

# Gender Differences in Mental Health: The Mediating Role of Perceived Personal Discrimination

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Why is women's mental health inferior to that of men? This study hypothesized that women's mental health is not as good as men's because women perceive more personal discrimination. It was confirmed that women obtained higher scores than did men on a subjective scale of psychological distress. Additionally, women perceived greater personal and group discrimination than did men. Perceived personal discrimination proved to be the more robust predictor of psychological distress. This was evident when results of a mediation analysis revealed that gender differences in subjective distress were mediated by the measure of perceived personal discrimination, but not by the measure of group discrimination.

Is the mental health of women inferior to that of men? Several studies have provided strong evidence for a gender gap in mental health (e.g., Emslie et al., 2002; Goldberg & Williams, 1988; Macintyre, Ford, & Hunt, 1999). Various explanations have been proposed to explain this gender difference (e.g., Astbury, 1999; Bruchon-Schweitzer, 2002; Jenkins, 1991), including biological, behavioral, and social factors. In the present study, we examine the role of perceived discrimination, a social psychological factor that we hypothesize is at least partly responsible for the observed gender gap in psychological distress.

It is well documented that women and men hold different social positions in the social hierarchy, with men having easier access to positions of higher status (Astbury, 1999; Sidanius & Pratto, 1999). Furthermore, it is not difficult to observe that even when their status is equal, men and women are compensated differentially. For example, in France, the National Institute of Economic Statistics (INSEE, 2000) reported that, given equal status, the level of women's compensation is significantly inferior to that of men. Women are also much more significantly affected by unemployment (INSEE, 2000).

Thus, there is objective evidence that even when women have the same credentials as do men, women do less well. It is interesting to note that in the *World Health Report* (World Health Organization, 1988), it was stated

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Women's health is inextricably linked to their status in society. It benefits from equality, and suffers from discrimination. Today, the status and well-being of countless women worldwide remains tragically low. As a result, human well-being suffers, and the prospects for future generations are dimmer. (p. 6)

Using a social psychological approach, several recent studies have documented how sexism is pervasive in many current societies, even though sometimes it is expressed in relatively subtle ways (Glick & Fiske, 1996; Swim, Aikin, Hall, & Hunter, 1995). Thus, there is converging evidence suggesting that women really are exposed more to objective discrimination and prejudice than are men. Thus, it is probable that the level of perceived discrimination of women (a social psychological mechanism) is significantly greater than that of men. This has been confirmed in a recent study by Schmitt, Branscombe, Kobrynowicz, and Owen (2002) in the United States in which women reported significantly higher levels of perceived discrimination and perceived injustice than did men. To the extent that perceived discrimination and perceived injustice can result in psychological distress, it becomes important to consider the potential role of perceived discrimination as a mediating variable in helping to explain the gender gap in mental health.

Several studies have demonstrated, among a wide variety of social groups (e.g., ethnic minorities, women, homosexuals), that perceived discrimination is a powerful and robust predictor of psychological distress. This has been demonstrated using correlational, longitudinal, and experimental designs. Various measures of perceived discrimination have been found to be related to a variety of mental health disorders, such as low levels of life satisfaction and happiness (Broman, 1997; Williams & Chung, 2001), low levels of well-being (Johnson, 1989; Schmitt et al., 2002), high levels of psychological distress and depressive symptoms (Brown et al., 2000; Dion, Dion, & Pak, 1992; Landrine, Klonoff, Gibbs, Manning, & Lund, 1995; Noh, Beiser, Kaspar, Hou, & Rummens, 1999; Williams, Yu, Jackson, & Anderson, 1997), and high levels of obsessive-compulsive symptoms (Klonoff, Landrine, & Campbell, 2000). Most studies found a significant relationship explaining between 5% and 15% of the observed variance in mental health.

In sum, there is convincing evidence that women are exposed to discrimination more frequently than are men and, consequently, perceive a greater amount of discrimination. Additionally it is plausible that this perceived discrimination produces more psychological distress (e.g., stress, anxiety, depression). Using this framework, the main objective of the present study is to test the hypothesis that women report greater psychological distress than

men because they perceive that they are victims of discrimination more frequently than are men. The model that we propose to test is as follows: Perceived discrimination will mediate, at least in part, the effect of gender on mental health. We use the definition of mediator variable that has been proposed by Baron and Kenny (1986), whereby a *mediator* is the generative mechanism by which the independent variable (i.e., gender) affects the dependent variable (i.e., psychological distress).

