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Abstract

Existing research suggests that gay men may be more vulnerable to depression than are heterosexual men, and that gender-related personality traits may be important in understanding this vulnerability. In the present study the association between two gender-related personality traits (agency and unmitigated communion) and depressive symptoms was examined in an Internet sample of 510 gay identified men, aged 18 years or older. Potential mediators of this association were also examined including: recalled peer harassment, interpersonal behavior, and self-discrepancies in the gender-related personality trait of agency. Participants completed the Extended Personal Attributes Questionnaire (EPAQ), the Unmitigated Communion Scale, the victim subscale from the Olweus Bully/Victim Questionnaire Revised (worded retrospectively), the Checklist of Interpersonal Transactions Revised, and the Centre for Epidemiological Studies Depression Scale. Self-discrepancy was calculated by repeating the agency subscale of the EPAQ from the perspective of ideal self and subtracting the actual score from the ideal score. Zero-order correlations indicated that among gay men who were less agentic than their ideal, the gender-related personality traits of agency and unmitigated communion were associated with depressive symptoms, as were recalled peer harassment, interpersonal behavior characterized as unassured and submissive, and self-discrepancies in agency. Two models were tested with half the sample and a respecified model was validated with the second half. The final model indicated that when all variables were considered jointly, agency and unmitigated communion were not directly related to depressive symptoms but rather, the effects of agency and unmitigated communion were mediated by unassured and submissive interpersonal behavior, and the effect of agency was also mediated by self-discrepancies in agency ($p < .05$). Thus, how

the participants interacted with close others, and the extent that they were not as agentic as they wished, were more important in predicting their depressive symptoms than were the gender-related personality traits of agency and unmitigated communion. The final model also indicated that recalled peer harassment has both a direct impact on depressive symptoms and an indirect impact on depressive symptoms through unassured and submissive interpersonal behavior. Implications for future research, anti-bullying initiatives, and interventions with depressed gay men are discussed.

Table of Contents

Acknowledgments.....	ii
Abstract.....	iii
Table of Contents.....	v
List of Tables.....	vii
List of Figures.....	viii
Introduction.....	1
Depressive Symptoms in Gay Men.....	4
Gender-Related Personality Traits and Depressive Symptoms.....	6
Interpersonal Relations and Depressive Symptoms.....	10
Peer harassment in adolescence.....	11
Problematic interpersonal behaviors.....	14
Self-Discrepancies and Depressive Symptoms.....	16
The Present Study: An Integrated Approach to Depressive Symptoms.....	21
Method.....	25
Participants and Procedures.....	25
Measures.....	27
Results.....	33
Internal Consistency of Measures.....	33
Missing Data and Division of Sample.....	34
Screening Sample A.....	35
Demographic Characteristics of Sample A.....	38
Means and Standard Deviations for Sample A.....	38
Correlations Among Measures.....	39

Table of Contents continued

Analysis of the Models.....	40
Validation of the Respecified Model Using Sample B.....	44
Discussion.....	49
Associations Between the Variables in the Model and Depressive Symptoms.....	49
Mediations Indicated by the Respecified Model.....	51
Hypothesized Mediations Not Found in the Final Model.....	55
Limitations of the Study.....	57
Implications of the Study.....	58
References.....	81
Appendix A. Advertising and Recruitment Text.....	100
Appendix B. Questionnaire.....	101
Appendix C. Follow-up Email to Participants.....	118
Appendix D. Power Analysis and Calculation of Sample Size	120
Appendix E. Research with Gay Identified Participants	122

List of Tables

Table 1	Cronbach's Alpha for Eight Dimensions of the CLOIT.....	64
Table 2	Cronbach's Alpha for all Variables.....	65
Table 3	Correlations Among Variables (Pearson Coefficients) – Sample A.....	66
Table 4	Demographic Characteristics of Participants - Sample A.....	67
Table 5	Means (M) and Standard Deviations (SD) of Variables for Sample A...	69
Table 6	Summary of Regression Analysis for the Three Octants associated with Depressive Symptoms.....	70
Table 7	Goodness of Fit Statistics for Initially Hypothesized and Respecified Models – Samples A and B.....	71
Table 8	Correlations Among Variables (Pearson Coefficients) - Sample B.....	72
Table 9	Demographic Characteristics of Sample B and a Comparison to Sample A.....	73
Table 10	Means (M) and Standard Deviations (SD) of Variables for Sample B and a Comparison to Sample A.....	75

List of Figures

Figure 1	The fully mediated model.....	76
Figure 2	The partially mediated model	77
Figure 3	Respecified model with standardized path values and their significance	78
Figure 4	Respecified model with path values for both samples A and B.....	79
Figure 5	Respecified model with paths significant in both Samples A and B....	80

A model of depressive symptoms in gay men.

Several authors have suggested that there is a unique association between minority sexual orientation and depressive symptoms. Some authors base this on clinical experience (e.g., Stein & Cohen, 1984), others on empirical research (e.g., Sandfort, de Graaf, Bijl, & Schnabel, 2001), and still others on a combination of both (e.g., Hardin & Hall, 2001). Efforts to understand this association frequently focus on the adverse effects of “anti-homosexual stigma” on identity formation and subsequent psychological distress (see for review, DiPlacido, 1998). Current efforts to conceptualize the mental health challenges of gay men and lesbians as issues of anti-homosexual stigma and homosexual identity development may have, however, overshadowed other important considerations. Although there is considerable research indicating many gay men and lesbians do not conform to societal expectations for gender-related personality traits, few authors have explored the associations among gender-related personality traits, stigma due to gender-role nonconformity, self-concept formation, and psychological adjustment. Hardin and Hall (2001), for example, indicated that both anti-homosexual prejudice and disapproval for gender nonconformity could be vulnerability factors for depressive symptoms in lesbians and gay men, but their discussion focuses almost solely on the former.

The relationship between gender-related personality traits and depressive symptoms has been well established for the general population. There are several reasons to suspect that this relationship could be particularly important in understanding gay men’s psychological distress. First, as a child, one is aware of typical gender-roles before a conscious recognition of the object choice for sexual desire (Plummer, 2001).

Thus, the first experiences of being different are likely related to gender conformity and not to homosexual identity (Hardin & Hall, 2001). Second, gender conformity is more readily visible than is sexual orientation and thus is more likely to precipitate negative treatment and protective/defensive responses to such treatment (Colgan, 1987). Finally, in North American society, both inside and outside of the gay community, masculine gay men are often more highly valued than are nonmasculine gay men (see for example, Bailey, Kim, Hills, & Linsenmeier, 1997). The empirical research examining the relationship between gender-related personality and depressive symptoms in gay men is, however, very limited. Research is needed to determine if gender-related personality traits in gay men are associated with their experience of depressive symptoms, and to explore potential mediators of this relationship.

The present study examines the relationship between gender-related personality traits and depressive symptoms in gay men and explores the role of the following three potential mediators: a history of peer harassment in adolescence, problematic interpersonal behavior, and self-discrepancies. All three potential mediators are strongly associated with depressive symptoms in the general population (Coyne & Whiffen, 1995; McCann & Endler, 1990). Furthermore, an integrative approach explains depressive symptoms better than when personality, self-concept or interpersonal factors are considered alone (Gotlib & Hammen, 1992; Ingram, Miranda, & Segal, 1998; Schmidt, Schmidt, & Young, 1999).

Throughout this research I make a distinction regarding the construct of depression. There is a longstanding debate regarding what constitutes, and thus can be called, depression. Historically, the debate was first expressed as arguments for (Vredenburg, Flett, & Krames, 1993) and against (Coyne, 1994) the use of samples of

students who did not have a formal diagnosis of depression to explore the nature of depression. At its core, the debate is concerned with the similarity of less debilitating forms of distress, captured in self-report measures of depression, and depression diagnosed through a clinical interview using criteria defined in North America in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association, 1994). Some authors indicate that there are qualitative differences between “depressive symptoms” and “clinical depression” (Coyne, 1999; Santor & Coyne, 2001). Others argue that the differences are only quantitative and an understanding of one can inform an understanding of the other (Flett, Vredenburg, & Krames, 1997). More research is necessary to resolve this debate and it is possible that, as Flett et al. suggested, there are both continuous and discontinuous aspects of milder and more severe forms of depression. In the present study, the term “depression” will be reserved for research involving clinically diagnosed depression. In describing research that utilized self-report measures, the term “depressive symptoms” will be used.

The following review of the literature first examines the evidence that depressive symptoms among gay men are unique in frequency or etiology. I then review the research on the association of depressive symptoms with the four areas under investigation in this study: gender-related personality, peer harassment in adolescence, problematic interpersonal behavior and self-discrepancies. The review of each of these areas begins with studies involving the general population and, when possible, ends with studies specific to gay men. Following this review, a model integrating these variables is proposed.

Depressive Symptoms in Gay Men

There are several sources of evidence suggesting that depressive symptoms are a significant concern for gay men. In a recent survey involving the Ottawa gay community, 35.6% of gay men indicated that “depression was an issue for them” (N = 386), making it the most frequently reported health concern (Pink Triangle Services, 2001). Similarly, in recent convenience samples at community events and online surveys of gay men and lesbians in North America, participants identified depression as their number one health concern (GayHealth.com Survey, 1999; March on Washington Survey, 1999). This concern is also reflected in the recent publication of treatment resources specific to the topic of depression in gay men and lesbians (see for example, Hardin & Hall, 2001; Schreier & Werden, 2000).

In an epidemiological study conducted in the Netherlands, in which participants were randomly selected, almost 10% of the men who identified as gay also reported experiencing a major depression in the past 12 months, compared to only 4% of their heterosexual counterparts (Sandfort et al., 2001). Lifetime prevalence rates were over 29% for gay identified men and just under 11% for heterosexual men. Gay men also reported a higher incidence of dysthymia and manic-depression than heterosexual men. Similarly, research using standardized measures of depressive symptoms has indicated higher levels of such symptoms in gay, lesbian, and bisexual youth (age 16-21) (Safren & Heimberg, 1999), and gay, lesbian, and bisexual college students (Westefeld, Maples, Buford, & Taylor, 2001), when each is contrasted with a heterosexual comparison group. A study of male identical twins, where one had reported male sex partners after age 18 and the other had not, found that the former was several times more likely to experience depressive symptoms, and had a substantially increased risk of suicidal behavior (Herrell

et al., 1999). In contrast to the values cited above, point prevalence rates for depression in the general Canadian population are estimated at 5% (Hunsley, Lee, & Aubry, 1999) and lifetime rates of depression in American men are estimated at 2.6 to 11% (Kaelber, Moul, & Farmer, 1995).

Two studies were identified that did not find significant differences in point prevalence rates of depressive symptoms in heterosexual and gay men. However, both are limited due to the sampling strategies used. In the first study, gay participants were required to travel to a gay community center to complete the survey (Carlson & Baxter, 1984). Given the lack of anonymity and the level of stigmatization surrounding homosexuality in 1984, it is quite possible that depressed gay men would have been less likely to participate. The second study only sampled men in relationships and the author suggested that his results could not be applied to single gay men due to the protective nature of relationships (Kurdek, 1987).

There are both theoretical reasons and empirical evidence to believe that unique factors may be implicated in the etiology of depressive symptoms in gay men. Prejudice against gay men is thought to affect identity formation (Gonsiorek & Rudolph, 1991) and to increase vulnerability to depressive symptoms (Malyon, 1982). As well, factors such as self-perceived masculinity (Carlson & Baxter, 1984) and dissatisfaction with gender identity (Weinrich et al., 1995) appear to be more strongly linked to depression and depressive symptoms in gay men than in heterosexual men.

Overall, community surveys and clinical case studies suggest that many gay men are concerned with depression. Although limited in number, empirical research suggests higher rates of reported depression and depressive symptoms in gay men than in heterosexual men. It is also reasonable to hypothesize that unique variables are involved

in the etiology of depression in gay men, in particular gender-related personality.

Gender-Related Personality Traits and Depressive Symptoms

Contemporary studies of gender-related personality traits focus on what Bakan (1966) referred to as two fundamental modalities of being human, one's existence as an individual, and the participation of each individual in a broader community. The distinction between two such "psychological forces" is reflected in a series of related concepts including: masculinity and femininity, instrumental and expressive roles, the needs for achievement and intimacy, and the traits of agency and communion (Helgeson & Fritz, 1999).

In the present study, I used the constructs agency and communion. Agency is an orientation toward the self and individualization, and communion is an orientation toward others and connection (Helgeson & Fritz, 1999). At times, I relate agency and communion to research that uses the conceptualizations of masculinity and femininity; for example, in the discussion of femininity in gay men. As Helgeson (1994) and others have explained, masculinity and femininity are now considered broader constructs than agency and communion, the latter referring more specifically to personality traits related to gender. Research on gender-related personality is, unfortunately, burdened with many versions of overlapping constructs. Thus, care is taken in this review to identify distinctions between constructs and the measures used to capture them.

Interest in the association between gender-related personality traits and depression is motivated in part by the robust finding that, in the developed world, women are twice as likely as men to be diagnosed with depression (Bebbington, 1998; Culbertson, 1997). In a meta-analysis of the research on gender-related personality and psychological well-being, Whitley (1984) demonstrated that individuals possessing traits

typically associated with the masculine gender-role, such as independence and decisiveness, were less likely to report depressive symptoms than were people without such traits. The findings for feminine traits, however, were not as clear. Some studies indicated femininity was strongly associated with depressive symptoms whereas others found no association.

Efforts to clarify this inconsistency led to the examination of “negative” aspects of masculine and feminine roles or unmitigated forms of agency and communion. A gender related personality trait is thought to be unmitigated when it is expressed to an extreme degree. Helgeson (1994) put forth a model suggesting that the inconsistent findings regarding the effects of agency and communion were due to the failure to distinguish the mitigated/non-extreme versions of these constructs from the unmitigated/extreme versions. Her model predicts that agency leads to good mental health but that high levels of unmitigated agency lead to physical illness. In contrast, communion leads to relationship satisfaction but high levels of unmitigated communion lead to psychological distress. The model has been empirically supported (Helgeson, 1993; Helgeson & Fritz, 1996), including evidence that unmitigated communion, or a focus on others at the expense of one’s own needs, is associated with higher levels of depressive symptoms (Fritz & Helgeson, 1998; Helgeson & Fritz, 1999; Whiffen, Thompson, & Aube, 2000). In addition, personality measures similar to unmitigated communion, such as dependency, demonstrate an association with depressive symptoms (Coyne & Whiffen, 1995).

There is also evidence indicating that conformity between gender-role orientation and biological sex is important in understanding the influence of gender-role on distress. Aube, Norcliffe, Craig, and Koestner (1995) found that feminine interests and behaviors

were associated with negative outcomes for men but not for women. Similarly, in a longitudinal study, Aube and Koestner (1992) found that males with gender-atypical interests and traits evoked negative social reactions from others, which were associated with negative self-conceptions and poor adjustment 10 years later.

In summary, research in the general population has produced strong evidence of a negative association between agency and psychological distress and some evidence of a positive association between unmitigated or extreme communion and psychological distress. There is also evidence that conformity with biological sex is important in understanding the relationship between gender-related personality traits and behaviors and depressive symptoms.

Although characterized by a great deal of intra-group diversity, there is strong evidence that many gay men are more nonconforming in their gender-related personality and behavior when compared to heterosexual men, particularly in childhood and early adolescence (Bailey et al., 1997; Zucker & Bradley, 1995). In a retrospective study, 71% of gay men and 70% of lesbian women recalled having felt different from same-sex peers as children, primarily due to gender-atypical behavior (Bell, Weinberg, & Hammersmith, 1981). As adults, gay men report more feminine characteristics than do heterosexual men on a series of measures of both personality and behavior (see for example, Hawkins, Herron, Gibson, Hoban, & Herron, 1988). In a review of 31 articles examining differences in traits on which men and women reliably differ, Pillard (1991) concluded that gay men were more feminine, but just as masculine, as men who are heterosexual.

Given the above evidence that gay men, on average, report more feminine traits than do heterosexual men, is there any evidence that the relationships between gender-related personality and depressive symptoms found in the general population are

operating in gay men? Weinrich et al., (1995) tested the hypothesis that high gender nonconformity might account for the higher rates of depression they observed in their clinical work with gay men in the context of HIV treatment and prevention. The authors found that high gender nonconformity scores were positively associated with self-reported depressive symptoms and with diagnosed depression. However, their measure of gender nonconformity differed from most others in that it included a gender identity factor measuring 'desire to have been born a woman'. This is problematic as it can be argued that wishing to be the other sex is conceptually distinct from acting in accordance with personality styles characteristic of the other sex. The implications of this study for the present examination of gender nonconformity, conceptualized as agency or communion, are therefore difficult to ascertain.

Carlson and Baxter (1984) examined whether Irish gay men and lesbians differed from heterosexuals in their gender-role conformity and if sexual orientation was related to psychological adjustment. Results indicated that gay men and lesbians self-identified as androgynous more often than did heterosexuals. As discussed earlier, these authors found that depressive symptoms in gay participants did not differ significantly from heterosexuals; however, there was a relationship between depressive symptoms and gender-role orientation among gay men. In gay men, depressive symptoms decreased as self-perceived masculinity increased and self-perceived femininity decreased. These associations were not found in heterosexual men. Of key importance to the present study, Carlson and Baxter concluded that it is not identification as gay that is associated with gay men's psychological health but rather, levels of self-perceived masculinity and femininity. Carlson and Steuer (1985) followed-up with a similar study in the United States and found that self-perceived masculinity predicted well-being in both gay and

heterosexual men.

Kurdek (1987) examined gender-role self-schema and psychological adjustment in homosexual and heterosexual men and women, all of whom were in relationships. In keeping with the results for the broader population, Kurdek identified a significant positive relationship between one aspect of masculine gender-role (autonomy) and psychological adjustment. The results, however, are limited to gay men who are in a relationship.

In summary, research on gender-related personality traits and depressive symptoms in gay men is limited to one study examining gender-nonconformity and depressive symptoms, and three studies on the relationship between aspects of gender-role (conceptualized as both personality and behavior) and depressive symptoms. Furthermore, samples are small, representativeness is seriously compromised, and conceptions of gender differ across studies. Despite these limitations, there is some evidence that, similar to the research involving the general population, depressive symptoms are negatively related to agency/masculinity and positively related to gender-nonconformity in gay men. Indeed, Carlson and Baxter's (1984) findings suggest this association is stronger in gay than heterosexual men. The association of unmitigated communion/negative femininity with depressive symptoms appears not to have been explored in gay men. This may be of particular importance because in the three studies that allowed for comparisons, all indicated that gay men are either more androgynous or more feminine than are heterosexual men.

Interpersonal Relations and Depressive Symptoms

The study of interpersonal relations and psychological distress stems from observations about the importance of social relationships to an individual's psychological

experience of the world. Theoretical accounts of the relationship between interpersonal processes and depressive symptoms began with Coyne's (1976) conceptualization of depression as a self-perpetuating interpersonal system. Coyne suggested that the depressed individual interacts with others in a manner that, over time, results in loss of support and further depression. Andrews (1989) integrated the work of several authors and developed a Self-Confirmation Model of depression. The model is based in part on the observation that individuals counteract, avoid, or discount information from their social world that does not confirm their self-concepts (Swann, 1983).

Building on the models of Coyne and Andrews, several researchers have established substantial evidence that an individual's depressive symptoms both influence, and are influenced by, how they behave in relationships with others (for extensive reviews see, Gotlib & Whiffen, 1991; Joiner, Coyne, & Blalock, 1999). Much of this research involved experimental designs that examined the interpersonal actions of depressed and non-depressed individuals and the reactions of those around them (see for example, Coyne 1976). Other studies have used correlational designs to examine the relationship between depression or depressive symptoms and specific events of an interpersonal nature (e.g., an abusive act) and/or patterns of problematic interpersonal behaviors (e.g., being overly critical of others). In the latter case, interpersonal behaviors are most often classified into the various dimensions of the taxonomy of interpersonal behavior known as the Interpersonal Circle (Kiesler, 1983). Of particular interest in the present study is how a negative interpersonal event, peer harassment, might be associated with ongoing problematic patterns in interpersonal behavior.

