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Dispositional Hardiness and Women's Well-Being Relating to Gender Discrimination: The Role of
Minimization

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Abstract

Three studies examined whether personality-based hardiness would be associated with mental health benefits in contexts of gender discrimination. Hardy women encountering both a laboratory simulation and a hypothetical scenario of discrimination showed greater self-esteem and less negative affect than low hardy women. However, these benefits were mediated by the use of specific attributions, suggesting that the well-being in hardy women may have been achieved through minimizing the pervasiveness of discrimination. Study three showed this mediation pattern occurred only for participants exposed to higher threat scenarios versus lower threat scenarios of discrimination. Thus, minimizing the pervasiveness of discrimination may have been a threat-reducing tool for high hardy women. Bandura's (1997) self-efficacy theory was used as a possible explanation for this finding.

Dispositional Hardiness and Women's Well-Being

Relating to Gender Discrimination: The Role of Minimization

The word “hardy” holds an important place in American culture. In the dictionary, a hardy individual is defined as “bold and courageous,” “inured to fatigue,” and “capable of withstanding adverse conditions” (Neufeldt & Guralnik, 1988). Cultural icons (e.g., the American pioneer) and popular slogans (e.g., “When the going gets tough, the tough get going”) seem to reflect these definitions. Even researchers examining the potential benefits of being hardy have defined hardiness similarly: it is a personality trait that “... provid[es] the courage to confront change or adversity and turn it to advantage instead of being debilitated by it” (Hardiness Institute Manual, 1994, p. 1). Thus, we have a cultural ideology that defines hardy people as those tough enough to acknowledge and confront problems, and do something about them.

Certainly, there is a great deal of empirical evidence that hardiness will promote such active beliefs and behaviors. For example, the more hardy people are, the more they will use active coping strategies such as problem-focused coping (Wiebe, 1991; Williams, Wiebe, & Smith, 1992), and health protective behaviors such as eating well and exercise (Wiebe & McCallum, 1986). In addition, hardy people will be more likely to positively appraise a stressful situation. For example, hardy people are more likely to perceive a stressful event as having less negative impact in their lives, as less undesirable and threatening, and as more moderately controllable (Allred & Smith, 1989; Clark & Hartman, 1996; Feinauer, Mitchell, Harper, & Dane, 1996; Rhodewalt & Agustdottir, 1984; Rhodewalt & Zone, 1989; Wiebe, 1991). Thus, by using more active coping mechanisms and using more positive appraisals, hardiness has an indirect effect on mental and physical health (Maddi, 1999; Maddi & Khoshaba, 1996; Nakano, 1990; Narsavage & Weaver, 1994; Rush, Schoael, & Barnard, 1995).

However, there is also the possibility that the health benefits of hardiness have been interpreted within a particular cultural reading of what it means to be hardy. Consider the theory in its

present form: hardy individuals redefine stress as positive and will therefore experience better mental and physical health (e.g., Maddi, 1997). For example, a person who is fired from his/her job may reason that “this is not a problem,” and as such experience positive health. Within the cultural reading of the theory, this appraisal is interpreted as an effective means of coping: those who are hardy are tough enough to slough off stress and move on.

However, if we attempt to take the American cultural definition out of the theory (Wilkinson, 1997), another interpretation is possible. Such a situation could also be interpreted as “ignorance is bliss”; that is, perhaps getting fired is a big deal but the individual feels so good because he/she has ignored the severity of the event. This alternative interpretation is consistent with research on positive illusions (Taylor & Armor, 1996) and defense mechanisms (Cramer, 1998) that are also related to positive adjustment and mental health. Thus, positive mental and physical health may be indirectly related to hardiness, not because a hardy individual acknowledges and confronts a problem, but because the person minimizes the severity of the problem. Thus, one purpose of this research was to allow for an alternative interpretation of hardiness theory by examining if personality-based hardiness may be beneficial through minimization.

Another interpretation of hardiness phenomena may be derived from group consciousness theories, that are based in the grass roots experiences of the consciousness-raising groups of the 1970s (e.g., Bartky, 1977; Bowles & Duelli Klein, 1982; Kimmel, 1989). In particular, most research on hardiness has examined how it may be beneficial for alleviating health risks within intrapersonal situations: namely, situations defined as happening to an individual alone. For example, hardiness aids people in coping with their individual jobs (Berwick, 1992; Manning, Williams, & Wolfe, 1988; Westman, 1990), their personal daily hassles (Lee, 1991; Solcova & Tomanek, 1994), and their alcohol and drug use (Maddi, Wadhwa, & Haier, 1996). The implication of a focus on intrapersonal situations is that the cause of decreased well-being becomes associated with the individual rather than possible social structural factors (Wilkinson, 1997).

There is, however, a growing literature showing that the perception of being discriminated against based on social categories beyond the individual (e.g., sex, race, religion, etc.) is also a stressful event, with negative psychological effects such as lowered self-esteem, heightened depression and anxiety (Dion, Dion, & Pak; 1992, Dion & Earn, 1975; Foster, 2000; Landrine, Klonoff, Gibbs, Manning, & Lund, 1995; Pak, Dion, & Dion, 1991), obsessive-compulsive and somatization symptoms (Klonoff, Landrine & Campbell, 2000) as well as physical symptoms such as headaches (Landrine et al., 1995). Discrimination may certainly be considered an intrapersonal situation in that the individual experiences discrimination. Yet it is also an intergroup situation because it is shared with other members of a larger social group, and has political ramifications. As such, the tools needed to cope with group-based discrimination may differ from tools helpful in the intrapersonal context. Thus, we categorize discrimination as an intergroup discrimination.

