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Perceived discrimination and psychological distress:  
the role of personal and ethnic self-esteem.

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**Abstract**

The current study aimed to draw on two theoretical models to examine the relationship between perceived ethnic discrimination and psychological distress in a sample of ethnic minority young people ( $n = 154$ ). Analysis provided no support for the hypothesis derived from the self-esteem theory of depression that self-esteem (personal and ethnic) moderates the discrimination-distress relationship. There was, however, partial support for a mediating role of self-esteem as predicted by the transactional model of stress and coping. This mediational relationship was moderated by gender, such that both forms of self-esteem exerted a mediating role among males but not females. We consider the implications of our findings for theory and future research examining the consequences of discrimination on psychological well-being.

For many people from ethnic minority groups, the experience of prejudice and discrimination is part of everyday life. In one US study (Krieger, 1990), 80 percent of respondents reported having experienced racial discrimination at some time in their lives. About one third of the respondents to a UK-based study (Virdee, 1995) reported that the way they led their lives was constrained by the fear of being racially harassed. Over the last decade, a growing literature has contributed to our understanding of the antecedents and consequences of discrimination (e.g., Allison, 1998; Crocker, Major & Steele, 1998; Ruggiero & Taylor, 1997; Schmitt, Branscombe, Kobrynowicz & Owen, 2002; Sellers & Shelton, 2003). Despite this increased knowledge, the psychological implications of being a target of discrimination are considerably less well understood than the 'psychology of the powerful' (Branscombe, Schmitt and Harvey, 1999), i.e., the attitudes and behaviours of the sources of discrimination (Corning, 2002; Swim & Stangor, 1998).

The aim of the current study was to address this weakness in the research literature by investigating the mental health consequences of perceived ethnic discrimination. Many theoretical approaches predict that exposure to prejudice and discrimination will adversely affect the psychological well-being of its targets (e.g., Allport, 1954; Cooley, 1902; Erikson, 1956; Mead, 1934). Symbolic interactionists, for example, emphasize the role of other people's perceptions ('reflected appraisals') in shaping how we understand and evaluate the self-concept (e.g., Mead, 1934). Allport (1954), with his assertion that 'One's reputation, whether false or true, cannot be hammered, hammered, hammered into one's head, without doing something to one's character (p. 142), suggested that the target of prejudice can come to internalize others' negative views of the ingroup.

Empirical research in this small but growing area suggests, however, that the relationship between prejudice and psychological well-being may be more complex than predicted. While some studies report that perceived ethnic discrimination is significantly

related to high levels of psychological distress (e.g., Brown, Williams, Jackson, Neighbors, Torres, Sellers & Brown, 1999; Noh, Beiser, Kaspar, Hou & Rummens, 1999; Williams & Williams-Morris, 2000), other studies suggest that the relationship is not straightforward (e.g., Corning, 2002; Fischer & Shaw, 1999; Landrine, Klonoff, Gibbs, Manning & Lund, 1995, see Crocker & Major, 1989, for review). Fischer and Shaw (1999), for example, found no direct relationship between perceptions of racism and mental health. Crocker and Major, in their (1989) review, concluded that members of stigmatized groups often have levels of psychological well-being as high or higher than members of non-stigmatized groups.

Alternative theories have been proposed to account for these conflicting findings. One such theory is the self-esteem theory of depression (Brown & Harris, 1978). This theory hypothesizes that self-esteem moderates the impact of negative events on depression such that when faced with significant stressors, lower levels of self-esteem place the individual at greater risk of depression. High self-esteem may thus protect the individual from distress by affording less vulnerability and more resilience to stressful events (Aspinwall & Taylor, 1992; Taylor & Brown, 1988).

The evidence for this theory when examining the relationship between discrimination and psychological distress has been mixed, however. Corning (2002) found support for the theory in her research on gender discrimination but only in relation to some of the measures of psychological distress used. Fischer and Straw (1999), in their sample of African Americans, found that self-esteem moderated the discrimination-distress relationship but, in contrast to Corning (2002), high self-esteem did not make individuals less vulnerable to experiences of discrimination but had the opposite effect. Participants with higher self-esteem reported poorer mental health as perceptions of racist discrimination increased, while those with lower levels of self-esteem did not.

Recently, a number of researchers have conceptualized the experience of discrimination as a stressor in the lives of stigmatized people (e.g., Allison, 1998; Clark, Anderson, Clark & Williams, 1999; Major, Quinton & McCoy, 2002; Miller & Kaiser, 2001; Sellers & Shelton, 2003; Utsey, Ponterotto, Reynolds & Cancelli, 2000). The stress and coping model which has dominated this work is the transactional model of stress and coping (Lazarus & Folkman, 1984). This model holds that stress is a transaction between situational and personal characteristics that leads a person to perceive an event as stressful. The approach draws attention to the importance of examining, firstly, how, like other types of stressor, discrimination is cognitively appraised by the target and, secondly, the coping strategies targets use to deal with discrimination that is appraised as stressful. Clark et al. (1999) advocate a stress and coping approach to the study of the effects of racism among African Americans. Their perspective draws on the Lazarus and Folkman model to identify a number of moderator and mediator variables which influence how individuals appraise and are affected by racism. This approach is not wholly inconsistent with the self-esteem theory of depression. Self-esteem, within the transactional model, can be conceptualized as a moderator variable, a psychological characteristic of the individual which determines whether a negative event is appraised as stressful, and, consequently, whether increased levels of psychological distress are experienced.