Peer harassment in adolescence. The terms victimization, bullying and peer harassment are used interchangeably in the research. In general, I use the term peer

harassment but defer to an author's choice when reviewing their work. Several studies have linked peer harassment in childhood to personal adjustment problems such as depressive symptoms. In a meta-analytic review of 20 years of research on peer victimization and psycho-social maladjustment, Hawker and Boulton (2000) concluded that victimization is strongly related to depression. Recently, a link between peer victimization and depressive symptoms has been shown in school children of Hispanic, African-American (Storch, Phil, Nock, Masia-Warner, & Barlas, 2003), Norwegian (Roland, 2002), and British (Bond, Carlin, Thomas, Rubin, & Patton, 2001) origin. In a longitudinal study, Bond et al., (2001) demonstrated that previous recurrent emotional problems were not significantly related to future victimization, suggesting that victimization gives rise to depressive symptoms and not vice versa. Research has also demonstrated that problems with depressive symptoms carry on into adulthood in that men who had been bullied in junior high school report more depressive symptoms and lower self-esteem than do their non-bullied peers (Olweus, 1993).

Using data from northern Europe, Olweus (1994) estimated 7.4% of boys in grades 7 to 9 are bullied. More recently, rates of 51% have been published for year 8 in Britain (Bond et al., 2001). Summarizing the research in this area, Olweus (1994) observed that boys who were bullied tend to: be more cautious, sensitive, and quiet; have a negative attitude to violence; be physically weak; and, be in closer contact with parents, in particular the mother. These characteristics also represent a non-conforming gender-role.

The harassment of gay, lesbian and bisexual youth has been well established (D'Augelli, 1998; Pilkington & D'Augelli, 1995). For example, studies of gay, lesbian, and bisexual identified youth in high school indicate that over half report verbal abuse

directed at their sexual orientation and 11% indicate they have been physically assaulted (D'Augelli, Pilkington, & Hershberger, 2002). There is also strong evidence of a relationship between this harassment and difficulties with mental health during adolescence (Hershberger & D'Augelli, 1995). Similarly, in adolescents, victimization has been found to mediate the association between identifying as lesbian, gay, or bisexual and higher health risk behaviors (Bontempo & D'Augelli, 2002).

The extent to which youth can conceal their sexual identity plays a role in the degree to which they are victimized (Pilkington & D'Augelli, 1995). More recent research has examined the experiences of men who did not disclose their sexual orientation at school but who were targeted because of perceived sexual orientation (Carragher & Rivers, 2002). Clearly, one way in which youth might be perceived as being gay is through their gender-role conformity. In a recent study of masculinity in 11-14 year-old boys, a key theme was the importance boys gave to being able to present themselves as properly masculine in order to avoid being bullied (Phoenix, Frosh, & Pattman, 2002). Indeed, those gay youth with more gender atypical behavior experience more victimization (D'Augelli, et al., 2002) and higher rates of victimization are associated with higher rates of mental health problems (D'Augelli, 2002).

Research with gay men on the association between adolescent peer harassment and adult depression is scarce. Rivers (2001a) examined the experiences of lesbian, gay, bisexual and transgendered adults who were bullied at school. The participants reported having endured many years of bullying and reported that the harassment was systematic and perpetuated by groups of peers rather than by one individual. Participants also indicated they were unlikely to have reported the harassment to anyone. With regard to their mental health, over 50% reported contemplating self-harming behaviors or suicide,

with 40% making one or more attempts. Furthermore, participants exhibited depressive symptoms at higher levels than did non-bullied lesbian, gay, bisexual and transgendered people who served as comparisons.

Descriptive research on gay adolescents' peer relations also suggests that some gay identified youth may face considerable harassment at school (Anderson, 1987; Crowley, Hallam, Harre, & Lunt, 2001). In addition, several authors have speculated from clinical experience that gay men face more difficult peer relations as children and that this affects their psychological adjustment as adults (see for example, Colgan, 1987; Corbett, 1999). As discussed below in the section on the integration of gender-related personality traits and interpersonal relations, many of these authors find in their clinical practices that gay men report having experienced peer harassment as boys due to gender nonconformity.

In summary, an association between peer harassment in adolescence and depressive symptoms has been demonstrated in the general population. The existence of peer harassment of gay youth has been well demonstrated. A limited number of recent studies explored the association between adolescent peer harassment and psychological functioning in both youth and adults, using indicators of mental health such as suicidal ideation. One recent study (Rivers, 2001a) found an association between adolescent peer harassment and adult depressive symptoms in gay men.

Problematic interpersonal behaviors. In correlational studies, depression or depressive symptoms have been shown to be associated with problematic interpersonal behaviors in the elderly (Hays et al., 1998), undergraduate students (Fritz & Helgeson, 1998), married couples (Bolger, DeLongis, Kessler, & Schilling, 1989), sexual assault survivors (Regehr & Marziali, 1999; Whiffen et al., 2000), and people who are shy (Dill

& Anderson, 1999). In their review of this literature, Gotlib and Whiffen (1991) suggested that the interpersonal behavior of depressed persons could be characterized as hostile or cold. More recently, Whiffen, Aube, Thompson, and Campbell (2000) found that women characterized by themselves and their partners as demonstrating interpersonal behavior that was submissive and cold were more likely to report depressive symptoms.

No research examining the interpersonal behaviors of gay men or lesbians, as conceptualized using the Interpersonal Circle, could be found. However, there is indirect evidence that gay men may develop problematic patterns of interpersonal behavior based on others' reactions to their sexual orientation (Cuenot & Fugita, 1982; Weissbach & Zagon, 1975; Wolfgang & Wolfgang, 1971). Of key interest in the present study are the repercussions of peer harassment in adolescence on interpersonal behavior. Gotlib and Whiffen (1991) proposed that the association between angry and hostile interpersonal behaviors and depressive symptoms could be explained by the following process. Present day interpersonal events remind one of negative interpersonal events in childhood and recreate feelings of loss of support and helplessness, resulting in frustration, anger and hostility directed at close others. This hostility in turn damages close relationships and increases vulnerability to depression. Such a process is consistent with the Theory of Interpersonal Complementary (Keisler, 1983), which predicts that peer harassment, conceptualized as hostile and dominant behavior, elicits its complementary, hostile and submissive behavior.

In summary, there is good evidence for a relationship between problematic patterns of interpersonal behavior and depressive symptoms. No one has examined the general patterns of interpersonal behavior of gay men and how these behaviors might

influence, and be influenced by, depression. There is, however, indirect evidence that gay men face specific challenges that could affect their patterns of interpersonal behavior and make them vulnerable to depressive symptoms. In particular, the experience of being harassed by peers may result in hostile and submissive interpersonal behavior, a pattern that is associated with depressive symptoms.

Self-Discrepancies and Depressive Symptoms

It has been demonstrated that individuals have multiple conceptions of self, including ideas about who they are at a given time (i.e., actual-self) and who they might ideally become, ought to become, or fear becoming (i.e., imagined-selves) (Markus & Nurius, 1986). Efforts to explore the psychological significance of discrepancies or conflicts in self-concepts are longstanding and varied. The general approach to assessing conflicts in self-concept is to compare participants' descriptions of their actual self with those of an imagined-self. For example, the concept of a discrepancy between beliefs about ideal and actual-self has been applied to measuring self-esteem (Norton, Morgan, & Thomas, 1995) and as an indicator of change in global self-construct in the fields of education and child development (Phillips & Zigler, 1982; Waugh, 2001). In the present analysis, it is the relationship between self-discrepancies and distress that is of interest. Use of self-discrepancies in this manner follows from observations by psychologists, such as Rogers (1961) that discrepancies between one's actual self and one's hopes or wishes for oneself can result in disappointment and dissatisfaction.

Contemporary research into the relationship between self-discrepancies and affect is dominated by Higgins' (1987) Self-Discrepancy Theory. Higgins identified three "domains of the self": actual-self, ideal-self and ought-self. "Actual-self" refers to the attributes a person believes he or she actually possesses. "Ideal-self" refers to the

attributes a person would ideally like to possess. Finally, “ought-self” refers to the attributes a person believes he or she should or ought to possess. For example, a person may characterize his actual-self as a graduate student, his ideal-self (a representation of hopes, aspiration or wishes) as a globe-traveling adventurer, and his ought-self (a representation of duty, obligation, or responsibility) as a supportive family member with a stable income.

The theory also distinguishes two “standpoints on the self”: one’s personal view of one’s self, and the view one believes a significant other holds. For example, one might view her actual-self as “scholar” and at the same time hold the belief that her family views her actual-self as “unemployed.” It is important to remember that self-discrepancies exist in the minds of those who hold them. Thus, the other standpoint is not necessarily what others actually believe one ought or ideally should be, but one’s perception of what others believe. Discrepancies are obtained when conceptions of self from different combinations of domain and standpoint are contrasted with each other. In the previous example, the discrepancy was between an actual/own view (scholar) and an actual/other view (unemployed). The six types of domain/standpoint representations combine with each other for a potential of 15 domain/standpoint contrasts. All of these, however, are not considered equally relevant and it is rare to consider all in any one investigation.

Self-Discrepancy Theory leads to two specific predictions. First, self-discrepancy magnitude and the intensity of psychological distress are positively correlated. Second, specific types of self-discrepancies are associated with particular types of psychological distress. For example, differences in a person’s conception of who she believes herself to actually be and who she ideally would like to be (actual/own

versus ideal/own), are thought to result in dejection-related or depressive feelings (Higgins, Klein & Strauman, 1987; Strauman & Higgins, 1988).

The ability of self-discrepancies to create vulnerability for depressive symptoms can be explained cognitively. It is assumed that self-knowledge is organized in memory and that conceptions of actual and ideal-selves for any attribute are interconnected in memory as a cognitive structure. Actual-self and ideal-self representations are believed to guide information processing and facilitate encoding, storage, and retrieval of self-related information (Higgins & Moretti, 1988; Higgins, Strauman, & Klein, 1986). Thus, when attention is directed to an actual-self, the ideal-self will also be activated and vice versa, resulting in emotional distress should the discrepancy be sufficiently large. Activation of one discrepant self-attribute is thought to result in the activation of other discrepant self-attributes, thus maintaining a vulnerability to depressive symptoms (Higgins, Van Hook, & Dorfman, 1988; Segal, Hood, Shaw, & Higgins, 1988). Such discrepancies of self are determined in part by one's socialization history, involving caregivers and important others, which causes certain meanings and consequences related to the self to become chronically accessible (Higgins, Tykocinski, & Vookles, 1990).

Higgins and colleagues demonstrated that actual-ideal discrepancies were associated with dejection-related emotions and that higher levels of self-discrepancy were associated with a greater intensity of psychological distress (Higgins, Bond, Klein, & Strauman, 1986; Higgins, Klein, & Strauman, 1985; Strauman, 1989; Strauman & Higgins 1988). More recently, the association between actual-ideal self-discrepancies and depressive symptoms was demonstrated in college students (Scott & O'Hara, 1993), adult cocaine users (Avants, Singer, & Margolin, 1993), and clinically depressed adults

(Fairbrother & Moretti, 1998). However, the predicted relationships are not always found, particularly between types of discrepancies and types of distress. For example, recent efforts by Weilage and Hope (1999) to replicate and extend the research of Strauman and Higgins met with mixed success. The authors examined whether self-discrepancies differentiated among social phobia, dysthymia, and co-morbid social phobia and depression, but found that dysthymic participants and non depressed participants did not differ in their actual-ideal ratings. However, in keeping with predictions from the theory, individuals with generalized social anxiety reported greater discrepancy between actual and ought selves than did comparison participants. Tangney, Niedenthal, Covert, and Barlow (1998) found an overall relationship between general self-discrepancy and general negative affect but similarly did not consistently find the specific effects predicted by the theory among types of domain/standpoint discrepancies and types of distress.

Higgins (1999) explained the failure to replicate some of the original findings by proposing that situational factors influence the strength of this association. Higgins suggested one such factor is the self-regulatory significance of the self-discrepancy. Self-regulatory significance is thought to be a result of the magnitude, accessibility, applicability, and importance of a self-discrepancy to a given individual. The accessibility of self-discrepancies is, in turn, influenced by the frequency of their activation, which is determined in part by the applicability of actual and imagined selves to ongoing events in an individual's life that act as stimuli (Higgins, 1989; see also, Boldero & Francis, 2000).

Of importance to the present study, two studies exploring self-discrepancies in gender-related personality traits were identified. The first found that discrepancies in a

participant's actual and ideal rating on the agentic dimension was a better predictor of both men and women's depressive symptoms than was agency alone (Grimmel & Stern, 1992). However, an attempt to replicate this study identified a sex difference not found in the first study (Grimmel, 1998): only data from women replicated the study's results. A sex difference in which only women demonstrated an association between depressive symptoms and actual-ideal discrepancies was also found by Moretti, Rein, and Wiebe (1998). However, this difference was only significant when the ideal-self was assessed from the standpoint of a parent or close other. When ideal-self was assessed from one's own standpoint (i.e., who do you ideally want to be), discrepancies were significant for both women and men. Moretti et al.'s findings suggest that men's "own standpoint" on the ideal-self is more important than is that of close others, thus offering an explanation for the sex difference found by Grimmel (1998). Grimmel's procedure lacked clarity in generating ideal selves in that participants were directed to consider the gender-role of an "ideal person" and not of themselves ideally. One's own standpoint on ideal-self, therefore, seems more relevant to men than that of significant others.

Although published studies exploring self-discrepancies in gay men could not be found, there is reason to suspect that perceptions of actual and ideal gender related personality traits would be substantially discrepant in gay men. As noted above, gay men demonstrate higher femininity scores than do heterosexual men (Zucker & Bradley, 1995), yet they also report positive biases towards masculine behavior, traits and appearances (Bailey et al., 1997). The vast majority of gay men demonstrate a preference for masculine over feminine characteristics in personal advertisements (Laner & Kamel, 1977) and in sexual partner choice (Bell & Weinberg, 1978). An example of how masculine conformity is a common topic in many gay men's lives is the website

“www.straightacting.com.” The site offers a “survey” involving questions relating to masculine stereotypes and yields an “official straight-acting rating” to communicate to potentially interested men in online personal advertisements or chat rooms. All of these examples suggest it is likely that gender-related personality traits are both accessible to gay men and involved in their self-regulation. Finally, self-discrepancies are of particular interest in gay men because the concept of an ideal-self captures social influences on self. Social influences on the self are of particular interest in minority groups because members of such groups must construct and maintain a sense of self in the presence of a majority who do not reflect, or may even actively stigmatize, the minority individuals’ experience (see for example, Cox & Gallois, 1996).

In summary, there is a long history of interest in self-discrepancies and their association with distress. Many studies have demonstrated that discrepancies in actual and ideal-self are associated with depressive symptoms. However, the occasional lack of this association suggests that such discrepancies may not always be of importance, or may be moderated by other variables. Limited research on discrepancies in gender-related personality traits indicates such discrepancies can be important predictors of depressive symptoms in women but that the association may be weaker in men when measured from the perspective of others’ ideal standards. Studies with gay men have not been published, which is surprising given there is considerable reason to suspect gender-related discrepancies will be more salient to them than to heterosexual men.

The Present Study: An Integrated Approach to Understanding Depressive Symptoms

Several researchers have developed models for understanding depressive symptoms that integrate cognitive and interpersonal factors (see for example, Gotlib & Hammen, 1992; Sacco, 1997; Schmidt et al., 1999). Ingram et al. (1998) outlined an

integrated model for depression that adds a developmental aspect to their consideration of cognitive and interpersonal factors. Their process is very similar to that hypothesized by Gotlib and Whiffen (1991) as discussed above. In their model, Ingram et al. suggest that through the experience of distressing interpersonal events in childhood, connections are developed between negative affective structures and negative cognitions about self and other. Once these vulnerability structures are in place, distressing interpersonal events in adulthood trigger the activation of negative cognitions and result in depression. Ingram et al. proposed that their model accounts for higher rates of depression demonstrated in women, and suspected for ethnic minorities. The mechanism by which such groups experience vulnerability for depression is the same as for all groups but the frequency of distressing interpersonal events in childhood is greater in low status groups, thus explaining their higher rates of depression. A similar line of reasoning might be applied to gay men who did not conform to expectations for gender-related personality traits as boys and, as a result, experienced peer harassment.

Hypothesized models of depressive symptoms in gay men. I propose two models that integrate cognitive and interpersonal factors based on the processes described by Ingram et al. (1998) and Gotlib and Whiffen (1991). The first is a fully mediated model the second is a partially mediated model.

Figure 1 illustrates the model in its fully mediated form. I hypothesize that, in gay men, the association between depressive symptoms and gender-related personality traits (specifically agency and unmitigated communion) is mediated by recalled peer harassment in adolescence, problematic patterns of adult interpersonal behavior, and self-discrepancies in agency. Rather than considering these three mediators to be at the same level in the model, however, I examined the possibility that the relationship between

recalled peer harassment in adolescence and depressive symptoms is mediated by problematic patterns of interpersonal behavior as an adult and by self-discrepancies in agency. Placement of the three mediators on two different “levels” is based on the idea that interpersonal maltreatment as a child can create cognitive vulnerabilities and adult interpersonal problems that then lead to depressive symptoms.

In developing this model I propose the following sequence of events. First, that men who report being low in agency and high in unmitigated communion were once boys low in agency and high in unmitigated communion and that these boys experienced peer harassment as a result of this configuration of gender-related personality traits. The experience of peer harassment then contributed to problematic patterns of interpersonal behavior and cognitive vulnerabilities in the form of actual-ideal discrepancies in agency. Evidence for the associations between each variable in the model and depressive symptoms has been presented in the literature review above. The evidence or theoretical rational for each the mediations included in Figure 1 is outlined below. Although the language used to describe such a model sounds causal, it must be remembered that the study is correlational and as such can not attribute cause.

Evidence for childhood peer harassment as a mediator of the association of gender-related personality traits and depressive symptoms. Based on clinical observations, many authors suggest that gay men as boys are targeted for peer harassment due to their gender-related personality and that this harassment contributes to adult depression (see for example, Colgan 1987; Hardin & Hall, 2001). Empirical support for this hypothesis comes from the demonstrated associations between gender atypicality and peer harassment (Pilkington & D’Augelli, 1995; D’Augelli et al., 2002), gender-related personality traits and depressive symptoms (Carlson & Baxter, 1984), and

peer harassment and depressive symptoms (Hawker & Boulton, 2000; see also, D'Augelli, 2002), which makes mediation possible.

Evidence for problematic interpersonal behaviors as a mediator of unmitigated communion and depressive symptoms. Fritz and Helgeson (1998) found good evidence that the association between unmitigated communion and depressive symptoms was at least partially mediated by nonassertive and overly nurturing interpersonal behaviors.

Evidence for self-discrepancies in agency as a mediator of agency and depressive symptoms. Research in the general population by Grimmel (1998; Grimmel & Stern, 1992) is equivocal, but suggests that self-perceptions of discrepancy between actual and ideal agency are stronger predictors of depressive symptoms than agency itself.

Theoretical rationale for problematic interpersonal behavior as a mediator of peer harassment and depressive symptoms. In the model proposed by Ingram et al., (1998) negative peer interactions as a child led to interpersonal problems as an adult and in turn to depressive symptoms. Gotlib and Whiffen (1991) also theorized such a mediation.

Theoretical rationale for self-discrepancies in agency as a mediator of the association between peer harassment and depressive symptoms. Several authors suggest it is through peer-harassment that gay men who were gender nonconforming as boys first obtained and internalized the message there is something “not right” with them (Corbett, 1999). Thus, such peer harassment may be key in the development of self-discrepancies between actual and ideal agency, and it may be the latter that acts as a vulnerability for depressive symptoms.