On the one hand, there is some, albeit limited support that personality based hardiness will be beneficial in an intergroup contexts. Dion, Dion, and Pak (1992), using an 11-item measure of hardiness [six items from Rotter's Locus of Control Scale and five items from Rosenberg's (1965) Self-esteem Scale] found that members of Toronto's Chinese community who were low in hardiness showed a positive relationship between experienced discrimination and psychological symptoms. The more they perceived themselves to be victims of discrimination, the more negative symptoms (e.g., sleep problems, nervousness) they experienced. However, Chinese-Canadians high in hardiness showed no relationship between perceived discrimination and stress symptoms, appearing to be buffered from discrimination-related stress.

This literature however, needs to be expanded for several reasons. First, given the scant research on hardiness in an intergroup context, more research needs to be conducted. Second, an updated measure of dispositional hardiness has been developed by the Hardiness Institute, namely the Personal Values Survey III (PVSIII). It has been shown to be reliable and valid by several researchers (Bartone, Ursano, Wright, & Ingraham, 1989; Maddi & Hess, 1992, Maddi & Khobasha, 1994; Parkes &

Rendall, 1988) but is yet to be examined in an intergroup context. Second, group consciousness theories (e.g., Bowles & Duelli Klein, 1982) might argue that hardiness is not likely as beneficial in intergroup contexts given the individualistic focus of the PVSIII. In particular, the PVSIII has three subscales. First, a hardy individual shows commitment. An example item includes “I really look forward to my work.” Second, a hardy individual perceives her/himself to be in control (e.g., “What happens to me tomorrow depends on what I do today”). Finally, a hardy individual values challenge positively (e.g., “It’s exciting to learn something about myself”). The emphasis in these items is the focus on the individual (e.g., “my work”; “what I do”; “about myself”). However, this focus on the self associates the cure for decreased well-being with the individual alone (Wilkinson, 1997). That is, in order to cope with discrimination, the individual may be encouraged to become hardier.

In contrast, group consciousness theories would argue that by focusing on the individual as the cure for structural causes of well-being (i.e., discrimination), the individual may ultimately experience decreases in well-being. An individual solution will not often break down systemic barriers. Having tried to resolve a situation without making progress, the individual may experience decreased self-esteem (Stake & Gerner, 1987; Weitz, 1982), depression (Weitz, 1982), and helplessness (Foster, Matheson, & Poole, 1994). Thus, group consciousness theories would likely argue that personality-based hardiness may not be an effective tool for coping with a systemic problem like discrimination. The purpose of this research therefore, was to examine the relationship between hardiness and well-being in an intergroup context of discrimination. Two sets of hypotheses were compared.

Set 1: Hardiness theory would expect that hardiness should have the same benefits in an intergroup context as it has in intrapersonal situations: high hardy women encountering gender discrimination will experience better well-being than low hardy women. Group consciousness theories however would expect that hardiness, as an individualistic personality trait, has less utility for coping with group-based discrimination. As such, high hardy women may not experience better well-being

than low hardy women.

Set 2: Given the social construction of hardiness as a trait that encourages acknowledgment and confrontation of a problem, high hardy women should acknowledge the pervasiveness of discrimination more readily than low hardy women.

In contrast, the cultural deconstruction of hardiness theory suggests that hardiness has been beneficial because of denial (“ignorance is bliss”). If this interpretation is plausible, then high hardy women would be expected to minimize the pervasiveness of discrimination more so than low hardy women.

Study 1

Method

Participants

Female introductory psychology students ($N=391$) at the University of North Dakota were first pre-screened on their level of dispositional hardiness using the PVSIII (Hardiness Institute Manual, 1994). Participants were then considered for participation in the present study if they scored in the top (high hardy) or bottom (low hardy) third of the distribution of hardiness scores. Of those that fell into the upper and lower thirds, 57 high and 57 low hardy women were telephoned and asked to participate for extra course credit, and all agreed. The remaining students were not contacted due to the limited time-frame of the study. Participants' average age was 21.2 and reported ethnicity of students was 93% European American, 2.2% American Indian, and 4.8% labeled themselves as “other.”¹ University women in particular, were asked to participate in this study because a large proportion of these women experience discriminatory events, even before they enter the workforce. For example, researchers (Calhoun & Atkeson, 1991; Koss, 1992) suggest that 1 in 4 college women are likely to experience sexual assault during their college years. Reports on sexual harassment in the academy suggest that between 9% and 38% of college women are harassed (Dziech & Weiner, 1990; Martin, 1995). While discriminatory

events indeed occur off campuses, given what appears to be a concentration of these events on campuses, there is a need to understand how these young women respond to gender discrimination.

Procedure

Participants² entered the lab in groups of five to ten and the female experimenter gave an overview of what the experiment would entail; that overview was, in reality, a cover story designed to conceal the purpose of the study. Specifically, participants were told that this was an experiment in a program of studies investigating test-taking anxiety. To assess how their anxiety might be related to test performance, they would first complete a task that often appears on standardized language placement tests. They would be given a list of 10 stimulus words to use as the basis for writing a paragraph that is creative, logical, and succinct and would be given five minutes to complete these paragraphs. After completing their paragraphs, their scores would be assessed by the experimenter using the criteria that testing agencies had presumably provided. Allegedly, only the highest scoring participants would then be selected to enter what was called the “video group.” The other participants would remain behind to participate in an alleged second part of the experiment.

The purpose of these group delineations was to simulate an intergroup situation (Foster, Matheson, & Poole, 1994; Foster, 2001; Wright, Taylor, & Moghaddam, 1990). To reflect a hierarchical organizational context, the methodological goal was to establish a group – the “dominant group” – that participants would aspire to be in and where inclusion would reflect personal success and high social value. The second group – the “subordinate group”-- should represent a relative lack of success and low social value. This differential evaluation of the two groups was achieved by varying the mundaneness of the task and the rewards associated with the work performed. Supposedly, those who performed well would be asked to provide ideas about how to develop a video for students, which might help them overcome the anxiety associated with test-taking. They were told they would do this in a different experimental room, where refreshments would be served and that they would be eligible for a \$100 lottery. Thus, their skills were valued by the experimenter; and they could potentially receive

a large reward.