However, the transactional model also suggests an alternative role for self-esteem in the relationship between the experience of discrimination and psychological distress, that of mediator rather than moderator variable. Lazarus and Folkman (1984) posit that when individuals appraise a negative event (in this case, discrimination) as stressful, they perceive their self-image to be threatened. This threat may have consequences for an individual's self-evaluation or self-esteem, which may, in turn, directly affect their levels of psychological distress. Thus, it can be argued that self-esteem is a mediating variable, in that discrimination

is related to symptoms of psychological distress through its negative effect on self-esteem. Indeed, there is empirical evidence to suggest that self-esteem plays a mediating rather than moderating role in the relationship between stress and psychological distress in different contexts. For example, physical changes that decreased appearance self-esteem increased psychological distress among individuals with systemic sclerosis (Malcarne, Hansdottir, Greenbergs, Clements & Weisman, 1999). Occupational stress that threatened self-esteem was found to be associated with an increase in psychological distress (Morris & Long, 2002). Given our conceptualization of perceived discrimination within the transactional model of stress and coping and the equivocal nature of the evidence base, our study aimed to test two hypotheses: firstly, that personal self-esteem moderates the link between perceived ethnic discrimination and psychological distress and secondly, that personal self-esteem mediates the discrimination link. In the moderating model, self-esteem affects the direction or strength of the relationship between discrimination and distress. In the mediating model, self-esteem accounts, at least in part, for the relationship between discrimination and distress (Baron & Kenny, 1986).

In addition, we sought to examine the role of ethnic or collective self-esteem in the discrimination-distress relationship. The distinction between personal and ethnic self-esteem reflects the distinction described within social identity theory (e.g., Tajfel & Turner, 1979; Tajfel, 1982) between social and personal identity. Personal identity refers to the self as a unique individual whereas social identity refers to the self as a group member. Crocker, Luhtanen, Blaine, and Broadnax (1994) administered measures of ethnic self-esteem, personal self-esteem and psychological adjustment to White, Black, and Asian students. They found that ethnic self-esteem predicted psychological adjustment beyond the effects attributed to personal self-esteem. They concluded that it is important to consider people's

evaluations of their social groups in order to develop a comprehensive understanding of mental health outcomes in minority groups.

Within the transactional model of stress and coping, ethnic self-esteem can be conceptualized as both a moderator and mediator of the relationship between discrimination and distress. There is empirical evidence for both roles. In the context of gender discrimination, Corning (2002) found a moderating effect of collective self-esteem (evaluation of self as female), such that the effect of gender discrimination decreased for those with high collective self-esteem but increased for those with low collective self-esteem. There have been no studies directly testing the collective self-esteem as mediator hypothesis but a number of studies have provided indirect support. For example, Branscombe et al. (1999) found that stable attributions to prejudice among African Americans had a direct and negative effect on ethnic self-esteem. The Crocker et al. (1994) study demonstrated a relationship between ethnic self-esteem and psychological adjustment. Thus, our study tested the hypotheses that (i) ethnic or collective self-esteem moderates the relationship between perceived ethnic discrimination and psychological distress and (ii) ethnic self-esteem mediates the discrimination-distress link.

The study also investigated gender differences, both in levels of perceived ethnic discrimination, and in the effects of personal and ethnic self-esteem on the discrimination-distress relationship. Although gender has been identified as one of the most important sources of individual variability in stress and coping within ethnic minority groups (Clark et al., 1999; Slavin, Rainer, McCreary & Gowda, 1991), few studies have examined gender differences in the effects of ethnic discrimination. Researchers, increasingly, are being urged to examine the mental health consequences of negative life events among ethnic minority women (Kohn & Hudson, 2002; Moradi & Subich, 2003; Russo, 1995). Research to date investigating gender differences in levels of perceived ethnic discrimination have provided

mixed results. Some studies have reported no gender differences (e.g., Branscombe et al., 1999; Landrine & Klonoff, 1996) but others have suggested lower levels of ethnic discrimination among women (e.g., Fischer & Shaw, 1999; Verkuyten and Thijs, 2001). Despite finding the latter, Fischer and Shaw did not include gender in their regression analyses examining the relationship between perceived ethnic discrimination and psychological distress in a sample of African Americans. Although evidence to suggest gender differences in the stress-distress relationship is accumulating (e.g., Aranda, Castaneda, Lee & Sobel, 2001; Ataca & Berry, 2002; Blalock & Joiner, 2000), there are no studies to our knowledge which have systematically examined gender differences in the relationship between perceived ethnic discrimination and psychological distress.

Most of the existing work examining ethnic discrimination has been based on African Americans, and as a result, little is known about the discrimination-distress relationship among members of other minority ethnic groups. Some studies have suggested a positive association between discrimination and distress among other ethnic populations, for example, Chinese immigrants in Toronto (Dion, Dion & Pak, 1992), Southeast Asian refugees in Canada (Noh, Besier, Kaspar, Hou & Rummens, 1999), Caribbean, South Asian and Chinese groups in Britain (Karlsen & Nazroo, 2002) and Hispanics and Asians in the United States (Williams, 2000). Crocker and Quinn (1999) have argued, however, that the relation between perceiving discrimination and self-esteem differs across minority ethnic groups. They report data suggesting a negative relationship between perceived discrimination and self-esteem for Asian Americans but a positive relationship for African Americans. Thus, lower perceived discrimination was associated with higher self-esteem among Asian Americans but with lower self-esteem among African-Americans. The current study sought to build on this research by examining self-esteem, distress and discrimination and how they interrelate in different ethnic groups resident in the U.K. Our sample consisted of young people drawn

from three ethnic minority groups who might be expected to experience discrimination on the basis of their distinctiveness from the mainstream culture. Research indicates that experience of ethnic discrimination among ethnic minorities in the UK is widespread (Karlsen & Nazroo, 2002; Virdee, 1995). The UK government recently identified black and ethnic minority individuals as a priority group, for the promotion of mental health (UK Department of Health, 2002). Research indicates that ethnic minority young people in particular are at increased risk of deprivation and social exclusion (Scottish Executive, 2001).

In summary, the current study tested two theoretical approaches to examine the relationship between perceived ethnic discrimination and psychological distress. The first approach, the self-esteem theory of depression (Brown & Harris, 1978), suggests that self-esteem moderates the relationship between discrimination and distress. The second approach, based on the transactional model of stress and coping (Lazarus & Folkman, 1984), suggests an alterative role for self-esteem, that of mediator rather than moderator. To this end, the study examined personal and ethnic self-esteem, perceived discrimination and psychological distress in a U.K. sample of ethnic minority young people. The study examined the moderating and mediating roles of both forms of self-esteem in the relationship between perceptions of discrimination and distress. The study also aimed to investigate gender differences in perceived discrimination as well as in the role that self-esteem plays in the discrimination-distress relationship.

