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Is the Belief in Meritocracy Palliative for Members of Low Status Groups? Evidence for a Benefit for Self-Esteem and Physical Health via Perceived Control

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Abstract

Consensually held ideologies may serve as the cultural "glue" that justifies hierarchical status differences in society (e.g. Augustinos, 1998). Yet to be effective these beliefs need to be embraced by low-status groups. Why would members of low-status groups endorse beliefs that justify their relative disadvantage? We propose that members of low-status groups in the United States may benefit from some system-justifying beliefs (such as the belief in meritocracy) to the extent that these beliefs emphasize the perception of control over future outcomes. In 2 studies, among women, lower-SES women, and women of color, we found a positive relationship between the belief in meritocracy and well-being (self-esteem and physical health) that was mediated by perceived control. Members of low-status groups may benefit from some system-justifying beliefs to the extent that these beliefs, like the belief in meritocracy, emphasize the perception of control over future outcomes.

Keywords

System Justification; Meritocracy; Self-Esteem; Socio-economic Status

In most cultures, some groups have higher status (more access to social goods, decision making power; the "haves") than other groups (the "have nots"). Consensually held ideologies may serve as the cultural "glue" that stabilizes and justifies these hierarchical status differences (e.g. Augustinos, 1998; Jost, Banaji, & Nosek, 2004; Marx & Engels, 1846/1970). The key to the effectiveness of this "glue" may be the extent to which these beliefs are embraced by the "have nots". Why would members of low-status groups endorse ideologies that justify their relative disadvantage?

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[7]We thank a thoughtful reviewer for this suggestion.

For an ideology to be truly effective it must "engage significantly with the wants and desires that people already have, catching up genuine hopes and needs, reinfecting them in their own peculiar idiom, and feeding them back to their subjects in ways that render these ideologies plausible and attractive" (Eagleton, 1991, p. 15). We propose that beyond preserving the status quo, these ideologies may serve the personal wants, desires, and needs of low status groups. Individuals may benefit from particular system-justifying ideologies to the extent that they emphasize the *perception of control* over future outcomes – a personal need that is beneficial for well-being. Said another way, some legitimizing ideologies may offer the benefit of psychologically transforming "have nots" into "soon to haves".[1]

The goals of the current work are to: 1) provide evidence that endorsement of a specific system justifying ideology in the United States, the belief in meritocracy, benefits the self-esteem of both high and low status groups, and 2) demonstrate the mechanism through which the belief in meritocracy exerts its palliative effect for both high and low status groups: through the association with perceptions of personal control.

The core of the United States' "dominant ideology" (Kluegel & Smith, 1986) revolves around the belief in meritocracy, that status differences are merit based. In the U. S., the belief in a just world (i.e. that people get what they deserve; Lerner, 1980; BJW), the belief in a secularized Protestant work ethic (e.g. hard work gets you ahead; PWE), and status permeability (e.g. advancement is possible) suggest that status differences are based on merit. Our focus is on the belief in meritocracy as a hierarchy-enhancing descriptive belief rather than a prescriptive justice principle (e.g. McCoy & Major, 2007; Son Hing, et al., 2011; Ledgerwood, Mandisodza, Jost, & Pohl, 2011). While other beliefs may be hierarchy-enhancing (e.g. stereotypes, Jost et al., 2004; status-legitimacy; O'Brien & Major, 2005; opposition to equality; Jost & Thompson, 2000), the belief in meritocracy suggests that even the lowest among us have the opportunity to rise. Meritocracy beliefs serve a legitimizing function in U.S. society by fostering the perception that outcomes are commensurate with the effort and ability of the individual and are thus "deserved" (Jost & Hunyady, 2002).

By influencing assumptions about the relative deservingness of high and low status groups, meritocracy beliefs preserve the status hierarchy and the interests of high status groups. Both members of high and low status groups tend to legitimize the status hierarchy by valuing high status groups over low status groups (e.g. Jost, et al., 2004). The more members of high status groups endorse meritocracy beliefs the more legitimate their advantage, the more meritorious their group, and the more personally responsible they are for their success. From a system-justification perspective, system, group and ego justification motives are consistent for members of high status groups (e.g. Jost & Hunyady, 2002). Not too surprisingly given these many benefits, previous research has demonstrated positive associations between meritocracy beliefs and well-being for high status groups (e.g., Jost & Thompson, 2000; O'Brien & Major, 2005; Wakslak, et al., 2007).

The more novel proposition, however, is that meritocracy beliefs are protective of self-esteem even for those who are disadvantaged by the status hierarchy. For low status groups, the motive to justify the system and the motive to feel good about the self appear in conflict. The more individuals endorse meritocracy beliefs the more they blame low status groups for their misfortune and lack of achievement (e.g., Cozzarelli, Wilkinson, & Tagler, 2001). Beliefs that legitimize the status hierarchy do lead members of low status groups to blame themselves (and their group) for their disadvantage. For example, the higher women are in BJW the more they perceive their own low job status as reasonable (Hafer & Olson, 1993).

[1]"soon" in geological time, see Hodgman, 2012; http://www.thedailyshow.com/watch/thu-february-2-2012/money-talks---the-haves---the-soon-to-haves.

When meritocracy beliefs are salient, women are more likely to endorse stereotypes that hold women responsible for their low status relative to men (McCoy & Major, 2007). Thus, endorsing meritocracy beliefs encourages the internalization of inequality.

Internalization of inequality among members of socially devalued groups may lead to low self-esteem, depression, and neuroticism (e.g. Allport, 1954; Jost & Hunyady, 2002). Prior research has found that endorsement of some system justifying beliefs is negatively associated with self-esteem. For example, the more African Americans were opposed to equality the lower their self-esteem (Jost & Thompson, 2000), and the more African Americans endorse general system legitimacy the lower their performance self-esteem (Rankin, Jost, & Wakslak, 2009). O'Brien and Major (2005) found a similar negative relationship between system justifying beliefs (including status legitimacy) among African Americans and Latinos, but only among those who were highly group identified. Yet, there is also research demonstrating that some legitimizing ideologies may pose a benefit for low status groups. Among non-overweight women, endorsement of the Protestant Work Ethic (a meritocracy belief) was positively associated with self-esteem (Quinn & Crocker, 1999). Meritocracy beliefs were also found to be positively associated with well-being among women following a personal failure (Foster & Tsarfati, 2005). It may be the case that not all legitimizing ideologies yield the same consequences for the self-esteem of members of low status groups. We propose that the belief in meritocracy may pose a benefit to the self-esteem of members of low status groups because it is consistent with the perception that advancement is possible. Not all system justifying beliefs emphasize this perception (e.g. opposition to equality, endorsement of stereotypes, status legitimacy).

