- Seedat S., Emsley R. A., & Stein D. J. (2004). Land of promise: challenges and opportunities for research in South Africa. *Molecular Psychiatry*, 9, 891.
- Seedat S., Stein D. J. (2000). Trauma and post-traumatic stress disorder in women: A review. *International Clinical Psychopharmacology* 15, 25–34.
- Silver, R. C., Wortman, C. B., & Crofton, C. (1990). The role of coping in support provision: The self-presentational dilemma of victims of life crises. In B. R. Sarason, I. G. Sarason, & G. R. Pierce, *Social Support: An Interactional View*. Oxford, England: John Wiley & Sons.

- Skinner, E., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: A review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, 129(2), 216-269.
- Smart Richman, L., & Leary, M. (2009). Reactions to discrimination, stigmatization, ostracism, and other forms of interpersonal rejection: A multimotive model. *Psychological Review*, 116(2), 365-383.
- Snyder, C., & Pulver, K. (2001). Copers coping with stress: Two against one. *Coping with stress*, 285–301.
- South African Police Service. (2010). *Crime Report 2010/2011*. South Africa.
- Sumner, L. A., Wong, L. H., Dunkel Schetter, C., & Myers, H. F. (2012). Predictors of posttraumatic stress disorder symptoms among low-income Latinas during pregnancy and postpartum. *Psychological Trauma*, 42(2), 196-203.
- Stein, D. J., Seedat, S., Herman, A., Moomal, H., Heeringa, S. G., Kessler, R., C. et al. (2008). Lifetime prevalence of psychiatric disorders in South Africa. *The British Journal of Psychiatry*, 192, 112-117.
- Swim, J., & Thomas, M. (2006). Responding to everyday discrimination: A synthesis of research on goal-directed, self-regulatory coping behaviors. *Stigma and Group Inequality: Social Psychological Perspectives*, 105.
- Symonds, A. (1980). The stress of self-realization. *The American Journal of Psychoanalysis*, 40(4), 293-300.
- Taylor, S., & Stanton, A. (Eds.). (2007). *Coping Resources, Coping Processes, and Mental Health* (Vol. 3): Annual Review of Clinical Psychology.

- Tennen, H., & Affleck, G. (1990). Blaming others for threatening events. *Psychological Bulletin*, *108*(2), 209-232.
- Thornton, B., Ryckman, R., Kirchner, G., Jacobs, J., Kaczor, L., & Kuehnel, R. (1988). Reaction to self-attributed victim responsibility: A comparative analysis of rape crisis counselors and lay observers. *Journal of Applied Social Psychology*, *18*, 409-422.
- Ullman, S. E. (1996a). Correlates and consequences of adult sexual assault disclosure. *Journal of Interpersonal Violence*, *11*(4), 554-571.
- Ullman, S. E. (1996b). Social reactions, coping strategies, and self-blame attributions in adjustment to sexual assault. *Psychology of Women Quarterly*, *20*(4), 505-526.
- Ullman, S. E. (1999). Social support and recovery from sexual assault: A review. *Aggression and Violent Behavior*, *4*(3), 343-358.
- Ullman, S. E. (2000). Psychometric characteristics of the social reactions questionnaire: A measure of reactions to sexual assault victims. *Psychology of Women Quarterly*, *24*, 257-271.
- Ullman, S. E., Filipas, H. H., Townsend, S. M., & Starzynski, L. L. (2007). Psychosocial correlates of PTSD symptom severity in sexual assault survivor. *Journal of Traumatic Stress*, *20*(5), 821-831.
- United Nations Office on Drugs and Crime. (2003). *Total sexual violence at the national level, number of police-recorded offences*. Vienna.
- Valentiner, D. P., Foa, E. B., Riggs, D. S., & Gershuny, B. S. (1996). Coping strategies and posttraumatic stress disorder in female victims of sexual and nonsexual assault. *Journal of Abnormal Psychology*, *105*(3), 455-458.

- Wasco, S. M. (2003). Conceptualizing the harm done by rape: Applications of Trauma Theory to Experiences of Sexual Assault. *Trauma, Violence, & Abuse, 4*(4), 309-322.
- Wegner, D. M., Schneider, D. J., Carter, S. R., & White, T. L. (1987). Paradoxical effects of thought suppression. *Journal of Personality and Social Psychology, 53*(1), 5-13.
- Winkel, F. W. & Koppelaar, L. (1991). Rape Victims' Style of self-presentation and secondary victimization by the environment: An experiment. *Journal of Interpersonal Violence, 6*, 29-40.
- Wood, K., & Jewkes, R. (2001). 'Dangerous. Love: Reflections on Violence among Xhosa Township Youth'. In R. Morrell (Ed.) *Changing Men in Southern Africa*, 317–336.
- Wood, K., Lambert, H., & Jewkes, R. (2008). "Injuries are beyond love": Physical violence in young South Africans' sexual relationships. *Medical Anthropology, 27*(1), 43-69.
- Wood, K., Maforah, F., & Jewkes, R. (1998). "He forced me to love him": Putting violence on adolescent sexual health agendas. *Social Science & Medicine, 47*(2), 233-242.
- Wyatt, G., Guthrie, D., & Notgrass, C. (1992). Differential effects of women's child sexual abuse and subsequent sexual revictimization. *Journal of Consulting and Clinical Psychology, 60*(2), 167-173.
- Zeidner, M., & Endler, N. S. (1996). *Handbook of coping: Theory, research, applications*. Oxford, England: John Wiley & Sons, 728.
- Zoellner, L. A., Goodwin, M. L., & Foa, E. B. (2000). PTSD severity and health perceptions in female victims of sexual assault. *Journal of Traumatic Stress, 13*(4), 635-649.

Compensatory Strategies in Disclosure of Concealable Stigmas

Lauren H. Wong

University of California, Los Angeles

Abstract

Disclosing a concealable stigma may benefit individuals by soliciting social support from others, but such disclosure may also engender prejudice and discrimination. One disclosure strategy that may increase the likelihood of receiving social support is the provision of emotional information. In the present study, participants heard a pre-recorded interview of a confederate disclosing either breast cancer or genital herpes and providing either (a) information about the stigmatized condition only, or (b) information about the stigmatized condition plus the associated emotional experience. Dependent measures were social rejection and social support. Results revealed that in the information-only condition, disclosing genital herpes elicited greater rejection and less support compared to disclosing breast cancer. However, in the information plus emotional expression condition, disclosure of genital herpes received greater positivity, yielding no difference in support or rejection compared to disclosure of breast cancer. Analysis revealed that positive impressions of the target's personal characteristics (as more responsible, warm, etc.) mediated this effect for the genital herpes condition. In sum, emotional expression surrounding a serious stigmatizing condition may decrease negative reactions to disclosure of stigmatized conditions.

Keywords: compensatory strategy, disclosure, stigma, emotion, support, rejection

Compensatory Strategies in Disclosure of Concealable Stigmas

People often have personal characteristics or information that they choose to keep hidden—secret identities, secret hobbies, and hidden illnesses. When faced with the decision or task of disclosing this information, the situation can become complicated. Although disclosure may allow an individual to garner support and resources from their social network (Ragins, 2008), individuals may also fear receiving social disapproval or negative reactions from others (Lane & Wegner, 1995; Pennebaker, 1993).

Contemporary research on disclosure has primarily focused on whether or not and to whom an individual should disclose stigmatizing information (Derlega et al., 1993; Omarzu, 2000). Although this literature provides valuable insight into the general costs and benefits of such revelations, far less attention has been paid to the method and process of disclosure. When faced with the task of disclosing in an actual interaction, a stigmatized individual could benefit from knowing the best way in which to convey such sensitive information. Of particular interest is disclosure of highly stigmatized conditions or identities (such as having a sexually transmitted infection), which often elicits strong negative emotional reactions from the confidant.

The current study addresses this issue by going beyond the initial decision to disclose and instead examines the effects of the content of disclosure communication on the reaction of confidants. In other words, assuming that an individual has already settled on disclosing a stigmatized condition, this research seeks to examine one disclosure strategy that will minimize negative feedback and garner positive interpersonal interactions: the disclosure of emotional responses to the condition.

Reactions to Disclosure

Having a deeper, more nuanced understanding of the process of disclosure in the context of social interactions is critical because such events frequently become relationship-defining moments in which a confidant's reaction to the new information can potentially start, end, strengthen, or weaken a relationship (Chaudoir & Fisher, 2010). Stigmatized individuals may simultaneously receive a mixture of positive and negative responses, or find that the confidant's responses change over time (Dunkel-Schetter, Blasband, Feinstein, & Herbert, 1992; Katz, 1977). These reactions may range from supportive responses, such as expressing positive affect and offering to provide assistance, to unsupportive responses such as rejection, minimization, or even infliction of violence (Dunkel-Schetter, et al., 1992). Disclosing a previously concealed stigma lends itself to the risk of becoming a target of prejudice, upsetting others, having support withdrawn, damaging a relationship, rejection, and/or avoidance (Pachankis, 2007). Studies have shown that when people with concealed stigmas disclose to others, the reactions they receive have a significant influence on the discloser's psychological outcomes (Ullman & Filipas, 2001). In general, during interpersonal interactions of this type, disclosers often want to maximize positive and minimize negative responses. Indeed, from a more practical standpoint, positive interactions should have beneficial effects for both the stigmatized individual and their interaction partner since both parties typically desire smooth exchanges. Given the importance of these reactions to both the stigmatized individual and the confidant, the present study seeks to examine two factors that may affect how much social support or rejection the discloser receives: first, what type of stigmatized condition is being disclosed, and second how this sensitive information is disclosed. Each of these factors is considered below.