## Method

### *Participants*

The participants were 154 young people, comprising 27 Chinese, 39 Indians and 88 Pakistanis, all resident in the city of Glasgow, Scotland. These groups constitute the three largest ethnic minority groups in the city. The number of participants in each group is

proportional to the numbers in the city as a whole. The mean age of the sample was 17.5 years ( $SD = 2.5$ , range 14-21 years); forty-five per cent ( $n = 69$ ) were male and 55 per cent ( $n = 85$ ) were female. The gender ratio for the three ethnic groups did not differ significantly ( $\chi^2 (2) = .22$ ,  $p=.89$ ). Ninety per cent ( $n = 138$ ) of the sample were in full-time education (secondary, further or higher education); eight per cent ( $n = 13$ ) were in employment and two per cent ( $n = 3$ ) were unemployed. These participants form part of a larger sample, which also includes young people who are White, and from other, numerically smaller, ethnic minority groups.

Participants were recruited in several different ways. A number of secondary schools were contacted and invited to participate in a longitudinal study examining the life experiences of ethnic minority young people. In schools that agreed to take part, participants were selected randomly by the school authorities. Pupils were informed that their participation was voluntary, that their responses were confidential and that they could withdraw from the study without penalty at any time. Parental consent forms were issued to all interested participants. Participants were also recruited through mailshots, posters, local organisations and community groups in the same geographic areas as the schools that took part.

### *Measures*

Measures, as described below, were taken, either directly or with minor modification, from existing scales. To ensure that the data were not affected by the order of presentation, the same order of measures was used for all participants. Measures assessing aspects of the personal self-concept were presented to participants before measures focusing on the group or ethnic self-concept. To minimize contamination, the measure of perceived discrimination was completed last. Overall scores were obtained for each scale by summing across items and dividing by the total number of items.

*Depression and anxiety.* Depression and anxiety were chosen as indicators of psychological distress because they are two of the most prevalent mental health problems of today (Weary & Edwards, 1994) and they frequently co-occur (Maser & Cloninger, 1990). They were measured using the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983). The HADS consists of 14 items, seven corresponding to the anxiety sub-scale (e.g., "Worrying thoughts go through my mind") and seven corresponding to the depression sub-scale (e.g., "I have lost interest in my appearance"). Each item is answered on a four point (0-3) response category so that possible scores for each subscale range from 0 to 21.

Cronbach's alpha coefficient was computed for both subscales using the present data: .73 for anxiety and .61 for depression.

*Personal self-esteem.* Personal self-esteem was measured using the Rosenberg (1979) self-esteem scale, a well-validated measure of global personal self-esteem. The scale consists of 10 items (e.g., "I feel that I have a number of good qualities") with a response format of five choices ranging from 'strongly disagree' (1) to 'strongly agree' (5). The maximum score is 50. The coefficient alpha for this sample was .80. Although often characterized as a time of 'storm and stress', there is increasing evidence that during adolescence self-esteem and self-concept are relatively stable (e.g., O'Malley & Bachman, 1983; Savin-Williams & Demo, 1984). A recent meta-analysis of 50 published studies reported test-retest reliabilities for participants of the same age as the current sample ranging from .51 to .61 (Trzesniewski, Donnellan & Robins, 2003).

*Ethnic self-esteem.* This measure examines how individuals evaluate the ethnic group with which they identify. The scale was a modified version of the Collective Self-Esteem (CSE) scale developed by Crocker & Luhtanen (1990). Three four-item subscales measured (i) private collective self-esteem (how positively they judge their ethnic group, e.g., "In general, I am glad to be a member of my ethnic group"), (ii) public collective self-esteem (how other

people evaluated their ethnic group, e.g., "Overall, my ethnic group is considered good by others") and (iii) membership self-esteem (how good or worthy a member they are of their ethnic group, e.g., "I am a worthy member of my ethnic group"). Items are rated on a seven-point scale from 'strongly disagree' (1) to 'strongly agree' (7). The identity importance subscale from the CSE was not included because other studies suggest that it is a measure of ethnic identification rather than of ethnic self-esteem (Ahlering, 2003; Branscombe et al., 1999). Using present data, Cronbach's alpha for the overall scale was .81.

*Perceived discrimination.* This scale was a composite of two measures, one used by Verkuyten (1998) and one developed by Phinney, Madden and Santos (1998). The scale consists of six items: two assess perceived frequency of being treated unfairly or negatively because of one's ethnic background at school and outside school (e.g., "How often are you called names and teased in school because of your ethnic background?")<sup>1</sup> and four assess feeling unaccepted in society because of one's ethnicity (e.g., "How often are you ignored or excluded because of your ethnic background?"). Each item is rated on a seven-point scale from 'almost never' (1) to 'very often' (7). The coefficient alpha for this sample was .82.

#### *Procedure*

The scales were administered in the second part of a two-stage interview. The first part considered participants' life experience across domains such as education (or employment), family, leisure and identity; data from this part are not reported here. The first part of the interview took approximately 30 minutes and the second part took approximately 20 minutes. Interviews and questionnaire completion took place on school premises and in a variety of venues, including university premises, local schools and community centers. Participants, who were not interviewed on school premises, were paid £5 for their participation and any travelling expenses incurred to attend the interview.

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<sup>1</sup> This question was asked in the past tense for those participants who were no longer attending school.

## Results

Descriptive statistics and bivariate zero-order correlations for the measured variables are shown by gender in Table 1. A series of 3 x 2 (ethnicity x gender) ANOVAs were carried out to determine differences by ethnic group and gender on all of the psychological variables. The only significant difference to emerge was in relation to perceived discrimination (PD). There was a significant effect of gender for PD ( $F(1, 153) = 4.87, p < .05, \eta_p^2 = .03$ ), indicating that male participants ( $M = 19.78, SD = 7.50$ ) perceived higher levels of discrimination than female participants ( $M = 17.29, SD = 7.53$ ). There were no significant differences across ethnic groups.