In contrast, those who did not perform well would continue to complete a series of further tests that would assess whether their low performance generalizes to other types of skills such as math. Also, they would only be eligible for a \$10 lottery. Thus, their continuation in the experiment would be tedious, their skills less valued by the experimenter, and only a small reward could potentially be received. In reality, the task and scoring were bogus; and all participants were eligible for the \$100 lottery.

To make the potential for gender discrimination salient, the experimenter told participants:

I should warn you that this task and the way it is scored could be considered to be discriminatory against women. It seems that women don't do well on this task and so it is very rare that women are allowed into the video group, while men almost always get in. We can talk about this after the experiment if you like, but we do have time limitations for this experiment, so we should continue.

Participants were then given five minutes to complete their paragraphs, which were then collected and ostensibly scored. After the scoring, they were given access to their scores. False feedback was given such that only women received a failing score, while men received a passing score. Those who passed were then asked to follow the experimenter to a different room where they would presumably participate in the video development. At this point it became clear to participants that consistent with the experimenter's previous warning, only men received the necessary passing score and left the room with the experimenter, allegedly to join the prestigious 'video' group, at which time the men were debriefed.

After the men had left, the experimenter asked the female participants to complete a questionnaire and stated that the alleged second part of the experiment would follow the questionnaire. This questionnaire was presumably designed to assess their opinions on the use of the

task but actually contained the manipulation checks and dependent measures. Once they had completed the questionnaire, they were told that this was the end of the experiment and then given an oral and written debriefing. This debriefing, given to both women and men, is a detailed, four-page description of the purpose of the study, as an explanation as to why deception was necessary to examine the purpose, repeated confirmation that their performance was not actually measured, as well as a contact sheet with phone numbers of local counseling centers, the researcher, and the chair of the Psychology Department. Discussions after debriefing indicate that participants understand the need for deception to obtain spontaneous reactions, and no adverse reactions have been reported (Foster, 1999, 2001; Foster, Matheson, & Poole, 1994).

Materials

Personal Values Survey III (PVS-III) (Hardiness Institute, 1994). Using a scale ranging from “not at all true” (0) to “completely true” (3), participants indicated the extent to which each of thirty items reflect their current life situation. Sample items included: “Most of my time gets spent doing things that are worthwhile,” and “Planning ahead can help avoid most future problems.” The measures were scored by the Hardiness Institute ($M = 60$, $SD = 6.52$). Those in the top (cutoff = 64) and bottom (cutoff = 56) thirds of the distribution were classified as high and low hardy respectively. Cronbach alpha was .84.

Positive and Negative Affect Scale (PANAS) (Watson, Clark, & Tellegen, 1988). Participants were asked to consider how they felt at that moment and rated 20 items on a scale ranging from “very slightly or not at all” (1) to “extremely” (5). Two subscales were computed using the mean across the ten positive affect items (e.g., “strong,” “interested,” “attentive”; Cronbach alpha = .88) and the ten negative affect items (e.g., “distressed,” “upset,” “nervous”; Cronbach alpha = .77)

State Self-Esteem Scale (SSES) (Heatherton & Polivy, 1991). To assess self-esteem, the performance and social subscales of the SSES were used. Participants were asked to consider what

was true of them at that moment and rated 14 items using a scale ranging from “not at all” (0) to “extremely” (4). Sample items on the performance self-esteem subscale included “I feel confident about my abilities,” “I feel that I have less scholastic ability right now than others” (Cronbach alpha = .90). Example items of the social self-esteem subscale included “I feel inferior to others at this moment,” “I feel concerned about the impression I am making” (Cronbach alpha = .89). The two subscale scores were computed by calculating the respondent’s mean across each of the seven performance and social SSES items. Heatherton and Polivy (1991) have reported that the SSES is valid, positively correlated with other measures of self-esteem, and negatively correlated with measures of depression and anxiety.

Minimization. To assess the extent to which participants would minimize the pervasiveness of discrimination, a one-item global-specific attribution measure was used. Making a global attribution involves defining discrimination as pervasive across contexts in their lives and making a specific attribution involves defining discrimination as an isolated event. Participants read: “Today in the experiment you were told that you either passed or failed a certain task. Does the reason you either passed or failed the task influence just this situation, or does it also influence other areas of your life?” The question was scored along a 0 to 10 scale so that higher scores reflected specific attributions, that is a greater tendency to minimize the pervasiveness of gender discrimination across life domains or contexts.

This measure was employed for two reasons. First, Cramer (1998) notes that minimizing stressful events is a form of denial, and as such, it may reflect a tendency to avoid stress rather than to acknowledge it. Second, research has shown that while women define discrimination as global in nonthreatening situations of discrimination, these same women redefine threatening situations of discrimination with the use of specific attributions (Foster, Jackson, Hartmann, & Woulfe, 2002), indicating again that the use of specific attributions may reflect a motivated tendency to minimize.

Manipulation check. To assess whether an experience of gender discrimination was adequately

portrayed, participants responded to the question “Ethical guidelines requires that we ask how fairly was your gender treated in the present experiment?” using a scale ranging from “not at all” (0) to “extremely” (10).