Disclosed Stigmas and Emotions

Research on emotions and stigma suggest that different stigmatized conditions tend to elicit distinct emotional reactions from the confidant (Cottrell & Neuberg, 2005; Cuddy, Fiske, & Glick, 2007). Thus, when studying the process of disclosure in an interaction, it is important to first determine the type of initial reaction one's partner is likely to have. The current study is primarily focused on stigmatized groups that typically elicit emotions of disgust or sympathy. These emotions were chosen because research suggests that they tend to elicit very different reactions from confidants—disgust generally elicits an avoidance response, and sympathy generally elicits an approach response (Cottrell & Neuberg, 2005; Cuddy, Fiske, & Glick, 2007; see also Dovidio, Brigham, Johnson, & Gaertner, 1996; Fiske, Cuddy, Glick, & Xu, 2002; Weiner, 1985). In addition, using emotions as a way of anticipating social reactions allows the possibility to generalize findings on disclosure to a broader and more diverse range of different stigmatized conditions. For example, stigmatized conditions that elicit sympathy may include individuals with leukemia or disabilities, whereas those that elicit disgust may include homeless people, drug addicts, and sexual minorities.

Sympathy.¹ is characterized as an other-oriented emotional reaction to the emotional state of another person and is theorized to lead to a desire to alleviate the need or distress of the other (Batson, 1987; Eisenberg, 1986). It involves the regulation of the human altruistic system (Trivers, 1971), which is associated with prosocial approach reactions, such as offers to help or provide aid (Eisenberg & Miller, 1987). Sympathy can be elicited by interactions with stigmatized individuals who are in distressed situations, but the cause of their distress is seen as uncontrollable and therefore they are not held responsible (Weiner, 1995). Typical groups might include cancer patients or individuals suffering bereavement.

Additionally, individuals may act in a prosocial manner towards stigmatized individuals because of cultural or social norms and expectations to be helpful. The emotion of sympathy can therefore play a motivational role in leading to helping behavior (Carlson & Miller, 1987) and empirical studies have found that sympathy has a positive relation to helping, even when individuals might easily escape the aversive situation or person (Batson, Duncan, Ackerman, Buckley, & Birch, 1981; Batson, O'Quin, Fultz, & Vanderplas, 1983). Thus, a stigmatized condition that elicits sympathy should garner social support and have less motivation to avoid social contact.

Disgust. In contrast, disgust has been conceptualized as a basic defensive emotion which reflects rejection and avoidance (Rozin, Lowery, & Ebert, 1994; Rozin, Haidt, & McCauley, 2000). Disgust can be associated with an active physical or psychological avoidance or rejection of an object, person, or idea (Cottrell & Neuberg, 2005). The emotion of disgust has been theorized to originate from interactions with some form of perceived contamination that initiates self-protection systems (Rozin, Markwith, & McCauley, 1994). Research on the evolution of stigma has similarly maintained that disgust is evoked because of an instinctive or spontaneous reaction, developed though learned avoidance of people perceived to be diseased or contaminated (Kurzban & Leary, 2001; Park, Faulkner, & Schaller, 2003). This learned avoidance may be conditioned and reinforced through cultural associations and norms developed in society (Biernat & Dovidio, 2000; Pavlov, 1927; Haidt, Rozin, McCauley, & Imada, 1997).

Accordingly, studies have shown that individuals with infectious diseases (e.g. sexually transmitted infections) or “moral contamination” (e.g. prostitutes, sexual minorities) often elicit the emotion of disgust (Pryor, Reeder, Yeadon, & Hesson-McInnis, 2004). Moreover, an empirical study using moment-by-moment approach-avoidance reactions found that participants

often had a reflexive or automatic disgust responses to individuals with stigmas that were seen as controllable (e.g. HIV positive, criminal record) and were significantly more likely to physically avoid these individuals (Pryor et al., 2004). Overall, the previous research suggests that stigmatized conditions that elicit disgust would be judged more negatively, with greater discrimination than those that elicit sympathy, and often with an immediate desire to physically and psychologically avoid a stigmatized individual.

Compensatory Strategies in Disclosure Interactions

Interactions with individuals with concealable stigmas may be uncomfortable and problematic, in part, because of the stigmatized individual's concern about being a target of prejudice and their non-stigmatized interaction partner's concern about being seen as prejudiced (Dovidio, Gaertner, Kawakami, & Hodson, 2002; Shelton, Richeson, & Salvatore, 2005; Smart Richman & Leary, 2009). However, stigmatized individuals are not simply passive victims that experience discrimination and subsequently attempt to repair damages (Miller & Kaiser, 2001). When individuals can neither eliminate nor live with the consequences of the stigma, they may be motivated to engage in compensatory actions, or "behaviors that are adopted in an attempt to reduce or altogether eliminate interpersonal discrimination toward stigmatized individuals" (Miller & Myers, 1998; Siegel, Lune, & Meyer, 1998; Singletary & Hebl, 2009). Engaging in these interpersonal strategies during disclosure may help to reduce stigmatization and as a result reduce the likelihood of contending with the negative psychological consequences of stigma (Hebl & Dovidio, 2005).

Although most stigmatized individuals cannot efface their stigmatized status or change the characteristics of their interaction partner, they can attempt to manage their communication with their interaction partner in order to reduce their partner's stigmatizing response. Given the

reality of the threat of prejudice during an interaction, the present study aims to explore an *interpersonal* strategy, or a strategy that a stigmatized individuals might be able to use during an interaction, to minimize negative reactions. An additional benefit of exploring an interpersonal compensatory strategy is that it may give stigmatized individuals a sense of agency—the feeling that they are actively doing what they can to better their situation.

Few studies have experimentally explored the effects of interpersonal compensatory strategies used during interactions (Stone, Whitehead, Schmader, & Focella, 2010). Existing research has tested a variety of strategies, such as acknowledging or bringing up a visible stigma in conversation for people with disabilities (Hebl & Kleck, 2002), increased effort for Black individuals during interracial interactions (Shelton et al., 2005), and distancing from traditional stereotypes for women (Kaiser & Miller, 2001). However, given that these studies were conducted with stigmatized conditions that were visible, and it is unclear how these findings might translate to individuals disclosing concealable stigmas.

Studies that have examined concealable stigmas have focused mainly on either societal level changes, such as public outreach or public awareness events (Corrigan & Penn, 1999; Rüschi, Angermeyer, & Corrigan, 2005), or are field studies that examine actual strategies being used in specific populations to compensate for stigmas such as HIV/AIDS (Siegel et al., 1998) or mental illness (Link, Mirotznic, & Cullen, 1991). The present study is novel in its experimental examination of how an interpersonal compensatory strategy may be used in an interactional context for individuals with concealable stigmatized conditions.

Emotional Expression as a Compensatory Strategy

Given that stigmatizing conditions—particularly those eliciting disgust—can often precipitate avoidance, the current study seeks to identify a compensatory strategy during

disclosure that may facilitate positive interaction outcomes. The Disclosure Process Model (DPM; Chaudoir & Fisher, 2010) provides a useful framework for examining interpersonal compensatory strategies in disclosure interactions. In this model, it was theorized that there are two distinct methods for disclosing information: providing facts and descriptive information versus providing emotional content. In the former, the confidant is provided only with basic facts, information and a description of the stigmatized condition, such as “I have been going to treatment” (Morton, 1978). In contrast, in the case of emotional disclosure, an evaluative perspective is also included, highlighting the stigmatized individual’s private thoughts, feelings, and opinions about their stigma. Emotionally expressive disclosure would therefore involve an emphasis on the emotions associated with the stigmatized condition, such as “going to treatment has been frustrating for me” (Chaudoir & Fisher, 2010; Reis & Shaver, 1988).

Receiving only descriptive information about the condition should therefore, evoke only the primary baseline emotion associated with the group since no additional information was provided. Thus, based on the literature on intergroup emotions previously discussed, it was hypothesized that providing only basic and descriptive information when disclosing a stigmatizing condition which elicits disgust will engender more negative and less positive responses by the confidant, as compared to disclosure of a condition that elicits sympathy.

In contrast with descriptive disclosure, an emotional disclosure can provide depth and insight into the individual’s personal and emotional thoughts. The DPM suggests that expressing emotions when disclosing builds interpersonal intimacy and ultimately leads to better social outcomes such as less prejudice and more social support for the discloser. The use of emotional expression can be seen as an approach-oriented compensation strategy which can be used to make the discloser build intimacy, attraction, and an interpersonal connection with their

confidant (Berg & Derlega, 1987; Collins & Miller, 1994; Hornstein & Truesdell, 1988). For example, a study by Laurenceau and colleagues (1998) used an event-contingent diary method in which undergraduate participants recorded information immediately after interactions with others over a two week period. They found that regardless of who their interaction partner was, in general, disclosure of emotion was a greater predictor of partner's feelings of intimacy than information-only disclosure. With regard to the DPM, Chaudoir and Fisher (2010) interpreted this finding to indicate that disclosure of emotions or feelings would lead to more positive interpersonal interactions and reactions from confidants compared to information-only disclosures.

Given that stigmatized conditions that elicit sympathy already evoke approach tendencies among confidants, it was hypothesized that the use of emotional disclosure for this type of stigma would effectively garner support and avoid rejection. Emotional expression is an interpersonal approach strategy that may make the confidant feel more comfortable approaching the discloser, and complement the initial tendency toward prosocial behaviors. Thus, both informational and emotional disclosure should elicit positive reactions, although no difference was expected between the two types of disclosure. Emotional expression should also be effective for a stigmatized condition that elicits disgust. Disclosing emotional information gives the confidant deeper insight into the discloser's emotional state should lead to more positive social outcomes. Thus, the use of emotional disclosure would also be an effective compensatory strategy in reducing negative evaluations for stigmatized conditions that elicit disgust, compared to descriptive information-only disclosure.