Although there are many costs associated with endorsing the belief in meritocracy for members of low status groups, there is one benefit that might be available to individuals both high and low in status: perceived control. The perception that one's future outcomes are controllable may mitigate some of the negative consequences of the internalization of inequality for members of disadvantaged groups. Meritocracy beliefs encourage the perception that outcomes in life are fair and deserved. People benefit psychologically from perceiving the distribution of outcomes as just and fair – even if the distribution is disadvantageous to the self (e.g. Haines & Jost, 2002; Lind & Tyler, 1988). In fact, perceptions of societal fairness encourage members of low status groups to work harder, persist longer, and invest in long term goals (Laurin, Fitzsimons, & Kay, 2011). In nations with high gender inequality, perceiving men as more deserving of high status is associated with higher life satisfaction for both men and women (Napier, Thorisdottir, & Jost, 2010).

Further, taking personal responsibility for negative outcomes in one's life has been shown to be positively associated with psychological well-being because it preserves control over future outcomes (Janoff-Bulman & Lang-Gunn, 1988; Tennen & Affleck, 1990). For example, the more individuals low in economic success locate the responsibility for economic outcomes internally, the more satisfied they report being (e.g. Kluegel & Smith, 1986; Napier & Jost, 2008). For these reasons, meritocracy beliefs may provide an indirect benefit to self-esteem by encouraging the perception that future outcomes remain under personal control. Thus, despite many costs for members of disadvantaged groups, there may be a benefit for self-esteem from endorsing the belief in meritocracy.

This hypothesis is consistent with a number of theoretical perspectives that propose that cultural worldviews, like meritocracy beliefs, function in part to reduce threat associated with uncertainty by increasing perceptions of control (e.g. Jost, et al., 2004; Greenberg, Pyszczynski, & Solomon, 1986; Van den Bos & Lind, 2002). Meritocracy beliefs may manage uncertainty by providing clear guidelines for the allocation of the rewards and burdens of life. Such guidelines, and the sense of predictability and control they provide,

have been argued to form the bedrock from which self-esteem is derived (e.g. Greenberg, Pyszcznski, & Solomon, 1986). Further, the compensatory control model (i.e., Kay, Whitson, Gaucher, & Galinsky, 2009) suggests that viewing the social hierarchy as stable and legitimate can serve to buffer anxiety and uncertainty associated with a loss of personal control. Consistent with these perspectives, the belief in personal control has generally been shown to be an important predictor of positive psychological well-being (e.g. Langer, 1975; Taylor & Brown, 1988). Even the semblance of personal control (e.g. being allowed to share one's opinion with a decision maker) ameliorates the negative consequences of uncertainty salience (Van den Bos, 2001). From these perspectives, meritocracy beliefs may assuage the threat of uncertainty by fostering perceptions of fairness, predictability, and internal control for *both* high and low status groups. While there are many benefits of endorsing meritocracy beliefs for members of high status groups (e.g. hubristic pride in being high status), we propose that meritocracy beliefs benefit the personal self-esteem of both high and low status groups through the positive association with perceived control.

Hypotheses

We hypothesize that for both high and low status groups one benefit of the belief in meritocracy may be the extent to which it preserves the perception that future outcomes are under personal control. In Study 1, we utilize a college sample and examined the hypothesized relationships between meritocracy beliefs, perceived control and self-esteem among women (low status) and men (high status). In Study 2, we examined our hypothesized relationships among a community sample of women with varied socio-economic status. In both studies, we tested the hypothesis that the belief in meritocracy is protective of self-esteem for members of low status groups primarily due to the association with perceived control.

Study 1

We hypothesized that meritocracy beliefs would be positively associated with self-esteem for both men and women (significant total effect). We further proposed that perceived control is an important mechanism for the palliative function of meritocracy beliefs. Thus, we predicted that perceived control would significantly mediate the positive association between meritocracy and self-esteem for both men and women (significant indirect effects).

Our hypotheses regarding the direct effect are more tentative. Based on prior research suggesting that members of high status groups benefit in multiple ways from endorsing meritocracy beliefs (e.g. Jost & Hunyady, 2002), one might expect that meritocracy remains beneficial to men's self-esteem (significant direct effect) even after accounting for the variance due to the association with perceived control. In contrast, meritocracy beliefs may provide little direct benefit to members of low status groups once the association with perceived control is accounted for. Consistent with that perspective, one might predict no direct effect of meritocracy for women's self-esteem (i.e. constraining direct path to 0 will not impair model fit) or even a negative direct effect (i.e. meritocracy acts as a suppressor).

Participants and Procedure

Undergraduates from the University of Maine (N=508, 52.6% female, M_{age}=19.44, SD=2.73, Race: 91.3% White, 2.4% Native American, 1.8% Mixed Race, 1.6% Asian, 1.2% Black, 1.2% Latino/a, .5% Other) participated in partial fulfillment of a psychology research requirement. Participants completed measures of meritocracy beliefs, self-esteem, perceived control, group identification[2], and public regard for their gender group in a large classroom setting during the psychology department's prescreening sessions. The response scale for all measures was 0(*strongly disagree*) to 6(*strongly agree*).

Measures

Meritocracy Beliefs—We assessed meritocracy beliefs with 3 measures used in previous research (e.g. O'Brien & Major, 2005): the belief in a just world for others (BJW, α = .85; 8 items, e.g. "I feel that people earn the punishments and rewards they get"; Rubin & Peplau, 1975), the protestant work ethic (PWE, α = .60; 4 items, e.g. "If people work hard they almost always get what they want."; Levin, Sidanius, Rabinowitz, & Federico, 1998), and the belief in status permeability (PERM, α = .85; 4 items, e.g. "America is an open society where all individuals can achieve higher status."; Levin, et al.,1998). These scales were highly correlated with each other and a composite average of all 16 items is highly reliable (α = .84).

Self-Esteem—We used Rosenberg's (1965) global self-esteem scale (10 items; e.g. " I feel that I am a person of worth, at least on an equal basis with others."; α=.89).

Perceived Control—Participants answered 7 questions assessing perceived control over life outcomes (e.g. "What happens to me in the future mostly depends on me"; Pearlin & Schooler, 1978; α=.78).

Public Regard—We asked participants the extent to which their own gender group was viewed as worthy by others to assess the extent to which women perceived their group as lower in status than men (4 items; "In general others respect women/men as a group"; Luhtanen & Crocker, 1992; α=.60).

Results

Preliminary Analyses

Correlations among the variables and descriptive statistics by gender are presented in Table 1. Consistent with expectations, women perceived their group to be lower in public regard (M=3.63; SD=.89) than did men (M=4.17; SD=.92), $t(502) = -6.72$, $p<.001$.