Statement of the problem. The above literature reviews indicate that depressive symptoms are a significant concern for many men who identify as gay. There is considerable evidence that agentic and unmitigated communion personality traits, peer

harassment in adolescence, submissive and hostile/cold interpersonal behavior, and discrepancies between actual and ideal self-conceptions are associated with depressive symptoms in the general population. Furthermore, studies exploring self-discrepancies in gender-related personality traits suggest an association with depressive symptoms but are few in number and inconclusive. Research examining the association of these constructs to depressive symptoms in gay identified participants is limited to a few studies examining gender-related personality traits, and a few others examining peer harassment in adolescence. In the latter case, researchers typically used indirect indicators of depression such as suicidal ideation. These few studies indicate that depressive symptoms in gay men are negatively associated with agency and positively associated with both gender nonconformity and peer harassment. Clearly, more research on the zero-order correlations of the variables in the proposed model with depressive symptoms in gay men is needed. In addition, efforts to develop an understanding of the experience of depressive symptoms are increasingly concerned with the relative importance of predictive factors and their integration. Thus, the present study also examines, through path modeling, potential mediating relationships among the variables and their relative importance in predicting depressive symptoms.

Method

Participants and Procedure

Participants were gay identified males aged 18 years and over. The identity and age limits were used to limit the inclusion of those engaged in identity exploration in adolescence and those who do not identify as gay. Age 18 is used by many authors (e.g., Herrell et al., 1999) to attempt to exclude adolescent same-sex experimentation that is not indicative of sexual orientation. Participants were recruited from the gay community

via two main procedures. The first involved recruitment through Internet sites, news groups, and email lists relevant to the gay community. The second involved printed advertisements in gay newspapers and at gay venues (e.g., bookstores, bars) (see Appendix A). Individuals were provided with a World Wide Web (WWW) address where they could find the survey and information about participation and confidentiality. The use of the Internet to gather data in this manner has been explored extensively by Gosling, Vazire, Srivastava and John (2004) who conclude it is as valid as traditional methods provided efforts are made to stop multiple submissions. In the present study, the software used to collect the data did not allow for multiple submissions from the same computer. The email address of the researcher was provided to allow individuals to seek further information. For the full survey, see Appendix B.

Participants responded to questions on-line by clicking over a response option (leaving a circle or check mark) much as one would mark a response on a traditional pen and paper survey. Participants were informed that submission of a completed survey was done by pressing the clearly marked "Submit Now" button at the end of the survey, and that doing so would indicate their consent to use their information. They were advised that a summary of the results would be available by contacting the study authors or consulting the University web site (see Appendix C).

A power analysis was conducted to determine the number of participants required (see Appendix D). Typically, approximate effect size can be estimated from previous studies. However, as adequate research involving gay men has not been conducted, effect sizes were estimated from research with the general population. Calculations suggested a minimum sample of 90 participants was necessary to have adequate power. For a discussion of issues specific to sampling gay men, see Appendix E.

Participants were informed that their participation was voluntary and confidential. They were advised that they could withdraw at any time simply by leaving the web site. It was noted that if they did so before clicking the “submit now” button they would not have submitted any information. Responses were collated using a software program and this information was stored on a secure network. Although the nature of the questionnaires was not particularly sensitive, if a participant was disturbed by responding to questions, the survey contained information on contacting crisis lines and/or professional assistance.

Measures

Demographic and background information. The following general information about participants was sought: age; gender (male/ female/ transgendered); country of residence; if Canadian, the city/municipality; sexual orientation (gay/ bisexual/ heterosexual); relationship status (single/partnered); education status; employment status; estimated income; and, if the participant identified as a visible minority (yes/no).

Extended Personal Attributes Questionnaire (EPAQ; Spence, Helmreich, & Holahan, 1979). The EPAQ measures self-perceived socially desirable and undesirable gender-related personality traits (Spence et al., 1979; see also, Saragovi, Koestner, Di Dio, & Aube, 1997). Three subscales of the EPAQ were used to measure agency, communion and unmitigated agency. Each subscale consisted of eight items rated on a 5-point bipolar scale from 0 (not at all) to 4 (very). Convergent validity for the first two subscales has been demonstrated through correlations with the Bem Sex Role Inventory (BSRI) and other measures of gender-related personality traits (Spence & Buckner, 2000). Convergent validity of unmitigated agency has been demonstrated by Buss (1990) who found that unmitigated agency was related to dominant behaviors motivated

by self-interest.

The agency subscale assesses self-assertive, instrumental qualities that are considered socially desirable in both genders but are more likely to be endorsed by men (e.g., “very independent” or “very competitive”). Internal consistency cited in the literature is adequate ($\alpha = .74$, Saragovi et al., 1997; $\alpha = .70$ to $.77$, Helgeson & Fritz, 1999). The communion subscale assesses expressive qualities that are considered socially desirable in both genders but are more likely to be endorsed by women, (e.g., “very gentle”, or “very helpful to others”). Internal consistency is adequate ($\alpha = .79$, Saragovi et al., 1997; $\alpha = .72$ to $.81$, Helgeson and Fritz, 1999). The unmitigated agency subscale assesses qualities considered socially undesirable in both genders but attributed more frequently to men than to women (e.g., “arrogant”). Internal consistency is adequate ($\alpha = .73$, Saragovi et al., 1997). The unmitigated communion subscale of the EPAQ assesses characteristics that are considered inappropriate for both genders but more often associated with women. However, as the scale yields poor internal consistencies ($\alpha = .51$), I used another measure of unmitigated communion.

Unmitigated Communion Scale (UCS; Helgeson, 1993). The UCS is a nine item, 5-point Likert scale, self-report measure of the tendency to place others’ needs before one’s own and to experience distress over concern for others (Helgeson, 1993). The UCS has demonstrated construct validity (Fritz & Helgeson, 1998), acceptable internal consistency, ranging from $.7$ to $.8$, and high test-retest reliability (Helgeson, 1993, 1994; Helgeson & Fritz, 1996; Saragovi et al., 1997).

Olweus Bully/Victim Questionnaire for Students -Revised (OBVQ-R; Olweus, 1996). The OBVQ-R is a 20-item, 4-point Likert scale, self-report questionnaire measuring the frequency of bullying and being bullied. For the purposes of the present

study participants were only asked the 10 items dealing with being bullied. Respondents are first offered a clear definition of bullying and then asked to indicate how often they have been bullied. The response to each item is rated from 1 (it hasn't happened to me in the past couple of months) to 5 (several times a week). The bullying scale has demonstrated construct validity, correlating highly with peer and teacher reports of bullying, and other self-report results (Olweus, 1991), as well as with peer rejection (Bendixen & Olweus, 1999). Internal consistency (from nonretrospective research) is good ($\alpha = .8$ to $.9$) (Olweus, 2000).

Following from Olweus (1991), in the present study the childhood bullying measure was altered to examine accounts of bullying retrospectively. This was done by changing the prompt "Have you been bullied in school in the past couple of months?" to "As you recall, during the period including grades 7-9, were you bullied? If yes how often?" Response options remained the same, with the exception that the first response option "it hasn't happened to me in the past couple of months" was changed to "I was not bullied" or "I was not bullied in this way". As in the childhood measure, a clear definition of bullying was given. The original coding of 1-5 was recoded to 0-4 so that a consistent response of not being bullied yielded a score of 0. Total scores for being bullied thus ranged from 0 to 40.

In general, retrospective measures are subject to limitations when compared to nonretrospective measures. However, in a longitudinal study, Olweus (1994) examined peer harassment in boys from grades 7 to 9 (approximately 14 to 16 years-old) and then followed up, at age 23, with participants who had reported being victimized and asked them to "recall grade 9" and indicate if they had been victimized at that time. Olweus (1994; p.104) found "substantial correlations" between self-ratings of victimization in

grade 9 and retrospective accounts of victimization approximately 7 years later.

Furthermore, in an extensive review of the literature examining retrospective studies, Brewin, Andrews, and Gotlib (1993) concluded that accuracy depends to a large extent on the characteristics of the events being recalled. Retrospective accounts are more reliable when inquiries are made into the repeated occurrence of specific concrete events, and when the inquiry does not involve specific details. Age at the time of the event is also an important consideration, with poorer reliability for events in the first five years of life. Brewin et al. (1993; p.91) concluded their review by stating that there was “little support for the claim that recall of childhood experiences is distorted by depressed mood”. Recently, the reliability of gay men and lesbians’ retrospective accounts of school harassment was examined by having participants respond to questions about their recollections of harassment twice, 12 to 14 months apart (Rivers, 2001b). The recollection of specific types of harassment, its specific location, and general chronology did not vary across the 12 to 14 month period.

The bullying subscale can be scored to indicate the percentage of respondents who were bullied. In this case the first two response options are scored 0 (not bullied) and the remaining three response options are scored 1 (bullied). A total score of 1 or higher is used to determine the percentage of individuals bullied. In the present study the bullied subscale is primarily used as a continuous measure. However, the percentage of respondents who can be classified as bullied was also calculated.

Checklist of Interpersonal Transactions-Revised (CLOIT-R; Kiesler, 1984). The CLOIT-R is a 96-item checklist of overt interpersonal behavior derived from Kiesler’s theoretical model, the Interpersonal Circle (Kiesler, 1983). The Interpersonal Circle is a classification system of interpersonal behavior based on two bipolar axes, hostile-

friendly and dominant-submissive. Each item on the checklist describes an interpersonal action (e.g., I am quick to take charge of a conversation or discussion). Participants were asked to place a check in front of each item that accurately describes an action typically exhibited by them in their transactions with those to whom they are close. Checked items were scored on a present/absent basis and summed to form continuous scores. Kiesler recommended that adjacent dimensions be combined to produce “octants” defined by 12 items (Kiesler, Goldston, & Schmidt, 1991). The CLOIT-R may also be examined at the level of quadrants and at the level of the two main axes. In the present analysis, the level of octants was chosen because it provided constructs comparable to published studies examining the associations among interpersonal behavior, personality and mood. Of the 12 items contributing to the score for an octant, six items are designed to measure mild-moderate levels of behavioral intensity, and six are designed to measure extreme levels of intensity. Endorsements of mild-moderate items receive a score of 1, and endorsements of extreme items receive a score of 2. The range of scores on any possible octant is therefore 0 to 18. Higher scores indicate a more rigid and troubled interpersonal style (Kiesler, 1991).

The CLOIT-R has good concurrent and predictive validity (Kiesler et al., 1991; Tracey & Schneider, 1995). Studies of the internal consistency of the octants demonstrate mixed results, typically ranging .65 to .70 but at times ranging from .53 to .80 (Kiesler et al., 1991).

Self-discrepancies in gender-related personality traits. Self-discrepancies in gender-related personality traits were derived by subtracting the values for agency and communion, as measured above, from values for ideal agency and ideal communion, respectively. Ideal agency and ideal communion were measured by asking participants

to respond again to the subscales for agency and communion but “this time from the perspective of the kind of person you would like to be – your personal ideal.”

Participants were prompted to “think about your hopes and aspirations for who you ideally would like to be.”

There is some debate in the literature about the reliability and validity of self-discrepancies, with some authors finding good psychometrics (Phillips & Zigler, 1982) and others not (Hoge & McCarthy, 1983). This variability is, in part, a result of differing conceptualizations and operationalizations of self-discrepancy. The procedure used in the present study was used previously with the Bem Sex Role Inventory, the Personal Attributes Questionnaire (PAQ), the Male-Female Relations Questionnaire (Grimmell, 1998; Grimmell & Stern, 1992), and the Revised Adjective Checklist (Gough, Fioravanti, & Lazzari, 1983). Gough et al. summed the absolute differences between ideal and actual scores and produced a difference index that had good internal reliability ($\alpha = .82$ to $.86$). In the present study I also calculated a difference score, however, I was specifically interested in the direction of the self-discrepancy (i.e., whether the men indicated their ideal was greater or less than their actual agency) and thus I did not take the absolute value of the difference.

Center for Epidemiological Studies Depression Scale - Short Form (CES-D-Short Form; Radloff, 1977; Santor & Coyne, 1997). The CES-D was developed to assess the severity of depressive symptoms in adults residing in the community. The original CES-D consisted of 20 items representing depressive symptoms (Radloff, 1977). Subsequent analysis by Santor and Coyne (1997) revealed that the efficiency with which depressed individuals were identified could be improved by reducing the scale to nine items. Items are rated on a 4-point scale according to the frequency with which symptoms were

experienced during the preceding week and summed to compute a continuous score of depressive symptoms ranging from 9 to 36. In the present study, the CES-D is used as a continuous measure of depressive symptoms.

Internal consistency for the CES-D 9-item version ($\alpha = .92$) is comparable to that of the 20 item version ($\alpha = .84$) (Santor & Coyne, 1997). Total scores for the 9-item revised scale correlated .93 with total scores from the original 20-item version. Like the original measure, the 9-item version has been found to demonstrate good construct validity (Santor & Coyne, 1997).

Results

Internal Consistency of Measures

Of the variables examined in the model, the internal consistency was adequate for all measures except ideal agency ($\alpha = .61$). By deleting two items from the measure of ideal agency (“Not at all competitive” to “Very competitive” and “Feel very inferior” to “Feel very superior”) the alpha improved to .66. Examination of the data indicated that these items reduced the internal consistency because participants who otherwise rated their ideal agency as high did not endorse wishing to be very competitive or to feel very superior. These two items were deleted from the measure of agency in order to equate the possible ranges for agency and ideal agency for the calculation of self-discrepancies. Doing so had no impact on the alpha for agency. Poor internal consistency reduces the chances of finding significant associations as it increases the error associated with the variable. Despite the lower internal consistency for ideal agency, significant correlations were found between self-discrepancy in agency and both unassured/submissive behavior and depressive symptoms.

Of the remaining measures, not in the model but assessed for descriptive information, four of the octants on the CLOIT-R also had inadequate internal consistencies. Consistent with published research, I found internal consistency values for the octants of the CLOIT-R ranging from .59 to .77 (see Table 1). Items were deleted from octants 1, 2, 6, and 8, to improve their internal consistency. Alphas for all measures are reported in Tables 1 and 2.

Missing Data and Division of Sample

Data were directly transferred from the online survey to a data file for the Statistical Package for the Social Sciences (SPSS). Examination of the data indicated all responses were conceptually possible. Overall, 510 of the 555 responses to the survey met the criteria of being gay identified males over 18 years of age. The data provided by 45 participants could not be used as they did not indicate age ($n = 18$); identified as female ($n = 2$), transgendered ($n = 4$), or bisexual ($n = 17$); did not report gender ($n = 17$), or were under 18 years of age ($n = 1$). Missing data analysis indicated that less than 5% of the 510 cases were missing variable scores and that there was no pattern in the missing data. Although missing value substitution is not necessary when less than 5% of the cases are affected, in most cases only one or two items in a variable were missing and it was decided to substitute group means for up to two missing items in order to use the response. Group means were substituted where necessary and caused no changes in the significance of correlations between predictor and criterion variables. Two participants had omitted several measures and their data were deleted from the analysis. In a few cases, a participant did not complete an entire measure and thus they were automatically omitted from any analysis involving that variable and omitted entirely from the path analyses.

Of the remaining 508 respondents, 254 were randomly selected to test two hypothesized models, a fully mediated model (Figure 1) and a partially mediated model (Figure 2). As described below, path values were used to develop a respecified model and the remaining 254 participants were used to validate the respecified model. As recommended by Tabachnick and Fidell (1996), subsequent data screening was conducted separately for the subsamples and involved examination of univariate and multivariate outliers, normality, linearity, heteroscedasticity, multicollinearity, and singularity.

Screening Sample A

Univariate outliers were defined as scores in excess of ± 3.3 ($p < .001$) on the standardized (z) distribution (Tabachnick & Fidell, 1996). Based on this criterion, univariate outliers were identified on the following eight scales: ideal communion, self-discrepancy in communion, and six of the octants of the CLOIT-R. As recommended by Tabachnick and Fidell normality and multivariate outliers were examined prior to responding to univariate outliers.

Univariate normality was examined through the skewness and kurtosis values provided by SPSS Frequencies. All variables were within acceptable ranges for skewness and kurtosis, except for ideal communion, self-discrepancies in communion, and six of the octants of the CLOIT-R, all of which showed a significant level of kurtosis and marked skewness. Visual inspection of the distributions for ideal communion suggested the difficulties in normality were due to outliers. Visual inspection of the six octant scales indicated that a high number of respondents did not endorse any of the items pertaining to these octants resulting in positive skewness and kurtosis for these scales. The scales were transformed by adding a constant of 1 (to bring zero values to

one) and taking the logarithm of the value. Following transformation, distributions were no longer skewed or kurtotic. A subsequent check indicated the transformations did not change the significance of correlations among the variables. Following subsequent handling of outliers, skewness and kurtosis values for ideal communion and self-discrepancy in communion were acceptable.

Multivariate outliers were assessed using Malhalanobis distance (as calculated by SPSS Regression using the transformed data) and indicated 2 participants were multivariate outliers. Upon examination, these participants had extremely high scores on agency and/or communion as well as very low scores on ideal communion and agency, resulting in extremely negative scores on self-discrepancies for communion and agency. These two participants' data were deleted from the analysis and Malhalanobis distance was calculated again and identified one further multivariate outlier due to very high ideal agency and very low ideal communion scores. Data from this participant were also excluded from the analyses.

With octants 1 to 5 and 8 of the CLOIT-R transformed, and three multivariate outliers deleted from the sample, there remained only three univariate outliers; one on self-discrepancies in communion, one on octant 3 of the CLOIT-R, cold/hostile, and one on octant 6 of the CLOIT-R, deferent/trusting. Univariate outliers were handled by adjusting their score to one unit larger (or smaller) than the next most extreme score in the distribution (Tabachnick & Fidell, 1996; p. 69). Removing outliers made no difference to the significance of correlations among the variables in the model.

Linearity and heteroscedasticity were examined through bivariate plots for the DV with each IV and a selection of IVs together and indicated no threat to these assumptions with one exception: the plot of self-discrepancies in agency and depressive

symptoms. It is theoretically possible that participants could be more agentic than their ideal or less agentic than their ideal. Self-discrepancies were calculated by subtracting actual agency from ideal agency, resulting in a positive value when a participant was less agentic than their ideal and a negative value when a participant was more agentic than their ideal. The hypothesized importance of agency to gay men would predict a linear relationship with depressive symptoms for those less agentic than their ideal. However, self-discrepancy theory suggests those more agentic than their ideal would also show a linear relationship with depression, resulting in a U shaped distribution. Examination of the scatter plot for self-discrepancies in agency and depressive symptoms showed that the overwhelming majority of participants ($n = 233$) reported they were not as agentic as their ideal. Given the small number of participants with negative values for self-discrepancy in agency ($n = 18$), and the small range of their responses (-1 to -6), it was difficult to judge if their distribution conformed to the otherwise linearity of the scatter-plot for self-discrepancy and depression. Two participants in particular had self-discrepancies approaching -6 but substantial depressive symptoms and based on these cases it was decided to remove those 18 participants who were more agentic than their ideal from Sample A. Therefore, subsequent discussion of results deals only with gay men who are less agentic than their ideal. Visual inspection of the means of the model variables, with and without these 18 participants and the outliers, indicates little change. As well, there were no changes in the significance of correlations between predictor and criterion variables.

Finally, multicollinearity and singularity were assessed by examining Pearson coefficients among the independent variables (presented in Table 3). All variables were well below the conventional cutoff value of $r = .90$, suggesting multicollinearity and

singularity were not present. The correlation between agency and self-discrepancies in agency was high ($r = .82$); however, on a conceptual level one cannot be assured of the value of one simply by knowing the value of the other. Furthermore, at $r = .82$, 34% of the variability between the two measures is still unaccounted for.

Demographic Characteristics of Sample A

On average, the men were in their 30s. Just over half the participants were from Canada, and just over a third from the United States. Canadian participants came from 24 different cities/regions, the 3 highest being Ottawa, Toronto, and Vancouver where advertisements had been run in gay community newspapers. About one half of the men reported being in a relationship and just over a fifth identified as being a visible minority. Almost three quarters of the men were currently employed and a similar number had a university degree. Just under one-half of the men made over \$ 46, 000 per year. Further details on the sample demographics are provided in Table 4.

Means and Standard Deviations for Sample A

Means and standard deviations for the self-report measures are presented in Table 5. Levels of agency, communion, unmitigated agency and communion are rarely reported in the published literature, with the emphasis placed instead on how these variables correlate with others. With regards to levels of peer harassment in the sample, the mean of 11.16 can be compared to a possible range of 0 – 40. If the harassment subscale is scored as recommended for use as a screening tool, 64.1% of the sample recalled being harassed by peers in junior high school.