Results and Discussion

Manipulation check. For the manipulation of gender discrimination to have been successful, it was desirable for the female participants to score at the low end of the scale, indicating perceived unfairness due to gender. A one-sample *t*-test showed the means for both the low, ($M = 2.98$, $SD = 3.01$), $t(56) = -5.06$, $p = .0001$, and high hardy groups, $M = 3.02$, $SD = 3.07$), $t(56) = -4.87$, $p = .0001$, were significantly lower than the midpoint of the scale (5), indicating that both groups had indeed perceived their gender to have been treated unfairly. Further, it was desirable for both low and high hardiness groups to perceive the same degree of unfairness so that the level of perceived discrimination would not be confounded with group differences in hardiness. A two sample *t*-test indicated that both high and low hardy groups perceived their gender to be unfairly treated, $t(112) = -.062$, ns. Thus, the manipulation of gender discrimination was successful.

Dependent variables. Means and standard deviations of the dependent variables are presented in Table 1. A MANOVA with hardiness (low vs. high) as the independent variable and positive and negative affect from the PANAS as the dependent variables showed a significant multivariate effect for hardiness, $F(2,111) = 5.99$, $p = .003$, $\eta^2 = .097$. However, only the univariate analysis for positive affect was significant, $F(1,112) = 10.67$, $p = .001$, $\eta^2 = .087$, indicating high hardy women felt more positively than low hardy women within a context of discrimination. A second MANOVA on the self-esteem variables (performance and social subscale scores on the SSES) was also significant for hardiness, multivariate $F(2,111) = 6.76$, $p = .002$, $\eta^2 = .109$. Both univariate *F*s were significant, showing that high hardy women felt greater performance, $F(1,112) = 10.68$, $p = .001$, $\eta^2 = .087$ and social self-esteem, $F(1,112) = 12.72$, $p = .001$, $\eta^2 = .102$ than low hardy women. Thus, in support of hardiness theory, these two analyses suggest

that hardiness was related to greater well-being in women within a context of gender discrimination. It is also possible however that the differences in well-being across low and high hardy women were instead a function of pre-existing differences. That is, high hardy women may generally have greater self-esteem than low hardy women.

A two sample t -test showed that high hardy women made more specific attributions than low hardy women (see Table 1), $t(112) = -2.51$, $p = .013$, suggesting that high hardy women were more likely to minimize the pervasiveness of gender discrimination across other areas of their lives. Thus, although high hardy women experienced greater well-being (self-esteem and positive affect) than low hardy women, they did not appear to be acknowledging or confronting the pervasiveness of gender discrimination. This finding is more consistent with a deconstruction of hardiness theory, whereby the mental health benefits of hardiness may be experienced due to minimization of, rather than acknowledgment of a problem.

To test whether minimizing attributions mediated the relationship between hardiness and mental health, the steps outlined by Baron and Kenny (1986) were used (see Figure 1a). First, there must be a significant relationship (paths c_1 , c_2) between the predictor variable (hardiness) and the outcome variables (positive affect and self-esteem).³ Two separate regressions showed positive relationships such that as hardiness increased, so did positive affect, $\beta = .346$, $p = .0001$, and self-esteem, $\beta = .360$, $p = .0001$, respectively. Second, there must be a relationship (path a) between the predictor variable (hardiness) and the mediator (minimization of discrimination). A regression analysis showed a positive relationship such that as hardiness increased, so did minimization, $\beta = .245$, $p = .001$. Third, there must be a relationship (paths b_1 , b_2) between the mediator (minimization) and the outcome variables, controlling for hardiness. Regression analyses showed that the relationship between minimization and positive affect controlling for hardiness was not significant, indicating no mediation of the relationship between hardiness and positive affect through minimization, $\beta = .005$, *ns*. However, there was a significant relationship between minimization and self-esteem controlling for

hardiness, $\beta = .363$, $p = .0001$. Finally, for mediation to exist, the relationship (path c') between the predictor (hardiness) and the outcome (self-esteem) must disappear or be reduced when the mediator is controlled. Regression analysis showed this path was significant, $\beta = .271$, $p = .01$. However, the Sobel test indicated that the size of the Beta weight decreased significantly, $Z = 2.70$, $p = .006$. The strength of the mediation effect was computed using the index ab/c (MacKinnon, Warsi, & Dwyer, 1995) which gives the proportion of the mediation effect in relation to the total effect. The mediation effect of minimization explained 24.7% of the relationship between hardiness and self-esteem. Thus, the relationship between hardiness and self-esteem appears to be partially mediated by minimization.

Given the correlational relationship between minimization and self-esteem, an alternative hypothesis is that self-esteem mediated the relationship between hardiness and minimization. A second mediation analysis was therefore conducted (see Figure 1b). The relationships between hardiness and minimization (now, path c), and between hardiness and self-esteem (now, path a) remain the same: as hardiness increased, so did minimization, $\beta = .245$, $p = .001$ and self-esteem, $\beta = .360$, $p = .0001$. The relationship between self-esteem and minimization, controlling for hardiness (now, path b) was also significant, $\beta = .392$, $p = .0001$. Finally, the relationship between hardiness and minimization disappeared when self-esteem was controlled (path c'), $\beta = .104$, $p = .257$. The Sobel test indicated the change was significant, $Z = 2.27$, $p = .02$ and the strength of the mediation effect was 37.5%. Thus, the relationship between hardiness and minimization was mediated by self-esteem: hardy women may minimize the pervasiveness of discrimination because they feel good about themselves. Much like a positivity bias (Aube, Koestner, Hodgins & Craig, 1994), it may be that hardy women's positive self-concept is influencing positive social evaluations, namely that discrimination is isolated rather than pervasive.

It could be argued however that there is no minimization effect per se. Instead, perhaps high hardy women are simply more capable of recognizing a psychological experiment for what it is, namely an isolated experience that will not impact other aspects of their lives. Thus, the issue becomes how to

test whether high hardy women were defining gender discrimination as isolated without exposing them to an isolated laboratory experiment. To do this, a second questionnaire study was designed so that more general tendencies could be assessed than could have been measured in the laboratory. If high hardy women were minimizing their experience of gender discrimination in Study 1, then they should show the same tendency when reading about a hypothetical situation of gender discrimination in a questionnaire format.