Are meritocracy beliefs beneficial for both men and women?—As a first step, and to replicate the analysis strategy used by O'Brien and Major (2005), we used hierarchical regression (Step 1: Meritocracy Beliefs (average of all 3 scales, centered at the mean) and Status (0=Men), Step 2: Meritocracy X Status interaction) to predict self-esteem. Meritocracy beliefs were positively related to self-esteem (β=.24, $p<.01$) and this relationship did not vary by gender (Interaction: β = -.03; ΔR^2=.00, $p>.70$; β_{women}=.20, $p<.01$; β_{men}=.29, $p<.01$). The same effects are observed when examining each meritocracy belief separately (all ΔR^2 =.00, $ps > .40$). In these data, endorsing the belief in meritocracy (as a composite or individual scale) was not significantly more beneficial to the self-esteem of men or women[3].

[2]We examined group identification using the importance subscale from Luhtanen and Crocker (1992; i.e., McCoy & Major, 2003) as both a moderator (all $p's>.22$) and as a covariate (details on all footnoted analyses available from the first author). We report the more parsimonious models without group identification as the effects reported were unchanged by either analysis.

[3]We replicate the finding that meritocracy is positively associated with global self-esteem for both high and low status groups in Study 2. We conducted the same moderated regression analysis (Step 1: meritocracy beliefs composite centered at the mean, Status (0 = low status; Step 2: Interaction) predicting global self-esteem. The main effect of meritocracy was always positive and significant, and the interaction was not significant whether low status was operationalized as low objective SES, Non-White, or low subjective SES (Interactions: βs < | .07 |, $\Delta R^2 < .002$, Fs < 1.21, $ps > .27$). We do not find that the belief in meritocracy is more beneficial for the global self-esteem of high or low status groups. Details on footnoted analyses are available from the first author.

Does Perceived Control Mediate the Beneficial Effect of Meritocracy Beliefs?

Analysis strategy—We elected to use structural equation modeling with maximum likelihood estimation and bootstrapped estimation (5000 samples) of the indirect effect to test our mediation hypotheses. While we could test these hypotheses in regression[4], the use of latent variable modeling provides the benefit of reducing the influence of measurement error and is consistent with the approach taken in Study 2. There are multiple methods of converting our path model (which contains single measurements of self-esteem and perceived control) into a latent variable model (e.g. disaggregating each scale item, creating a latent variable with the error fixed to $(1-\alpha)*s^2$, creating parcels from subsets of items based on factor analysis or domain representation). Following recommendations and data from Coffman and MacCallum (2005), we elected to create parcels (of no less than 3 items) to form our latent variables of self-esteem (3 parcels: SE1, SE2, SE3) and perceived control (2 parcels: PC1, PC2).

We first conducted a multigroup analysis to test whether our measurement models were equivalent for men and women, and to test whether the structural paths differed by gender. We used criteria outlined by Hu and Bentler (1999) to evaluate good model fit: a nonsignificant chi-square, a root-mean-square error of approximation (RMSEA) value of .05 or lower, a standardized root mean square residual (SRMR) of .08 or lower, and a comparative fit index (CFI) greater than .95. We used the Akaike information criterion (AIC) for model comparison, subtracting our hypothesized model AIC from comparison models, such that positive ΔAIC indicates better model fit.

Multigroup analysis—The model fit the data collapsed across gender well (χ^2 (17) =16.6, p=.48; *CFI*=1, *RMSEA*=.00 (*CI*: .00-.04); *SRMR*=.02; *AIC*=54.59) and was an improvement over the saturated (ΔAIC=17.41) and independence models (ΔAIC= 1754.70). The model accounted for 37% of the variance in self-esteem (see top panel Figure 1). The measurement model was found to be invariant across groups (χ^2 (5)=4.65, p=.46) which is important for making model comparisons. It was also not the case that the relationships between meritocracy, self-esteem and perceived control differed by gender as the structural paths were also invariant (χ^2 (3)=2.85, p=.42) supporting our hypothesis that meritocracy poses benefits for both high and low status groups.

Women—The model fit the data well and accounted for 39% of the variance in self-esteem (χ^2 (17)=18.22, p=.38; *CFI*=.99, *RMSEA*=.02 (CI: .00-.06); *SRMR*=.03; *AIC*=56.23; Model comparison: $\Delta AIC_{\text{saturated}}$=15.76; $\Delta AIC_{\text{independence}}$=890.76). The total effect of meritocracy on self-esteem was positive (β = .26, p < .01). Perceived control mediated the positive relationship between meritocracy beliefs and self-esteem (indirect effect point estimate =.21; Bc 95% CI: .12-.37; see middle panel Figure 1). With perceived control in the model, meritocracy beliefs were unassociated with self-esteem (β = .05, p =.49). In fact, we tested an alternative model omitting this direct path and it did not adversely affect model fit (χ^2(18)=18.70, p =.41; *CFI* =.99; *RMSEA*=.01 (CI: .00-.06); *SRMR*=.03; *AIC*=54.70; Model comparison: χ^2_{diff} (1) = .48, p = .49, ΔAIC=−1.52). For women, the more parsimonious model *without* a direct path from meritocracy to self-esteem is preferred.

Men—The model also fit the data well for men accounting for 33% of the variance in self-esteem (χ^2 (17)=12.59, p=.76; *CFI*=1, *RMSEA*=.00 (CI: .00-.04); *SRMR*=.03; *AIC*=50.59;

[4]We find the same effects when the data are analyzed with observed variables (i.e. the means for: the meritocracy composite, perceived control, and self-esteem) using methods described by Preacher and Hayes (2008). For women, the indirect effect was significant (point estimate = .14, BC 95% CI: .05-.24) and the direct effect was not (β = .07). For men, the direct effect remained significant (β = .21, p <.05) in the presence of the significant indirect effect (point estimate = .12; BC 95% CI: 05-.20).

$\Delta AIC_{saturated}$=21.41; $\Delta AIC_{independence}$=801.20). The total effect of meritocracy on self-esteem was positive ($\beta = .37$, $p < .01$;see bottom panel, Figure 1). Although the indirect effect was significant indicating mediation by perceived control (point estimate =.18; Bc 95% CI: .09-.30), meritocracy remained a significant positive predictor of men's self-esteem as evidenced by the direct effect ($\beta = .19$, $p < .05$). In contrast to the findings for women, the model fits better *with* the direct path than without (model comparison: χ^2_{diff} (1) = −4.95, $p < .05$, ΔAIC=3.28). Thus, although the multigroup analysis demonstrates that the direct path between meritocracy beliefs and self esteem does not differ significantly by gender ($\beta_{men} = .19$ vs. $\beta_{women} = .05$), our model fit analyses suggest the best fitting model for women omits the direct path, whereas the model for men retains it.