The participants' pattern of interpersonal behavior is described relative to the Interpersonal Circle. Examining the mean scores in the present sample, the participants' interpersonal profiles were highest in the warm/friendly dimension of the circumplex and

lowest at the contrasting side of the circumplex, at the cold/hostile octant. The participants as a group, therefore, can be characterized as seeing themselves as predominantly more friendly than hostile and somewhat more submissive than dominant. Although higher scores on any dimension of the Interpersonal Circle are considered indicative of more difficulties with that pattern of interpersonal behavior, there are no clinical cutoffs or norms for the CLOIT-R. With regards to the level of depressive symptoms in the present sample, the mean of 17.74 can be compared to the possible range of 9 to 36.

Correlations Among Measures

Zero-order correlations among the measures are reported in Table 3. Bonferroni correction was used to adjust for the number of tests of significance, such that the alpha level for significance was .0027 ($\alpha = .05 / 18$). As hypothesized, each of the variables in the hypothesized model correlated significantly, and in the expected directions, with the dependent measure. That is to say, agency correlated negatively with depressive symptoms ($r = -.50$), unmitigated communion correlated positively with depressive symptoms ($r = .27$), recalled peer harassment was positively correlated with depressive symptoms ($r = .32$), and self-discrepancies in agency correlated positively with depressive symptoms ($r = .53$). Furthermore, as expected, interpersonal styles characterized as submissive and more hostile than friendly were associated with depression including the octant dimensions unassured/submissive ($r = .51$), cold/hostile ($r = .33$), and detached /inhibited ($r = .38$).

A multiple regression analysis was performed to examine the extent to which of these three octants contributed unique variance to the relationship with depressive symptoms. As indicated in Table 6, only one of the three octants contributed

significantly to the prediction of depressive symptoms, that being unassured/submissive interpersonal behavior. Thus, further analyses only included this octant.

The correlations also support the possibility of all but one of the hypothesized mediations as depicted in the model in Figure 1. According to Baron and Kenny (1986), four specific conditions must be met for a variable to be considered a mediator: (a) the predictor must be significantly associated with the hypothesized mediator, (b) the predictor must be significantly associated with the dependent measure (in the present study - depressive symptoms), (c) the mediator must be significantly associated with the dependent variable, and (d) the impact of the predictor on the dependent measure is less after controlling for the mediator. A comparison of the correlations in Table 3 and the mediations hypothesized in Figure 1 suggests that on the basis of the first three steps in Baron and Kenny's analysis, all mediations are possible with one exception. The mediation of the association of unmitigated communion and depressive symptoms by recalled peer harassment does not appear possible as the first condition is not met in that unmitigated communion does not show a significant association with peer harassment. Keeping this in mind, the mediations were tested simultaneously in the analysis of the hypothesized models.

Analysis of the Models

Structural equation modeling (SEM) was used to determine the goodness of fit of two hypothesized models. The first, the fully mediated model, is depicted in Figure 1. The second, the partially mediated model, is depicted in Figure 2. The partially mediated model includes the mediational paths from Figure 1 and the direct (unmediated) paths from the two gender-related personality traits and peer harassment to depressive symptoms. For completeness, the partially mediated model also includes two additional

mediations, unassured/ submissive behavior as a mediator of the link between agency and depressive symptoms, and self-discrepancies in agency as a mediator of the link between unmitigated communion and depressive symptoms. The adequacy of each model was assessed using the SEM package, Analysis of Moments Structures (AMOS; Arbuckle, 1994). In comparison to individual tests of mediation, SEM has the advantages of allowing for a comparison of the relative fit of different models and of reducing the impact of measurement error on obtained results by examining the hypothesized relationships in a model simultaneously. A specific type of SEM, known as path analysis, was used and involved examination of only manifest or measured variables.

The adequacy of the proposed models was determined using fit indices. Choice of fit indices is said to differ with personal or journal preferences, however, the CFI and RMSEA are the two most frequently reported indices (Tabachnick & Fidell, 2001; p. 702). The following four fit indices were used to test the adequacy of the proposed model: Chi-square statistic (χ^2), Comparative Fit Index (CFI), the Expected Cross Validation Index (ECVI), and the Root Mean Square Error of Approximation (RMSEA). The Chi-square statistic (χ^2) is suggested by Byrne (1990) as the first fit index of a model to consider as it is a measure of absolute fit between the covariance matrix of the population, as defined by the hypothesized model, and the covariance matrix of the observed data. The χ^2 statistic is used to test the null hypothesis that the discrepancy between the two matrices is zero, and the probability value associated with χ^2 represents the likelihood of obtaining a χ^2 value of that particular size or larger by chance if the null hypothesis that the model fit the data is true. Thus, the higher the probability value associated with χ^2 , the closer the fit between the hypothesized model and the sample data

(Byrne, 1990). When the statistical significance associated with the χ^2 value is lower than the .05 level used by convention, the null hypothesis that the model fits the data is rejected. As an alternative for large samples, Kline (1998) recommended assessing the significance of χ^2 using the ratio of χ^2 over its degrees of freedom. Using Kline's method, a χ^2 value is significant if χ^2/df is less than 3.

The Comparative Fit Index (CFI) was developed by Bentler (1990) and is used as a measure of the goodness of fit of the overall model. According to Byrne (1990), the CFI is the best index of relative fit. CFI values range from 0 to 1.00, with a value above 0.9 indicating an acceptable fit of the data and higher values indicating increasingly better fit.

The Expected Cross Validation Index (ECVI) evaluates the likelihood of cross-validation across samples of similar size drawn from the same population. Smaller ECVI values denote greater potential for model replication. However, because ECVI coefficients can take on any value, there is no determined appropriate range of values (Byrne, 1990). This is because the ECVI is utilized to rank order different models according to their potential for cross-validation. The ECVI for the model being tested is compared with that of the "independence model" and the "saturated model". The independence model (also known as the null model) is essentially a highly restricted one which stipulates complete independence of (i.e., complete lack of correlation among) all the variables in the model. It therefore represents a lower-end, baseline level of fit which any realistic model is expected to exceed. By contrast, the saturated model is one in which the number of estimated parameters equals the number of data points, representing a perfect fit (Loehlin, 1992). The closer the ECVI value is to that of the saturated model, and the farther it is from that of the independence model, the greater the level of fit and

the potential for model replication.

The Root Mean Square Error of Approximation (RMSEA) assesses the estimated discrepancy per degrees of freedom, between model fitted variances and covariances and the true population values. Thus, the RMSEA determines how well the model would fit the population covariance matrix if it were available (Byrne, 1990). Based on convention, values less than 0.06 indicate a good fit (Hu & Bentler, 1999), whereas values between 0.08 and 0.10 represent a mediocre fit, and those greater than .10 indicate a poor fit (Byrne, 1990).

Testing of the fully mediated model revealed a poor degree of fit ($\chi^2 (6) = 81.801$, $p = 0.000$; CFI = .842; ECVI = .490 (Saturated model = .184; Independence model = 2.228); RMSEA = .235). In contrast, testing of the partially mediated model revealed a very good degree of fit, with $\chi^2 (1) = .023$, $p = .880$; CFI = 1.0; ECVI = .176 (Saturated model = .184; Independence model = 2.228); RMSEA = .000. Therefore, the more parsimonious fully mediated model was rejected and the partially mediated model was examined further.

Examination of the standardized estimates identified four non-significant paths at $\alpha = .05$. As expected on the basis of correlations, the path between unmitigated communion and peer harassment was non-significant and was removed. The paths from agency to depressive symptoms and peer harassment to self-discrepancies in agency were also non-significant and removed. A fourth path, from unmitigated communion to depression approached significance and given the exploratory nature of the study, and the plan to retest the model in a second sample, this path was left in. The respecified model (the full model minus the 3 clearly non-significant paths) was assessed for fit. The respecified model revealed a good degree of fit, with $\chi^2 (4) = 2.769$, $p = .597$; CFI = 1.0;

ECVI = .161 (Saturated model = .184; Independence model = 2.228); RMSEA = .000.

The extent to which a new model represents a statistically significant change in adequacy of fit compared to a previous model can be assessed by evaluating the difference in χ^2 ($\Delta \chi^2$) between the two. The difference in χ^2 is distributed along the χ^2 -distribution, with degrees of freedom equal to the difference in degrees of freedom (Δdf) between the previous and respecified models. A non-significant $\Delta \chi^2$, therefore, indicates no statistically significant change in the revised model's goodness-of-fit. The removal of the three paths that were clearly not significant did not significantly change the model's fit as the calculated χ^2 ($\Delta \chi^2 = 2.769 - .023 = 2.746$) is less than the critical value for χ^2 . Thus, the revised model is neither a significantly better or worse fitting model; however it is more parsimonious as it excludes three clearly non-significant paths.

Goodness of fit indices for the fully mediated, partially mediated, and respecified models appear in Table 7. These results suggest a good fit for the final respecified model, presented schematically in Figure 3. Figure 3 also depicts the standardized regression (Beta) weights for the respecified model, indicating the level of association between variables and their significance.

Validation of the Respecified Model Using Sample B

A second randomly selected sample of participants ($n = 254$) was used to validate the respecified model. Again, data screening followed recommendations by Tabachnick and Fidell (1996) including screening for normality, linearity, and homoscedasticity of residuals; examination of outliers using Mahalanobis distance; and testing for multicollinearity and singularity.

Screening of Sample B. Similar to Sample A, univariate outliers were defined as scores in excess of ± 3.3 ($p < .001$) on the standardized (z) distribution (Tabachnick &

Fidell, 1996). Based on this criterion, univariate outliers were identified on eight scales, ideal communion, ideal agency, and six of the octants of the CLOIT-R. Normality of distribution and multivariate outliers were examined prior to responding to univariate outliers.

Univariate normality was examined through the skewness and kurtosis values provided by SPSS Frequencies. All variables were in acceptable ranges for skewness and kurtosis, except for self-discrepancy in communion and the octants 1 to 5 and 8 of the CLOIT-R, which showed both kurtosis and marked skewness. Examination of the distribution for self-discrepancies in communion indicated the skewness was a result of a few outliers with very large negative values (i.e., much more communal than their ideal). Adjustments to these outliers resulted in acceptable skewness and kurtosis for self-discrepancy in communion. Visual inspection of the octants 1 to 5 and 8 confirmed high levels of positive skew and kurtosis that were suitably addressed with a logarithmic transformation.

Following transformations of the six CLOIT-R octants, multivariate outliers were assessed using Mahalanobis distance and identified 3 participants as multivariate outliers. Inspection of these participants revealed that the first had among the highest scores for communion, yielding the largest score for self-discrepancy in communion. He also had a high unmitigated communion score and was very high on octant 2 and 5. The second was much more communal than his ideal and he scored extremely high (most often the highest value) on all eight of the octants. The third participant had the lowest score on agency and the highest on ideal agency resulting in the largest self-discrepancy on agency. He also had the highest among the ideal communion scores. Data from these 3 participants were deleted from the analysis and a search for multivariate outliers was

run again. The second examination yielded one outlier who had the highest score on communion, the second lowest on ideal communion and among the largest on self-discrepancy in communion. Data from this participant were also deleted.

With data from these participants deleted from the sample, and a logarithmic transformation of the six octants, there remained only two univariate outliers, both on ideal agency. Univariate outliers were handled by adjusting their scores to one unit larger (or smaller) than the next most extreme score in the distribution (Tabachnick & Fidell, 1996, p. 69).

Linearity and heteroscedasticity were examined through bivariate plots for the DV with each IV and a selection of IVs together and indicated no threat to these assumptions, with the same exception as in Sample A. The scatter plot for self-discrepancy in agency and depressive symptoms was once again not clearly linear. Only 5.2% ($n = 13$) of participants indicated ideally wanting to be less agentic than they felt they were. Self-discrepancy values ranged from -1 to -3 and, similar to Sample A, it was difficult to judge the linearity of the distribution. One participant, with a self-discrepancy value of -3, indicated experiencing above average levels of depression. Based on this case, these 13 participants were deleted and the analysis continued with only those participants who felt they were less agentic than their ideal.

Finally, multicollinearity and singularity were assessed by examining Pearson coefficients among the independent variables (see Table 8). All variables were well below the conventional cutoff value of $r = .90$, suggesting multicollinearity and singularity were not present.

Demographic Characteristics of Sample B and a Comparison to Sample A. The demographics of Sample B, and a statistical comparison with Sample A, are depicted in

Table 9. Once again the men were, on average, in their late 30s and just over half the participants were from Canada and about a third were from the United States. Canadian participants came from 20 different cities/regions, the 3 highest being Ottawa, Toronto, and Vancouver. About one half reported being in a relationship and just under a fifth identified as being a visible minority. Almost three quarters of the men were currently employed and a similar number had a university degree. One half of the men made more than 46, 000 \$ per year. The only significant difference in the demographics between Sample A and Sample B is that the American participants in Sample B had significantly higher incomes than did the American participants in Sample A.

Means and Standard Deviations of Sample B and a Comparison to Sample A.

Means and standard deviations for the self-report measures in Sample B and a comparison to Sample A are presented in Table 10. As the t-test results in Table 10 indicate, no significant differences were found between the two samples. Levels of agency, communion, unmitigated agency and communion are similar to those in Sample A. Mean level of peer harassment in Sample B was 10.64 compared to 11.16 in Sample A. In Sample B, 64.7% of the men recalled being harassed by their peers compared to 64.1% in Sample A.

With regards to the participants' pattern of interpersonal behavior, mean scores in Sample B indicate their profiles were very similar to those in Sample A. That is, participants are highest in the warm/friendly dimension of the circumplex, and lowest at the cold/hostile dimension. The participants can once again be characterized as describing themselves as predominantly more friendly than hostile and as somewhat more submissive than dominant. Mean level of depressive symptoms in Sample B was 16.61 compared to a mean of 17.74 in Sample A.

Retesting of Respecified Model. The respecified model was examined in Sample B and, as can be seen in Table 7, it did not fit as well as it did in Sample A, with $\chi^2 (4) = 10.926$, $p = .027$; CFI = .984; ECVI = .196 (Saturated model = .183; Independence model = 2.068); RMSEA = .087. The χ^2 significance of $p = .027$ for Sample B indicates a fit at $p = .01$ but not at $p = .05$. However, as discussed above, χ^2 is affected by sample size and it is more difficult to obtain model fit with larger samples (Byrne, 1990). Use of Kline's (1998) procedure for determining χ^2 significance in large samples (i.e., $\chi^2 / \text{degrees freedom}$) yields a value less than 3 ($10.926 / 4 = 2.73$) suggesting the data fit the model. The RMSEA indices is not under .06, indicative of a good fit, but falls in the range between .08 and .1 suggested by Byrne as demonstrating a mediocre fit. The CFI is above .90 indicating an acceptable fit. Finally, the ECVI value for Sample B also indicates a reasonably good fit as it is much closer to the value for the saturated model than the value for the independent model.

The respecified model, developed on Sample A and cross-validated with Sample B, is depicted again in Figure 4 with path coefficients for Sample B identified in parentheses. As can be seen in Figure 4, the path from unmitigated communion to depressive symptoms, which was only approaching significance ($p = .05$) in Sample A, was statistically significant in Sample B. In contrast, two paths that were significant in Sample A were not significant in Sample B, those being the path from agency to harassment ($p = .937$) and the path from unmitigated communion to self-discrepancies in agency ($p = .186$).

Considering only the results that were significant in both Sample A and B (see Figure 5), the respecified model indicates that, in gay men who are less agentic than their ideal, agency and unmitigated communion are not directly related to depression. Instead,

the association between agency and depressive symptoms is mediated by self-discrepancies in agency and unassured/ submissive interpersonal behavior, and the association between unmitigated communion and depressive symptoms is mediated by unassured/ submissive interpersonal behavior. In addition, peer harassment has both a direct impact on depressive symptoms and an indirect impact on depressive symptoms through unassured/ submissive interpersonal behavior.

Discussion

The goal of this study was to determine if the gender-related personality traits of agency and unmitigated communion are associated with depressive symptoms in gay men, and to explore three potential mediators of this association: a history of peer harassment in adolescence, problematic interpersonal behavior, and self-discrepancies in agency. As the research with gay men is very limited, I was interested in examining both the associations of each of these variables with depressive symptoms and then, if warranted, testing two models. The first model involved only mediations to the dependent variable and the second involved both mediations and direct paths. These analyses were intended to establish a greater understanding of the psychological aspects of gay men's depressive symptoms.

Associations Between the Variables in the Model and Depressive Symptoms

Prior to considering mediation, a significant negative association was observed between agency and depressive symptoms. Thus the present study replicated, in a sample of gay men, the finding summarized by Whitley (1984) that lower levels of agency are associated with higher levels of depressive symptoms. In doing so, the findings support those of Carlson and Baxter (1984) and Carlson and Steuer (1985) who found in samples of gay men, that depressive symptoms decreased as self-perceived

masculinity increased. Kurdek (1987) found similar results in a sample of partnered gay men.

A significant positive association was also observed (again, prior to considering mediation) between unmitigated communion and depressive symptoms mirroring Helgeson and Fritz's (1999; Fritz & Helgeson, 1998) finding in heterosexuals that higher levels of unmitigated communion are associated with higher levels of psychological distress. It appears this is the first time this result has been shown in a sample of gay men.

The present study also found that recollection of peer harassment during adolescence is positively associated with depressive symptoms in adulthood, as was observed in heterosexual men by Olweus (1993). This mirrors Rivers' (2001a) finding that gay men who recalled harassment in school were more likely to exhibit depressive symptoms than were gay men who did not recall such harassment.

In addition, the present study found a positive association between problematic interpersonal behaviors and depressive symptoms. Thus, it replicates in a sample of gay men what others have found in the elderly (Hays et al., 1998), undergraduate students (Fritz & Helgeson, 1998), married couples (Bolger et al., 1989), sexual assault survivors (Regehr & Marziali, 1999; Whiffen et al., 2000), and people who are shy (Dill & Anderson, 1999). As described in the literature review, previous research on interpersonal behavior and depression indicates that the interpersonal behavior of depressed persons can be characterized as hostile (Gotlib & Whiffen, 1991) or cold and submissive (Whiffen et al., 2000). The present study found that gay men who reported a pattern of unassured and submissive behavior were more likely to report depressive symptoms. The CLOIT-R octant unassured and submissive falls within what Whiffen et

al. referred to as the cold and submissive quadrant of the Interpersonal Circle. Thus, the present findings support the conclusions of the review by Gotlib and Whiffen, and the empirical findings of Whiffen et al., that depressive symptoms are associated with reports of interpersonal behavior that is submissive and more hostile than friendly.

Finally, the present study replicated the finding that self-discrepancies are positively associated with depressive symptoms as demonstrated in college students (Scott & O'Hara, 1993), adult cocaine users (Avants et al., 1993), and clinically depressed adults (Fairbrother & Moretti, 1998). This finding further supports the idea that self-discrepancies are associated with dejection-related or depressive feelings (Higgins et al., 1987; Strauman & Higgins, 1988) and, for what appears to be the first time, extends this finding to a sample of gay men. As discussed earlier, gay men are likely very aware of agency and thus these findings may support Higgins' (1999) argument that an association between self-discrepancies and depressive symptoms is dependent on the self-regulatory significance of the self-discrepancy.

Mediations Indicated by the Respecified Model

Considering only model paths that were significant in both samples, I found that a pattern of unassured and submissive interpersonal behavior mediated the relationship between both agency and depressive symptoms and unmitigated communion and depressive symptoms. As well, such interpersonal behavior also partially mediated the relationship between recalled peer harassment and depressive symptoms. I also found that self-discrepancies in agency mediated the relationship between agency and depressive symptoms. Figure 5 depicts the consistently significant paths. Each of these mediations is discussed further below.