Study 2

Method

Participants and Procedure

Female introductory psychology students ($N=225$, Mean age = 21) at the University of North Dakota were first pre-screened on their level of dispositional hardiness using the Personal Values Survey III (Hardiness Institute Manual, 1994). Participants were then considered for participation in the present study if they scored in the top (high hardy) or bottom (low hardy) thirds of the distribution of hardiness scores. Seventy-four high and 69 low hardy women were telephoned and asked to participate in a questionnaire study for extra course credit, and all agreed. Once in the lab, participants read and signed an informed consent, completed the questionnaire, and then were debriefed.

Materials

Personal Values Survey III. For this sample, the mean hardiness score was 64.9 ($SD = 10.23$) and those in the top (cutoff = 69) and bottom (cutoff = 61) third of the distribution were classified as high and low hardy, respectively (Cronbach alpha = .86)

Discrimination scenario. Derived from the Attributions for Discrimination Scale (Foster, 2001), participants read a scenario that was similar in theme to the experimental situation in study one.

Participants read:

Please try to imagine **yourself** in the situation that follows. If such a situation

happened to you personally, what would you feel would have caused it? Think about what you think caused it and answer the corresponding questions:

As a part of a demonstration in one of your classes, the whole class is asked to complete a short task assessing your cognitive ability. The professor warns the class that the women should try extra hard because this particular measure has been known to yield low scores for women, while men end up always performing well. The professor grades the tasks after everyone has completed it and says, "The men performed well, the women did not."

Affect. Because study one showed there were only differences between the hardy groups on positive but not negative affect, it was reasoned that perhaps the adjectives in the negative affect scale were not ecologically valid. That is, the adjectives did not reflect feelings that young women may have in response to discrimination. Therefore, in a pilot study 10 female students were asked to list adjectives that describe negative feelings they may have after experiencing discrimination. Adjectives that were mentioned at least twice were included. These adjectives were combined to reflect general negative affect (distressed, nervous, sad, helpless, hesitant, and uncertain; Cronbach alpha = .87) and anger (angry, frustrated, resentful; Cronbach alpha = .81). Three positive affect adjectives were derived from the Mood Adjective Checklist (Nowlis, 1965) which were combined to reflect nonchalance (leisurely, nonchalant, easy-going; Cronbach alpha = .91). Participants rated these adjectives in terms of how being in that situation would make them feel, using a scale ranging from "not at all like this" (0) to "totally like this" (10).

Minimization. As in study one, minimization was assessed via the use of a one-item attribution question. Participants indicated on a scale ranging from 0 to 10 how much the cause of that situation would influence "all other areas of my life" to "just this situation." Higher scores reflected more specific attributions for discrimination, i.e., minimization of the pervasiveness of gender discrimination.

Results and Discussion

Means and standard deviations for the dependent variables appear in Table 2.

A MANOVA was conducted on the three affect variables: negative affect, anger, and nonchalance. There was a significant multivariate effect of hardiness, $F(3,139) = 5.20$, $p = .002$, $\eta^2 = .101$. However, the only significant univariate effect was for negative affect, $F(1,141) = 12.27$, $p = .001$, $\eta^2 = .080$, showing that, consistent with Study one, high hardy women reported they would feel less negative affect than low hardy women when presented with hypothetical situation of gender discrimination (see Table 2).

As in Study one, a t -test indicated that high hardy women made more specific attributions than low hardy women (see Table 2), $t(141) = -2.47$, $p = .014$.

To test whether the mediation patterns were similar to those found in study one, several regression analyses were again conducted (see Figure 2a). The total relationship (path c) between hardiness and negative affect was significant, $\beta = -.207$, $p = .01$, indicating that as hardiness increased, negative feelings about discrimination decreased. Second, the relationship between the predictor (hardiness) and the mediator (path a_1), minimization, $\beta = .204$, $p = .01$ was significant, indicating that as hardiness increased, so did minimization. The third regression showed a significant relationship (path b) between minimization and negative affect, controlling for hardiness and $\beta = -.294$, $p = .0001$, indicating that as minimizing increased, negative affect decreased. Finally, the direct relationship between hardiness and negative affect (path c') became nonsignificant when minimization was controlled, $\beta = -.152$, ns . The Sobel test of mediation was significant, $Z = -4.12$, $p = .0001$, indicating that the hypothesis of mediation was supported. The mediation effect for minimization explained 42.4% of the total relationship between hardiness and negative affect (Baron & Kenny, 1986).

As in study one, a second mediation analysis was conducted to assess whether negative affect may mediate the relationship between hardiness and minimization (see Figure 2b). The relationships

between hardiness and minimization (now, path c) and between hardiness and negative affect (now, path a) remain the same: as hardiness increased, so did minimization, $\beta = .204$, $p = .01$, but negative affect decreased, $\beta = -.207$, $p = .01$. The relationship between negative affect and minimization, controlling for hardiness (now, path b) was significant, suggesting that as negative affect decreased, minimization increased, $\beta = -.297$, $p = .0001$. Finally, the relationship between hardiness and minimization (path c) disappeared when negative affect was controlled, $\beta = .126$, $p = .114$. The Sobel test was significant, $Z = 2.11$, $p = .034$, and the mediation effect explained 30.1% of the total relationship between hardiness and negative affect. Thus, again, this may reflect a positivity bias: if hardy women are not likely to experience negative affect in such a situation, then they may also be unlikely to make other negative social evaluations, namely pervasive discrimination.

The question remains whether hardy women's minimization of discrimination is a function of their feeling better (i.e., decreased negative affect, and increased self-esteem), or due to threat. Major, Quinton & McCoy (2002) suggest that attributions reflect a coping mechanism. Upon experiencing a negative event like discrimination, disadvantaged groups respond with various cognitive coping strategies designed to change the meaning of stressful events. Minimization may therefore be a response to the threat of discrimination.