Overview of the Present Study

The present study used a laboratory-based paradigm to examine the effectiveness of disclosure compensation strategy (emotional disclosure) on participants' prejudicial or supportive attitudes, as well as their emotional reactions toward two distinct stigmatized groups. The study is a 2 (group that elicits disgust or sympathy) X 2 (disclosure strategy: information-only control or information plus emotional expression) between-participant design with random assignment to condition. The present research is based on theories regarding the role of intergroup emotions and compensation strategies as applied to disclosure of a stigmatized condition. The overarching hypothesis is that the efficacy of using a particular compensatory strategy to reduce prejudice against individuals with concealable stigmas will depend on the type of emotion the stigma elicits. Specifically:

Hypothesis 1. Disclosing a stigma that elicits disgust by providing only facts and descriptive information will evoke more social rejection and less support from the participant compared to disclosing a stigma that elicits sympathy.

Hypothesis 2. Disclosing a stigma that elicits disgust by providing emotional details will show low levels rejection and high levels of support, comparable to disclosure of stigmas that elicit sympathy.

Stigmatized Conditions and Pilot Study

Prior to initiating the main study, a pilot study was conducted to carefully pretest and determine the two stigmatized conditions that elicit either the most sympathy (and least disgust) or the most disgust (and least sympathy) out of a set of health conditions considered to be realistic and believable by the average college student. Candidate health conditions that elicited sympathy included breast cancer and leukemia. Candidate health conditions that elicited disgust

included eczema, bulimia, and genital herpes. Judgments of a “UCLA student” were included as a comparison condition. In addition, the pilot study examined whether participants’ previous exposure to people with a particular stigmatized condition had any influence on their subsequent reactions. The pilot test was a between-groups design where participants were randomly assigned to only answer questions about one of the six groups previously listed.

To recruit participants for the pilot study, 280 undergraduate women were approached around the UCLA campus by trained research assistants and asked to participate in a short paper survey. To minimize potential gender effects, only female participants were recruited and interacted with female research assistants. Participants self-identified as Asian (40%), Caucasian (32%), Latina (17%), or other ethnicity (11%), and the mean age was 20.6 years ($SD=2.52$).

After verbal consent, participants were asked to fill out a short questionnaire instructing them to:

“Imagine that you are asked to complete an interaction task with another female. Before you meet her, you listen to a taped interview in which she says she is also a UCLA student and you receive other basic background information. In the interview, she is asked to describe an ongoing personal struggle,”

The vignette then stated that this UCLA student discloses to the participant that she has one of the 6 health conditions described earlier. Participants were subsequently asked to answer 2 questions regarding their feelings toward the student in the vignette. Respondents were asked to what extent they would feel “grossed out” and to what extent they would feel sympathy if they met the person in the vignette. The term “grossed out” was used for this study instead of related terms such as moral or physical disgust, since it has been previously found to be reliable and more commonly used among college student populations (Nabi, 2002). Both responses were provided on a Likert-type scale ranging from 1 (*not at all*) to 7 (*extremely*), with higher scores

indicating higher association of the stigmatized individual with a particular characteristic (see Table 1). Participants also reported whether or not (yes/no) they had any exposure or experience with the specific stigmatized group described in the vignette they read (through friends, relatives, co-workers, etc.). After completing the questionnaire, participants were probed for suspicion, debriefed about the study, thanked, and given candy for compensation.

Manipulation checks. Comparing the means between all the stigmatized groups at face value, it appeared that breast cancer had higher sympathy and genital herpes had higher disgust (e.g. “grossed out”) compared to the other stigmatized groups. Contrast analysis was conducted to statistically verify these distinction and found that indeed, breast cancer elicited significantly higher sympathy ($M=5.50$, $SD=1.47$) compared the average mean of the other stigma categories ($M=4.39$, $SD=1.36$; $F(1,254) = 12.10$, $p=.001$). In addition, contrast analysis revealed that genital herpes elicited significantly more disgust ($M=3.32$, $SD=1.71$) compared to the other stigmatized groups ($M=1.80$, $SD=1.15$; $F(1,160)=57.06$, $p<.001$). As expected, contrast analysis revealed that the UCLA student comparison group received lower levels of sympathy ($M=1.69$, $SD=1.13$) compared to the breast cancer group ($F(1,254)=125.21$, $p<.001$), and also lower levels of disgust ($M=1.30$, $SD=0.57$) compared to the genital herpes group ($F(1,160)=39.70$, $p<.001$), which demonstrated that participants did not consider these stigmatized groups chosen as emotionally neutral. Based on these results, breast cancer was selected as the target stigmatized condition to elicit higher sympathy and lower disgust, whereas genital herpes was selected as the target stigmatized condition to elicit higher disgust and lower sympathy.

It was also important to determine whether having experience or exposure to the stigmatized condition presented in the vignette would influence how much disgust or sympathy the participant reported. Thus, for each of the six stigmatized conditions a series of independent

sample t-tests were conducted to test whether or not stigma exposure influenced feeling of sympathy or disgust. None of these tests were significant, indicating that previous exposure to a particular stigma with did not predict any differences in ratings of disgust or sympathy.

Method

Participants

One hundred and four female undergraduates were recruited via a mass testing questionnaire conducted by the UCLA Psychology Department to participate in the study for one hour in exchange for partial course credit. Participants indicating suspicions about the study hypothesis were excluded from analysis ($N=21$)² resulting in a total sample size of 83. Participants were self-identified as 52% Asian, 18% White, 13% Latina, 6% Black, and 11% other. The average age was 19.5 years ($SD=1.1$).

Design and Procedure

Using procedures adapted from Silver, Wortman, and Crofton (1990) and from Westmaas and Silver (2001), participants were told that the study was intended to examine how initial impressions affect the acquaintanceship process. Each participant was told that she and a fellow student would privately and separately complete a brief audio-recorded interview on the computer, and that they would subsequently listen to each other's interview on the computer, before meeting for several minutes. In reality, the interaction partner's interview was pre-recorded to reflect one of four conditions in the study design. The interview administered to the participant was conducted via text and audio on the computer (Silver et al., 1990; Westmaas & Silver, 2001, 2006). The interview questions were administered to the participants in order to increase the believability of the target's interview. Both the participant's interview and the pre-recorded interview contained the same questions, which focused on basic background questions

about academic life, family, and social activities. In order to increase the validity and plausibility of the interview answers provided by the targets, responses were created by combining materials from Garfin, Silver et al. (in prep), with responses to the interview questions provided by UCLA undergraduates from an informal online questionnaire (see Appendix A for the full interview).

After completing their own interview, participants listened to the pre-recorded audio interview. Except for the final question, answers in the pre-recorded interviews were identical and neutral for all conditions. The final question asked participants to describe “the worst thing that had happened to them recently.” Participants were randomly assigned to listen to one of four pre-recorded answers: 2 (health condition: breast cancer, genital herpes) X 2 (disclosure strategy: information-only control, information plus emotional expression). All materials were directly adapted from text used by Silver and colleagues (1990), and the condition assigned to each participant was kept unknown to the research assistant. In each of the conditions (shown below), the target stated that “the worst thing that had happened to them recently” was either being diagnosed with breast cancer or genital herpes. Each of these medical conditions were, in turn, disclosed by either providing only basic information about being diagnosed and seeking treatment, or by providing this basic information plus the target’s positive and negative emotional reaction to the diagnosis. Emotional disclosure was characterized by both positive and negative emotions since confidants often expect disclosers to be processing both types of emotions. The passages heard by the participants were as follows:

Information-only disclosure (breast cancer):

“Well, I hadn’t been feeling well lately and then I got diagnosed with breast cancer. They had to take out a lump and I’ve been in chemo for the past month, but now I’m just focusing on school.”

Information-only disclosure (genital herpes):

“Well, I hadn’t been feeling well lately and then I got diagnosed with genital herpes. They had to treat my last outbreak of sores, but there isn’t really a treatment for it, so now I’m just focusing on school.”

In the information plus emotional disclosure condition, participants heard one of the above statements, plus the following statement:

“I remember the day I got the diagnosis I pretty much freaked out. But I feel much more comfortable talking about this now. My reaction to having breast cancer/genital herpes has changed from the fear and panic that I originally experienced to an attitude of acceptance. Umm, some days, I feel like it was a random thing, you know, [breast cancer/genital herpes] just happens; it just strikes someone. Other days I feel like I really need to have someone to blame, like why did this have to happen to me? So... I just go on trying to deal with these problems, be really open about everything, and make the best of what I have.”

After listening to the target’s interview, participants filled out a questionnaire regarding their current affect, initial impressions, and feelings of rejection or support for the target (see Appendix B for the full measures). Following completion of the study, participants were probed for suspicions about the study’s hypothesis. Finally, they were debriefed and thanked.

Measures

Sympathy and disgust. One item assessed the extent to which participants reported feeling sympathetic and another item assessed the extent to what extent they felt grossed out when listening to the target’s interview. Responses were provided on a Likert-scale ranging from 1 (*not at all*) to 5 (*extremely*).

Social rejection. Rejection of the target was assessed using a modified 6-item rejection scale by Westmaas and Silver (2001) regarding how much participants accepted and desired social contact with the target (e.g. “I would not feel at ease introducing this person to a friend of mine”). Responses were provided on a Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly disagree*), with higher scores indicating greater social rejection. Scores for each item were averaged to create a reliable composite score ($M=2.28$, $SD=.83$, $\alpha=.752$).

Social support. Social support for the target was assessed using a 4-item measure on how much informational, instrumental, and emotional social support participants would be willing to provide the target (e.g. “How willing would you be to give advice and information to the other student?”). Responses were provided on a Likert-type scale ranging from 1 (*not very willing*) to 7 (*very willing*), with higher scores indicating greater social support. Scores for each item were averaged to create a highly reliable composite score ($M=5.7$, $SD=2.28$, $\alpha=.873$).