Mediation of the association between unmitigated communion and depressive symptoms by unassured and submissive interpersonal behavior. In exploring the association between gender-related personality characterized as unmitigated communion and depression, Fritz and Helgeson (1998) explored the mediating role of interpersonal behavior and found that in a sample of adult women, unassertive behavior partially mediated the association between unmitigated communion and depressive symptoms. They also found, in women and men attending college, that self-neglect and over-involvement with others partially mediated the association between unmitigated communion and depressive symptoms. The results of the present study further support the idea that it is through problematic patterns of interpersonal behavior that unmitigated communion is associated with depressive symptoms. The presence of full mediation in the present study and the partial mediation found by Fritz and Helgeson may be a result of differences in the measurement of interpersonal behavior. Fritz and Helgeson used the constructs of assertiveness and overly-nurturing behavior from the Inventory of Interpersonal Problems (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), whereas I used the broader constructs of unassured and submissive behavior from the CLOIT-R (Kiesler, 1984). It may also be that interpersonal behavior more fully mediates the association between unmitigated communion and depressive symptoms in gay men than in heterosexual men and women.

Mediation of the association between agency and depressive symptoms by self-discrepancies in agency and unassured and submissive interpersonal behavior. In the present study the negative association between agency and depressive symptoms was mediated by both self-discrepancies in agency and unassured and submissive behavior. The latter of these mediations was not specifically hypothesized as the literature review

had not uncovered any previous explorations of the role of interpersonal behavior as a mediator of agency's association with depressive symptoms. However, this mediation is conceptually in keeping with what could be expected from agency, an orientation toward the self and individualization. As well, others have found that self-esteem mediates the association between agency and depressive symptoms (see for review, Spence & Helmreich, 1978) and it is reasonable to suspect an association between unassured/submissive behavior and low self-esteem.

The mediation of the association between agency and depressive symptoms by self-discrepancies in agency mirrors the results from samples of male and female college students (Grimmell & Stern, 1992), in which self-discrepancies in gender-related personality traits were found to be more important in understanding depressive symptoms than the personality trait itself. In a study using college students, Grimmell (1998) replicated his 1992 findings among women but not men. Grimmell speculated that self-discrepancies in masculinity/agency were more likely to show this mediating role in women college students as they are more concerned about being agentic in an academic setting. Similarly, for gay men who rate their ideal agency higher than their actual agency, self-discrepancies in agency appear to be of more importance in understanding their experience of depressive symptoms than their self-rating of agency.

Mediation of the association between peer harassment and depressive symptoms by unassured and submissive interpersonal behavior. The finding that interpersonal behaviors characterized as unassured and submissive partially mediated the relationship between peer harassment and depressive symptoms provides some insight into an area that is not well researched. No studies were identified that examined the mediating role

of interpersonal behavior on an association between peer harassment and depressive symptoms.

How might interpersonal behavior or social relations partially mediate the relationship between peer harassment and depressive symptoms? The process hypothesized by Gotlib and Whiffen (1991), as described in the literature review above, offers one possibility. It is possible that interpersonal interactions as an adult that can be perceived as disapproving or harassing could remind gay men of peer harassment as an adolescent and recreate the behavioral response exhibited in adolescence. In the present study the response observed was unassured and submissive behavior. Following the process suggested by Gotlib and Whiffen, unassured and submissive behavior may damage close relationships and increase vulnerability to depression. Indeed, Jack (1991) has proposed a process in which the non-expression of anger in an attempt to please others results in an estrangement from the self, resulting in a loss of intimacy. As a pattern of unassured and submissive behavior would continue to elicit competitive/dominant behavior from others, a reinforcing cycle would be created.

The finding that unassured and submissive behavior mediates the association between peer harassment and depressive symptoms mirrors discussion regarding the potential mediating role of shame in the association between abuse and depressive symptoms (Andrews, 1998). It is possible that the men's unassured and submissive behavior reflects an internal experience of shame. Shame has been defined as a process of blaming one's character for bad events (Andrews, 1998) and is thought to be closely associated with interpersonal behaviors, such as eye-gaze avoidance (Gilbert, 1998), that one might expect in unassured/ submissive behavior. The role of shame in the experience of gay men has been explored conceptually by Kaufman and Raphael (1996)

and it could be an interesting area to explore further in an empirical study. However, care would need to be taken to operationalize shame, as an examination of the research on shame indicates the concept lacks cohesiveness (Gilbert, 1998).

In addition to its indirect impact on depressive symptoms through unassured and submissive behavior, the model indicates peer harassment also has a direct impact on depressive symptoms. It is possible this impact is mediated by a factor not examined in the present study. Hershberger and D'Augelli (1995) found family support and self-acceptance in gay youth partially mediated the association between peer harassment and mental health. Similarly, Waldo, Hesson-McInnis, and D'Augelli (1998) found, again in gay youth, that self-esteem mediated the impact of victimization on mental health. Uncovering other mediators, or alternatively resiliency factors, could be an important step in reducing negative psychological outcomes from such harassment.

Hypothesized Mediations Not Found in the Final Model

Mediation of an association between peer harassment and depressive symptoms by self-discrepancies in agency. In contrast to what was hypothesized, self-discrepancies in agency did not mediate the association between recalled peer harassment and depressive symptoms. It was thought that being targeted for harassment would affect beliefs about self that are related to what one should be with respect to levels of agency. Indeed, recalled peer harassment and self-discrepancies in agency were correlated significantly in sample A but not sample B. It is still possible that being harassed might affect beliefs about self, but the present study yielded no clear evidence for such a relationship when beliefs are conceptualized as self-discrepancies in agency.

Mediation of an association between gender-related personality traits and depressive symptoms by peer harassment. Also in contrast to what was hypothesized,

peer harassment did not mediate the association between agency and depressive symptoms or the association between unmitigated communion and depressive symptoms. In the literature review, there was no strong evidence for the mediation of unmitigated communion and depressive symptoms by peer harassment but there was evidence for the mediation of the relationship between agency and depressive symptoms. Given that boys report fears of being labelled gay (see for example, Phoenix et al., 2002), and that several researchers have found a link in gay youth between gender-role typicality and harassment (D'Augelli, Pilkington & Hershberger, 2002; Waldo et al., 1998) it was hypothesized that low agency would be associated with peer harassment. Indeed a significant negative relationship between agency and peer harassment was found in sample A but not sample B.

In attempting to understand why this association was not consistently found in the present study, several possibilities can be considered. It is possible that the concepts of agency and unmitigated communion do not capture gender-non conformity in a manner that is most noticed by those looking for targets for peer harassment. Perhaps, more than gender-related personality, a measure of gender-related behaviors would have consistently shown a link with peer harassment. Typically, researchers exploring this association in gay youth have measured typicality of gender-role with only single item ratings of self on a scale of masculine to feminine (see for example, Pilkington & D'Augelli, 1995). More recently, D'Augelli et al. (2002) utilized a measure designed to capture how often in childhood one thought or acted in a manner typically associated with the opposite sex. The measure consisted of 16 items, each with a six-point rating scale, and had good reliability (Cronbach's $\alpha = .77$). Use of a measure that

specifically inquires about gender related actions, may help to clarify the equivocal nature of the results in the present study.

It is also possible that the present study did not consistently reveal an association between agency and peer victimization due to the inference of agency in adolescence from present day agency. As some authors note (e.g., Bailey et al., 1997) many gay men undergo a process of becoming increasingly masculine in adulthood. Indeed, a closer look at the literature on the stability of gender-related personality suggests traits such as agency may not be stable from adolescence to adulthood, or through early adulthood. Holmlund (1992) found evidence that, in women, gender role is not yet integrated during adolescence. Similarly, Parker and Aldwin (1997) found, in a review of the literature and empirically, that men and women reported increasingly masculine self-identification through ages 20 to 40 years. Thus, levels of agency measured in adulthood appear not to be accurate indicators of such levels as youth. Clearly, longitudinal research in this area would be beneficial.

Limitations of the Study

The study is a cross-sectional self-report survey and thus cannot be used to infer causal relationships. As such, inferences of causation in the path model are subject to the possibility of reverse causation, third variable causation, and reciprocal or circular causation. As in most surveys with participants who identify as gay, the sample selection is not based on a probability sampling strategy and norms for the population of gay men cannot be known. As a non-probability sample, the results must be interpreted with caution but they allow for some understanding of the possible relationships between the variables. As a self-report survey the responses are subject to biases including social desirability. Although outliers were excluded or adjusted, it must be assumed that people

completing the survey did so accurately. Given the nonlinear distribution of self-discrepancies in agency, and the small number of men who were more agentic than their ideal, the results are limited to only those men who were less agentic than their ideal.

Although the survey did not request names, addresses or phone numbers it can be a challenge to ensure anonymity in a small subset of the population such as the gay community. Perhaps because they were concerned about identification, several participants did not record their age and in future research it is recommended that participants be offered ranges of age (e.g., 30-35 years old) as response options. The participants' demographics suggest that the education level may be higher than the general population. This is not an uncommon finding in studies of gay men and lesbians, suggesting those more prepared to identify as gay and respond to a survey may have more education and perhaps more economic resources. As an internet based study the sample was restricted to those who had access to a computer. However, there is some evidence that in Canada Internet access is not a strong limitation as 61% of Canadian households have at least one regular Internet user (Statistics Canada, 2002).

Implications of the Study

Despite the above limitations, there are many reasons to suspect the present study is as valid, if not more so, than most studies of gay men. First, relative to other studies, a large number of gay men participated in the present study. These men were diverse in relationship status, age, income, and their identification as a visible minority. They experienced a broad range of depressive symptoms. They also experienced a broad range of peer harassment as adolescents, of levels of agency and unmitigated communion, and of self-discrepancies in agency.

The study's findings have implications for the prevention of depressive

symptoms. Although anti-bullying campaigns often include descriptions of the potential link between harassment and mental health challenges such as depression, there is little discussion of the reasons certain children are targeted for bullying or of mediators or moderators of the relationship between bullying and depressive symptoms. Pepler, Connolly, and Craig (2004) have demonstrated that visible minorities are more often the target of bullying, this may also be true for gender non-conforming youth. Depression prevention efforts may also come in the form of discussions in the gay community around the effects of childhood peer harassment, the concept of ideal agency, and the importance of being aware of and challenging self-discrepancies in agency.

The results also provide some insights for therapists treating gay men with depressive symptoms. For example, the mediation of the relationship between gender-related personality and depressive symptoms suggests that rather than discussing gender-related personality traits, several other issues could be more fruitful for the depressed gay male client. First, the mediating role of interpersonal behaviour suggests it would be important to discuss what the experience of low agency, high unmitigated communion, and peer harassment has taught the client about how to behave interpersonally. Specifically, it may be important to examine patterns of interpersonal behavior characterized as unassured and submissive. This could be done both in the relationship with the therapist and with significant others. Joiner et al. (1999) suggested that depression is interpersonally mediated and is thus interpersonally remediable. An interpersonal approach to psychotherapy would suggest taking the anti-complementary position of unassured and submissive behavior when working with men who demonstrate such behavior. In the interpersonal circle the position anti-complementary (the opposite of the complimentary position) to unassured and submissive behavior is submissive and

deferent behavior. Thus, once a therapeutic alliance has been created, Kielser (1983) recommends taking a submissive and deferent stance with such a client and through acting submissive, respectful, and deferring to the client's authority, encourage the client to act more dominant and assured. Alternatively, cognitive-behavioural or experiential approaches could be used to help the client explore the implications of this interpersonal style.

A second important topic to discuss, given the mediating role of self-discrepancies in agency, is the client's acceptance of the degree to which they are agentic and how to value the degree of agency/masculinity they possess. It may also be useful with depressed gay clients to discuss how a heightened sensitivity to discrepancies in agency may be biasing their information processing such that they are overly focused on aspects of their life that do not meet their expectations.

Third, given the high percentage of gay men who reported peer harassment in adolescence it is important to inquire into the existence of such harassment. Although therapists typically discuss family relationships it is also important to inquire about peer relationships and the presence of peer harassment.

In addition, the present study demonstrated that a greater understanding of gay men's depressive symptoms can be gained through examination of the integration of several factors, including recalled interpersonal events, interpersonal behaviors, and discrepancies in self-conceptions. Together, the variables examined demonstrated a significant and replicable relationship with depressive symptoms that, when averaged between the two samples, explained 18% of the variance in depressive symptoms. According to Cohen's effect sizes for multiple regression, this corresponds to a medium to strong effect.

The findings of this study have implications for future research on depression. To begin, the results point to the potential success of using the Internet to access this population. The results also suggest further exploration of the association between self-discrepancies and “gender” is warranted. However, it is recommended that self-discrepancies be quantified directly, for example by asking participants to rate their self-discrepancy on a 9 point scale from “much more than my ideal” to “much less than my ideal”. It is also recommended that gender be assessed using behavioural measures to avoid the conceptual ambiguities present in measures of gender-related personality. In addition, further research is needed on how discrepancies between actual and ideal-selves and affect information processing biases associated with depressive symptoms.

The results indicate that further exploration of interpersonal behaviour is warranted but it is recommended that this be done with a more internally consistent and conceptually simpler measure, such as the Inventory of Interpersonal Problems. Unfortunately, this measure can not be placed on the Internet due to copy right law. Further research is needed on the association between unassured and submissive interpersonal behavior and depressive symptoms in gay men as no similar research could be identified. Also of interest would be an experimental examination of the interpersonal responses to submissive, unassured gay men; do people indeed respond with dominant and competitive behavior? Similarly, do therapeutic stances characterized as submissive and deferent encourage gay men to be less unassured and submissive resulting in reduced depressive symptoms?

As well, further exploration of the association between peer harassment and depressive symptoms is warranted. In particular, the relationship of peer harassment with unassured/ submissive interpersonal behaviour could be explored further. The

placement of unassured/submissive behaviour as a mediator of peer harassment and depressive symptoms was decided based on Ingram et al.'s (1998) model but it is also possible that their order in the model could be reversed with unassured/submissive behaviour contributing to peer harassment.

Differences found between the two randomly generated samples demonstrate the importance of replicating studies and basing conclusions only on relationships that are consistently found. Given these inconsistencies, further replication is needed. In this regard, it would be useful to replicate the relationships identified in this study in a sample of gay men with diagnosed depression and to measure constructs through interviews. Although such research demands more resources, it would increase the validity of the findings. Longitudinal studies would also increase the validity of the findings. In the last five years D'Augelli has conducted several studies into peer harassment of gay youth, including some in which gender typicality was reported, and it would be informative if he were able to conduct follow-up studies.

Finally, depression is only one way of conceptualizing mental well-being and stress and anxiety are also important concerns, particularly given the co-morbid nature of anxiety and depression. A refinement of the integrated approach used in the present study to examine stress and anxiety could also be useful in building an understanding of gay men's mental health

The present study found the vast majority of men reported being less agentic than their ideal. However, the opposite was true for some men, a reminder that although there is a tendency to speak of "gay men" as a group, there is diversity within that group. Some of the men who reported being more agentic than their ideal also reported depressive symptoms and future studies could explore further the nature of their distress.

As well, comparative studies with heterosexual and bisexual men and women would help to determine if the associations observed in the present study differ for these groups. Studies involving bisexual men were rare and provided little information on which to base a comparison. The strength of the associations between depressive symptoms and peer harassment, unmitigated communion, and unassured/submissive behaviour found in the present study with gay men, are similar to those published for heterosexual men and women. In contrast, the associations between agency and depressive symptoms, and self-discrepancies in agency and depressive symptoms, are stronger among gay men than among heterosexual men and women. Thus, the role of both low agency and high self-discrepancies in agency may be unique in gay men's experience of depressive symptoms.

Table 1

Cronbach's Alpha for Eight Dimensions of the CLOIT

Octant	Cronbach's Alpha	Items deleted	Adjusted Alpha
1. Assured/Dominant	.67	38	.68
2. Competitive/Mistrusting	.65	12 and 44	.68
3. Cold/Hostile	.73		
4. Detached/Inhibited	.74		
5. Unassured/Submissive	.77		
6. Deferent/Trusting	.59	52 and 4	.61
7. Warm/Friendly	.72		
8. Sociable/Exhibitionistic	.63	27	.64

Note. 1-8 represent the octant dimensions of the Interpersonal Circle.

Table 2

Cronbach's Alpha for all Variables

Variable	α Before screening and sample division	α Sample A Following screening	α Sample B Following screening
1. Agency	.76	.73	.74
2. Communion	.73	.72	.70
3. Unmitigated Agency	.75	.73	.78
4. Unmitigated Communion	.76	.79	.73
5. OBVQ-R	.91	.91	.91
6. Ideal Agency	.66	.67	.62
7. Ideal Communion	.81	.80	.74
8. CLOIT 1 Assured/Dominant	.68	.70	.65
9. CLOIT 2 Competitive/Mistrusting	.68	.66	.65
10. CLOIT 3 Cold/Hostile	.73	.69	.71
11. CLOIT 4 Detached/Inhibited	.74	.75	.71
12. CLOIT 5 Unassured/Submissive	.77	.77	.77
13. CLOIT 6 Deferent/Trusting	.61	.54	.65
14. CLOIT 7 Warm/Friendly	.72	.67	.75
15. CLOIT 8 Sociable/Exhibitionistic	.64	.60	.65
16. CES-D	.91	.91	.91

Note. 1.-3 Agency, Communion and Unmitigated Agency from the EPAQ. 4. Unmitigated Communion from the UCS. 5. Victim scale of the Olweus Bully/Victim Questionnaire-Revised. 6.-7. Ideal agency and communion from revised EPAQ. 8. – 15. Octants from the Checklist of Interpersonal Transactions-Revised. 16. Centre for Epidemiological Studies-Depression Scale.

Table 3

Correlations Among Variables (Pearson Coefficients) - Sample A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. CES-D	1.0																	
2. Com	.03	1.0																
3. Agency	-.50*	.08	1.0															
4. UnCm	.27*	.37*	-.17	1.0														
5. Un Ag	.20*	-.40*	-.11	-.08	1.0													
6. IdCm	.14	.54*	.01	.32*	-.17	1.0												
7. IdAg	.09	.15	.25*	.08	.08	.30*	1.0											
8. Cmdis	.11	-.54*	-.08	-.08	.26*	.42*	.17	1.0										
9. AgDis	.53*	.01	-.82*	.21*	.16	.17	.35*	.17	1.0									
10. A/D-1	-.12	-.14	.34*	-.22*	.35*	.06	.20*	.21*	-.22*	1.0								
11. C/M-2	.39*	-.13	-.19*	.11	.37*	.05	.04	.19	.21*	.22*	1.0							
12. C/H-3	.33*	-.32*	-.22*	-.01	.38*	-.01	.11	.34*	.28*	.24*	.56*	1.0						
13. D/I-4	.38*	-.23*	-.39*	.13	.23*	-.04	-.03	.22*	.36*	-.09	.42*	.43*	1.0					
14. U/S-5	.51*	-.03	-.55*	.27*	.09	.12	-.12	.09	.47*	-.18	.33*	.25*	.54*	1.0				
15. D/T-6	-.16	.26*	.20	.10	-.13	.28*	.15	.01	-.10	-.04	-.03	-.03	-.09	.06	1.0			
16. W/F-7	-.11	.43*	.09	.25*	-.30*	.28*	.10	-.18	-.03	.06	-.06	-.19	-.02	.13	.64*	1.0		
17. S/E-8	.03	.18	.10	.07	.04	.27*	.07	.07	-.06	.38*	.15	.01	-.11	.11	.47*	.44*	1.0	
18. Harass	.32*	.07	-.23*	.07	.16	.18	.04	.11	.25*	.04	.16	.22*	.26*	.26*	.04	.02	.15	1.0

* $p < .0027$ Note. 1. Centre for Epidemiological Studies-Depression Scale. 2.-3. Communion and Agency from the EPAQ. 4. Unmitigated Communion from the UCS. 5. Unmitigated Agency from the EPAQ. 6.-7. Ideal communion and agency from revised EPAQ. 8.-9. Discrepancies - Actual minus Ideal communion and agency. 10.-17. Octants from the CLOIT-R (octant 1-5 and 8 logarithm transformation). 18. Victim scale of the Olweus Bully/Victim Questionnaire-Revised.