Study 3 was designed to expose a sample of university women to two different types of discrimination, in order to induce different threat levels (low and high). Furthermore, study 3 addressed the potential criticism that specific attributions were made because only one specific situation of discrimination was depicted. In study 3, 11 different scenarios of discrimination were presented in one of two discrimination conditions. If hardy women's greater minimization was a means to cope with the threat of discrimination, then hardy women should make more specific attributions in a higher threat situation of discrimination (potential for personal discrimination) than in a lower threat situation (where a generic woman is described as experiencing discrimination).

Method

Participants and Procedure

Female psychology students ($N = 159$, Mean age = 22.3) at the University of North Dakota were offered extra course credit to participate in this study. Those who wanted to participate wrote their name on a sign-up sheet, which told them the location of the lab and time of the session. Upon entering the lab, they read and signed a consent form, then completed a questionnaire described to them as an investigation into various social opinions, and then were debriefed. Half the women ($N = 79$) were given a questionnaire which asked them to envision themselves experiencing the discrimination depicted in each situation (Discrimination happening to Self; DTS). The other half of the women ($N = 80$) were given a revised version of the questionnaire that depicted discrimination happening to another woman (Discrimination happening to Other; DTO).

Materials and Experimental Conditions

Personal Values Survey III. For this sample, the mean hardiness score was 61.87 ($SD = 7.88$) and those in the top (cutoff = 66) and bottom (cutoff = 59) third of the distribution were categorized as high and low hardy respectively (Cronbach alpha = .83).

Type of discrimination. Type of discrimination was manipulated by varying the wording of the scenarios and instructions given to participants. Those in the DTS condition read the following instructions, that included references to “you” and “personally”:

Please try to imagine **yourself** in each of the situations that follow. If such a situation happened to you personally, what would you feel would have caused it? Think about what you think caused it and answer the corresponding questions below.

A sample scenario read:

Imagine your male employer tells you that your productivity has been low and that it is

clear you are not attracting new clients to the firm. He says to you that he is willing to help you out if you will see him on a social basis. While you resist, he reminds you that if you were performing as you should, there would be no need for this special attention he can give you.

Women in the DTO condition read a revised version of the same scenario with instructions and scenarios that omitted any reference to the word “you” or “personal”:

Please read each of the situations that follow. What would have caused it? Think about what caused it and answer the corresponding questions below.

A sample scenario read:

A woman’s male employer tells her that her productivity has been low and that it is clear she is not attracting new clients to the firm. He tells her that he is willing to help her if she will see him on a social basis. While she resists, he reminds her that if she was performing as she should, there would be no need for the special attention he can give her.

These scenarios had been previously piloted to assess whether the scenarios evoked different threat levels. Sixty university women read either the DTS (n = 30) or DTO (n = 30) scenarios and then indicated how they felt at that moment, using six adjectives: three positive (confident, secure, strong) and three negative (timid, helpless, fearful) adjectives (Nowlis, 1965). Two separate MANOVAs showed significant multivariate effects for the positive, $F(3,56) = 3.06$, $p = .012$, $\eta^2 = .175$ and negative mood adjectives, $F(3,56) = 3.87$, $p = .014$, $\eta^2 = .172$. Univariate analyses showed that women who read the DTS scenarios felt more helpless, $F(1,58) = 6.61$, $p = .013$, $\eta^2 = .102$, more timid, $F(1,58) = 8.07$, $p = .006$, $\eta^2 = .122$, less confident, $F(1,58) = 4.87$, $p = .001$, $\eta^2 = .077$ and less strong, $F(1,58) = 2.28$, $p = .013$, $\eta^2 = .168$ than those who read the DTO scenarios (see Table 3). Thus, those in the DTS condition appeared to have been more threatened than those in the DTO condition.

Affect. As in study two, participants rated 12 adjectives in terms of how being in that situation would make them feel, using a response scale ranging from “not at all like this” (0) to “totally like this” (10). The adjectives were again combined to reflect negative affect (distressed, nervous, sad, helpless, hesitant, uncertain; Cronbach alpha = .90), anger (angry, frustrated, resentful; Cronbach alpha = .89), and nonchalance (leisurely, nonchalant, easy-going; Cronbach alpha = .97). *Minimization.* Following each scenario women answered the same one-item attribution question as in Study two. The mean across all 11 scenarios was used for an overall attribution score (Cronbach alpha = .79).

Results and Discussion

A 2 (DTS, DTO condition) x 2 (high, low hardy) ANOVA was conducted on the attribution measure. There was a significant interaction between type of discrimination and hardiness, $F(1, 114) = 4.28, p = .04, \eta^2 = .037$. Simple effects showed that low hardy women’s attributions were no different across the DTS ($M = 4.18, SD = 1.49$) and DTO conditions ($M = 3.56, SD = 1.56, t(59) = -1.57, p = .12$). Low hardy women defined both types of discrimination as relatively pervasive. In contrast, the type of discrimination did affect high hardy women’s attributions, $t(51) = -4.15, p = .0001$, such that high hardy women were more likely to make specific attributions when exposed to the threat of personal discrimination ($M = 5.15, SD = 1.76$) than discrimination to another woman, ($M = 3.56, SD = 1.48$). Thus, high hardy women minimized the pervasiveness of discrimination potentially affecting them, but not discrimination happening to another. Thus, specific attributions may have been serving as a threat-reducing tool.

To assess whether the mediation patterns differed across the two discrimination conditions, a mediation analysis was conducted within each condition (see Figure 3). In the DTO condition (Figure 3a), the first step of mediation showed that hardiness was related to negative affect ($\beta = -.286, p = .001$). However, hardiness was unrelated to the mediator, minimization ($\beta = .056, ns$). Thus, when the threat level was low, well-being was not achieved via minimization.