Positive impressions. Participants also completed a 7-item measure regarding their initial positive impressions of the target’s personal character traits, including the extent to which they thought the target was respectable, intelligent, trustworthy, good-natured, likeable, optimistic, and warm (Garfin, Silver, & Helm, in preparation) on a scale of 1(*not at all characteristic*) to 5(*completely characteristic*). The items were standardized and averaged into a composite, with higher scores indicate a more positive impression of the target ($\alpha=.84$).

Results

Manipulation Check

As expected, an independent samples t-test revealed that the genital herpes condition elicited more disgust ($M=2.68$, $SD=1.56$) compared to breast cancer, ($M=1.29$, $SD=.66$), $t(81)=-5.45$, $p=.000$. In addition, disclosure of genital herpes elicited less sympathy ($M=5.24$, $SD=1.28$),

compared to breast cancer ($M=6.02$, $SD=.99$), $t(81)=3.148$, $p=.002$. There was no interaction between type of disclosure (information-only vs. information plus emotional) and type of stigma, with regards to feelings of disgust or sympathy.

Informational vs. Emotional Disclosure

We expected an ordinal interaction between the type of disclosure and the type of stigma, such that information-only disclosure would receive greater social rejection and less social support when the disclosed condition was genital herpes compared to breast cancer. By contrast, in the information plus emotion condition, it was predicted that disclosure of genital herpes would reduce social rejection and increase support to levels similar to the disclosure of breast cancer.

Social rejection. General linear modeling was used to examine interaction effects for social rejection. Results revealed a main effect of stigma type ($F(1,79)=7.82$, $p=.006$) and type of disclosure ($F(1,79)=4.70$, $p=.033$), qualified by an interaction ($F(1,79)=7.36$, $p=.008$). Planned contrasts were conducted to examine this interaction in more detail. Results supported Hypothesis 1, social rejection was significantly higher for genital herpes ($M=2.97$, $SD=.85$) compared to breast cancer ($M=2.04$, $SD=.62$, $F(1, 79)=14.491$, $p<.000$, $\eta^2=.155$) in the information-only disclosure condition. As predicted by Hypothesis 2, there was lower social rejection in the information plus emotion condition, such that social rejection did not significantly differ between genital herpes ($M=2.14$, $SD=.79$) and breast cancer ($M=2.13$, $SD=.82$, $F(1,79)=.004$, $p=.952$, $\eta^2=.000$, see Figure 1).

Social support. General linear modeling was also used to examine interaction effects for social support. Results revealed a main effect of disclosure ($F(1,79)=7.09$, $p=.009$), which was qualified by an interaction between stigma type and disclosure type ($F(1,79)=3.85$, $p<.05$). As

before, planned contrasts were conducted to examine this interaction in more detail. Supporting Hypothesis 1, results revealed that in the information-only disclosure condition, social support was significantly lower for genital herpes ($M=5.06$, $SD=1.07$) compared to breast cancer ($M=5.72$, $SD=.84$, $F(1, 79)=4.755$, $p=.032$, $\eta^2=.057$). However, as anticipated by Hypothesis 2, there was higher social support in the information plus emotion condition such that social support did not significantly differ between genital herpes ($M=6.02$, $SD=1.05$) and breast cancer ($M=5.86$, $SD=.83$, $F(1,79)=.309$, $p=.580$, $\eta^2=.004$).

In sum, results indicated that information-only disclosure is met with the least support and most rejection for genital herpes, but that these effects are attenuated through the use of emotional disclosure. Disclosure of breast cancer, on the other hand, is generally met with positive evaluations across both types of disclosures.

Post-hoc Mediation for Genital Herpes Condition

Previous results have provided some insights into how stigma type and type of disclosure communication might affect social responses. However, missing from this finding is an indication of the mechanism through which information plus emotional disclosure may affect responses for certain types of stigmatized characteristics. Results indicated that information plus emotional disclosure was an effective compensatory disclosure strategy for the genital herpes condition. Positive impressions were tested as a potential mediator for participants in the genital herpes condition ($N=38$).

The following conditions must be met to establish and test mediation: 1) The predictor variable (type of disclosure) must be associated with the outcome variable (social rejection or social support); 2) the predictor variable must be associated with the mediator (positive impressions); 3) the mediator must be associated with the outcome variable, after controlling for

the relationship between the predictor and outcome; and 4) the addition of the mediator variable must significantly decrease the association between the predictor and the outcome variable (Kenny, Kashy, & Bolger, 1998). Hayes (2012) mediation analysis was conducted for all analysis using the Process macro.

Social rejection. Analysis revealed that using information plus emotion disclosure predicted more positive impressions ($B=.819, SE=.223, p=.0008$) and less social rejection ($B=-.828, SE=.266, p=.0036$), compared to information-only disclosure. Positive impression also predicted less social rejection ($B=-.740, SE=.158, p=.0000$). The addition of positive impressions into the model fully mediated the relationship between information plus emotional disclosure and social rejection ($B=-.222, SE=.248, p=.38$). That is, participants in the genital herpes condition who heard an emotional disclosure had more positive impressions of the target, and consequently, reported less social rejection. Bootstrap analysis of 1000 samples confirmed that the positive impressions mediator conveyed a significant indirect effect of disclosure type on social rejection, $B=-.606, SE=.263, p<.05, 95\% CI [-1.3203, -.2036]$. The proportion of total effect that is mediated was .732. The results of the mediation analysis are displayed in Figure 3.

Social support. The same mediation analysis described above was conducted with social support as the dependent variable. Analysis indicated that using emotional disclosure predicted more positive impressions ($B=.82, SE=.22, p=.001$) and greater social support ($B=.965, SE=.346, p=.0084$), compared to information-only disclosure. Positive person perceptions also predicted social support ($B=.889, SE=.215, p=.0002$). The addition of positive person perceptions into the model fully mediated the relationship between information plus emotional disclosure and social support ($B=.237, SE=.337, p=.487$). In other words, participants in the genital herpes condition who heard an emotional disclosure had more positive impressions of the target, and

consequently, reported greater social support. Bootstrap analysis of 1000 samples confirmed that the positive impressions mediator conveyed a significant indirect effect of disclosure type on social support, $B=.728$, $SE=.290$, $p<.05$ 95% CI [.2947, 1.5269]. The proportion of total effect that is mediated was .754. The results of the mediation analysis are displayed in Figure 4.

Finally, mediation analysis found that changes in perceptions of the stigmatized condition (feelings of sympathy or disgust) did not mediate the relationship between emotional disclosure and social support or social rejection in the genital herpes condition. In sum, findings suggest that the mediator driving the reduction in negative evaluations following emotional disclosure in the genital herpes condition was a change in perceptions of the *person*, rather than a change in perceptions of the *stigmatized condition* (i.e. feelings of disgust or sympathy).

Discussion

The present study is one of the first to experimentally examine if and how disclosure communication—that is, the information provided during a dyadic social interaction—influences the acceptance or rejection of individuals with concealable stigmas. This research was designed to examine two distinct emotional reactions which often arise following the disclosure of certain conditions: feelings of disgust (triggered here by disclosure of genital herpes) and feelings of sympathy (triggered here by disclosure of breast cancer). For each of these health conditions, the effects of two types of disclosure strategies were analyzed: an “information-only” script in which only descriptive, factual information was provided, and an “information plus emotional” script in which descriptive information was supplemented with emotional content about the discloser’s feelings regarding their condition.

As hypothesized, disclosing genital herpes elicited greater rejection and less support when only basic information about the condition was provided compared to disclosure of breast

cancer. In contrast, information plus emotional disclosure regarding genital herpes was received positively, yielding no difference in support or rejection compared to information plus emotional disclosure of breast cancer. Post-hoc mediation analysis confirmed that in the genital herpes condition, the relationship between type of disclosure (information-only versus information plus emotional) was fully mediated by the participant's more positive perceptions of the target's personal characteristics (e.g. perceiving the discloser to be more responsible, warm, etc.), and not by changes in sympathy or disgust.

When only a basic description of the stigmatized condition was provided during disclosure, the predicted pattern of results emerged in which breast cancer elicited sympathy and an approach response, whereas genital herpes elicited disgust and an avoidance response. This finding corroborates extant literature on intergroup emotions (Cottrell & Neuberg, 2005; Cuddy, Fiske, & Glick, 2007; Dovidio, Brigham, Johnson, & Gaertner, 1996; Fiske, Cuddy, Glick, & Xu, 2002; Weiner, 1985). It is important to note that several of the prior studies have used only basic descriptors when asking participants to rate a target group (e.g. evaluating a "homeless person"), or have utilized third person vignettes (e.g. "John is a 35 year old homeless man"). Such formats provide the participant with only basic, factual information about the target, but do not provide any personal depth, instead characterizing the target as a homogenous and indistinctive outgroup. Actual interactions and first person accounts are less commonly investigated in this line of research. In the present study, although participants expected to meet with another person, their pattern of reactions was similar to as if they had simply read about the stigmatized person or they were given a target group to evaluate. Thus, it would appear that the prospect of meeting and interacting with a stigmatized person is not sufficient to reduce prejudice in the genital herpes condition.

Results suggest that information plus emotional disclosure is an effective interpersonal strategy in decreasing negative reactions toward genital herpes to approximately the same levels as breast cancer. Thus, emotional disclosure may be a useful compensatory strategy for individuals with particularly negatively stigmatized conditions. These findings corroborate and extend the framework of the Disclosure Process Model (DPM; Chaudoir & Fisher, 2010), which posits that disclosing emotions, as opposed to disclosing information or facts alone, leads to better social outcomes for the discloser. The results of the present study support this general proposition, demonstrating that emotional disclosure can engender higher levels of support and lower levels of rejection for conditions evoking either sympathy or disgust. That said, this study also found that emotional disclosure may not always be needed, particularly if the condition being disclosed already elicits sympathy. Specifically, for disclosure of breast cancer, basic descriptive information was sufficient to draw social support from the confidant. Thus, from a practical perspective, these individuals may have greater flexibility when deciding how best to disclose their condition, whereas those with more negatively evaluated stigmas, such as genital herpes, may experience better social outcomes by disclosing both facts *and* emotional details.