*Table 1 Intercorrelations and Descriptive Statistics for Measured Variables for Male and Female Participants*

| Variable                    | 1       | 2       | 3      | 4     | 5 | <i>M</i> | <i>SD</i> |
|-----------------------------|---------|---------|--------|-------|---|----------|-----------|
| Males                       |         |         |        |       |   |          |           |
| 1. Anxiety                  |         |         |        |       |   | 7.49     | 3.61      |
| 2. Depression               | .49***  |         |        |       |   | 4.46     | 2.72      |
| 3. Personal self-esteem     | -.50*** | -.53*** |        |       |   | 37.93    | 7.12      |
| 4. Ethnic self-esteem       | -.46*** | -.43*** | .67*** |       |   | 60.70    | 8.96      |
| 5. Perceived discrimination | .25*    | .28*    | -.33** | -.30* |   | 19.78    | 7.50      |
| Females                     |         |         |        |       |   |          |           |
| 1. Anxiety                  |         |         |        |       |   | 8.46     | 3.02      |
| 2. Depression               | .28**   |         |        |       |   | 4.18     | 2.44      |
| 3. Personal self-esteem     | -.20    | -.24*   |        |       |   | 38.46    | 4.98      |
| 4. Ethnic self-esteem       | .04     | .00     | .18    |       |   | 60.89    | 9.94      |
| 5. Perceived discrimination | .29**   | .14     | -.06   | -.01  |   | 17.29    | 7.53      |

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

The patterns of relationships for males and females were similar with some notable exceptions. The relationships between ethnic self-esteem and the measures of psychological distress were significantly stronger for male participants than for females participants (anxiety:  $z = 3.21, p < .001$ ; depression:  $z = 2.79, p < .01$ ). Similarly, the relationship between

ethnic self-esteem and personal self-esteem was stronger for males ( $r = .67$ ) than for females ( $r = .18$ ),  $z = 3.79$ ,  $p < .001$ .

*Testing personal self-esteem as moderator*

Hierarchical regression analyses were performed to test the hypotheses that personal self-esteem moderates the relationship between perceived discrimination and psychological distress. Dummy codes for gender (0 = male; 1 = female) were also entered into the analyses to test for gender differences in the hypothesized relations among self-esteem, perceived discrimination and psychological distress. With the exception of gender, all variables were centered and then entered into the regression equation in the order recommended by Rose, Holmbeck, Coakley & Franks (in press). In Step 1, perceived discrimination, personal self-esteem and gender were entered to test for main effects. In Step 2, all of the two-way interaction terms were entered, i.e. those reflecting the product of personal self-esteem and perceived discrimination and the product of gender and the other two variables. Finally, in Step 3, the three-way interaction (perceived discrimination x personal self-esteem x gender) was entered.

The results of these analyses, as shown in Table 2, suggested main effects of personal self-esteem for both distress variables: anxiety and depression. Young people with higher personal self-esteem reported lower levels of anxiety and depression. There was a main effect of gender for anxiety only; female participants reported higher levels of anxiety than male participants. There were no main effects of perceived discrimination. There was no evidence to suggest interaction effects between perceived discrimination and personal self-esteem for either anxiety or depression. There were no interaction effects (two-way or three-way) involving gender.

*Table 2 Hierarchical multiple regression analyses testing moderating effects of personal self-esteem and gender in the relationship of perceived discrimination to psychological distress*

| Step                                  | Predictor         | Final $\beta$ | Cumulative R <sup>2</sup> | Adjusted R <sup>2</sup> | Incremental R <sup>2</sup> | Incremental F |
|---------------------------------------|-------------------|---------------|---------------------------|-------------------------|----------------------------|---------------|
| <u>Dependent Variable: Anxiety</u>    |                   |               |                           |                         |                            |               |
| 1                                     | PD                | .11           |                           |                         |                            |               |
|                                       | PSE               | -.45***       |                           |                         |                            |               |
|                                       | Gender            | .19*          | .21                       | .20                     | .21                        | 13.37***      |
| 2                                     | PD x PSE          | .01           |                           |                         |                            |               |
|                                       | PD x Gender       | .10           |                           |                         |                            |               |
|                                       | PSE x Gender      | .13           | .22                       | .19                     | .01                        | 0.78          |
| 3                                     | PD x PSE x Gender | .03           | .23                       | .19                     | .00                        | 0.14          |
| <u>Dependent Variable: Depression</u> |                   |               |                           |                         |                            |               |
| 1                                     | PD                | .13           |                           |                         |                            |               |
|                                       | PSE               | -.38***       |                           |                         |                            |               |
|                                       | Gender            | -.02          | .19                       | .17                     | .19                        | 11.34***      |
| 2                                     | PD x PSE          | .02           |                           |                         |                            |               |
|                                       | PD x Gender       | -.01          |                           |                         |                            |               |
|                                       | PSE x Gender      | .11           | .19                       | .16                     | .01                        | 0.40          |
| 3                                     | PD x PSE x Gender | .07           | .20                       | .16                     | .00                        | 0.51          |

Note: PD = perceived discrimination, PSE = personal self-esteem.

\* p<.05. \*\* p<.01. \*\*\* p<.001.

#### *Testing ethnic self-esteem as moderator*

Hierarchical regression analyses were also performed to test the ethnic self-esteem as moderator hypothesis. The procedures were identical to those outlined above, except that ethnic self-esteem was entered instead of personal self-esteem. A main effect of ethnic self-esteem was indicated for both anxiety and depression (see Table 3). Similar to the personal self-esteem analysis, young people with higher ethnic self-esteem reported lower levels of anxiety and depression.