In the DTS condition (Figure 3b), hardiness was again related to negative affect, ($\beta = -.222, p = .05$). Hardiness was positively related to the mediator, minimization, ($\beta = .305, p = .001$), and minimization was also related to negative affect, ($\beta = -.371, p = .001$). Finally, when minimization was controlled for, the relationship between hardiness and negative affect disappeared, ($\beta = -.109, ns$), $Z = -3.44, p = .001$. The mediation effect explained 50.9% of the relationship between hardiness and negative affect. When hardy women were exposed to the potential for personal discrimination, hardiness in and of itself was not sufficient to achieve well-being. Instead, the use of minimization appeared necessary.

A second mediation analysis testing whether negative affect mediated the relationship between hardiness and minimization was conducted, but was not significant, $Z = 1.72, p = .085$. Thus in this study, hardy women's minimization appeared to be more a function of threat than of decreased negative affect.

General Discussion

This research sought to examine how high hardy women would respond to experiences of gender discrimination. Consistent with hardiness theory (e.g. Maddi, 1997), high hardy women showed greater well-being than low hardy women when they experienced discrimination, and imagined themselves in a similar situation. At the same time however, all three studies showed some evidence that these benefits were partially experienced through a tendency by high hardy women to minimize the pervasiveness of discrimination. In contrast, it could be argued hardy women were not necessarily minimizing the problem of discrimination, but that low hardy women were overestimating the problem. According to this argument, those low in hardiness who have lower coping abilities may appraise discrimination as more threatening than it is. However, an extensive literature shows that women and minorities do not overestimate, but instead underestimate the amount of discrimination they perceive (e.g., Crosby, 1984; Foster & Matheson, 1999; Taylor, Wright, Moghaddam, & Lalonde, 1990). Further, study one showed that both high and low hardiness groups equally recognized gender discrimination

when they encountered an actual instance. If low hardy women had been overestimating the experience of discrimination, then group differences on perceived gender discrimination would have been expected.

The question of why hardy women were minimizing the pervasiveness seems to have two possible explanations. First, hardy women may simply be “Polyannas”—those who see everything in a positive light. Studies one and two showed that hardy women may have been minimizing the pervasiveness of discrimination because of their greater self-esteem and lowered negative affect. This is interesting in that it suggests a different causal direction than is suggested by the Rejection Identification Model (Branscombe, Schmitt & Harvey, 1999). This model has shown that perceptions of discrimination as pervasive predict decreased well-being (Branscombe et al., 1999; Schmitt, Branscombe, Kobrynowicz & Owen, 2002; Schmitt, Branscombe & Postmes, in press). In contrast, our findings suggest that well-being can predict perceptions of discrimination. Our future research will investigate the causal relationship between perceived pervasiveness of discrimination and well-being, and whether being hardy moderates this relationship.

A second explanation is that hardy women’s minimization is a coping response aimed at reducing the threat of discrimination. Study three showed that hardy women minimized the pervasiveness of discrimination more under the higher threat condition. Given the cultural definition of hardiness, it seems somewhat counterintuitive that high hardy women should be so threatened by personal discrimination that they need to minimize it. Bandura’s self-efficacy theory (1997) may help to explain why those high in hardiness may have particular difficulty coping with discrimination. Bandura suggests that those who have most difficulty coping with problems are those whose personal efficacy beliefs do not match those promoted by the social context. High hardiness is defined in part as having strong personal efficacy beliefs (Maddi, 1997), but when discrimination occurs, there is an implication that it is the system, not the person, that controls success. Thus, there is a mismatch between personal and contextual efficacy messages. Certainly, this mismatch may be particularly threatening to high

hardy women who have always believed they can control events in their lives, but all of a sudden are hearing a different message. Future research will, therefore, need to pursue the role of efficacy beliefs in high hardy women's ability to cope with discrimination.

Future research should also examine the role dispositional hardiness plays in coping with discrimination based on categories other than, or in addition to, gender. The participants in these studies were primarily European American, yet women who experience discrimination from other cultures may have different experiences. Other ethnic groups that focus more on collectivism in their culture may not value hardiness to the same extent. They may not experience the mismatch in personal and efficacy beliefs and, they may feel no or less need to minimize discrimination. Alternatively, hardiness may be constructed differently, for example, it may place a greater focus on support from members in their social group as a means of coping. Thus, cross-cultural differences in hardiness may provide additional information on how women (and men) experience the trait to cope with discrimination.

If high hardy women are particularly threatened by personally experiencing discrimination, then given how hardiness has been contextualized in this culture, this subgroup of discrimination victims may be at risk. That is, if friends, family, and health professionals assume that high hardy women will cope well because they are "tough," then this is the group whose mental health needs may be ignored. This situation is problematic, given that Pennebaker and colleagues have shown that avoidance strategies may have long-term health risks (e.g., Pennebaker, 1993; Pennebaker & Keough, 1999; Pennebaker & Susman, 1988).

Moreover, the implications of minimizing the pervasiveness of discrimination for social change will be important to understand. On the one hand, research (Foster, 2001) has shown that the more women define discrimination as isolated, the less they report participation in collective actions aimed at reducing discrimination. At the same time however, this relationship appears to be moderated by hardiness: hardy women take more collective action when they minimize discrimination, while low

hardy women take more collective action when they define discrimination as pervasive (Foster & Dion, 2002). Thus, minimization appears to play a different role for different people—for some it is inhibiting, but for others it is motivating. Future research will need to clarify why a group of women culturally defined as “tough” need to *minimize* discrimination in order to act against it, and whether such a strategy may be useful for other victims of discrimination.

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Footnotes

¹ The homogeneity of the University of North Dakota population is such that the percentage of participants in each ethnic category was consistent across the three studies.