Discussion

As predicted, we found that meritocracy beliefs were positively associated with self-esteem for members of a high and a low status group. Further, for both men and women, perceived control significantly mediated this effect. For women, no significant direct benefit of endorsing meritocracy remained after controlling for the indirect effect of perceived control. In fact, constraining this direct path to 0 (no association at all between meritocracy and self-esteem) did not harm model fit. While there is always the possibility of suppressor relationships and measurement error, this lack of a direct benefit of endorsing meritocracy is consistent with the perspective that there are likely limited benefits to self-esteem from endorsing system justifying beliefs for members of low status groups (e.g. Jost & Hunyady, 2002).

In contrast, higher status groups benefit in multiple ways from endorsement of beliefs that justify their position of relative advantage in the status hierarchy (e.g. Jost & Thompson, 2000). Consistent with this perspective our higher status group, men, retained a direct positive benefit for self-esteem from meritocracy. Constraining this direct relationship to 0 significantly impaired model fit suggesting that variance in the positive relationship between meritocracy beliefs and self-esteem remains to be explained by variables not assessed in our model. Among many possibilities, this remaining variance could possibly be explained by hubristic pride (Tracy & Robins, 2007), or feelings of worth derived from merely being relatively high status. In the current research, we focused on demonstrating a significant indirect effect of meritocracy on self-esteem due to the association with perceived control. Future research could seek to identify additional mediators of the positive association between meritocracy beliefs and the self-esteem of higher status groups, and possible suppressors for the relationship between meritocracy and self-esteem for lower status groups.

These results provide initial evidence for our argument that meritocracy beliefs are beneficial to self-esteem for members of high and low status groups. It is important to note, however, that they are correlational and we cannot infer causal relationships from these data. In addition, the implications of our findings are predicated on the assumption that women are a low status group. While there is widespread evidence of disadvantage by gender in American society, and women in our study did view their group as less respected than men, our sample was predominantly White and college educated. In Study 2, we examined whether our hypothesis would be supported in a more diverse community sample of women.

Study 2

We extend our work in two important ways in Study 2: 1) by using a community sample with varied race and socio-economic status (SES), and 2) by extending our mediation hypothesis to physical health. Physiological stress responses are buffered by endorsement of

BJW (Tomaka & Blascovich, 1994) and perceived control is positively associated with self-reported health among those both high and low in SES (Lachman & Weaver, 1998). Accordingly meritocracy beliefs, due to the association with perceived control, may be beneficial for both self-esteem *and* physical health.

We hypothesized that meritocracy beliefs would be positively associated with self-esteem, health, and control for women. We predicted that perceived control would mediate the relationship between meritocracy beliefs and self-esteem, and the relationship between meritocracy beliefs and health. Finally, we predicted that we would find these same effects even among women relatively lower in SES. We also strengthened our analyses by using multiple markers of self-esteem and health.

Participants and Procedure

Women (*N*=597, Age: *M*=28.39, *SD*=7.09; see Table 2) were recruited from the San Francisco bay area via a variety of methods (e.g. Craigslist posts, community flyers, newspaper advertisements). Participants completed our online questionnaire as a preliminary step in a paid study on women's health. The sample used in the current study had data for all measures.[4] Consent was obtained to use the online responses for research purposes. All measures (except the health scale) used a 1(strongly disagree) to 7 (strongly agree) scale.

Meritocracy Beliefs (BJW, PERM, PWE)—We used the same three measures described in Study 1 (BJW, α=.88; PERM, α=.79; PWE, α=.71) as separate indicators of our latent meritocracy beliefs variable.

Self-Esteem (GSE, PSE, SSE)—We used global self-esteem (see Study 1; GSE; α=.89), and 2 subscales from Heatherton and Polivy's (1991) self-esteem scale: performance ("I feel confident about my abilities"; PSE; α=.84) and social ("I am worried about what other people think of me"; SSE; α=.90) as indicators of our latent self-esteem variable.

Physical Health (PF, GH, PAIN)—Participants reported on their current health status using three subscales from the Short Form (36) Health Survey (SF-36; Ware & Sherbourne, 1992): limitations to physical functioning (10 items; "climbing one flight of stairs"; α=.89; PF), general health (5 items; "My health is excellent"; α=.71; GH), and experience of physical pain (2 items; "How much bodily pain have you had in the last 4 weeks?"; α=.79; PAIN).

Perceived Control (PC1, PC2)—We used the same measure used in Study 1 to create the two indicator parcels for our latent variable of perceived control. We present the average of all 7 items (α = .84) in the correlations and descriptive statistics in Table 3 as the parcels are redundant.

Socio-Economic Status—Participants indicated their level of education on a 7 point scale (1 = some high school, 2 = high school graduate or equivalent, 3 = some college, 4 = junior college or technical college graduate, 5 = college graduate, 6 = master's degree, 7 = doctoral degree) and their household's yearly income (including the income of a spouse or partner).

Following procedures from Adler, Epel, Castellazo, and Ickovics (2000) and Kraus, Piff, and Keltner (2009) we first recoded income to reduce bias due to outliers and approximate a normal distribution (0 = lowest through $15,000, 1 = $15,001 – $25,000, 2 = $25,001 - $35,000, 3 = $35,001 -$50,000, 4 = $50,001 – $75,000, 5 = $75,001 - $100,000, 6 =

$100,001 – highest) and then standardized income and education, and finally averaged them together to create our composite of SES.[5]

Subjective Socio-Economic Status—Participants ranked themselves relative to other members of their community on a ladder with 7 rungs with higher rungs representing increasing levels of income, education and occupational status (MacArthur scale of subjective SES; Adler et al., 2000).

Results

Preliminary Analyses

Creating SES groups—To examine whether the effect of meritocracy beliefs on self-esteem and physical health differed for women relatively lower and higher in SES, we split the file at 0 on our standardized measure of SES[3]. As is clear in Table 2, this approach yielded a lower SES group with a mean education level of some college (*M*=3.71; *SD*=1.08) and an income about $10,000 less than the median income for a woman and roughly half the income of the average 2 person family in the geographic region (2008 census, census.gov; *M*=$30,796.01, *SD*=$22,433.20). The higher SES group had a mean educational level of college graduate (*M*=5.29, *SD*=.80) and an income placing them in the upper middle class (*M*=$78,636.21, *SD*=$47,303.14). Correlations and descriptive statistics among all variables by SES group are presented in Table 3.

Status Perceptions—Participants in the lower SES group perceived themselves to be of lower status (*M*=4.63; *SD*=1.23) relative to their community than did those in the higher SES group (*M*=5.15; *SD*=1.16; $t(589)=-5.29$, $p<.001$).