Findings support the perspective that emotional disclosure of a stigmatized condition that elicits disgust evokes more positive reactions. Research on disgust and dehumanization may provide one possible explanation for these findings. Feelings of disgust have been shown to target both humans (e.g. homeless people) and non-humans (e.g. vomit), and effectively dehumanize the target by deeming them to be the functional equivalent of objects or animals (Harris & Fiske, 2006). Furthermore, studies using fMRI have found that non-stigmatized individuals often fail to spontaneously think about thoughts, feelings, personality characteristics of stigmatized individuals (Harris & Fiske, 2011). In other words, non-stigmatized participants

tend to find it more difficult to infer the mental states of stigmatized individuals, perceiving them with a more simplistic framework of disgust and dehumanization (Harris & Fiske, 2011).

Emotional disclosure may provide a means of decreasing dehumanization by calling the confidant's attention to the stigmatized individuals' complex inner thoughts and feelings—attributes which are not characteristic of objects or animals. However, in order to fully test this hypothesis, future studies would need to measure and account for the specific effects of dehumanization.

Preliminary exploratory post-hoc analysis demonstrated that the relationship between emotional disclosure and negative reactions was fully mediated by positive impressions of the target in the genital herpes condition. As previously discussed, feelings of disgust have been found to precede dehumanization—or the view that the discloser is more animal-like, irrational, irresponsible, or cold. In the emotional disclosure condition, however, the target was portrayed as having uniquely human-like characteristics, expressing a complex mix of emotions and introspective thoughts about their health condition. The addition of emotion to the genital herpes condition was associated with participants perceiving the target as more intelligent, responsible, trustworthy, likeable, optimistic, warm, and good-natured, than in the information-only condition. It should be noted that each of these characteristics map very closely on to the characteristics listed in the dehumanization literature (Haslam, 2006).

The present study did not find any differences in the degree of disgust or sympathy expressed between the descriptive information-only and the information plus emotional disclosure in the genital herpes condition—both elicited higher amounts of disgust and lower amounts of sympathy than for breast cancer. This suggests that the higher levels of support in the genital herpes condition was not necessarily based on changes in participants' perception of the

stigma itself—genital herpes was still rated as disgusting—but rather changes in their perception of the discloser as a person—discloser were rated as having more positive characteristics (e.g. see Hodson & Costello, 2007). This finding is important since disclosers are likely to prefer that a confidant hold positive perceptions about them as a person—even if there are no charges in evaluations of their stigmatized condition itself. However, further follow-up would be needed to determine if indeed participants are separating their evaluations of the discloser as a person from their evaluation of genital herpes as a stigmatized condition.

One benefit of exploring emotional disclosure as a compensatory strategy is that expressed emotions have been found to have both intra- and interpersonal benefits. Following a traumatic incident or emotional episode, it is common for individuals to share their emotions with others (Rimé, Mesquita, Philippot, & Boca, 1991). Research suggests that one of the basic functions of emotions is to express goals or personal needs (Frijda, 1993). For the discloser, expressing emotions may help to regulate their emotions, habituate them to negative emotions, and facilitate positive and helpful responses from a confidant, which may eventually lead to positive effects on their well-being and health (Frattaroli, 2006). By contrast, evidence suggests that suppressing emotions can lead to feelings of inauthenticity and alienation for the discloser (Butler & Gross, 2004; Gross & John, 2002) and may result in higher physiological stress responses for both discloser and interaction partner (Christenfeld et al., 1997; Glynn, Christenfeld, & Gerin, 1999; Lepore, Allen, & Evans, 1993). In addition, emotional expression may be a disclosure strategy that is already being employed by stigmatized individuals. It can be enacted relatively easily during interpersonal interactions, making it a particularly attractive technique for altering the reactions of confidants.

The present study explored the simultaneous expression of both positive and negative emotions. One advantage to this approach is that this is how interaction partners often believe disclosers are actually feeling in the real world. For instance, disclosers may be labeled as inauthentic if they display only positive emotions and suppress negative emotions (Shelton et al., 2005; Silver et al., 1990; Butler & Gross, 2004; Fischer, Manstead, Evers, Timmers, & Valk, 2004). Similarly, evidence on distress has shown that exhibiting only negative emotions has both positive and negative effects (Dunkel-Schetter & Skokan, 1990). Low to moderate levels of expressed distress may signal to others that the discloser is in need (Schwartz, 1977), but high distress over time often leads interaction partners to themselves feel distressed or helpless, thereby reducing their likelihood of providing support (Gurtman, 1986). The use of the same broad and general emotional disclosure script for both types of health conditions in this study also suggests that disclosing mixed inner feelings and thoughts may be more important for confidant's reactions than providing particular emotional details regarding the specific condition (e.g. disclosing about particular emotions with regards to chemotherapy for the breast cancer condition).

A strength of the present study is that while a large number of studies have examined social responses to stigmatized people through the use of survey vignettes, few have tested these responses in interaction paradigms (Garfin et al., in prep; Westmaas & Silver, 2006). The current study was one of the first to test how disclosure communication content affects the social responses of confidants in an experimental context. Another advantage of the present study was that because experimental groups were chosen based on the emotions they elicited, the findings may be generalizable beyond genital herpes and breast cancer specifically, to other stigmatized characteristics that may share similar emotional signatures, such as drug addicted or homeless

populations. Finally, in this study genital herpes was the most negatively valenced condition among those tested in the pilot study, and yet a relatively brief script with general emotions and thoughts was sufficient to reduce social rejection and foster support.

Limitations

A potential limitation of the present study is that it examined disclosure through computer interactions instead of live interactions with a confederate or someone familiar to the participant. However, research on disclosure interactions in the laboratory has found that perceptions of the target usually remain constant when comparing pre- and post-interaction data (Westmaas & Silver, 2001). This eliminates the need to conduct an actual interaction which might introduce additional noise due to particular characteristics or behavior of the confederate. Regarding disclosure to strangers, although disclosers in real life are more likely to reveal potentially stigmatizing information to important others such as family members and friends, the need to tell acquaintances and strangers does sometimes arise (Beals, Peplau, & Gable, 2009). For example, in the medical context, individuals with HIV are often encouraged to disclose their HIV status to dentists or other medical professionals prior to receiving services (Hillis & Huelsenbeck, 1994). Examining disclosure to strangers may also be important because when social support is not available to stigmatized individuals in their immediate social network, they may look to acquaintances or strangers for support (Westmaas & Silver, 2001).

One important precaution in studying compensatory strategies is that it may be misconstrued as “victim blaming” because the burden of responsibility is placed on the stigmatized individual (Miller & Myers, 1998). However, despite years of empirical studies and interventions to eradicate negative consequences, stigma still persists and is an unfortunate but powerful reality for many individuals (Deitch et al., 2003; Miller et al., 1995; Shelton, Richeson,

& Salvatore, 2005). Stigma is a pervasive social problem that has been resistant to change, and for these reasons stigma cannot simply be legislated away (Beatty & Kirby, 2006). In order to alleviate stigmatization, change must ultimately occur within societies and institutions, not simply from stigmatized individuals (King et al., 2006; Singletary & Hebl, 2009). That said, in the short-term course of everyday life, these individuals may nevertheless benefit interpersonally and professionally from knowledge of the most effective strategies to reduce or alleviate stigma (Kessler, Mickelson, & Williams, 1999).

Conclusion

The current research is one step in developing our understanding of how stigmatized individuals face the difficult task of revealing their identities in an interaction and how they may benefit from disclosure strategies that minimize the social costs of disclosure, while maximizing the benefits of support. Decreasing negative reactions from confidants can have tangible effects on the lives of individuals with stigmatized conditions, often improving both their psychological health and their social conditions (increasing access to employment, housing, or medical resources) (Barreto, Ellemers, & Banal, 2006; McLaughlin, Bell, & Stringer, 2004; Ragins, 2008). This is particularly important given that research comparing the differential impact of negative and positive reactions on stigmatized individuals has found that, on average, the detrimental impact of negative reactions on psychological health is relatively stronger than positive reactions are helpful in augmenting psychological well-being (Pagel, Erdly, & Becker, 1987; Silver et al., 1990). Research on compensatory strategies during disclosure is thus a useful social tool for empowering stigmatized individuals while broader, societal level interventions are being explored. Future research would benefit from replicating and extending these findings outside of the laboratory, among different types of social relationships (e.g. friends, family

members, etc.), with different types of stigmatized groups (e.g. non-illness groups such as homeless populations), and also in cross-gender relationships. Academics and policymakers alike must continue to search for ways to reduce prejudice and improve the lives of individuals with stigmatized conditions (Schmader & Stone, 2008).

Footnotes

¹Previous research has distinguished between sympathy, pity and empathy. The current study focuses on sympathy, which has received considerable attention as a predictor of positive social reactions and prosocial behaviors (Weiner, 1995). Future research extending this model to the emotions of pity and empathy would be important.

²Participants excluded from this analysis were those that expressed suspicions during the study or stated that they had completed a similar study (“I suspect, however that this person isn’t real. I’ve taken psych classes and it seems like the setup”). A large number of these participants were part of the last cohort of participants tested at the end of the 2011 academic year. Although all precautions were taken to ensure that the study had high believability, it is possible that these students were savvy to the use of deception in psychological studies and, given their last minute sign-up for the study, were potentially unmotivated to seriously consider all elements of the study. Analysis including these students revealed results that the interaction between stigma type and disclosure type were non-significant but trending in the same direction as the primary findings for social rejection, social support, and positive impressions. Perceptions of disgust and sympathy showed the same significant main effect as the primary findings.

Table 1.

Pilot test means and standard deviations for each stigma group (N=280).