Table 4

Demographic Characteristics of Participants - Sample A

Variable	<i>M (SD)</i>	Range	<i>N</i>
Age	38.33 (10.70)	18-65	233
		% of sample	<i>N</i>
Relationship Status			
Single	46.80		109
Partnered	53.2		124
Identify as Visible Minority			
Yes	21.50		50
No	76.00		177
Country of Residence			
Canada	54.50		127
United States	33.50		78
England	1.70		4
Australia	6.90		16
Other	2.60		6
Educational level			
High school	8.20		19
Some college or university	18.90		44
College or technical diploma	12.40		29
Bachelor's degree	33.50		78
Masters degree	17.60		41
Ph. D.	7.70		18
Other	1.70		4
Employment Status			
Currently employed	70.4		164
Unemployed and looking for work	9.9		23
Unemployed and not looking for work	5.6		13
Student	7.7		18
Retired	6.4		15

Table 4 continued

Demographic Characteristics of Participants - Sample A

Variable	% of sample	N
Estimated Income for Canadians*		126
Under \$15, 000	10.20	13
\$15,000 – \$29,000	11.80	15
\$30,000 - \$45,000	20.50	26
\$46,000 - \$59,000	26.80	34
\$60,000 - \$74,000	7.90	10
\$75,000 and over	22.00	28
Estimated Income for Americans*		78
Under \$15, 000	24.40	19
\$15,000 – \$29,000	26.90	21
\$30,000 - \$45,000	20.50	16
\$46,000 - \$59,000	11.50	9
\$60,000 - \$74,000	6.40	5
\$75,000 and over	10.30	8
Estimated Income for Australians*		16
Under \$15, 000	0	0
\$15,000 – \$29,000	6.30	1
\$30,000 - \$45,000	31.30	5
\$46,000 - \$59,000	25.00	4
\$60,000 - \$74,000	18.80	3
\$75,000 and over	18.80	3

Note. * dollar amounts in currency of the country

Table 5

Means (M), and Standard Deviations (SD) of Variables for Sample A

Measure	<i>M</i>	<i>SD</i>
1. Agency	15.09	3.84
2. Communion	23.71	4.01
3. Unmitigated Agency	12.01	4.54
4. Unmitigated Communion	20.25	6.60
5. OBVQ-R	11.16	9.29
6. Ideal Agency	20.79	2.53
7. Ideal Communion	25.96	3.74
8. Agency Discrepancy	6.02	3.96
9. Communion Discrepancy	2.26	3.69
10. CLOIT 1 Assured/Dominant	3.99	3.16
11. CLOIT 2 Competitive/Mistrusting	1.59	2.10
12. CLOIT 3 Cold/Hostile	1.06	2.00
13. CLOIT 4 Detached/Inhibited	2.04	2.92
14. CLOIT 5 Unassured/Submissive	3.33	3.59
15. CLOIT 6 Deferent/Trusting	4.70	2.94
16. CLOIT 7 Warm/Friendly	7.23	4.05
17. CLOIT 8 Sociable/Exhibitionistic	4.05	2.86
18. CES-D	17.74	6.91

Note. 1.-3. Agency, Communion and Unmitigated Agency from the EPAQ. 4. Unmitigated Communion from the UCS. 5. Victim scale of the Olweus Bully/Victim Questionnaire-Revised. 6.-7. Ideal agency and communion from revised EPAQ. 8.-9. Discrepancies = Ideal minus Actual agency and communion. 10.-17. Octants from the CLOIT-R (for ease of comparison means are given on un-transformed values for octants 1 through 5 and 8). 18. Centre for Epidemiological Studies-Depression Scale.

Table 6

Summary of Regression Analysis for the Three Octants associated (theoretically and statistically) with Depressive Symptoms

Variable	<i>B</i>	β	sr^2 (unique)
CLOIT 3 Cold/Hostile	.452	.145	.129
CLOIT 4 Detached/Inhibited	.0831	.037	.028
CLOIT 5 Unassured/Submissive	.674**	.366	.300**
			$R^2 = .205$
			Adjusted $R^2 = .195$
			$R = .453^{**}$

** $p < .01$, *Note.* Octants 3, 4, and 5 from the Check List of Interpersonal Transactions Revised. R for regression was significantly different from zero, $F(3, 226) = 19.45$, $p < .001$. B = Unstandardized regression coefficient. β = Standardized Beta weights for each variable. sr^2 = semi partial correlation for each variable (unique variance).

Table 7

*Goodness of Fit Statistics for Initially Postulated and Final Models –
Samples A and B*

	Fully Mediated Model	Partially Mediated Model	Respecified Model	Sample B
χ^2	81.801	.023	2.769	10.926
df	6	1	4	4
Probability Value	.000	.880	.597	.027
CFI	.842	1.0	1.0	.984
ECVI				
- Model Tested	.490	.176	.161	.196
- Saturated Model	.184	.184	.184	.183
- Independence Model	2.228	2.228	2.228	2.068
RMSEA				
- Model Tested	.235	.000	.000	.087
- Independence Model	.375	.375	.375	.361

Note. χ^2 = chi-square. CFI = Comparative Fit Index. ECVI = Expected Cross Validation Index. RMSEA = Root Mean Square Error of Approximation

Table 8

Correlations Among Variables (Pearson Coefficients) - Sample B

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. CES-D	1.0																	
2. Com	-.02	1.0																
3. Agency	-.36*	.09	1.0															
4. UnCm	.30*	.32*	-.22*	1.0														
5. UnAg	.12	-.39*	.08	-.16	1.0													
6. IdCm	-.14	.54*	.13	.13	-.27*	1.0												
7. IdAg	.05	.21*	.26*	.04	-.06	.34*	1.0											
8. CmDis	.01	-.61*	.02	-.24*	.18	.35*	.08	1.0										
9. AgDis	.38*	.03	-.84*	.24*	.11	.06	.32*	.02	1.0									
10. A/D-1	-.02	-.09	.32*	-.06	.43*	-.11	-.00	-.01	-.32*	1.0								
11. C/M-2	.36*	-.11	-.26*	.17	.16	-.11	-.06	.02	.22*	.22*	1.0							
12. C/H-3	.29*	-.25*	-.16	.09	.26*	-.20*	-.01	.09	.16	.30*	.52*	1.0						
13. D/I-4	.30*	-.17	-.44*	.19	.06	-.01	-.07	.10	.39*	-.00	.45*	.41*	1.0					
14. U/S-5	.40*	.08	-.50*	.30*	-.02	.04	.02	-.05	.50*	-.08	.43*	.32*	.51*	1.0				
15. D/T-6	-.05	.32*	.16	.19	-.09	.16	.11	-.20*	-.10	.29*	.12	.02	.03	.20	1.0			
16. W/F-7	-.05	.47*	.06	.29*	-.24*	.31*	.02	-.23*	-.05	.12	.09	-.11	.03	.21*	.71*	1.0		
17. S/E-8	.02	.25*	.07	.12	.03	.11	.03	-.18	-.06	.24*	.16	.11	-.04	.19	.66*	.57*	1.0	
18. Harras	.26*	.11	-.01	.12	.08	.01	-.06	-.11	-.02	.01	.13	.09	.07	.16	.09	.15	.19	1.0

* $p < .0027$ Note. 1. Centre for Epidemiological Studies-Depression Scale. 2.-3. Communion and Agency from the EPAQ. 4. Unmitigated Communion from the UCS. 5. Unmitigated Agency from the EPAQ. 6.-7. Ideal communion and agency from revised EPAQ. 8.-9. Discrepancies - Actual minus Ideal communion and agency. 10.-17. Octants from the CLOIT-R (octant 1-5 and 8 logarithm transformation). 18. Victim scale of the Olweus Bully/Victim Questionnaire-Revised.

Table 9

Demographic Characteristics of Participants in Sample B and Comparison to Sample A

Variable	<i>M (SD)</i>	Range	<i>N</i>	<i>t</i>
Age	38.22 (11.28)	18-67	237	.11
		% of sample	<i>N</i>	<i>z</i>
Relationship Status				1.39
Single		52.7	125	
Partnered		46.4	110	
Identify as Visible Minority				0.74
Yes		18.6	44	
No		78.1	185	
Country of Residence				0.34
Canada		54.90	130	
United States		35.00	83	
England		.80	2	
Australia		7.20	17	
Other		.80	2	
Educational level				0.10
High school		3.80	9	
Some college or university		25.30	60	
College or technical diploma		12.20	29	
Bachelor's degree		31.20	74	
Masters degree		19.40	46	
Ph. D.		6.80	16	
Other		1.30	3	
Employment Status				0.43
Currently employed		72.20	171	
Unemployed looking for work		8.90	21	
Unemployed not looking for work		3.40	8	
Student		9.70	23	
Retired		5.50	13	

Table 9 continued

Demographic Characteristics of Participants in Sample B and Comparison to Sample A

Variable	% of sample	N	z
Estimated Income for Canadians ¹		123	0.41
Under \$15, 000	11.50	15	
\$15,000 – \$29,000	11.50	15	
\$30,000 - \$45,000	21.50	28	
\$46,000 - \$59,000	19.20	25	
\$60,000 - \$74,000	11.50	15	
\$75,000 and over	19.20	25	
Estimated Income for Americans ¹		80	2.52*
Under \$15, 000	24.40	11	
\$15,000 – \$29,000	26.90	13	
\$30,000 - \$45,000	20.50	21	
\$46,000 - \$59,000	11.50	14	
\$60,000 - \$74,000	6.40	10	
\$75,000 and over	10.30	11	
Estimated Income for Australians ¹		17	0.32
Under \$15, 000	11.80	2	
\$15,000 – \$29,000	11.80	2	
\$30,000 - \$45,000	17.60	3	
\$46,000 - \$59,000	29.40	5	
\$60,000 - \$74,000	29.40	5	
\$75,000 and over	0	0	

For *t* and *Z* test **p*<.05. *Note.* ¹amounts in currency of the country. Non-parametric tests of difference calculated with the Mann-Whitney Test.

Table 10

Means (M) and Standard Deviations (SD) of Variables for Sample B and a Comparison to Sample A

Variable	M	SD	t
1. Agency	15.72	3.88	1.78
2. Communion	23.79	3.72	0.22
3. Unmitigated Agency	12.03	4.83	0.05
4. Unmitigated Communion	20.22	6.11	0.06
5. OBVQ-R	10.64	9.05	0.55
6. Ideal Agency	21.39	2.21	1.29
7. Ideal Communion	26.50	3.14	1.69
8. Agency Discrepancy	5.67	3.95	1.02
9. Communion Discrepancy	2.71	3.34	1.38
10. Assured/Dominant	4.13	2.95	0.47
11. Competitive/Mistrusting	1.41	1.98	0.97
12. Cold/Hostile	1.11	2.10	0.44
13. Detached/Inhibited	2.33	2.90	1.05
14. Unassured/Submissive	3.18	3.56	0.50
15. Deferent/Trusting	5.11	3.34	1.44
16. Warm/Friendly	7.14	4.44	0.17
17. Sociable/Exhibitionistic	3.99	2.96	0.27
18. CES-D	16.61	6.69	1.78

For t-test results * $p < .05$. *Note.* 1.-3. Agency, Communion, and Unmitigated Agency from the EPAQ. 4. Unmitigated Communion from the UCS. 5. Victim scale of the Olweus Bully/Victim Questionnaire-Revised. 6.-7. Ideal agency and communion from revised EPAQ. 8.-9. Discrepancies = Ideal minus Actual agency and communion. 10.-17. Octants from the CLOIT-R (for ease of comparison means are given on untransformed values for octants 1 through 5 and 8). 18. Centre for Epidemiological Studies-Depression Scale.

Figure 1

The fully mediated model.

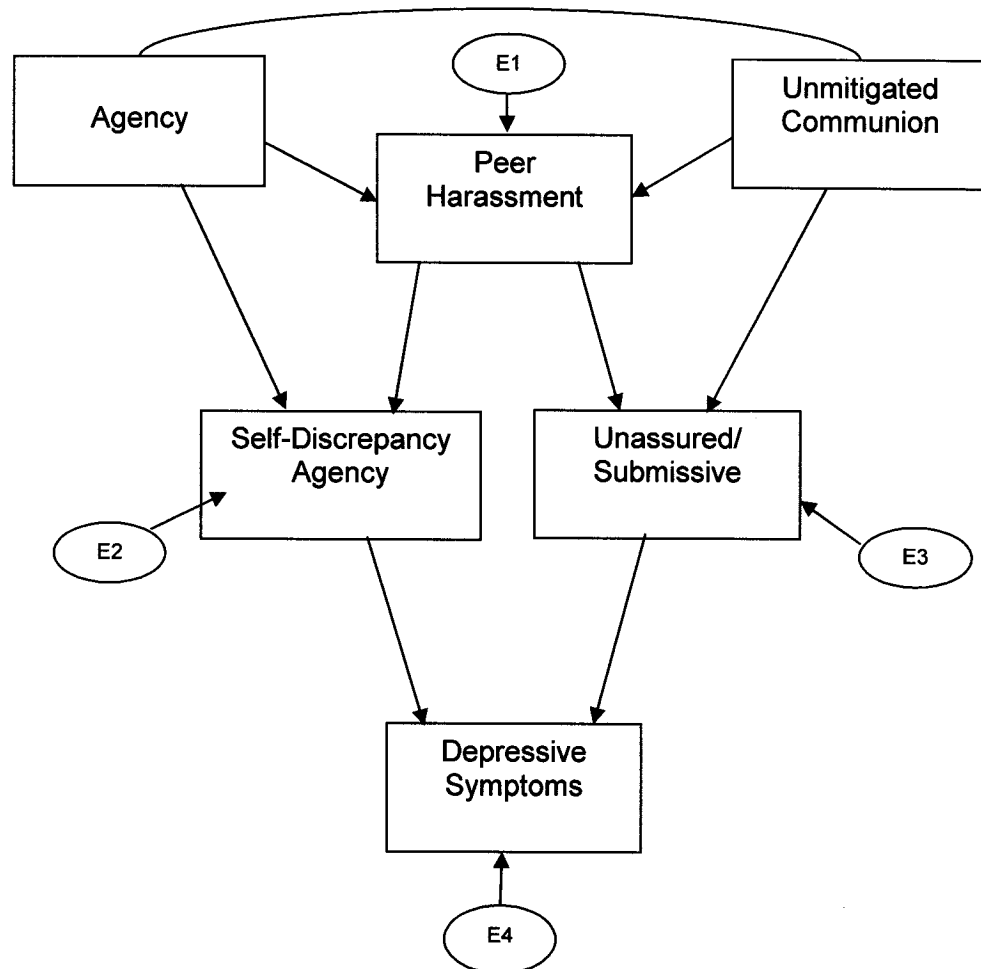


Figure 2

The partially mediated model.

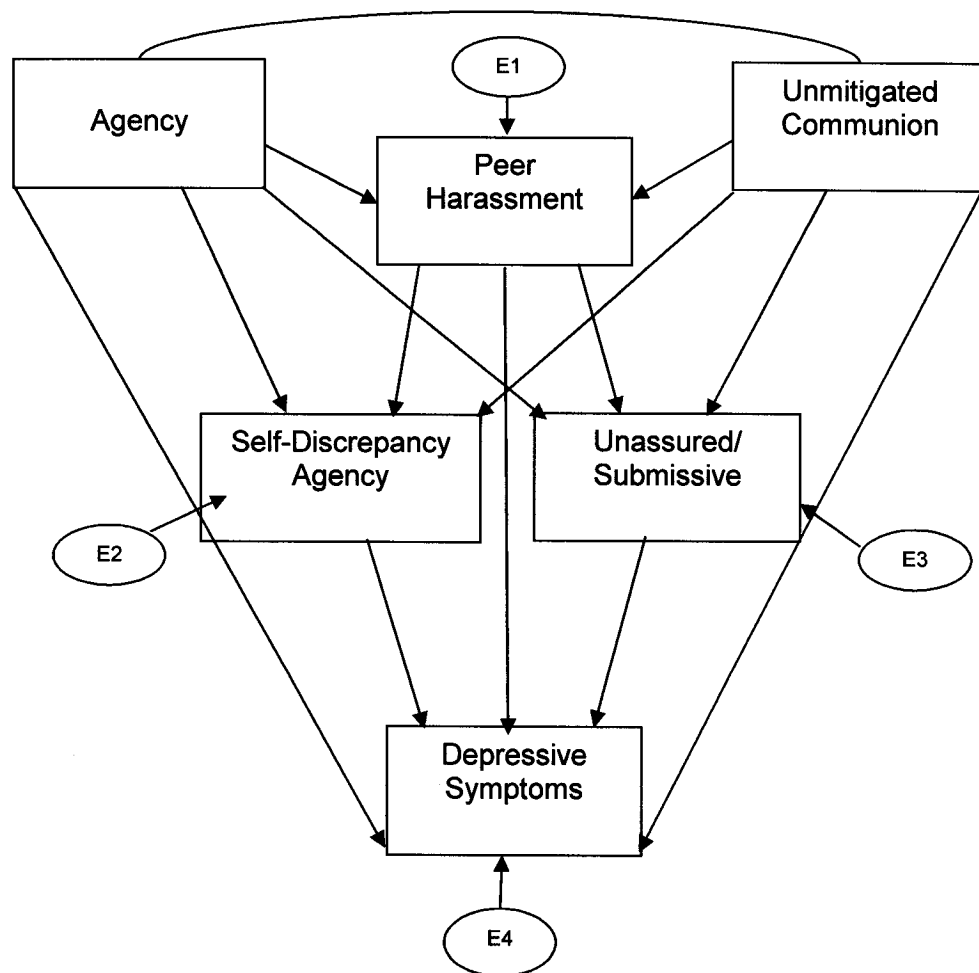
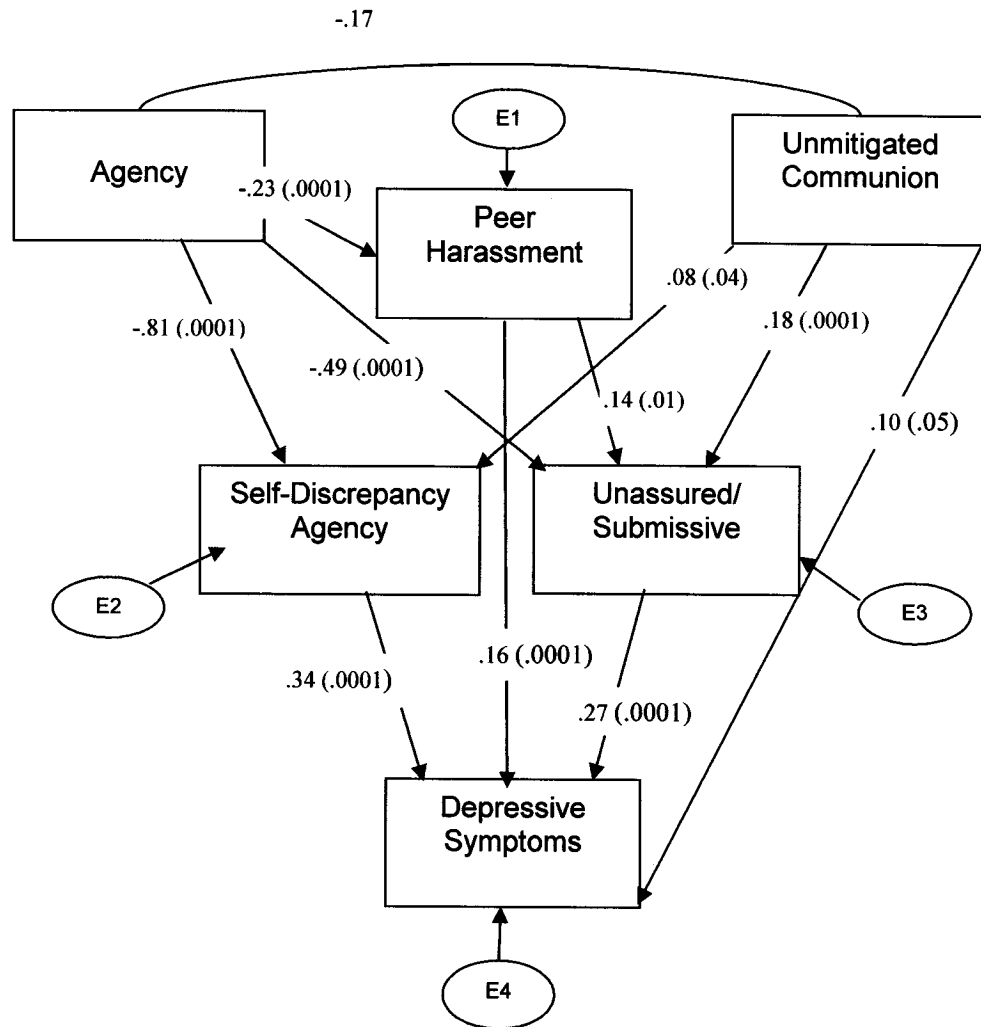