² Men were also included in the experiment because past research has shown the discrimination manipulation is more realistic when men are present (Foster, 2001; Foster, Matheson, & Poole, 1994), However, because the men leave the experiment before dependent measures are collected, they were not included in the analysis.

³ Given the correlation between the two self-esteem subscales, $r(112) = .76$, $p = .0001$, the mean of two scales were combined for an overall self-esteem composite measure.

Table 1

Means and Standard Deviations for the Dependent Variables in Study 1

<u>Dependent Variables</u>	<u>Low Hardy</u>		<u>High Hardy</u>		
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	
Positive Affect	1.84	.58	2.27	.79	
Negative Affect	1.51	.44	1.42	.42	
Performance Self-Esteem	2.48	.76	2.97	.82	
Social Self-Esteem		2.80	.87	3.34	.72
Attributions		6.90	2.59	8.14	2.48

Note: Higher score reflect stronger affect, self-esteem and specific attributions.

Table 2

Means and Standard Deviations for the Dependent Variables in Study 2

<u>Dependent Variables</u>	<u>Low Hardy</u>		<u>High Hardy</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Anger		6.75 2.60		6.75 2.26
Negative affect	4.49	2.25	3.18	2.22
Nonchalance		2.25 2.32		2.25 2.60
Attributions		3.91 1.67		5.10 1.58

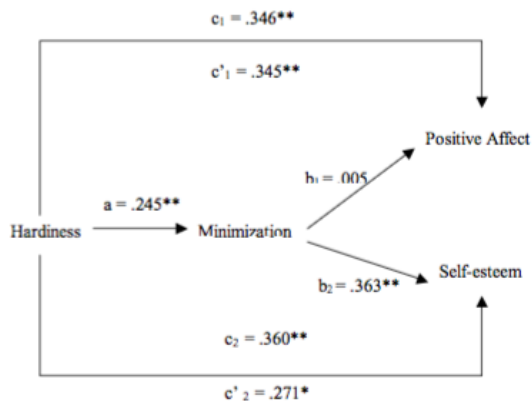
Note: Higher scores reflect a stronger mood and specific attributions.

Table 3

Means and Standard Deviations for the Mood Adjective Items in Study 3

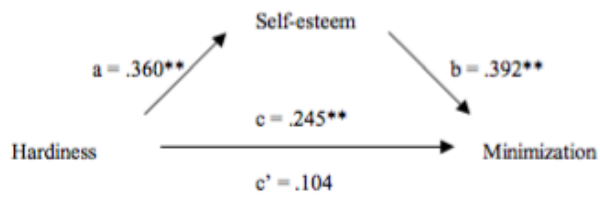
<u>Dependent Variables</u>	<u>DTS</u>		<u>DTO</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Confident	6.00	2.18	7.13	1.77
Secure	6.30	1.98	7.20	2.59
Strong	4.40	2.54	6.56	2.35
Timid	3.97	2.31	2.16	2.58
Helpless	2.33	2.52	0.80	2.07
Fearful	1.46	2.06	1.16	2.36

Note: Higher scores reflect a stronger mood. DTS= Discrimination happening To Self condition, DTO= Discrimination happening To Other.



* $p = .01$, ** $p = .0001$.

Fig. 1a. Minimization as mediator between hardiness and well-being.



* $p = .01$, ** $p = .0001$.

Fig. 1b. Self-esteem as mediator between hardiness and minimization.

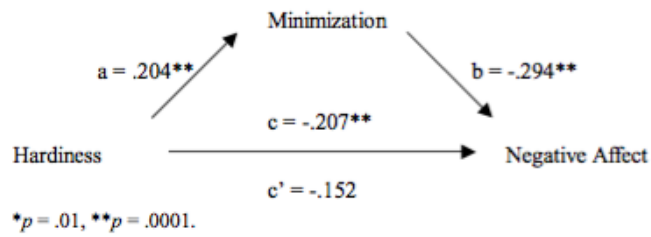


Fig. 2a. Minimization as mediator between hardiness and negative affect.

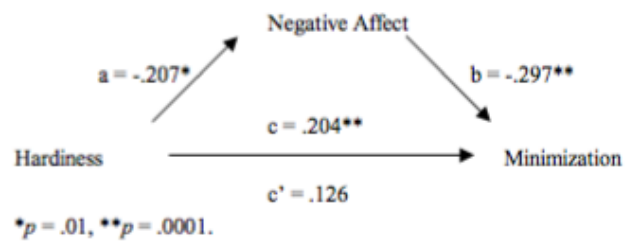


Fig. 2b. Negative affect as mediator between hardiness and minimization.

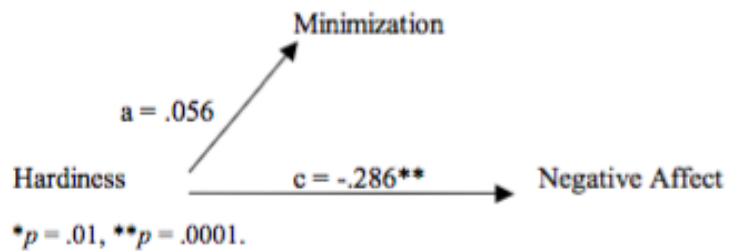


Fig. 3a. Test of mediation model in DTO condition.

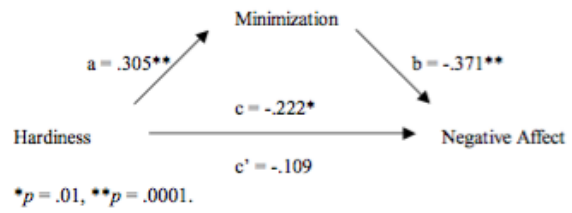


Fig. 3b. Minimization as mediator between hardiness and negative affect in DTS condition.