Race—Contrary to what one might expect, the ratio of white to non-white participants was roughly equivalent in both the higher and lower SES groups (see Table 3). There were no significant race differences (white vs non-white) in levels of education or income (*ps*>.23). Including race as a covariate in the models presented below did not alter the significance or strength of any of the paths in the models. Thus, we present the more parsimonious models below.

Does Perceived Control Mediate the Beneficial Effect of Meritocracy Beliefs?

Analysis strategy—We used structural equation modeling with maximum likelihood estimation to examine our hypothesized model predicting both outcomes (self-esteem and physical health) simultaneously. We used the same fit and model comparison criteria described in Study 1. The measurement model fit the data well and all indicators significantly loaded on their respective latent variables. As with Study 1, we used multigroup analysis to insure that our measurement model was invariant across SES group, and to test whether the structural paths in the model differed by SES group.

Multigroup analysis—The model collapsed across SES group fit the data well (χ^2 (38) =42.68, p=.28; *CFI*=.99, *RMSEA*=.01 (*CI*: .00-.03); *SRMR*=.02; *AIC*=120.68; $\Delta AIC_{saturated}$=33.32; $\Delta AIC_{independence}$= 2322.39) and accounted for 44% of the variance in self-esteem and 18% in health. The total effects of meritocracy on self-esteem (β = .21, p < .

[5]As our rate of missing data was low (no missing data on health; approximately 2% on MB variables, and an additional 5% on the self-esteem variables) we elected to use listwise deletion. As our models fit equivalently well and path estimates remained the same using FIML to estimate data, we felt confident in using listwise deletion. For 100 participants who did not report income we estimated SES solely on education. Results are identical with these participants omitted. 1 participant declined to state both income and education and was dropped from analyses.

001) and health (β = .13, $p < .05$) were positive and significant, as where the indirect effects of perceived control on self-esteem (point estimate =.16; Bc 95% CI: .01-.23) and health (point estimate =.10; Bc 95% CI: .06-.16; see Figure 2). The absence of significant direct effects of meritocracy beliefs on self-esteem (β = .05, $p > .22$) and health (β=.02,$p > .64$) are consistent with our findings for women in Study 1.

An alternative model (health and self-esteem as mediators between meritocracy beliefs and control) did not fit the data as well as our theoretical model (χ^2 (39)=113.99, $p<.001$; *RMSEA*=.06 (*CI*: .05-.07); *CFI*=.96; *AIC*=189.99). A second alternative model (control predicting health and self-esteem with meritocracy as a mediator) fit as well as our proposed model. This may not be surprising as this model is functionally equivalent to the model we initially tested. Consistent with the non significant paths from meritocracy beliefs to the outcome variables in our proposed model, the indirect effect of control on the outcome variables via meritocracy beliefs was not significant for self esteem (point estimate =.01; Bc 95% CI: -.01-.04) or health (point estimate =.006; Bc 95% CI: -.02-.3), indicating that meritocracy beliefs are not a mediator of the effect of control on either outcome variable.

We used multigroup analysis to examine variance in the measurement and structural paths between higher and lower SES women[6]. Importantly, the measurement model was found to be invariant across groups ($\chi^2_{diff}(7)=2.95$, $p=.89$). Surprisingly, the structural paths were found to differ across groups ($\chi^2_{diff}(23)=37.28$, $p<.05$); in particular the direct path between meritocracy beliefs and self-esteem differed significantly by SES group ($Z = 2.68$, $p < .01$).

Lower SES model—The model fit the data well (χ^2 (38)=50.32, $p=.09$; *CFI*=.99, *RMSEA*=.03 (CI: .00-.05); *SRMR*=.03; *AIC*=128.31) and was an improvement over the saturated (Δ*AIC*=25.69) and independence models (Δ*AIC*=1174.29). The model accounted for 49% of the variance in self-esteem and 20% in health. The total effects of meritocracy were positive, but only significant for self-esteem (β = .13, $p < .05$; Health: β = .09, $p = .21$). Perceived control mediated the positive relationship between meritocracy beliefs and self-esteem (indirect effect point estimate =.20; Bc 95% CI: .09-.31) and between meritocracy beliefs and health (indirect effect point estimate =.12; Bc 95% CI: .05-.21; see Figure 3). With perceived control in the model, meritocracy beliefs were unassociated with self-esteem (β = -.05, $p = .35$) and health (β = −.03, $p = .67$).

For lower SES women, the belief in meritocracy may only be beneficial to self-esteem and health through the association with perceived control. In fact, consistent with Study 1, eliminating the direct paths from meritocracy beliefs to self-esteem and health does not adversely affect model fit (χ^2_{diff} (2) = 3.83, $p = .15$, Δ*AIC*=.15; χ^2 (40)=54.15, $p = .07$; *CFI* =.99; *RMSEA*=.04 (CI: .00-.05); *SRMR*=.03; *AIC*=128.15). Thus, this more parsimonious model without these direct paths is preferred for the lower SES group.

Higher SES Model—The model fit the data well (χ^2 (38)=47.66, $p=.14$; *CFI*=.99, *RMSEA*=.03 (*CI*: .00-.05); *SRMR*=.04; *AIC*=125.66) and was an improvement over the saturated (Δ*AIC*=28.34) and independence models (Δ*AIC*=1143.77). The model accounted for 41% of the variance in self-esteem and 18% in health. The total effect of meritocracy beliefs on self-esteem (β = .30, $p < .001$) and health (β = .18, $p < .05$) were positive.

[6]We also conducted the multigroup analysis comparing those high and low in subjective SES. This analysis yielded results comparable to those reported here with the objective SES split (all indirect effects significant; only direct effect on self-esteem significant for high status) with two exceptions. The ratio of White to Non-White participants in each group were now different, and the sample sizes were quite unequal due to many participants falling at the median (High subjective SES: 62% White, $N = 403$; Low subjective SES: 52% White, $N = 188$).

Consistent with the model for lower SES women, perceived control mediated the effect of meritocracy beliefs on health (indirect effect point estimate =.09; Bc 95% CI: .03-.16; see Figure 4) and there was no direct benefit of meritocracy beliefs for health (β=.10, $p = .20$). Surprisingly, the effects for self-esteem paralleled those observed for *men* in Study 1. While the indirect effect of meritocracy beliefs on self-esteem was significant (indirect effect point estimate =.13; Bc 95% CI: .05-.22) the significance of the direct effect of meritocracy beliefs on self-esteem (β = .17, $p < .01$) could suggest additional benefits of endorsing meritocracy beliefs for higher SES women. In fact, removing the direct path from meritocracy beliefs to self-esteem significantly reduces model fit ($\chi^2_{diff}(1) = 8.23$, $p < .01$; $\Delta AIC = -6.32$), while removing the direct path to health does not ($\chi^2_{diff}(1) = -1.54$, $p = .21$; $\Delta AIC = .38$). As a result, for higher SES women the model omitting the direct path from meritocracy beliefs to health and retaining the direct path from meritocracy to self-esteem is preferred (χ^2 (40)=54.15, p=.07; *CFI* =.99; *RMSEA*=.04 (CI: .00-.05); *SRMR*=.03; *AIC*=128.15).