In order to test this hypothesis, two different measures of perceived discrimination are included in the protocol: a measure of perceived personal discrimination, and a measure of perceived group discrimination. Is it the perception of oneself as a victim of discrimination (i.e., personal discrimination) that results in disorders of mental health, or is it the perception of one's group as a victim of discrimination (i.e., group discrimination) that produces these consequences? Or do both of these variables play a role?

It is possible that personal discrimination and group discrimination represent two different and important ways in which discrimination affects psychological distress. To our knowledge, this relationship has not yet been examined explicitly. Most studies have assessed only the personal dimension of discrimination, while others have used measures in which personal and group discrimination were not clearly separated (see Brown et al., 2000; Schmitt et al., 2002). The second objective of this study is more explorative and consists of determining the relative impact of personal, as opposed to group, perceived discrimination on psychological distress.

## Method

### *Participants*

Participants were 141 psychology students (78 female, 63 male) at Blaise Pascal University (France) who were recruited for the study. Participants' mean age was 19.72 years ( $SD = 2.30$ ). The male and female groups did not differ in age or educational level.

### *Material*

Participants were asked to answer a questionnaire during one of their classes, which was held in a large lecture hall. The questionnaire consists mainly of two measures: a measure of perceived discrimination, and a scale of psychological distress.

*Measures of perceived discrimination.* Two components of perceived discrimination were assessed: personal discrimination (PD), and group discrimination (GD). All participants were asked to answer six questions on a 7-point scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). The questions were as follows:

1. As a woman, to what extent do you feel personal discrimination? (PD1)
2. As a woman, how frequently are you personally the object of sexist remarks? (PD2)
3. As a woman, to what extent do you feel unfairly treated when comparing yourself with men? (PD3)
4. To what degree do you feel that women as a group are victims of discrimination? (GD1)
5. To what degree do you find that women as a group are objects of sexist remarks? (GD2)
6. To what degree do you feel women as a group are treated unfairly, as compared to men? (GD3)

The scale assessing the personal component of perceived discrimination ( $\alpha = .79$ ; Items 1, 2, and 3) and the scale assessing the group component of perceived discrimination ( $\alpha = .89$ ; Items 4, 5, and 6) both provided adequate internal consistency. As would be predicted by the phenomenon of personal discrimination–group discrimination discrepancy (Taylor, Wright, Moghaddam, & Lalonde, 1990), participants reported greater group discrimination ( $M = 3.30$ ) than personal discrimination ( $M = 2.55$ ),  $t(140) = 7.33$ ,  $p < .001$ .

*Measure of psychological distress.* Participants were asked to rate on a 7-point scale the extent to which they often feel stressed, discouraged, depressed, nervous, anxious, unable to relax, and tense. They also were asked how often they have digestive troubles, difficulty sleeping, difficulty making decisions, pessimistic ideation, and feelings that they are depressed. The aforementioned scale was developed in France and displays both convergent validity (Dambrun & Tiboulet, 2005) and adequate reliability. In the present study, the internal consistency of this 12-item scale was found to be very satisfactory ( $\alpha = .85$ ).

## Results

### *Mental Health*

Analysis of scores on the psychological distress scale reveals a significant gender difference,  $F(1, 140) = 4.18$ ,  $p < .043$ ,  $\eta^2 = .029$ . Women scored

significantly higher on the subjective scale of mental health than did men (women,  $M = 3.62$ ,  $SD = 1.11$ ; men,  $M = 3.23$ ,  $SD = 1.13$ ).

### *Perceived Discrimination*

*Personal discrimination.* When an ANOVA was conducted to compare the scores of perceived personal discrimination for males versus females, a significant effect was found,  $F(1, 140) = 20.49$ ,  $p < .0001$ ,  $\eta^2 = .128$ . Women perceived significantly more personal discrimination than did men (women,  $M = 2.95$ ,  $SD = 1.18$ ; men,  $M = 2.05$ ,  $SD = 1.13$ ).

*Group discrimination.* Analysis comparing scores for perceived group discrimination between males and females also reveals a gender effect,  $F(1, 140) = 69.01$ ,  $p < .0001$ ,  $\eta^2 = .332$ . Again, women scored higher with respect to perceived group discrimination than did men (women,  $M = 4.14$ ,  $SD = 1.20$ ; men,  $M = 2.28$ ,  $SD = 1.44$ ).

### *Relationships Between Perceived Discrimination and Mental Health*

As can be seen in Table 1, perceived personal and group discrimination were correlated significantly and positively. The more the participants perceived personal discrimination, the more they also perceived group discrimination. As predicted, both personal and group discrimination were related positively and significantly to mental health. The more the participants perceived discrimination at both personal and group levels, the more they reported poor mental health on the subjective scale of psychological distress. However, the effect of personal discrimination accounted for a greater proportion of the variance ( $r^2 = .054$ ) than did the effect of group discrimination ( $r^2 = .029$ ).