*Table 3 Hierarchical multiple regression analyses for moderating effects of ethnic self-esteem and gender*

| Step                                  | Predictor         | Final $\beta$ | Cumulative R <sup>2</sup> | Adjusted R <sup>2</sup> | Incremental R <sup>2</sup> | Incremental F |
|---------------------------------------|-------------------|---------------|---------------------------|-------------------------|----------------------------|---------------|
| <u>Dependent Variable: Anxiety</u>    |                   |               |                           |                         |                            |               |
| 1                                     | PD                | .18           |                           |                         |                            |               |
|                                       | ESE               | -.49***       |                           |                         |                            |               |
|                                       | Gender            | .20*          | .11                       | .09                     | .11                        | 5.93**        |
| 2                                     | PD x ESE          | .03           |                           |                         |                            |               |
|                                       | PD x Gender       | .15           |                           |                         |                            |               |
|                                       | ESE x Gender      | .50***        | .19                       | .16                     | .09                        | 5.23**        |
| 3                                     | PD x ESE x Gender | .03           | .19                       | .16                     | .00                        | 0.08          |
| <u>Dependent Variable: Depression</u> |                   |               |                           |                         |                            |               |
| 1                                     | PD                | .18           |                           |                         |                            |               |
|                                       | ESE               | -.43**        |                           |                         |                            |               |
|                                       | Gender            | -.03          | .06                       | .04                     | .06                        | 3.28*         |
| 2                                     | PD x ESE          | .01           |                           |                         |                            |               |
|                                       | PD x Gender       | -.03          |                           |                         |                            |               |
|                                       | ESE x Gender      | .37**         | .12                       | .08                     | .06                        | 3.16*         |
| 3                                     | PD x ESE x Gender | -.03          | .12                       | .08                     | .00                        | 0.07          |

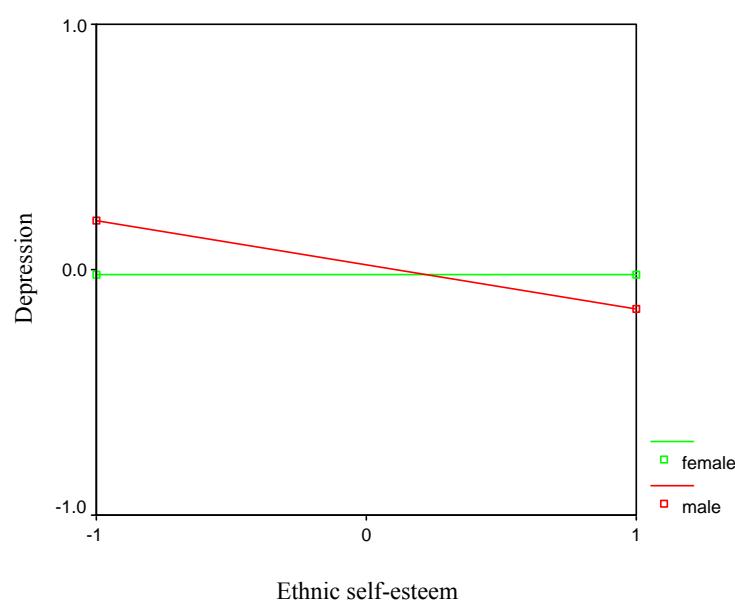
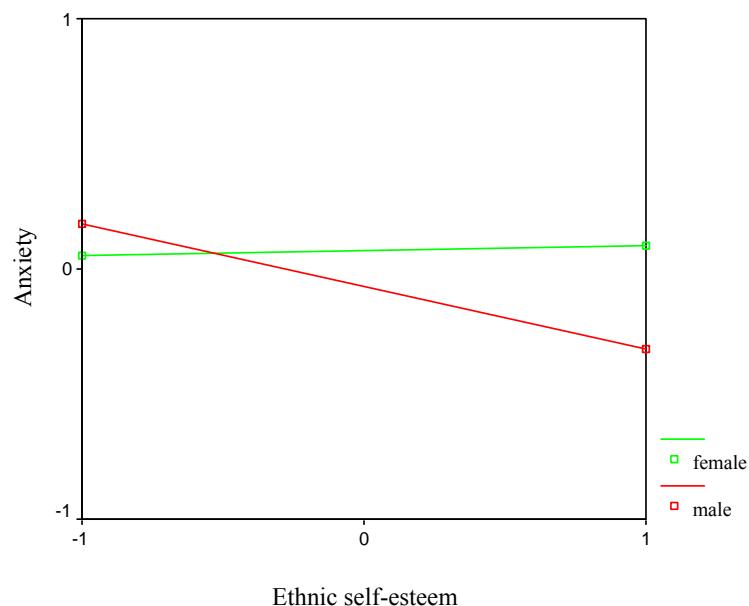
Note: PD = perceived discrimination, ESE = ethnic self-esteem.

\* p<.05. \*\* p<.01. \*\*\* p<.001.

As in the previous analyses, there was a main effect of gender for anxiety. Similarly, there were no main effects of perceived discrimination or interaction effects between perceived discrimination and ethnic self-esteem for either anxiety or depression. Analyses did reveal, however, significant interaction effects between ethnic self-esteem and gender for both anxiety and depression. Figure 1 depicts the nature of the moderating effect of gender in the relationship between ethnic self-esteem and both anxiety and depression. Among male participants, anxiety and depression decreased with ethnic self-esteem. Among female participants, however, the effect of ethnic self-esteem on both anxiety and depression decreased. Post hoc probing showed that the slope of the lines representing males for both depression ( $\beta = -.22$ ,  $t(151)=3.93$ ,  $p<.001$ ) and anxiety ( $\beta = -.32$ ,  $t(151)=4.57$ ,  $p<.001$ )

differed significantly from zero. The slope of both lines representing females did not differ significantly from zero (depression:  $\beta = -.02$ ,  $t(151)=0$ , NS; anxiety:  $\beta = .02$ ,  $t(151)=.13$ , NS). There were no other interaction effects (two-way or three-way) involving gender.

*Figure 1. Gender as a moderator of the relationship between ethnic self-esteem and (a) depression and (b) anxiety. Lines plotted for males and females represent their respective sample scores 1 SD below the mean and 1 SD above the mean.*



### *Testing personal self-esteem as mediator*

Moderated mediation analysis was conducted to test possible mediation by personal self-esteem while simultaneously examining the moderating effect of gender. When, as in this case, the moderator is categorical, moderated mediation is most simply examined by separate mediation analyses at each level of the moderator (Wegener & Fabrigar, 2000). Our mediation analyses followed the procedures described by Baron and Kenny (1986). Among males, all three preconditions identified by Baron and Kenny (1986) were met (see Table 4). Firstly, perceived discrimination significantly predicted depression ( $pr = .28, t(68) = 2.39, p < .05$ ) and anxiety ( $pr = .25, t(68) = 2.14, p < .05$ ). Secondly, perceived discrimination significantly predicted personal self-esteem ( $pr = -.33, t(68) = -2.82, p < .01$ ). Finally, perceived discrimination no longer served as a significant predictor of depression ( $pr = .14, t(68) = 1.11, ns$ ) or anxiety ( $pr = .14, t(68) = 1.11, ns$ ) when personal self-esteem was controlled. Sobel tests indicated that personal self-esteem significantly mediated the relationship between perceived discrimination and both depression ( $z = 2.37, p < .05$ ) and anxiety ( $z = 2.33, p < .05$ ) (MacKinnon & Dwyer, 1993).