Discussion

In Study 2, we tested our hypothesis that meritocracy beliefs are beneficial for self-esteem and health in a diverse community sample of women. Replicating our findings from Study 1, we found that the belief in meritocracy was positively associated with self-esteem and physical health for women (total effects, collapsed across SES). Further, we found some evidence that the benefits of endorsing meritocracy may be limited to the association with perceived control, particularly for women lower in SES. Once the indirect effect of perceived control was accounted for, no direct benefit of endorsing meritocracy was observed for health or self-esteem for women lower in SES (although we cannot rule out suppressor relationships and measurement error). In fact, the model constraining these direct paths to 0 was preferred over a model that included them. Yet, through the association with perceived control, we observed a positive relationship between the belief in meritocracy and both self-esteem and physical health. While there are many costs to endorsing beliefs that legitimize relative disadvantage for members of low status groups, the belief in meritocracy may provide a benefit to self-esteem through this association with perceived control. This benefit may make meritocracy a particularly "plausible and attractive" legitimizing ideology for members of low status groups (Eagleton, 1991, p. 15). Ironically, for lower status groups, this "benefit" may facilitate both the endorsement of the belief in meritocracy, and defense of a social system in which they are relatively disadvantaged (e.g. Jost, Pelham, Sheldon, & Sullivan, 2003).

It is important to note, however, that the women in Study 2 were only relatively low in SES. Although our demographic information supports that our sample in Study 2 was diverse, our internet survey required access to a networked computer. Due to our urban location this was less of a barrier than in more rural settings, however, it likely limits our sample. For example, while the level of income and education in our lower SES group is low for the geographic area, it is certainly not poverty level. In fact, our lower SES group in Study 2 reported levels of perceived status on par with levels reported among a separate sample of women taken from the same population as Study 1. Although we did not have SES on the women in Study 1, women at the same institution rated their subjective SES at a level consistent with the *low* SES sample in Study 2 (undergraduate women: N=454, M=4.55, SD=1.72; low status women Study 2: M= 4.63, SD=1.23)[8]. Contrary to our intentions, we

[8]Inclusion of SES as a covariate did not alter the reported effects for the Race multigroup analysis. The Non White group did perceive themselves as significantly lower in status (M=4.72, SD=1.25) than the White group (M=5.02, SD=1.19, $t(585)$=2.84, p<.01). It could be argued that Asian Americans are not a low status racial minority. The results reported here hold whether or not Asian-Americans are included in Non-White group.

may have actually extended our research to *higher* rather than *lower* SES women in Study 2. This may help explain why the models for the women in Study 1 and the models for women overall and lower SES women in Study 2 were all consistent.

Surprisingly, women higher in SES, like men in Study 1, maintained a direct benefit for self-esteem from endorsing the belief in meritocracy, as well as, an indirect benefit via perceived control. For higher SES women, constraining the path from meritocracy to self-esteem significantly decreased model fit suggesting that variance remains in the positive association between meritocracy beliefs and self-esteem that is not explained by the association with perceived control. This effect was not hypothesized, nor was it replicated with physical health. It remains an interesting question for future research to consider the role of socio-economic status as a possible moderator of the effects of meritocracy beliefs on self-esteem among low social status groups that are often studied (e.g. minority groups, women).

Of note, our strategy for creating SES groups yielded equal representation of non-white women in both the higher and lower SES groups. This allowed us to examine SES effects relatively independent from those of race. Being a person of color in the United States is another possible marker of low status. Accordingly, we pursued an alternative analysis testing our model separately for White and Non-White respondents.[9] Consistent with our hypotheses, 1) the measurement models were invariant across race, 2) the models fit the data well for both groups (White: N=348; (χ^2(38)=42.72, p=.28; *CFI*=.99, *RMSEA*=.02 (CI: .00, .04); *SRMR*=.03; *AIC*=120.71); Non-White: N=245; (χ^2(38)=41.13, p=.34; *CFI*=.99, *RMSEA*=.02 (*CI*: .00, .05); *SRMR*=.03; *AIC*=119.13), and 3) meritocracy exerted a significant and positive total effect on self-esteem (White: β=.21, p < .001; Non-White: β=.18; p <.05) and a marginal positive total effect on health (White: β=.12, p=.07; Non-White: β=.16, p=.06). We also observed significant indirect effects on self-esteem (White: point estimate =.14, Bc 95% CI: .05, .22; Non-White: point estimate =.22, Bc 95% CI: .12, .33) and health (White: point estimate =.08, Bc 95% CI: .03, .15; Non-White: point estimate =.17, Bc 95% CI: .09-.28) via perceived control and no direct relationship between meritocracy beliefs and self-esteem or health for Non-White women (self-esteem: β=-.04, p=.55; health: β= -.01, p=.88). Thus, whether we conceptualized low status as “women”, “lower SES women”, or “women of color”, we found a positive relationship between endorsing the belief in meritocracy and self-esteem that was well accounted for by perceived control.

These data may help clarify when, and for whom, system justifying beliefs will be positively associated with self-esteem. First, our data suggest that in the United States, system justifying beliefs that foster perceptions of control (perhaps those that suggest advancement is possible) may be positively associated with self-esteem for both higher and lower status groups. Some legitimizing beliefs that have demonstrated negative associations with self-esteem among low status groups may not afford this perception (e.g. status legitimacy: O’Brien & Major, 2005; opposition to equality: Jost & Thompson, 2000; general system justification: Rankin, Jost, & Wakslak, 2009). For example, in contrast to our findings with meritocracy beliefs, Rankin and colleagues (2009) found that endorsement of general system justification (e.g. 8 items including: “In general, I find society to be fair”; “Our society is getting worse every year”, reverse scored) was negatively associated with both perceived control and performance self-esteem among low income African Americans (N = 27, nationally representative sampling strategy). Direct comparison to our findings is slightly complicated by appropriate differences in analysis strategy across the two studies (effects reported in Rankin et al., used a simultaneous regression with other predictors including religiosity). Thus, it remains a question for future research to examine whether the benefits of endorsing legitimizing beliefs for the self-esteem of low status groups are limited to those beliefs, like the belief in meritocracy, that are positively associated with perceived control.