Table 1

#### *Correlations Between Perceived Discrimination and Mental Health*

Variable	1	2
1. Personal discrimination	—	
2. Group discrimination	.654***	—
3. Subjective psychological distress	.232**	.171*

Note.  $N = 140$ .

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

*Perceived Personal and Group Discrimination and Gender Differences in Mental Health*

We first tested the mediating role of personal discrimination. Then, we repeated our statistical analyses in order to assess the mediating function of group discrimination.

In order to test the mediating role of personal discrimination in the relationship between gender and subjective psychological distress, the regression procedure advocated by Baron and Kenny (1986) was followed. The first requirement for this procedure is that the independent variable (i.e., gender) be related to the dependent variable (i.e., psychological distress). As shown in Figure 1, gender is related significantly and positively to the subjective scale of psychological distress ( $\beta = -.171, p < .043$ ). Second, the mediating variable (i.e., personal discrimination) should be related to the independent variable and the dependent variable. As Figure 1 illustrates, these two requirements were satisfied. Personal discrimination and gender correlated positively and significantly ( $\beta = -.358, p < .001$ ). Moreover, subjective psychological distress ( $\beta = .232, p < .01$ ) was related significantly and positively to personal discrimination. The final (and most important) requirement, as specified by Baron and Kenny, is that the mediating variable should predict the dependent variable, even when the independent variable is statistically controlled, while the effect of the independent variable on the dependent measure should be reduced significantly when the mediating variable is controlled statistically. As expected, the effect of gender on psychological distress became nonsignificant when the measure of personal discrimination was controlled statistically ( $\beta = -.101, ns$ ). But the effect of personal discrimination on psychological distress remained significant even when gender was controlled statistically ( $\beta = .195, p < .05$ ).

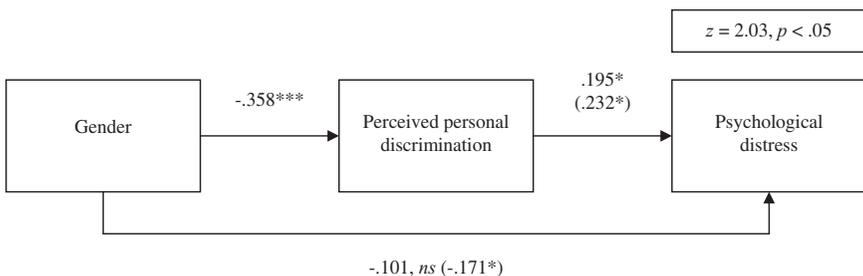


Figure 1. Perceived personal discrimination as a significant mediator of the effect of gender on psychological distress: predicted model.

Note: \* $P < .05$ . \*\* $P < .01$ . \*\*\* $P < .001$ .

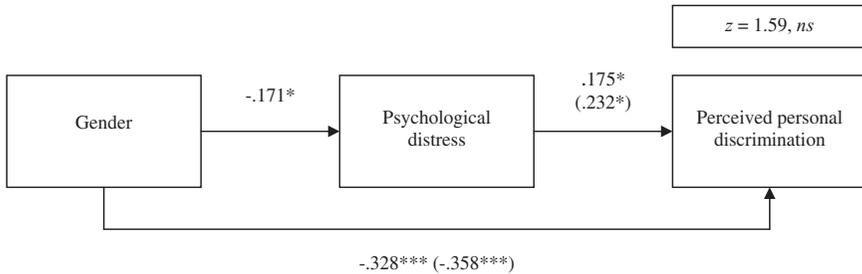


Figure 2. Perceived personal discrimination as a significant mediator of the effect of gender on psychological distress: reversed model.

Note:  $*P < .05$ .  $**P < .01$ .  $***P < .001$ .

The Sobel test, which was used to test the significance of the mediation (see Kenny, 2007) was significant, indicating a significant mediation ( $z = 2.03$ ,  $p < .05$ ). The reverse model was not confirmed, providing additional verification for our model (see Figure 2). More specifically, controlling for psychological distress, the effect of gender on personal discrimination remained strongly significant ( $\beta = -.328$ ,  $p < .001$ ), suggesting that the reversed model in which psychological distress would mediate the effect of gender on personal discrimination is not valid.