*Table 4. Mediation analyses for personal self-esteem: Predicting depression & anxiety among males*

Note: PD = perceived discrimination, PSE = personal self-esteem, Dep = depression, Anx = anxiety;

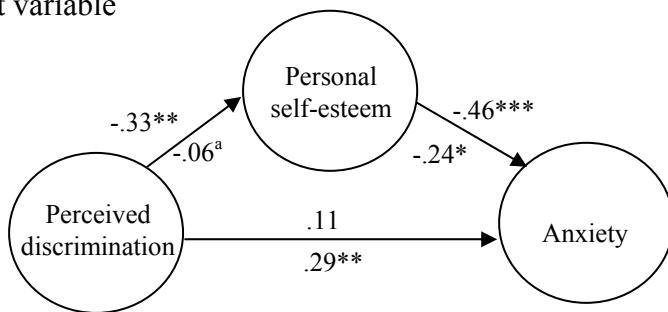
\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

| Order<br>of entry                          | Predictor | <i>F</i> for stepDep |          | <i>t</i> for step<br>Dep |         | <i>df</i> | Partial<br>correlation |      |
|--|-----------|----------------------|----------|--------------------------|---------|-----------|------------------------|------|
|  |           | Anx                  |          |                          | Anx     |           | Dep                    | Anx  |
| <i>Step 1: Dependent variable: Dep/Anx</i> |           |                      |          |                          |         |           |                        |      |
| 1.   | PD        | 5.69*                | 4.56*    | 2.14*                    | 2.14*   | 1, 67     | .28                    | .25  |
| <i>Step 2: Dependent variable: PSE</i>     |           |                      |          |                          |         |           |                        |      |
| 1.   | PD        |                      | 7.93**   |                          | -2.82** | 1, 67     |                        | -.33 |
| <i>Step 3: Dependent variable: Dep/Anx</i> |           |                      |          |                          |         |           |                        |      |
| 1.   | PSE       | 13.54***             | 11.65*** | -4.45***                 | -4.20   | 2, 66     | -.48                   | -.46 |
| 2.   | PD        |                      |          | 1.11                     | 0.89    | 2, 66     | .14                    | .11  |

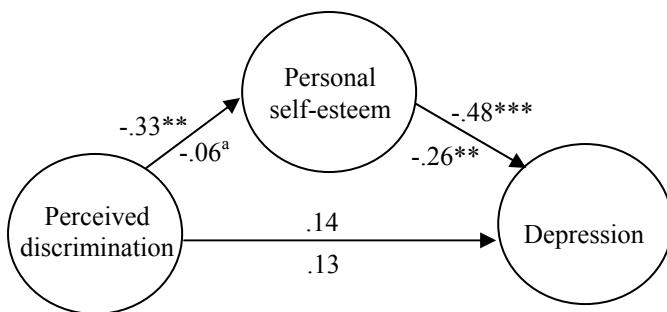
Among females, however, the results were not consistent with the self-esteem as mediator hypothesis for either anxiety or depression. There was a significant effect of perceived discrimination on anxiety ( $pr = .25, t(68) = 2.14, p < .05$ ) but the second condition for mediation was not met, i.e. perceived discrimination did not significantly predict personal self-esteem ( $pr = -.06, t(83) = -.52, ns$ ). For depression, the first condition for mediation was not met ( $pr = .14, t(83) = 1.25, ns$ ). These findings suggested a direct effect of perceived discrimination on anxiety among females but no effect, either direct or indirect, of perceived discrimination on depression.

*Figure 2. Mediating effects of personal self-esteem for (a) anxiety and (b) depression. (Males' path coefficients are above the arrow; females' path coefficients are below the arrow. All path coefficients are standardized. <sup>a</sup> analysis indicated a significant difference between males and females for this path. \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .)*

(a) Anxiety as dependent variable



(b) Depression as dependent variable



Following Wegener & Fabrigar (2000), we conducted comparisons across males and females between regression coefficients for all three critical paths (i.e. IV to mediator, mediator to DV partialing the IV, and IV to DV partialing the mediator). As shown in Figure 2, this analysis revealed one significant difference: the path from perceived discrimination to personal self-esteem was significantly stronger among males than among females ( $z = -1.99$ ,  $p < .05$ ).

#### *Testing ethnic self-esteem as mediator*

As with the previous analyses, separate mediation analyses were conducted for males and female participants. Among male participants, the results supported the ethnic self-esteem as mediator hypothesis for both anxiety and depression. The previous analysis showed that the first condition for mediation was met, i.e. that perceived discrimination significantly predicted depression and anxiety. As shown in Table 5, perceived discrimination was significantly correlated with ethnic self-esteem ( $pr = -.30$ ,  $t(68)$ ,  $p < .05$ ). In the final regressions, perceived discrimination no longer served as a significant predictor of depression ( $pr = .18$ ,  $t(68) = 1.45$ ,  $ns$ ) or anxiety ( $pr = .14$ ,  $t(68) = 1.11$ ,  $ns$ ) when ethnic self-esteem was controlled. Sobel tests confirmed that ethnic self-esteem significantly mediated the relationship between perceived discrimination and both depression ( $z = 2.03$ ,  $p < .05$ ) and anxiety ( $z = 2.11$ ,  $p < .05$ ).