Characteristics	Sympathy		“Grossed out”	
	M	SD	M	SD
UCLA student	1.69	1.13	1.30	0.57
Leukemia	5.41	1.17	1.20	0.77
Breast Cancer	5.50	1.47	1.05	0.22
Genital herpes	4.99	1.47	3.32	1.71
Eczema	4.85	1.56	2.87	1.36
Bulimia	5.00	1.49	2.59	1.32

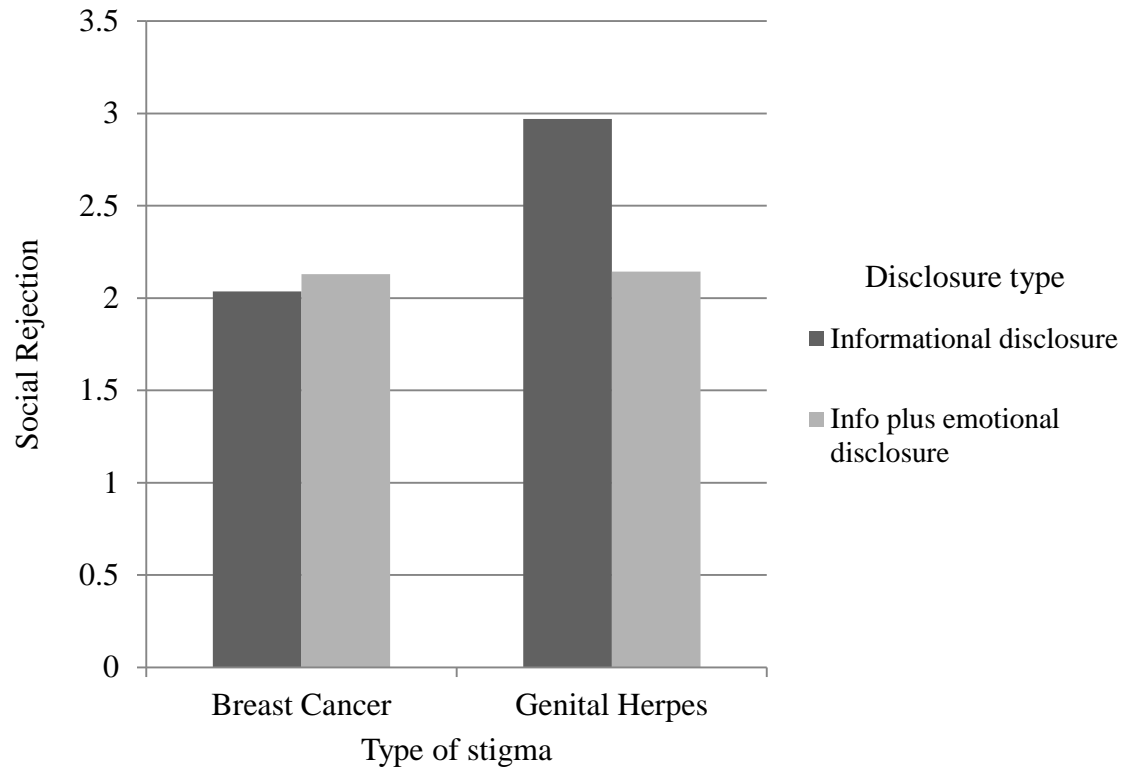


Figure 1. Social rejection as a function of type of stigma (breast cancer or genital herpes) and disclosure type (informational or information plus emotion).

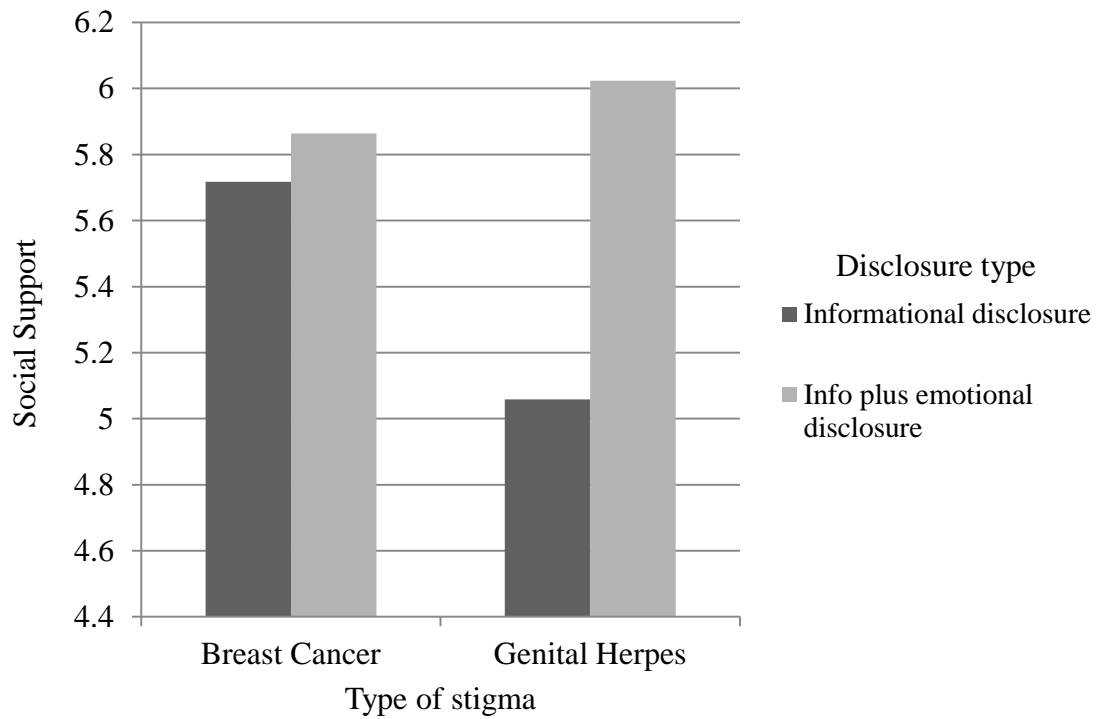


Figure 2. Social support as a function of type of stigma (breast cancer or genital herpes) and disclosure type (informational or information plus emotion).

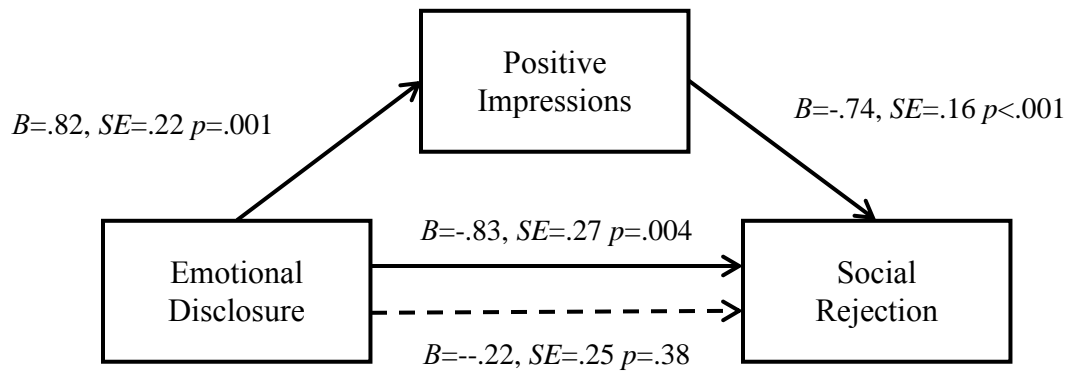


Figure 3. Positive impressions as a mediator between emotional disclosure and social rejection for the genital herpes condition (N=38)

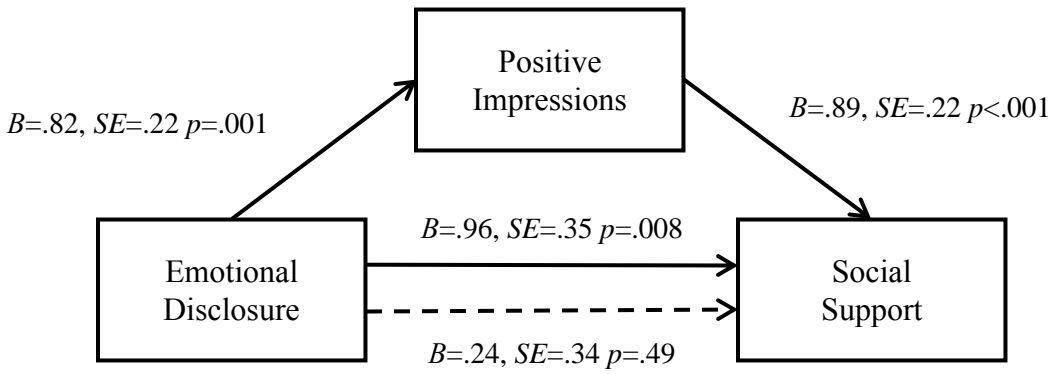


Figure 4. Positive impressions as a mediator between emotional disclosure and social support for the genital herpes condition (N=38)

Appendix A

Transcript of Confederate Interview

Note: Answers given by the confederate are presented in italics.

This is going to be a short interview about the recent past and the present and how you feel about these experiences. Please be as honest and open as possible, so let's start with some basic information.

1. What town did you grow up in?

I grew up in Pasadena, which is like 40 minutes from here in east LA.

2. What was the best thing about the town you grew up in?

Umm, it was a pretty quiet town, it was really nice. Uh, I liked going to the main street to eat with my friends.

3. What did you like least about the town you grew up in?

Well, there's really not that much to do, everything closes early, like around 10 at night.

4. Did you come to UCLA directly after high school or did you take some time off before college?

No, I came here right after high school.

5. What is your year and major here at UCLA?

I'm currently a 2nd year and I'm a psych major.