Figure 3

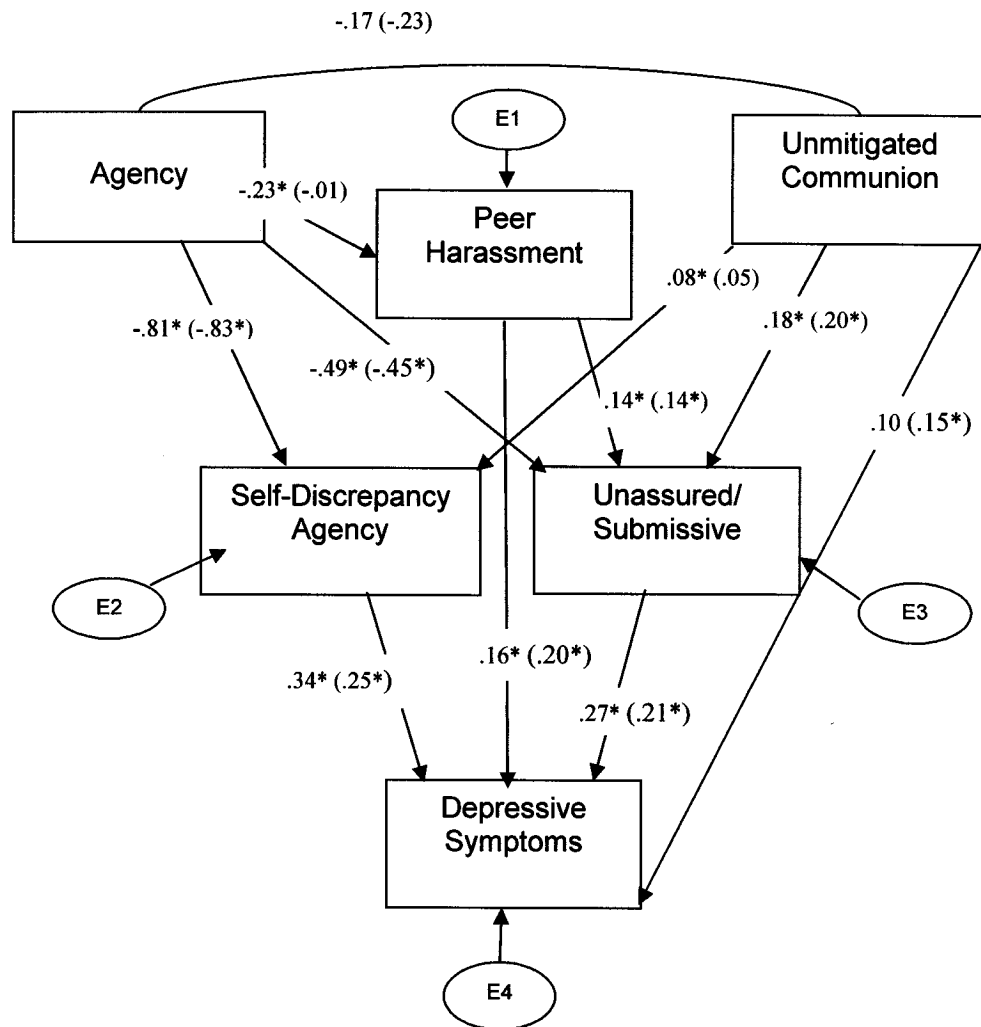
Respecified model with standardized path values and their significance.



Note: Value in parentheses is the significance of standardized path values.

Figure 4

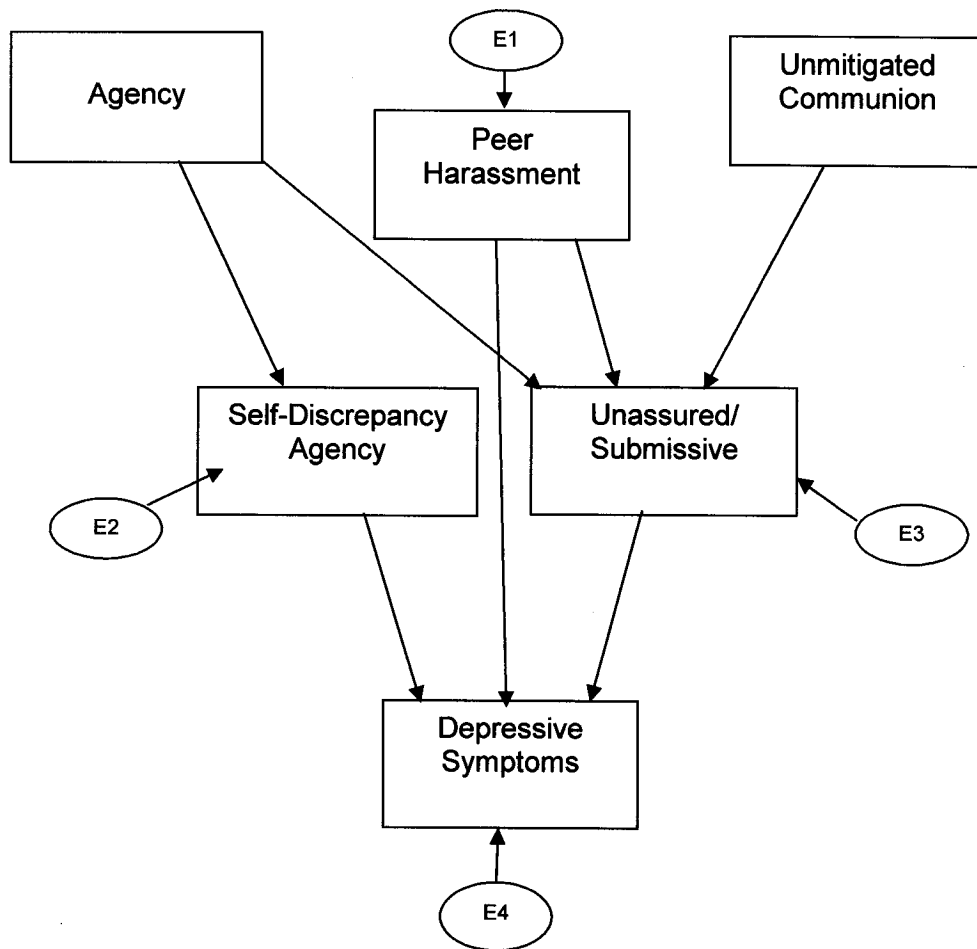
Respecified model with path values for both Samples A and B.



Note: Path coefficient for sample B in parentheses; * indicates significance at $p < .05$.

Figure 5

Respecified Model with Paths Significant in Both Samples A and B



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Appendix A

Poster for Shops:

Study of Gay Men's emotional well-being.

Wanted: Gay men 18 and over for participation in a survey that looks at the factors involved in feeling good. The survey takes 30 minutes and asks you about your mood, your relationships and your approach to life. You do not identify yourself and individual responses are confidential. We are researchers in the School of Psychology at the *University of Ottawa* working with *Pink Triangle Services* of Ottawa and we welcome your participation!

To complete the survey online visit www.sdrssurvey.com/gaymenstudy

Online recruitment text:

Participants wanted for on-line study of gay men's emotional well-being.

Wanted: Gay men 18 and over for participation in a survey that looks at factors involved in feeling good. The survey takes 30-35 minutes and asks you about your mood, your relationships and your approach to life. You do not identify yourself and individual responses are confidential. We are researchers in the School of Psychology at the University of Ottawa, in Ottawa, Ontario, Canada. We are conducting this study in cooperation with our local gay, lesbian, bisexual and transgender service agency, Pink Triangle Services, and we welcome your participation!

For further information or to participate in this study, please go to:

www.sdrssurvey.com/gaymenstudy

Advertisement in Community Newspaper:

Study of Gay Men's emotional well-being.

Wanted: Gay men 18 and over for participation in a survey that looks at the factors involved in feeling good. The survey takes 30 minutes and asks you about your mood, your relationships and your approach to life. You do not identify yourself and individual responses are confidential. We are researchers in the School of Psychology at the University of Ottawa working with Pink Triangle Services of Ottawa and we welcome your participation!

To complete the survey online visit www.sdrssurvey.com/gaymenstudy.

Appendix B

Questionnaire:

Study of Gay men's emotional well-being.

Do you identify as a gay man?

Are you 18 or older?

If yes, we would very much appreciate your participation in this study!

(University of Ottawa logo inserted here)

About the study: My name is Gordon Josephson. I am conducting this study as part of my doctoral dissertation and I would greatly appreciate your participation. The purpose of the study is to examine how one's approach to life and relationships might affect mood.

This study is being conducted under the supervision of Dr. Valerie Whiffen of the School of Psychology at the University of Ottawa. We are conducting this study in cooperation with our local gay, lesbian, bisexual and transgender service agency, *Pink Triangle Services*.

Interested in participating? Please read over the next page carefully and then press the "continue" button at the bottom of the page.

What You Have To Do To Participate: To participate in this study, you simply fill out the questionnaires below. This will take approximately 30 minutes. The overall results of the study will be available online and by mail. However, please note that you will not be given any feedback regarding your individual answers to the questions.

Questionnaires

Completing the questionnaires: We ask that you fill in all the questions below and then hit the SUBMIT QUERY button at the bottom of this page. If you have only completed some of the questions and decide you want to quit, we would appreciate it if you would scroll down to the end and hit the submit button anyway. That way we can at least get some of your answers. Thank you again for your interest in our study!

Questionnaire #1

INSTRUCTIONS: The items below inquire about what kind of person you think you are. Each item consists of a pair of characteristics, with the numbers 1-5 in between. For example:

Not at all Artistic 1 2 3 4 5 Very Artistic

Each pair describes contradictory characteristics – that is, you cannot be both at the same time, such as very artistic and not at all artistic. The numbers form a scale between the two extremes. You are to choose a number which describes where you fall on the scale. For example, if you think you have no artistic ability, you might choose 1. If you think you are pretty good, you might choose 4. If you are only medium, you might choose 3, and so forth.

Using your mouse, click on the number that best describes where you fall on the scale.

Not at all independent	1	2	3	4	5	Very independent
Not at all dictatorial	1	2	3	4	5	Very dictatorial
Not at all emotional	1	2	3	4	5	Very emotional
Not at all arrogant	1	2	3	4	5	Very arrogant
Very passive	1	2	3	4	5	Very active
Not at all able to devote self completely to others	1	2	3	4	5	Able to devote self completely to others
Not at all boastful	1	2	3	4	5	Very boastful
Very rough	1	2	3	4	5	Very gentle
Not at all helpful to others	1	2	3	4	5	Very helpful to others
Not at all egotistical	1	2	3	4	5	Very egotistical

Not at all competitive	1	2	3	4	5	Very competitive
Not at all kind	1	2	3	4	5	Very kind
Not at all aware of feelings of others	1	2	3	4	5	Very aware of feelings of others
Not at all greedy	1	2	3	4	5	Very greedy
Can make decisions easily	1	2	3	4	5	Have difficulty making decisions
Give up very easily	1	2	3	4	5	Never give up easily
Not at all cynical	1	2	3	4	5	Very cynical
Not at all self-confident	1	2	3	4	5	Very self-confident
Feel very inferior	1	2	3	4	5	Feel very superior
Not at all hostile	1	2	3	4	5	Very hostile
Not at all understanding of others	1	2	3	4	5	Very understanding of others
Very cold in relations with others	1	2	3	4	5	Very warm in relations with others
Not at all look out only for self	1	2	3	4	5	Very much look out only for self
Go to pieces under pressure	1	2	3	4	5	Stand up well under pressure

Questionnaire 1-b

INSTRUCTIONS: For this questionnaire you are to complete part of Questionnaire 1 again but this time from the perspective of the kind of person you would like to be – your personal ideal. Think about your hopes and aspirations in life and indicate your ideal response. Again, each item is a pair of characteristics, with the number 1-5 in between. For example:

Not at all Artistic	1	2	3	4	5	Very Artistic
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As before, each pair describes contradictory characteristics – that is, you cannot wish to ideally be both at the same time, such as very artistic and not at all artistic. The numbers form a scale between the two extremes. You are to choose a number which describes where you fall on the scale. For example, if your personal ideal does not include being artistic at all you might choose the number 1, if your personal ideal is to be pretty good, you might choose the number 4, if it is your hope to have average artistic ability, you might choose 3, and so forth.

Remember, this time think about your hopes and aspirations for who you ideally would like to be and respond from that point of view.

Not at all independent	1	2	3	4	5	Very independent
Not at all emotional	1	2	3	4	5	Very emotional
Very passive	1	2	3	4	5	Very active
Not at all able to devote self completely to others	1	2	3	4	5	Able to devote self completely to others
Very rough	1	2	3	4	5	Very gentle
Not at all helpful to others	1	2	3	4	5	Very helpful to others
Not at all competitive	1	2	3	4	5	Very competitive
Not at all kind	1	2	3	4	5	Very kind
Not at all aware of feelings of others	1	2	3	4	5	Very aware of feelings of others
Can make decisions easily	1	2	3	4	5	Have difficulty making decisions
Give up very easily	1	2	3	4	5	Never give up easily
Not at all self-confident	1	2	3	4	5	Very self-confident
Feel very inferior	1	2	3	4	5	Feel very superior
Not at all understanding of others	1	2	3	4	5	Very understanding of others
Very cold in relations with others	1	2	3	4	5	Very warm in relations with others
Go to pieces under pressure	1	2	3	4	5	Stand up well under pressure

Questionnaire # 2

INSTRUCTIONS: Using the scale below, choose a number that indicates the extent to which you agree or disagree with each statement. Think of the people close to you (friends or family) in responding to each statement.

Strongly Disagree 1	Slightly Disagree 2	Neither Agree nor Disagree 3	Slightly Agree 4	Strongly Agree 5
I always place the needs of others above my own.				
1	2	3	4	5
I never find myself getting overly involved in others' problems.				
1	2	3	4	5
For me to be happy, I need others to be happy.				
1	2	3	4	5
I worry about how other people get along without me when I am not there.				
1	2	3	4	5
I have no trouble getting to sleep at night when other people are upset.				
1	2	3	4	5
It is impossible for me to satisfy my own needs when they interfere with the needs of others.				
1	2	3	4	5
I can't say no when someone asks me for help.				
1	2	3	4	5
Even when exhausted, I will always help other people.				
1	2	3	4	5
I often worry about others' problems.				
1	2	3	4	5

Questionnaire # 3

INSTRUCTIONS: Please indicate how satisfied you are with the extent to which you possess each of the following characteristics. Use the following scale to indicate your level of satisfaction.

Strongly Dissatisfied	Slightly Dissatisfied	Neither Satisfied nor Dissatisfied	Slightly Satisfied	Strongly Satisfied
1	2	3	4	5

How satisfied are you with the extent to which, in general, you:

1. Are independent	1	2	3	4	5
2. Are passive	1	2	3	4	5
3. Are competitive	1	2	3	4	5
4. Can make decisions	1	2	3	4	5
5. Are persistent	1	2	3	4	5
6. Are self-confident	1	2	3	4	5
7. Are warm in relations with others	1	2	3	4	5
8. Stand up under pressure	1	2	3	4	5
9. Are emotional	1	2	3	4	5
10. Are able to devote yourself to others	1	2	3	4	5
11. Are gentle	1	2	3	4	5
12. Are helpful to others	1	2	3	4	5
13. Are kind	1	2	3	4	5
14. Are aware of others' feelings	1	2	3	4	5
15. Are understanding of others	1	2	3	4	5

Finally, how satisfied are you with:

16. How you feel about yourself compared to others	1	2	3	4	5
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Questionnaire #4

INSTRUCTIONS: The following questionnaire contains a list of actions that can occur in interactions between two people. Your task is to **select each item that accurately describes an action typically exhibited by you** in your transactions with those close to you (your partner or friends).

To help you make these judgments, imagine that, for some time, a hidden observer has followed you around daily as you interacted with those close to you. Make your judgements about which of the following actions are typical for you based on what that observer would have typically seen.

In order to be selected, the action described by a particular item must have occurred at least once in your transactions with a partner or friend and must also be judged by you as typical of the way you interact with partners/friends. If an action does not typically occur in your interactions in close relationships, leave it blank.

In my interactions with partners or friends.....

- _____ 1. I am quick to take charge of the conversation or discussion, or to offer suggestions about what needs to be done
- _____ 2. I am hesitant to express approval or acceptance of them
- _____ 3. I am careful not to let my feelings show clearly; or I speak undemonstratively, with little variation in tone or manner
- _____ 4. I find it difficult to take the initiative; or I look to them for direction or focus; I show a desire to do "whatever they want"
- _____ 5. I am receptive and cooperative to their requests, directions, appeals, or wishes; or I am quick to assist or work with them
- _____ 6. I express pleasure in myself; or I comment on my own accomplishments, awards, or successes
- _____ 7. I scan carefully to detect any of their reactions, evaluations, or motives that might have a harmful intent
- _____ 8. I show little attention, interest, curiosity, or inquisitiveness about their personal lives, affairs, feelings, or opinions
- _____ 9. I wait for or follow their lead regarding topics or issues to discuss, directions or actions to pursue
- _____ 10. I am quick to express approval or acceptance of them
- _____ 11. I speak or act emotionally or melodramatically, or with much variation in tone or manner
- _____ 12. I show an intense task focus or desire to "get down to business"; or I suggest directions or objectives

- _____ 13. I am quick to resist, not cooperate, or refuse to comply with their requests, directions, appeals, or wishes
- _____ 14. I make self-critical statements; or I express low self-worth; or I apologize frequently
- _____ 15. I gaze at them in an open, receptive, trusting, non-searching manner
- _____ 16. I inquire into or express attention, interest, or curiosity about their personal lives, affairs, feelings, or opinions
- _____ 17. I dominate the flow of conversation, or change topic, or interrupt and “talk down to them”
- _____ 18. I avoid at any cost showing affection, warmth, or approval
- _____ 19. I endlessly preface or qualify statements to the place where points I’m making get lost, or my views or positions are unclear or ambiguous
- _____ 20. I go out of my way to give them credit for their contributions, or to admire or praise them for their good ideas or suggestions
- _____ 21. I inconvenience myself or make sacrifices to contribute, help, assist, or work cooperatively with them
- _____ 22. I am cocky about my positions or decisions; or I make it abundantly clear I can do things by myself; or I avoid any hint that they can help
- _____ 23. I express doubt, mistrust, or disbelief regarding their intentions or motives
- _____ 24. I refrain at all costs from close visual or physical contact or direct body orientation with them
- _____ 25. I find it almost impossible to take the lead, or to initiate or change the topic of discussion
- _____ 26. I constantly express approval, affection, or effusive warmth to them
- _____ 27. I make startling or “loaded” comments; or I take liberties with facts to embellish stories
- _____ 28. I work hard to avoid giving them credit for any contribution; or I imply or claim that good ideas or suggestions were my own
- _____ 29. I am openly antagonistic, oppositional, or obstructive to their statements, suggestions, or purposes
- _____ 30. I am hesitant or embarrassed to express my opinions; or I conduct myself in an unsure, unconfident, or uneasy manner
- _____ 31. I respond openly, candidly, or revealingly to the point of “telling all”
- _____ 32. I continually stand, sit, move or lean toward others to be physically close
- _____ 33. I express firm, strong personal preferences; or I stand up for my opinions or positions
- _____ 34. I act in a stiff, formal, unfeeling, or evaluative manner
- _____ 35. I find it difficult to express my thoughts simply or without qualifications; or I work hard to find precise words to express my thoughts
- _____ 36. I am content, unquestioning, or approving about the focus or direction of a given topic of discussion or course of action; or I am quick to follow their lead