*Table 5. Mediation analyses for ethnic self-esteem: Predicting depression and anxiety among males*

| Order<br>of entry                          | Predictor | <i>F</i> for step |          | <i>t</i> for step |          | <i>df</i> | Partial<br>correlation |      |
|--|-----------|-------------------|----------|-------------------|----------|-----------|------------------------|------|
|  |           | Dep               | Anx      | Dep               | Anx      |           | Dep                    | Anx  |
| <i>Step 1: Dependent variable: Dep/Anx</i> |           |                   |          |                   |          |           |                        |      |
| 1.   | PD        | 5.69*             | 4.56*    | 2.14*             | 2.14*    | 1, 67     | .28                    | .25  |
| <i>Step 2: Dependent variable: ESE</i>     |           |                   |          |                   |          |           |                        |      |
| 1.   | PD        |                   | 6.53**   |                   | -2.56**  | 1, 67     |                        | -.30 |
| <i>Step 3: Dependent variable: Dep/Anx</i> |           |                   |          |                   |          |           |                        |      |
| 1.   | ESE       | 8.78***           | 11.65*** | -3.32**           | -3.73*** | 2, 66     | -.38                   | -.42 |
| 2.   | PD        |                   |          | 1.45              | 1.11     | 2, 66     | .18                    | .14  |

, ESE = ethnic self-esteem, Dep = depression, Anx = anxiety;

\*  $p<.05$ . \*\*  $p<.01$ . \*\*\*  $p<.001$ .

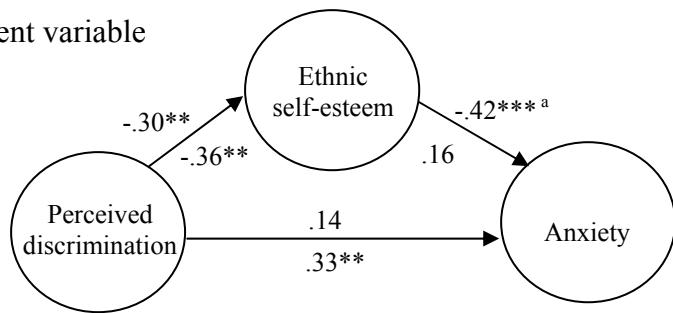
*Note:* PD = perceived discrimination

Our previous mediational analysis for females indicated no effect of perceived discrimination on depression. Because a significant effect of perceived discrimination on anxiety was indicated, the next step was taken to determine if perceived discrimination was correlated with ethnic self-esteem. Analysis did suggest a significant effect of perceived discrimination on ethnic self-esteem ( $pr = -.36$ ,  $t(82) = 3.50$ ,  $p<.01$ ). In the final regression, however, the effect of ethnic self-esteem on anxiety was non-significant and the effect of perceived discrimination remained significant ( $pr = -.33$ ,  $t(82) = 3.13$ ,  $p<.01$ ). These data suggested a direct and independent effect of perceived discrimination on anxiety among females.

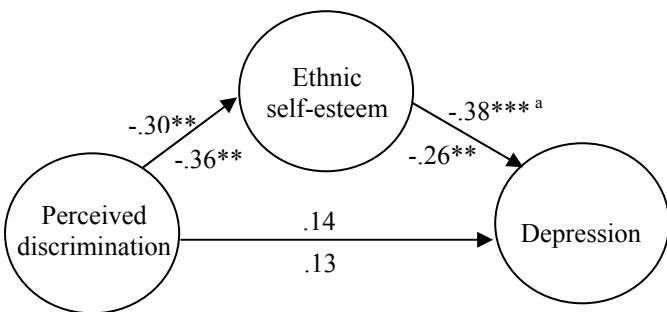
Comparisons across males and females between regression coefficients for the three paths, presented in Figure 3, revealed that the path from ethnic self-esteem to anxiety was significantly stronger among males than among females ( $z = -3.85$ ,  $p<.001$ ). The path from ethnic self-esteem to depression was also significantly stronger among males than among females ( $z = -2.85$ ,  $p<.01$ ).

*Figure 3. Mediating effects of ethnic self-esteem for (a) anxiety and (b) depression. (Males' path coefficients are above the arrow; females' path coefficients are below the arrow. All path coefficients are standardized. <sup>a</sup> analysis indicated a significant difference between males and females for this path. \* p<.05. \*\* p<.01. \*\*\* p<.001.)*

(a) Anxiety as dependent variable



(b) Depression as dependent variable



## Discussion

The present study examined whether self-esteem moderated or mediated the relationship between perceived ethnic discrimination and psychological distress. The findings failed to support the hypotheses derived from the self-esteem theory of depression (Brown & Harris, 1978) that personal and ethnic self-esteem moderate the discrimination-distress relationship but provided partial support for the transactional model of stress and coping (Lazarus & Folkman, 1984), which suggests a mediating role. The mediational relationships were moderated by gender, however, such that personal and ethnic self-esteem mediated the discrimination-distress relationship among males but not among females. Males

experiencing high levels of perceived discrimination had lower personal and ethnic self-esteem which in turn predicted increased depression and anxiety. For females, however, there was a direct effect (i.e., an effect not mediated by personal or ethnic self-esteem) of discrimination on anxiety but no effect - direct or indirect - on depression.

Female participants reported lower levels of perceived discrimination than did male participants. At the item level, this difference was largely accounted for by "being called names" and "being teased outside school" because of ethnic background. This finding may reflect gender differences in the use of space given that young men are likely to access more diverse spaces during their leisure time (Watt, 1998). Some studies have also suggested lower levels of perceived ethnic discrimination among women (e.g., Fischer and Shaw, 1999; Verkuyten & Thijs, 2001), while others have suggested no differences between men and women (e.g., Landrine & Klonoff, 1996; Phinney et al., 1998). This inconsistency across studies may reflect differences in how ethnic discrimination is operationalized. Fischer and Shaw (1999) explain their gender difference in terms of attributional ambiguity. It is possible for women to attribute negative experiences to gender discrimination as well as to ethnic discrimination. Compared with ethnic minority women, ethnic minority men are less likely to experience gender discrimination and, therefore, may be more likely to attribute negative experiences to ethnic discrimination.