6. What do you like most about life as a college student at UCLA?

Probably getting to meet all sorts of different people from all over. Like my roommate is from Washington and lots of my friends are from back east. There are just a lot of groups on campus here that have so many different backgrounds, and there's always new people to meet there.

7. What do you like least about life here as a college student here at UCLA?

Honestly, there are just too many students in each class and it's hard to enroll for classes sometimes.

8. Do you currently have a job, and if you do, do you enjoy it?

Yeah, I do work on campus here and it's pretty cool. The people here I've meet are really great and they've actually become some of my closest friends on campus.

9. What, in general, was the best thing that's happened to you recently?

Umm, I just got a really good grade on my last midterm and I'm pretty happy about it.

10. In general, what have you been struggling with recently?

Information-only disclosure:

Breast cancer condition: *Well, I hadn't been feeling well lately and then I got diagnosed with breast cancer. They had to take out a lump and I've been in chemo for the past month, but now I'm just focusing on school.*

Genital herpes: *Well, I hadn't been feeling well lately and then I got diagnosed with genital herpes. They had to treat my last outbreak of sores, but there isn't really a treatment for it, so now I'm just focusing on school.*

Emotional disclosure:

I remember the day I got the diagnosis I pretty much freaked out. But I feel much more comfortable talking about this now. My reaction to having breast cancer has changed from the fear and panic that I originally experienced to an attitude of acceptance. Umm, some days, I feel like it was a random thing, you know, [breast cancer/genital herpes] just happens; it just strikes someone. Other days I feel like I really need to have someone to blame, like why did this have to happen to me? So... I just go on trying to deal with these problems, be really open about everything, and make the best of what I have.

Appendix B

Impressions of confederate's characteristics:

We realize that you've only heard an interview and have not yet met your interaction partner, but we would like to know your impressions of them so far. Please rate your impression of them on the following attributes using the scale below. My interaction partner seems to be...

Likert scale: 1 (*not at all characteristic*) to 5 (*completely characteristic*)

1. Intelligent
2. Respectable
3. Trustworthy
4. Likeable
5. Good-natured
6. Optimistic
7. Warm

Participant's feelings when listening to the interview:

When you were listening to the interview, to what extent did you feel...

Likert scale: 1 (*not at all*) to 5 (*a great deal*)

1. "Grossed out"
2. Sympathetic

Social Rejection:

How comfortable would you feel in each of these situations?

Likert scale: 1 (*strongly disagree*) to 5 (*strongly agree*)

1. I would feel at ease introducing this person to a friend of mine.
2. I would not accept this person into my social group.
3. I would want this person as a friend.
4. I would not want to sit by this person in class.
5. If this person had a problem, I would want to help them with it.
6. I would not feel at ease working on a group project with this person.

Social Support:

Likert scale: 1 (*strongly disagree*) to 5 (*strongly agree*)

1. How willing would you be to spend talking with and listening to the other student?
2. How willing would you be to give advice and information to the other student?
3. How willing would you be to console and reassure the other student if they were upset?
4. How willing would you be to assist the other student with a small problem?

References

- Barreto, M., Ellemers, N., & Banal, S. (2006). Working under cover: Performance-related self-confidence among members of contextually devalued groups who try to pass. *European Journal of Social Psychology, 36*(3), 337-352.
- Batson, C. (1987). Prosocial motivation: Is it ever truly altruistic. *Advances in Experimental Social Psychology, 20*, 65-122.
- Batson, C., Duncan, B., Ackerman, P., Buckley, T., & Birch, K. (1981). Is empathic emotion a source of altruistic motivation? *Journal of Personality and Social Psychology, 40*(2), 290-302.
- Batson, C., O'Quin, K., Fultz, J., & Vanderplas, M. (1983). Influence of self-reported distress and empathy on egoistic versus altruistic motivation to help. *Journal of Personality and Social Psychology, 45*(3), 706-718.
- Beals, K. P., Peplau, L. A., & Gable, S. L. (2009). Stigma management and well-being: The role of perceived social support, emotional processing, and suppression. *Personality and Social Psychology Bulletin, 35*(7), 867-879.
- Berg, J., & Derlega, V. (1987). Themes in the study of self-disclosure. *Self-disclosure: Theory, research, and therapy*. New York, NY: Plenum Press.
- Beatty, J. E., & Kirby, S. L. (2006). Beyond the Legal Environment: How Stigma Influences Invisible Identity Groups in the Workplace. *Employee Responsibilities and Rights Journal. Special Issue: Sexual Orientation/Identity Issues in the Workplace, 18*(1), 29-44.
- Biernat, M., & Dovidio, J. (2000). Stigma and stereotypes. *The Social Psychology of Stigma, 88-125*.

- Butler, E. A., & Gross, J. J. (2004). Hiding feelings in social contexts: Out of sight is not out of mind. In P. Philippot, & R. S. Feldman (Eds.), *The regulation fo emotion* (pp. 101-126). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Carlson, M., & Miller, N. (1987). Explanation of the relation between negative mood and helping. *Psychological Bulletin*, *102*(1), 91-108.
- Chaudoir, S. R., & Fisher, J. D. (2010). The disclosure processes model: Understanding disclosure decision making and postdisclosure outcomes among people living with a concealable stigmatized identity. *Psychological Bulletin*, *136*(2), 236-256.
- Christenfeld, N., Gerin, W., Linden, W., Sanders, M., & et al. (1997). Social support effects on cardiovascular reactivity: Is a stranger as effective as a friend? *Psychosomatic Medicine*, *59*(4), 388-398.
- Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. *Psychological Bulletin*, *116*(3), 457-475.
- Corrigan, P. W., & Penn, D. L. (1999). Lessons from social psychology on discrediting psychiatric stigma. *American Psychologist*, *54*(9), 765-776.
- Cottrell, C. A., & Neuberg, S. L. (2005). Different Emotional Reactions to Different Groups: A Sociofunctional Threat-Based Approach to "Prejudice". *Journal of personality and social psychology*, *88*(5), 770-789.
- Cuddy, A. J. C., Fiske, S. T., & Glick, P. (2007). The BIAS map: Behaviors from intergroup affect and stereotypes. *Journal of Personality and Social Psychology*, *92*(4), 631-648.
- Deitch, E. A., Barsky, A., Butz, R. M., Chan, S., Brief, A. P., & Bradley, J. C. (2003). Subtle yet significant: The existence and impact of everyday racial discrimination in the workplace. *Human Relations*, *56*(11), 1299-1324.

- Derlega, V. J., Metts, S., Petronio, S., & Margulis, S. T. (1993). Self-disclosure. *Sage series on close relationships*. Thousand Oaks, CA, US: Sage Publications, Inc, 142.
- Dovidio, J., Brigham, J., Johnson, B., & Gaertner, S. (1996). Stereotyping, prejudice, and discrimination: Another look. *Stereotypes and Stereotyping*, 276, 319.
- Dovidio, J., Gaertner, S., Kawakami, K., & Hodson, G. (2002). Why can't we just get along? Interpersonal biases and interracial distrust. *Cultural Diversity and Ethnic Minority Psychology*, 8, 88-102.
- Dunkel-Schetter, C., Blasband, D. E., Feinstein, L. G., & Herbert, T. B. (1992). Elements of supportive interactions: When are attempts to help effective? In S. Spacapan & S. Oskamp (Eds.) *Helping and being helped: Naturalistic studies. The Claremont Symposium on Applied Psychology.*, (pp. 83-114). Thousand Oaks, CA, US: Sage Publications, Inc, viii, 259 pp.
- Dunkel-Schetter, C., & Skokan, L. A. (1990). Determinants of social support provision in personal relationships. *Journal of Social and Personal Relationships. Special Issue: Predicting, activating and facilitating social support*, 7(4), 437-450.
- Eisenberg, N. (1986). *Altruistic emotion, cognition, and behavior*: Hillsdale, NJ, US: Lawrence Erlbaum Associate Inc.
- Eisenberg, N., & Miller, P. (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101(1), 91-119.
- Fischer, A. H., Manstead, A. S. R., Evers, C., Timmers, M., & Valk, G. (2004). Motives and norms underlying emotion regulation. In P. Philippot & R. S. Feldman, *The regulation of emotion*, (pp. 187-210). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers, xiv, 415 pp.

- Fiske, S. T., Cuddy, A. J. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology*, 82(6), 878-902.
- Fratraroli, J. (2006). Experimental disclosure and its moderators: A meta-analysis. *Psychological Bulletin*, 132(6), 823-865.
- Frijda, N. H. (1993). Moods, emotion episodes, and emotions. In M. Lewis & J. M. (Eds.) *Handbook of emotions* (pp. 381-403). New York, NY, US: Guilford Press, xiii, 653 pp.
- Garfin, D., Silver, R. C., & Helm, L. (*in preparation*). Stigma and Social Support.
- Glynn, L. M., Christenfeld, N., & Gerin, W. (1999). Gender, social support, and cardiovascular responses to stress. *Psychosomatic Medicine*, 61(2), 234-242.
- Gross, J. J., & John, O. P. (2002). Wise emotion regulation. In L.R. Barrett & P. Salovey (Eds.) *The wisdom in feeling: Psychological processes in emotional intelligence. Emotions and social behavior.*, (pp. 287-319). New York, NY, US: Guilford Press, xx, 444 pp.
- Gurtman, M. B. (1986). Negative reactions to depressive displays: Does justification help? *Journal of Social & Clinical Psychology*, 4(4), 497-502.
- Haidt, J., Rozin, P., McCauley, C. R., & Imada, S. (1997). Body, psyche, and culture: The relationship between disgust and morality. *Psychology and Developing Societies*, 9, 107-131.
- Harris, L. T., & Fiske, S. T. (2006). Dehumanizing the lowest of the low: Neuroimaging responses to extreme out-groups. *Psychological Science*, 17(10), 847-853.
- Harris, L. T., & Fiske, S. T. (2011). Dehumanized perception: A psychological means to facilitate atrocities, torture, and genocide? *Journal of Psychology*, 219(3), 175-181.