Second, evidence that the system is not merit based, garnered through exposure or repeated experience, may undermine perceived control and the benefits of meritocracy beliefs for low status groups. Consistent with this idea, endorsing meritocracy is not beneficial to self-esteem among members of low status groups who read about pervasive prejudice toward their group (Major, Kaiser, O'Brien, & McCoy, 2007) or report repeated experience with discrimination (Foster, Sloto, & Ruby, 2006). Among those very low in status, perceptions of control over future outcomes are likely to also be low, and the costs associated with endorsing meritocracy may outweigh the potential benefits. This may be true of the very low income African American participants in Rankin et al. (2009), all of whom had incomes below $30,000 a year, with over a quarter of the sample reporting income between $5,000 and $9,000 a year. Finally, perceived control may be undermined by a lifetime of experience and a failure to advance. It may be the case that the beneficial effects observed here are limited to early adulthood when the "American Dream" still seems attainable.

General Discussion

It may be no mistake that political figures in the U.S. have emphasized America's belief in meritocracy in an effort to convince members of low status groups to vote seemingly against their own interests (i.e. against social "safety net" programs; Jost & Hunyady, 2005). Governor Mitch Daniels in the Republican response to the President's 2012 State of the Union address stated, "We do not accept that ours will ever be a nation of haves and have nots; we must always be a nation of haves and soon to haves" (Daniels, 2012). Florida Senator Marco Rubio, in a December, 2011 Senate speech, remarked that the poor do not get jealous when driving through rich neighborhoods, rather they think: "Congratulations on your nice house. Guess what? We will be joining you soon" (Rubio, 2011). Not all status legitimizing beliefs may serve this function, but we propose that endorsement of meritocracy beliefs encourage "have nots" to view themselves as "soon to haves." Through the association with perceived control, the belief in meritocracy may foster the perception that members of low status groups will be "joining" high status groups "soon." Because meritocracy beliefs are positively associated with both the acceptance of relative disadvantage *and* self-esteem, efforts to reduce inequality may face a tremendous obstacle. How can one fight the American Dream?

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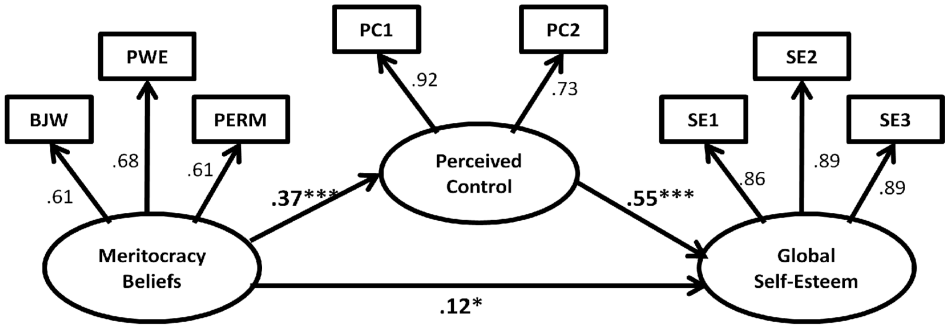
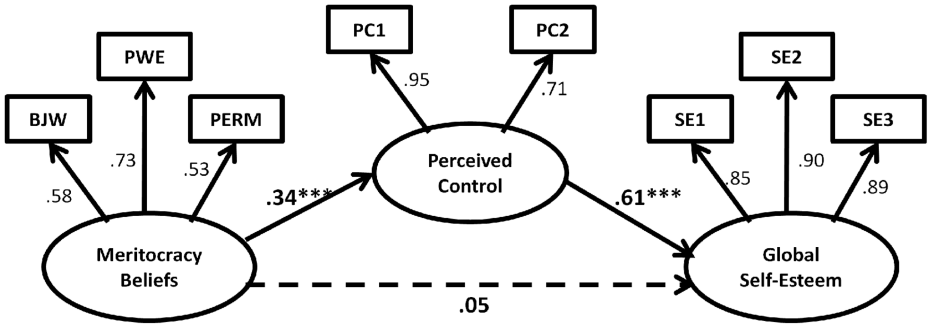
a) Overall



b) Women



c) Men

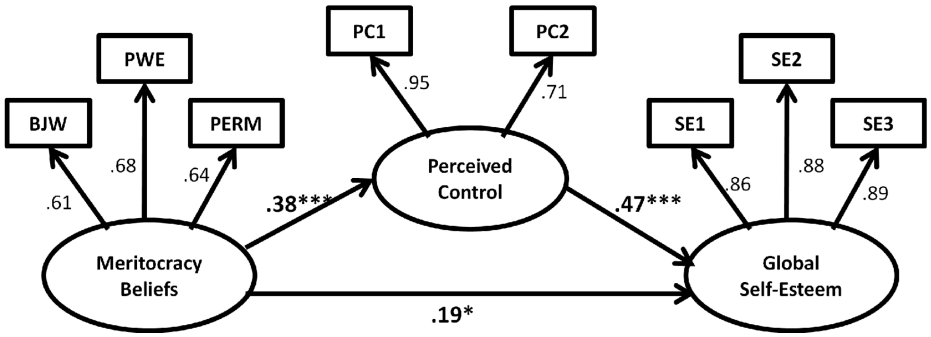


Figure 1.
Study 1: Perceived Control Mediates Effect of Belief in Meritocracy on Self-Esteem.