Other studies have also provided inconsistent evidence for the moderating role of self-esteem predicted by the self-esteem theory of depression (Brown & Harris, 1978). Fischer and Shaw (1999) found that personal self-esteem had a moderating role but, contrary to self-esteem theory, the pattern of moderation suggested that African Americans with relatively high levels of self-esteem had poorer global mental health when they reported perceptions of racist discrimination. Corning (2002), in her study of gender discrimination, found that personal self-esteem moderated the discrimination-distress relationship in the predicted

direction but only for one of the distress variables (for depression but not for anxiety or somatization). Corning did find, however, more consistent evidence for the moderating role of collective self-esteem. Our findings are consistent with other studies within the stress literature which have shown that self-esteem plays a mediating rather than moderating role in the stress-distress relationship (Jalajas, 1994; Malcarne et al., 1999; Morris & Long, 2002).

It is noteworthy, however, that our evidence for the mediating role of personal and ethnic self-esteem was obtained for males but not for females. We argue that these findings are particularly important because no other study, to our knowledge, has examined gender differences in how personal or ethnic self-esteem impacts on the discrimination-distress relationship. One possible explanation for our findings might be in terms of gender differences in identity and the notion of identity-relevant stressors. Thoits (1991) argued that it is stressors which threaten a salient and central part of an individual's identity that are particularly pernicious. Our findings might suggest that, compared to males, the degree to which females evaluate and relate to their ethnic group relates less to how they evaluate themselves as individuals. Interestingly, other studies (e.g., Crocker & Wolfe, 2001; Yip & Fuligni, 2002) have suggested that ethnic identity is more consequential for males' well-being. Aspects of life other than ethnic identity, for example, interpersonal relationships, may be more influential for females' well-being.

The finding that perceived discrimination directly affects anxiety among females does raise, however, the possibility that there are other mechanisms by which discrimination impacts on distress among females. Other research has shown that gender interacts with coping and social support to predict psychological distress (Attaca & Berry, 2002; Blalock & Joiner, 2000). In addition, some studies have suggested that women define themselves more in terms of intimacy and empathy than men, which is reflected in differences in levels of social connectedness (Clancy & Dollinger, 1993; Lang-Takac & Osteweil, 1992).

Furthermore, in their study of female undergraduate students, Lee and Robbins (1998) reported that women with high levels of connectedness are less prone to anxiety in daily life. The measure of ethnic self-esteem used in the current study taps closeness or attachment to one's ethnic group (termed 'group attachment' by Prentice, Miller and Lightdale, 1994) rather than attachment *to members* of one's ethnic group (termed 'member attachment' by Prentice et al.). We suggest that future research should investigate gender differences in the role of the latter dimension of attachment, 'member attachment', in the discrimination-distress relationship.

The findings, along with those reported by Corning (2002), point to the importance of distinguishing between different types of psychological distress when examining the discrimination-distress relationship. Our analysis suggests different relationships with perceived discrimination for anxiety and depression. Theoretical and empirical work suggest that anxiety and depression are characterized by distinctive cognitive features (Beck, 1976; Clark & Watson, 1991). Depression, for example, is associated with thoughts organized around themes of loss and personal deficiency whereas anxiety is associated with thoughts focused on danger and future threat (Beck, 1976; Beck & Emery, 1985; Joiner, Katz & Lew, 1999). Thus, the relationship between perceived discrimination and psychological distress will depend on which type of distress is under investigation.

Finally, the findings point to the usefulness of the transactional stress and coping model for guiding the study of the antecedents and consequences of prejudice and discrimination. The model provides a comprehensive and empirically testable conceptual framework within which researchers can examine the psychological, behavioral and sociodemographic factors that influence the relationship between discrimination and mental health outcomes. The distinction between mediator and moderator variables, also central to Clark et al.'s (1999) stress and coping model, will ensure greater precision - conceptually and

methodologically - in elucidating the nature of the role these variables play in determining how the individual is affected by experiences of discrimination.

A number of limitations of this research should be kept in mind when interpreting the findings. First, the measure of perceived ethnic discrimination used in the current study is a modified scale and may not capture the multidimensional nature of this construct. Landrine and Klonoff's (1996) Schedule of Racist Events, for example, taps experience of a wider range of racist events. It is suggested that research in this area is hampered by the dearth of instrumentation to measure ethnic discrimination, particularly among young people (Taylor & Turner, 2002) and among ethnic groups other than African Americans. There are also numerous biases, which can potentially affect estimates of perceived discrimination (Krieger, 2000). Second, we need to note that, although a well-validated instrument was used, the reliability estimate for one of our outcome measures, depression ( $\alpha = .61$ ), can be classified as less acceptable by conventional standards (Nunnally, 1978). Third, while there is growing evidence that self-esteem is relatively stable during adolescence (e.g., Trzesniewski, Donnellan & Robins, 2003), few of the studies examining stability have focused on ethnic minority populations. Furthermore, although the Rosenberg Self-Esteem Scale used in this study is well-validated, it has been criticized because it treats self-esteem as a unitary construct and does not, for example, distinguish between negative and positive dimensions of self-esteem (Verkuyten, 2003). Fourth, because the present study used a correlational design, inferences concerning influences among the constructs investigated are inherently tentative. For example, the present conceptual framework treated anxiety and depression as dependent variables but they may also affect perceived discrimination. Researchers have investigated and emphasized both directions of the relationship because it is highly unlikely that the relationship is unidirectional (Verkuyten, 1998). Longitudinal analysis is required to investigate further the possibility of bidirectional or interactive relationships linking

perceptions of discrimination and psychological distress. Finally, although analysis of variance indicated no differences between ethnic groups, it was not possible to examine group differences in the interrelationships between self-esteem, psychological distress and discrimination due to the relatively small number of participants in two of the groups.

In conclusion, the current study enhances our understanding of the complex relationship between perceived discrimination and psychological distress. It draws attention to important gender differences in the role of personal and ethnic self-esteem in mediating the discrimination-distress relationship. We suggest that provision of counseling services should be based on the knowledge that men and women may experience and respond to ethnic discrimination in different ways. Counseling psychologists would benefit from increased knowledge of the mechanisms by which psychological distress can be minimized in the face of discrimination. This study identifies ethnic self-esteem as a possible target for intervention, particularly for male victims of ethnic discrimination. Ethnic self-esteem may be enhanced through social support from fellow ethnic group members or by shifting the degree of importance placed on public evaluation to other bases of evaluation, such as private or membership self-esteem.

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