- Haslam, N. (2006). Dehumanization: An integrative review. *Personality and Social Psychology Review, 10*(3), 252-264.
- Hayes, A. F. (2012). An analytical primer and computational tool for observed variable moderation, mediation, and conditional process modeling. *Manuscript submitted for publication*
- Hebl, M. R., & Dovidio, J. F. (2005). Promoting the "Social" in the Examination of Social Stigmas. *Personality and Social Psychology Review, 9*(2), 156-182.
- Hebl, M., & Kleck, R. E. (2002). Acknowledging one's stigma in the interview setting: Effective strategy or liability? *Journal of Applied Social Psychology, 32*(2), 223-249.
- Hillis, D., & Huelsenbeck, J. (1994). Support for dental HIV transmission. *Nature, 369*, 24-25.
- Hodson, G. & Costello, K. (2007). Interpersonal disgust, ideological orientations, and dehumanization as predictors of intergroup attitudes. *Psychological Science, 18*(8), 691-698.
- Honneth, A. (1992). Integrity and disrespect: Principles of a conception of morality based on the theory of recognition. *Political Theory, 20*(2), 187-201.
- Hornstein, G. A., & Truesdell, S. E. (1988). Development of intimate conversation in close relationships. *Journal of Social & Clinical Psychology, 7*(1), 49-64.
- Katz, I. (1977). *Stigma: A social psychological analysis*. Hillsdale, NJ: Lawrence Erlbaum Associates Publishers.
- Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior, 40*(3), 208-230.

- King, E. B., Shapiro, J. R., Hebl, M. R., Singletary, S. L., & Turner, S. (2006). The stigma of obesity in customer service: A mechanism for remediation and bottom-line consequences of interpersonal discrimination. *Journal of Applied Psychology, 91*(3), 579-593.
- Kurzban, R., & Leary, M. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin, 127*(2), 187-208.
- Lane, J. D., & Wegner, D. M. (1995). The cognitive consequences of secrecy. *Journal of Personality and Social Psychology, 69*(2), 237-253.
- Laurenceau, J.-P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology, 74*(5), 1238-1251.
- Lepore, S. J., Allen, K. M., & Evans, G. W. (1993). Social support lowers cardiovascular reactivity to an acute stressor. *Psychosomatic Medicine, 55*(6), 518-524.
- Link, B. G., Mirotznik, J., & Cullen, F. T. (1991). The effectiveness of stigma coping orientations: Can negative consequences of mental illness labeling be avoided? *Journal of Health and Social Behavior, 32*(3), 302-320.
- McLaughlin, M. E., Bell, M. P., & Stringer, D. Y. (2004). Stigma and Acceptance of Persons With Disabilities Understudied Aspects of Workforce Diversity. *Group & Organization Management, 29*(3), 302-333.
- Miller, C., & Myers, A. (1998). Compensating for prejudice: How heavyweight people (and others) control outcomes despite prejudice. In J. K. Swim & C. Stangor (Eds.) *Prejudice: The target's perspective*, (pp. 191–218). San Diego, CA, US: Academic Press, xiv, 332 pp.

- Miller, C. T., & Kaiser, C. R. (2001). A theoretical perspective on coping with stigma. *Journal of Social Issues. Special Issue: Stigma: An Insider's Perspective*, 57(1), 73-92.
- Miller, C. T., Rothblum, E. D., Felicio, D., & Brand, P. (1995). Compensating for stigma: Obese and nonobese women's reactions to being visible. *Personality and Social Psychology Bulletin*, 21(10), 1093-1106.
- Morton, T. L. (1978). Intimacy and reciprocity of exchange: A comparison of spouses and strangers. *Journal of Personality and Social Psychology*, 36(1), 72-81.
- Nabi, R. L. (2002). The theoretical versus the lay meaning of disgust: Implications for emotion research. *Cognition and Emotion*, 16(5), 695-703.
- Omarzu, J. (2000). A disclosure decision model: Determining how and when individuals will self-disclose. *Personality and Social Psychology Review*, 4(2), 174-185.
- Pachankis, J. E. (2007). The psychological implications of concealing a stigma: A cognitive-affective-behavioral model. *Psychological Bulletin*, 133(2), 328-345.
- Pagel, M. D., Erdly, W. W., & Becker, J. (1987). Social networks: We get by with (and in spite of) a little help from our friends. *Journal of Personality and Social Psychology*, 53(4), 793-804.
- Park, J., Faulkner, J., & Schaller, M. (2003). Evolved disease-avoidance processes and contemporary anti-social behavior: Prejudicial attitudes and avoidance of people with physical disabilities. *Journal of Nonverbal Behavior*, 27(2), 65-87.
- Pavlov, I. P. (1927). *Conditioned reflexes: An investigation of the physiological activity of the cerebral cortex*. In G. V. Anrep. (Ed.) New York, NY: Boyer.

- Pennebaker, J. W. (1993). Social mechanisms of constraint. In D. M. Wegner & J. W. Pennebaker (Eds.) *Handbook of mental control. Century psychology series*, (pp. 200-219). Englewood Cliffs, NJ, US: Prentice-Hall, Inc., ix, 611pp.
- Pryor, J. B., Reeder, G. D., Yeadon, C., & Hesson-McInnis, M. (2004). A Dual-Process Model of Reactions to Perceived Stigma. *Journal of Personality and Social Psychology*, 87(4), 436-452.
- Ragins, B. R. (2008). Disclosure disconnects: Antecedents and consequences of disclosing invisible stigmas across life domains. *Academy of Management Review. Special Topic Forum on Stigma and Stigmatization*, 33(1), 194-215.
- Reis, H. T., & Shaver, P. (1988). Intimacy as an interpersonal process. In S. Duck., D. F. Hay, S. E. Hobfoll, W. Ickes, & B. M. Montgomery (Eds.) *Handbook of social relationships*, (pp. 367-389). Oxford, England: John Wiley & Sons Ltd. Xvii 720pp.
- Rimé, B., Mesquita, B., Philippot, P., & Boca, S. (1991). Beyond the emotional event: Six studies on the social sharing of emotion. *Cognition and Emotion. Special Issue: Emotion in Social Life*, 5(5-6), 435-465.
- Rozin, P., Haidt, J., & McCauley, C. R. (2000). Disgusts. In M. Lewis & J. M. Haviland-Jones (Ed.), *Handbook of emotions* (2nd ed., pp. 637-653). New York: Guilford Press.
- Rozin, P., Lowery, L., & Ebert, R. (1994). Varieties of disgust faces and the structure of disgust. *Journal of Personality and Social Psychology*, 66(5), 870-881.
- Rozin, P., Markwith, M., & McCauley, C. (1994). Sensitivity to indirect contact with other persons: AIDS aversion as a composite to aversion to strangers, infections, moral taint, and misfortune. *Journal of Abnormal Psychology*, 103(3), 495-505.

- Rüsch, N., Angermeyer, M. C., & Corrigan, P. W. (2005). Mental illness stigma: Concepts, consequences, and initiatives to reduce stigma. *European Psychiatry, 20*(8), 529-539.
- Sapontzis, S. F. (1981). A critique of personhood. *Ethics, 91*(4), 607-618.
- Schmader, T., & Stone, J. (2008). Toward a Problem-Focused Understanding of Prejudice. *Psychological Inquiry, 19*(2), 108-113.
- Schwartz, S. (Ed.). (1977). *Normative influences on altruism*. New York: Academic Press.
- Seigel, K., Lune, H., & Meyer, I. H. (1998). Stigma management among gay/bisexual men with HIV/AIDS. *Qualitative Sociology, 21*(1), 3-24.
- Silver, R. C., Wortman, C. B., & Crofton, C. (1990). The role of coping in support provision: The self-presentational dilemma of victims of life crises. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.) *Social support: An interactional view. Wiley series on personality processes*, (pp. 397-426). Oxford, England: John Wiley & Sons, xvi, 528 pp.
- Shelton, J. N., Richeson, J. A., & Salvatore, J. (2005). Expecting To Be the Target of Prejudice: Implications for Interethnic Interactions. *Personality and Social Psychology Bulletin, 31*(9), 1189-1202.
- Sherman G. D. & Haidt, J. (2011). Cuteness and disgust: The humanizing and dehumanizing effects of emotion. *Emotion Review, 3*(3), 245-251.
- Singletary, S. L., & Hebl, M. R. (2009). Compensatory strategies for reducing interpersonal discrimination: The effectiveness of acknowledgments, increased positivity, and individuating information. *Journal of Applied Psychology, 94*(3), 797-805.
- Smart Richman, L., & Leary, M. (2009). Reactions to discrimination, stigmatization, ostracism, and other forms of interpersonal rejection: A multimotive model. *Psychological Review, 116*(2), 365-383.

- Stone, J., Whitehead, J., Schmader, T., & Focella, E. (2010). Thanks for asking: Self-affirming questions reduce backlash when stigmatized targets confront prejudice. *Journal of Experimental Social Psychology, 47*(3), 589-598.
- Trivers, R. (1971). The evolution of reciprocal altruism. *The Quarterly Review of Biology, 46*(1).
- Ullman, S. E., & Filipas, H. H. (2001). Predictors of PTSD symptom severity and social reactions in sexual assault victims. *Journal of Traumatic Stress, 14*(2), 369-389.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review, 92*(4), 548-573.
- Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. New York, NY, USA: The Guilford Press.
- Westmaas, J. L., & Silver, R. C. (2001). The role of attachment in responses to victims of life crises. *Journal of Personality and Social Psychology, 80*(3), 425-438.
- Westmaas, J. L., & Silver, R. C. (2006). The Role of Perceived Similarity in Supportive Responses to Victims of Negative Life Events. *Personality and Social Psychology Bulletin, 32*(11), 1537-1546.