- _____ 37. I express appreciation, delight, or satisfaction about them, our situation, or our task
- _____ 38. I prefer to rely on my own resources to make decisions or solve problems
- _____ 39. I claim that they misunderstand, misinterpret, or misjudge my intentions or actions
- _____ 40. I remain aloof, distant, remote, or stand-offish from them
- _____ 41. I claim that I don't have an opinion, preference, or position, or that "it doesn't matter," "whatever you want," "I don't know," etc.
- _____ 42. I act in a relaxed, informal, warm, or nonjudgmental manner
- _____ 43. I make comments or replies that "pop out" quickly and energetically
- _____ 44. I question or express reservation or disagreement about the focus or direction of the conversation or course of action
- _____ 45. I grumble, gripe, rag, or complain about them, our situation, or our task
- _____ 46. I readily ask them for advice, help, or counsel
- _____ 47. I communicate that they are sympathetic or fair in interpreting or judging my intents or actions
- _____ 48. I am absorbed in, attentive to, or concentrate intensely on what they say or do
- _____ 49. I state preferences, opinions or positions in a dogmatic or unyielding manner
- _____ 50. I have absolutely no room for sympathy, compromise, or mercy regarding their mistakes, weaknesses, or misconduct
- _____ 51. I "talk around" or hedge on evaluations of them, events, or objects, or I constantly minimize expressions of my feelings
- _____ 52. I make statements that are deferentially, softly, or carefully presented as if I desperately want to avoid any implication of disapproval, criticism, or disagreement
- _____ 53. I seem to always agree with or accommodate them; or I seem impossible to rile
- _____ 54. I brag about achievements, successes, or good-fortune; or I "put on airs" as if in complete control of my life
- _____ 55. I express harsh judgment, "never forgetting," or no forgiveness for their mistakes, weaknesses, or injurious actions
- _____ 56. I seem constantly uncomfortable with them as if I want to leave or be by myself
- _____ 57. I express my own preferences hesitantly or weakly; or I yield easily to their viewpoints; or I back down quickly when they question or disagree
- _____ 58. I go out of my way to understand or be sympathetic towards them, or to find something about them to approve of, endorse, or support
- _____ 59. I constantly overstate evaluations of them, events, or objects; or I exaggerate expression of my feelings

- _____ 60. I make comments that avoid sharing credit with them for good happenings or joint accomplishments; or I “play up” my own contributions
- _____ 61. I argumentatively challenge or refute their statements or suggestions; or I “tell them off”, “let them have it” when I disagree
- _____ 62. I claim I am a constant failure, or am helpless, witless, or at the mercy of events and circumstances
- _____ 63. I express unbending sympathy, understanding, or forgiveness for their hurtful or injurious actions
- _____ 64. I find it difficult to leave them; or I go out of my way to secure more and more of their company
- _____ 65. I seize opportunities to instruct or explain things, or to give advice
- _____ 66. I express stringent, exacting, rigorous standards or expectations of them
- _____ 67. I delay giving clear answers or postpone decisions; or I deliberate carefully before speaking or acting
- _____ 68. I make comments that give them credit for any good happenings or joint accomplishments; or I point out their contributions while “playing down” my own
- _____ 69. I am attentive to, considerate or solicitous of their feelings, or sensitive to pressures or stresses in their lives
- _____ 70. I express my opinions with conviction and ease; or I conduct myself in a confident, assured, and unruffled manner
- _____ 71. In response to their inquiries or probings, I act evasively as if I’m hiding important secrets
- _____ 72. I am slow to respond or speak to them; or I seem distracted by my own thoughts
- _____ 73. I am quick to agree with their opinions or to comply with their directions or preferences
- _____ 74. I express lenient, soft-hearted, or compassionate standards or expectations of them
- _____ 75. I make hasty decisions; or I jump into new activities with little premeditation
- _____ 76. I challenge or dispute their ideas or statements; or I attempt to get the better of them or put them down
- _____ 77. I ignore, overlook, or am inconsiderate of their feelings; or I disregard pressures or stresses in their lives
- _____ 78. I urgently solicit their advice, help, or counsel even for everyday troubles or difficulties
- _____ 79. I show trust in or reliance upon their good intentions or motives; or I cast their behavior in the best possible “light”
- _____ 80. I am careful to acknowledge and be responsive to their statements and actions
- _____ 81. I overwhelm or “steamroll” them by my arguments, positions, preferences, or actions
- _____ 82. I express severe, inflexible, or uncompromising expectations for their conduct
- _____ 83. I endlessly avoid or delay clear answers, decisions, actions or commitments to positions
- _____ 84. I make flattering or glowing comments about them, our situation, or our joint task

- _____ 85. I make unconditionally supportive, encouraging, endorsing, comforting, or bolstering comments to them
- _____ 86. I act as if excessively “full of myself,” or as feeling I am special or favored, or as cocksure of my future
- _____ 87. I am bitterly accusatory, suspicious, or disbelieving of them
- _____ 88. I seem totally unmoved, unaffected, or untouched by their comments or actions
- _____ 89. I seem unable to assert what I want, or to stand up to them, or to take any opposing position
- _____ 90. I am unwaveringly tolerant, patient, or lenient in regard to my expectations for their conduct
- _____ 91. I seem compelled to act out feelings with them, or impulsively to jump into new actions or activities
- _____ 92. I make critical, demeaning, snide, or derisive statements about them, our situation, or our joint task
- _____ 93. I swear at them; or I make abusing, disparaging, damaging, or crude comments to them
- _____ 94. I am constantly dissatisfied with myself, feel guilty or depressed; or I feel hopeless about the future
- _____ 95. I show blind faith or polyannish trust in them; or I believe almost anything they say
- _____ 96. I seem totally engrossed in them; or I am constantly moved, affected, or responsive to their comments or actions

Questionnaire # 5

INSTRUCTIONS: This questionnaire asks you about how you were treated by other children when you were in grades 7, 8 and 9 (sometimes referred to as “junior high-school”). Think back to those years and indicate the degree to which you were directly or indirectly bullied by peers.

Please use the following definition of bullying to respond to these questions.

Bullying is when one child, or several other children,

- say mean and hurtful things or make fun of another child, or
- completely ignore or exclude a child from their group of friends or leave them out of things on purpose, or
- hit, kick, push, shove around, or lock a child up in a room, or
- tell lies about a child, or spread false rumours, or send notes around saying things to try and make other children dislike that child

For this questionnaire it is not considered bullying when the teasing is done in a friendly playful way, or when two children of equal power fight.

For all responses to Questionnaire # 5 use the following response key:

I was not bullied 1	It only happened once or twice 2	I was bullied 2-3 times a month 3	About once a week 4	Several times a week 5
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1. As you recall, during the period including grades 7 – 9, were you bullied, if yes how often? (Choose one of the following)

1 2 3 4 5

If you choose option 1, “I was not bullied” skip ahead to Questionnaire 6.

If you recall being bullied during the period including grades 7-9, were you bullied in one or more of the following ways? Continue using the same response key and please answer all questions.

2. I was called mean names, was made fun of, or teased in a hurtful way

1 2 3 4 5

I was not bullied in that way	It only happened once or twice	I was bullied 2-3 times a month	About once a week	Several times a week
1	2	3	4	5

3. Other children left me out of things on purpose, excluded me from their group of friends, or completely ignored me

1 2 3 4 5

4. I was hit, kicked, pushed, shoved around, or locked indoors

1 2 3 4 5

5. Other children told lies or spread false rumours about me and tried to make others dislike me

1 2 3 4 5

6. I had money or other things taken away from me or damaged

1 2 3 4 5

7. I was threatened or forced to do things I didn't want to do

1 2 3 4 5

8. I was bullied with mean names or comments about my race or colour

1 2 3 4 5

9. I was bullied with mean names, comments, or gestures with a sexual meaning (for example, "homo", "dick")

1 2 3 4 5

10. I was bullied in another way

1 2 3 4 5

In this case, please describe what way _____

Questionnaire # 6

INSTRUCTIONS: Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way during the past week.

	Rarely or None of the time (less than 1 day) 1	Some or a little of the time (1-2 days) 2	Occasionally or a Moderate amount of time (3-4 days) 3	Mostly or all of the time (5-7 days) 4
During the past week...				
1. I was bothered by things that usually don't bother me.	1	2	3	4
2. I felt that I could not shake off the blues even with help from my family or friends.	1	2	3	4
3. I had trouble keeping my mind on what I was doing.	1	2	3	4
4. I felt depressed.	1	2	3	4
5. I felt that everything I did was an effort.	1	2	3	4
6. My sleep was restless.	1	2	3	4
7. I was happy.	1	2	3	4
8. I enjoyed life.	1	2	3	4
9. I felt sad.	1	2	3	4

Demographic Information

INSTRUCTIONS: Please fill out the following demographic information about yourself.

Age: ____

Gender: Male ____ Female ____ Transgender ____

Country of residence: ____ (*response options provided*)

If Canada, City/Municipality of residence: ____ (*response options provided*)

Sexual orientation Gay ____, Bisexual ____, Heterosexual ____

If gay, I “came out” (first identified myself as gay) at age ____

Relationship status: Single ____, Partnered ____

Educational status:

- ____ Grade school
- ____ High School
- ____ Some college or university
- ____ College or Technical diploma
- ____ Bachelor’s degree
- ____ Master’s degree
- ____ Ph.D.
- ____ Other

Employment status:

- ____ Currently employed
- ____ Unemployed and looking for work
- ____ Unemployed and not looking for work
- ____ Student
- ____ Full-time stay-at-home parent
- ____ Retired

Estimated Income:

- ____ under \$15 000
- ____ \$15 000 - \$29 000
- ____ \$30 000 - \$45 000
- ____ \$46 000 - \$59 000
- ____ \$60 000 - \$74 000
- ____ \$75 000 +

Please indicate if you identify as a member of a visible minority group yes ____ no ____

Appendix C

Dear Interested Participant:

Last summer you sent me an email indicating interest in my online study of gay men's mental health. As indicated in the survey, I was gathering information for my PhD thesis in clinical psychology at the University of Ottawa. I am still in the process of completing the analysis but I did not want to delay my response to your inquiry any further. Ultimately, I will submit the study for publication in a journal but I don't anticipate this happening until the end of 2003. Until then, I hope that the information below is of interest to you.

It was likely apparent to you by the end of the survey that the study examined specific psychological aspects of depressive symptoms in gay identified men. We were interested in surveying both gay men who experienced depressive symptoms and gay men who did not, and we tested specific hypotheses that certain factors would be associated with the experience of depressive symptoms. These factors were chosen from a review of the published research on depression in the general population and the limited writings on gay men's experience of depression.

It is perhaps important to make clear that the study can not make direct comparisons between gay and non-gay men, to do this we would have required a sample of non-gay men. Our goal instead was to explore the associations between certain factors in a sample of gay men to better understand how one might assist them in responding to their depression. By comparing our findings to published studies of the general population we will be able to speculate on potential differences/similarities for gay men, but a direct comparison remains a goal for future research.

The online study was very successful in obtaining participants! Just over 500 gay men responded in a 3-month period. The majority of the respondents were from Canada, the United States and Australia. The men participating represented a variety of ages, incomes and education levels.

The psychological aspects investigated in this study consisted of the following 4 factors:

1. Gender-role orientation – This characteristic was measured using the personality traits known as agency and communion, the concepts were historically captured by the terms masculinity and femininity. There is research suggesting women are more susceptible to depression due to a gender-role socialization process that has the potential to teach them to overly focus on the needs of others and not assert their own needs. We tested two related ideas: First, that those gay men who identified a personality style characterized as low in agency/masculinity would also be more likely to report depressive symptoms. Second, that those men who reported a style known as unmitigated communion, or a strong focus on the needs of others instead of ones own needs, would be more likely to report depressive symptoms. We found support for both these ideas.

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Page 2.

2. Self-discrepancies in gender-role orientation – There is a significant body of research on the effects of self-discrepancies on the experience of depression. It has been found that when people express beliefs that they should be something they do not believe themselves to be, they are more likely to experience depressive symptoms. We thought that gay men who aren't as agentic/masculine as they think they should be might be more depressed. The results indicate this is true.
3. Childhood peer victimization – There is research from the general population demonstrating an association between being bullied as a child and experiencing depressive symptoms as an adult. Recently, there is much concern in the gay community about the effects of bullying on gay youth. We thought that gay men who recalled experiencing childhood peer victimization would be more depressed. We found this to be true.

4. Interpersonal relationship style - Previous research in the general population suggests that certain difficulties in interpersonal relationship style (i.e., a lack of assertiveness) are related to the experience of depressive symptoms. We found that gay men who said they felt depressed also felt less assertive, less confident, more angry and more mistrustful.

The four factors described above were chosen due to existing research in the general population that suggested they would be of significance in understanding depression. There were other factors that are discussed in the literature that could also have been included (i.e., heterosexism, difficulties in identity development resulting from internalized homophobia) but it was decided that this study would focus in on the area of gender-role and factors that may relate to gender-role. In the book, Queer Blues: The lesbian and gay guide to overcoming depression (Oakland, CA: New Harbinger Publications) by K. Hardin and M. Hall (2001), the authors describe the importance of both societal factors such as heterosexism and personality factors such as gender-role in understanding gay men's depression. However, the majority of research presently being done has focused on the first issue and our intent was to offer some exploration of the second.

Our next task is to build a model attempting to explain the pattern of associations among the 4 factors analyzed and how they might, as a whole, contribute to the experience of depressive symptoms. The manner by which these specific 4 factors may work together to create a susceptibility to depression was an additional consideration in our decision to include them in the study. For example, we are currently testing, through statistical modeling, whether one can argue that gender-role orientation leads to peer victimization which in turn leads to self-discrepancies regarding gender-role and ultimately to depressive symptoms. Such analysis will help us to speculate about distinctions such as

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Page 3

whether it is gender-role itself, or how one personally feels about their gender role as a result of their experiences with others, that affects the presence of depressive symptoms.

As indicated above it is our goal to submit this study for publication. It is my hope that you will be interested in reading that publication. Until then, I hope this summary has given you a better sense of the study. If you have further questions or comments please do not hesitate to contact me.

Thank you again for your interest in this work.

Best Regards,
Gordon Josephson

Doctoral Candidate
University of Ottawa
February 2003

Appendix D

Power Analysis and Calculation of Sample Size

Cohen's (1992) values for small (.10), medium (.30) and large (.50) effect sizes were used to classify correlations found in the literature. Where effect size is directly stated, the authors classification of small, medium, or large will be cited. The discussion of effect size is organized by variable.

To determine the number of participants required, a power analysis was conducted. Using the best estimate (i.e., meta-analysis over single studies and the studies closest in content).

Effect size of the relationship between gender-role orientation and depressive symptoms.

Whitley (1984; p.219) summarized the findings of 13 studies containing 21 observations of the association between agency and depressive symptoms and reported a “moderately strong” effect size between masculinity and depressive symptoms. He calculated what he describes as an “underestimate of the true value” of ($r = .28$) (better classified as a “medium” effect size, Cohen, 1992).

Effect size of relationship between self-discrepancies and depressive symptoms.

Grimmell and Stern (1992) explored gender-role self-discrepancies and found a medium to strong effect size ($r = -.439$) for agentic self-discrepancies.

Effect sizes of the relationship between interpersonal problems and depressive

symptoms. Effect size for the subscales of the Inventory of Interpersonal Problems of interest in this analysis (unassertive, overly nurturing behaviours) range from medium ($r = .341$) to large ($r = .599$) (Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988).

Effect sizes of the relationship between childhood peer victimization and depressive symptoms. The effect size for troubled peer relations and depressive symptoms was

estimated by Hawkin and Boulton (2000) in a meta-analysis of 9 studies involving self-report measure of troubled peer relations as medium ($r = .45$).

In summary then, effect sizes of the association of the constructs of interest and depressive symptoms range from medium to large. A medium effect size will be used to calculate sample size. Cohen (1992) suggests a medium effect size for multiple regression is 0.15. Cohen and Cohen (1983) offer the following formula to estimate sample size required for a multiple regression $N=L/ES + k + 1$ where N is the estimated sample size, L is derived from tables from Cohen and Cohen, k is the number of variables considered and ES is the estimated effect size. Of the analyses involved in the testing of the proposed hypotheses, the maximum number of variables in an analysis is five. Thus, with power set at .80 (as recommended by Cohen, 1992) and with an alpha coefficient of .05, based on a medium effect size ($ES = .15$) a sample of approximately 90 is needed. I propose to collect a sample consisting of 100 gay men.

*Appendix E*Research with Gay Identified Participants

The primary concern in conducting research with participants who identify as gay is the ability to obtain a representative sample of the gay population. Random sampling in the general population is difficult as the majority of selected participants would not be gay. Therefore, the vast majority of the research dealing with gay participants uses a non-random sampling strategy. A thorough overview by Solarz (1999) indicated that many researchers utilize a “snowball sampling technique”, a survey strategy that employs social networks to tap into “hidden” communities. The representativeness of “snowball samples” can be improved by surveying participants from as many different sources as possible. This increases the heterogeneity of the respondents on factors such as: involvement in the gay community, income, educational level, race/ethnicity, and age (Kauth & Prejean, 1997).

Another common approach to surveying the gay population is through a “convenience sample” in which individuals attending a gay community event, such as a pride day or political rally, complete surveys at the event or are given surveys or notification of the survey to complete at a later time (Solarz, 1999). An obvious difficulty with this approach is that only individuals comfortable attending such events will be included.

More recently, authors of epidemiological studies of HIV have utilized more complex sampling procedures involving the enumeration of men leaving a gay identified facility, such as a bar, and then randomly sampling from this “sampling frame”. Using this process, researchers are able to make inferences to the entire population of gay people who frequent such facilities (MacKellar, Valleroy, Karon, Lemp, & Janssen,

1996).

In practice, research with gay participants often combines snowball and convenience sampling. For example, in a survey of the psychotherapy histories of lesbians, gay men, and bisexuals, Jones and Gabriel (1999) recruited respondents through a variety of means including: mailing notices to names obtained from national gay and lesbian mailing lists, posting information on Internet bulletin boards and in gay and lesbian publications, and distributing surveys at conferences and through informal networks. Jones and Gabriel also provided each person who requested a questionnaire with a reply envelope and a postcard to request a summary of the findings. Such a sampling strategy makes it impossible to estimate a response rate or sample bias.

Non-random samples are thought to be at risk of attracting more economically stable individuals with higher income levels as they are thought to be more involved in the gay community and more likely to identify themselves as gay. Perhaps because they are in more secure careers and social positions. Indeed many non-random studies of the gay population suggest their incomes are higher than average. In contrast, data from the rare random samples that record sexual orientation suggest that gay and bisexual men may earn on average slightly less than heterosexual men and that the salaries of lesbians and bisexual women are not significantly different from heterosexual women (Lee Badgett, 1998).

A second general concern related to research involving gay men, lesbians and bisexuals is how to define who qualifies as a participant. Homosexuality is thought to be defined in three ways: 1) by behavior, 2) by the experience of desire, and 3) by reported identity (Michaels, 1996). Typically, gay men are defined behaviorally by asking about same-sex sexual experiences since the age 18 years. Desire has been measured by using

ratings of sexual “attraction to” and “appeal of having sex with” someone of the same gender. Identity is determined through self-labeling and can be thought of as a political or social demarcation of group membership. Some researchers have measured respondent’s self-identification using the Kinsey Scale. In this case, respondents were asked to represent their sexual orientation along a 7-point continuum, with 7 being exclusively heterosexual and 1 being exclusively homosexual (Sorensen & Roberts, 1997). Such an approach is unnecessarily detailed for the present study as the goal was to gain insight into the depressive symptoms of men who identify as gay. As the present study is characterized by a focus on self and self-conception, identity is of most interest and will be asked about in the present tense and in a global way (i.e., do you presently identify as a gay man?). A similar “self-definition” approach was used by Simonsen, Blazina, and Watkins (2000) whereby only those men who stated they were gay were asked to complete the study.