Interestingly, similar analyses testing the mediating role of group discrimination show a different pattern of results, which suggests that group discrimination did not mediate the gender gap in mental health. As expected, the effect of gender on psychological distress became nonsignificant when the measure of group discrimination was statistically controlled ( $\beta = -.109$ ,  $ns$ ). However, the effect of group discrimination on psychological distress disappeared once gender was statistically controlled ( $\beta = .108$ ,  $ns$ ). To summarize, only the measure of perceived personal discrimination significantly mediated the effect of gender on psychological distress.

## Discussion

The main objective of the present study was to examine the potential role of perceived discrimination in the mediation of gender differences in psychological distress. First, we replicated previous research and found that women were more distressed than were men (e.g., Emslie et al., 2002; Macintyre et al., 1999). Second, consistent with the results of Schmitt et al. (2002), we showed that women perceived more personal and group discrimination than did men. Both types of perceived discrimination corre-

lated significantly and positively with psychological distress. However, only perceived discrimination was found to have a significant mediating role in this relationship.

As mentioned previously, researchers have postulated several kinds of interpretations to explain the gender gap in mental health. While gender discrimination often is presumed to be a potential factor underlying this effect (Astbury, 1999; WHO, 1998), to our knowledge, the present study is the first to provide strong empirical support for this perspective. Because we demonstrated a significant mediation, we can conclude that the perceived discrimination is not only a strong underlying mechanism, but also a central one. Of course, this does not imply that other processes are not involved also, but it does illustrate that it is one of the main generative mechanisms by which gender affects mental health (Baron & Kenny, 1986).

In the present study, the effect of gender on psychological distress was relatively small, accounting for only 2.9% of the variance. Consistent with past studies, the measure of perceived personal discrimination accounted for 5.4% of the variance in psychological distress, and mediated the effect of gender. In sum, the present study strongly suggests that perceived discrimination is a key variable in explaining gender differences in mental health.

Results of the present study do not support the alternative model in which psychological distress mediates the effect of gender on perceived personal discrimination. This result is very important for two reasons. First, it indicates the causal direction between perceived discrimination and mental health, demonstrating that only the former significantly mediates the latter. Of course, because our design is correlational, it is difficult to provide strong claims about causality. Future studies using experimental designs would increase our confidence in the causal direction between perceived discrimination and psychological distress.

Second, without such evidence, an alternative explanation can account for our findings. In order to explain the gender gap in mental health, some authors have suggested that women tend to overreport morbidity (e.g., Hibbard & Pope, 1983, 1986). It could be suggested similarly that women also tend to overreport discrimination. Thus, it may be that perceived discrimination mediates the association between gender and morbidity only because of the bias in overreporting. This type of explanation would account equally well for the two models that we tested.

In the first model, overreporting of perceived discrimination would mediate the association between gender and overreporting of psychological distress; whereas in the second model, overreporting of mental health problems would mediate the connection between gender and the overreporting of perceived discrimination. If gender differences in overreporting explain the relationship between perceived discrimination and psychologi-

cal distress, we should find strong support for both models. However, in our study, only the model in which perceived discrimination was used as a mediator variable supported the data. Thus, the interpretation of overreporting was not upheld, thereby negating the overreporting interpretation.

These findings are consistent with a recent study that was conducted by Macintyre et al. (1999) in which they found that women did not overreport morbidity. In addition, other studies involving perceived discrimination have shown clearly that reporting of discrimination by women frequently is inhibited (Kaiser & Miller, 2001a, 2001b; Ruggiero & Taylor, 1995). Therefore, it would seem that overreporting of discrimination seems to be an unlikely process.

The second objective of our study was to examine the respective roles of personal versus group perceived discrimination. While both were correlated positively and significantly with psychological distress, only perceived personal discrimination mediated the gender effect. Thus, when compared with the effects of personal discrimination, the role of group discrimination on mental health seemed to be of minor importance. This is very compatible with other results obtained in another domain of social psychology: the field of relative deprivation. When people compare themselves to other people in an unfavorable way, they can perceive personal relative deprivation. When they compare their in-group with another out-group in an unfavorable way, they perceive group relative deprivation. While personal deprivation has been found to be related strongly to stress and distress symptoms (Crosby, 1976; Martin, 1981), group deprivation has been found to be more related to collective movements of protest (Guimond & Dubé-Simard, 1983) and ethnic prejudice (Guimond & Dambrun, 2002). Thus, it would be interesting in future research to examine the relationship between group discrimination and collective behaviors.

Concerning the external validity of our results, because only students served as participants, it is important to replicate the present study with a more representative sample. Nonetheless, the present study represents significant progress in understanding the factors underlying gender differences in mental health. Because we demonstrated that perceived personal discrimination is a central variable, we can conclude that gender equality and equity are essential for mental health. Thus, the present research provides scientific support for the necessity of gender equality.

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