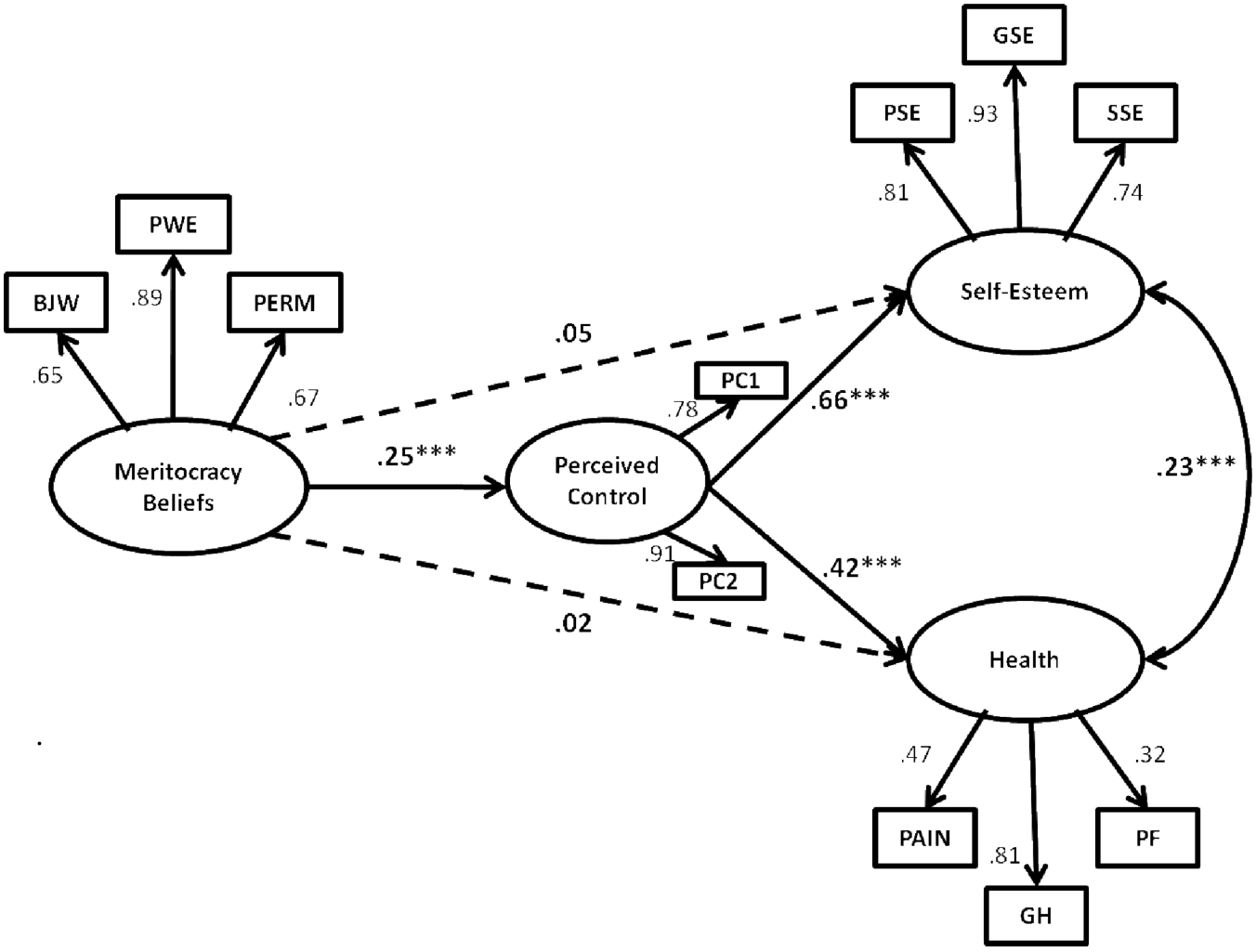


Figure 2.

Study 2: Perceived Control Mediates Effect of Belief in Meritocracy for Women. *Note:* *p<.05, **p<.01, ***p<.001. Standardized regression weights presented. All indicators loaded significantly on their respective factors. Model fits better without the dashed line.

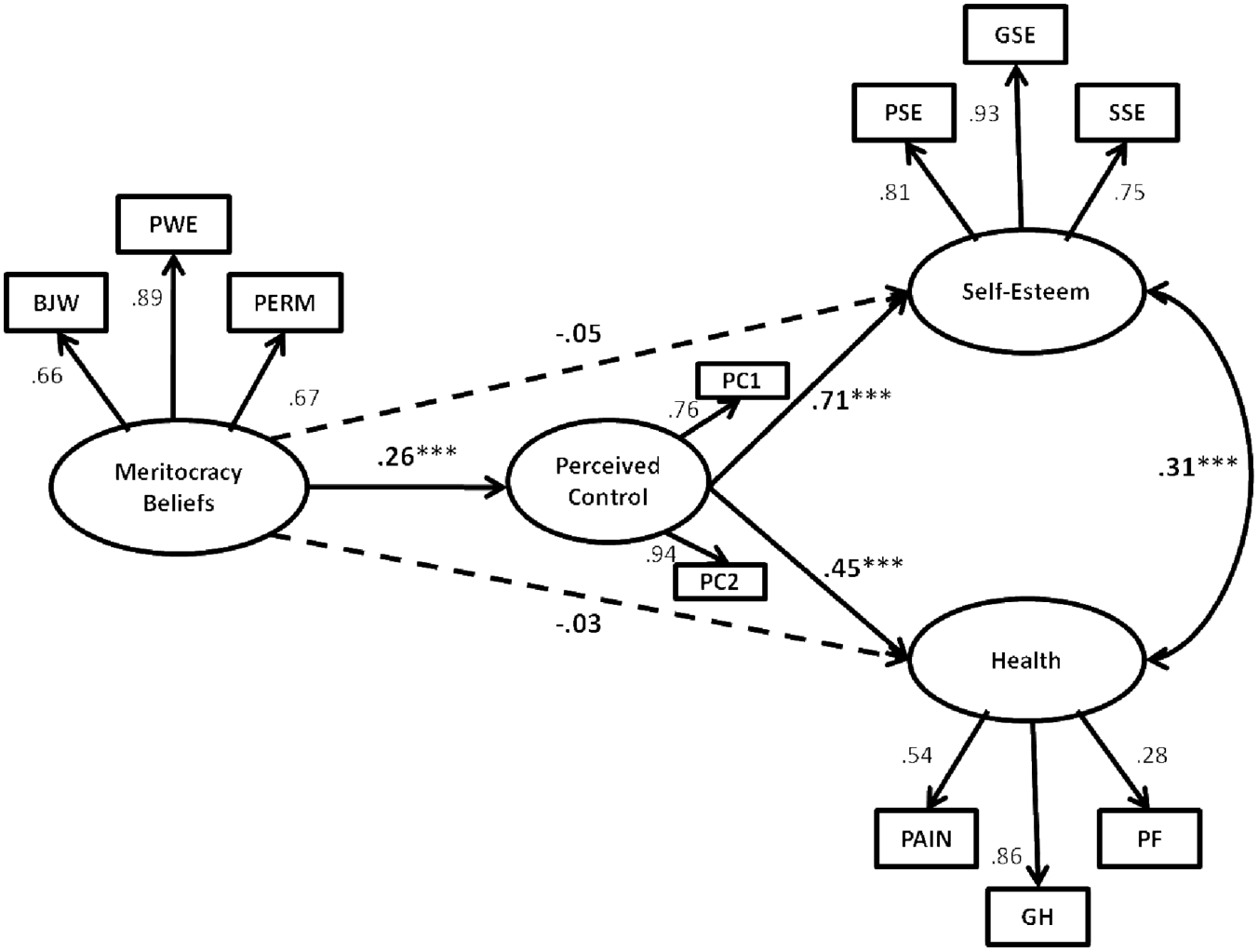


Figure 3.
Study 2: Perceived Control Mediates Effect of Belief in Meritocracy for Lower SES Women.
Note: *p<.05, **p<.01, ***p<.001. Standardized regression weights presented. All indicators loaded significantly on their respective factors. Model fits better without the dashed line.

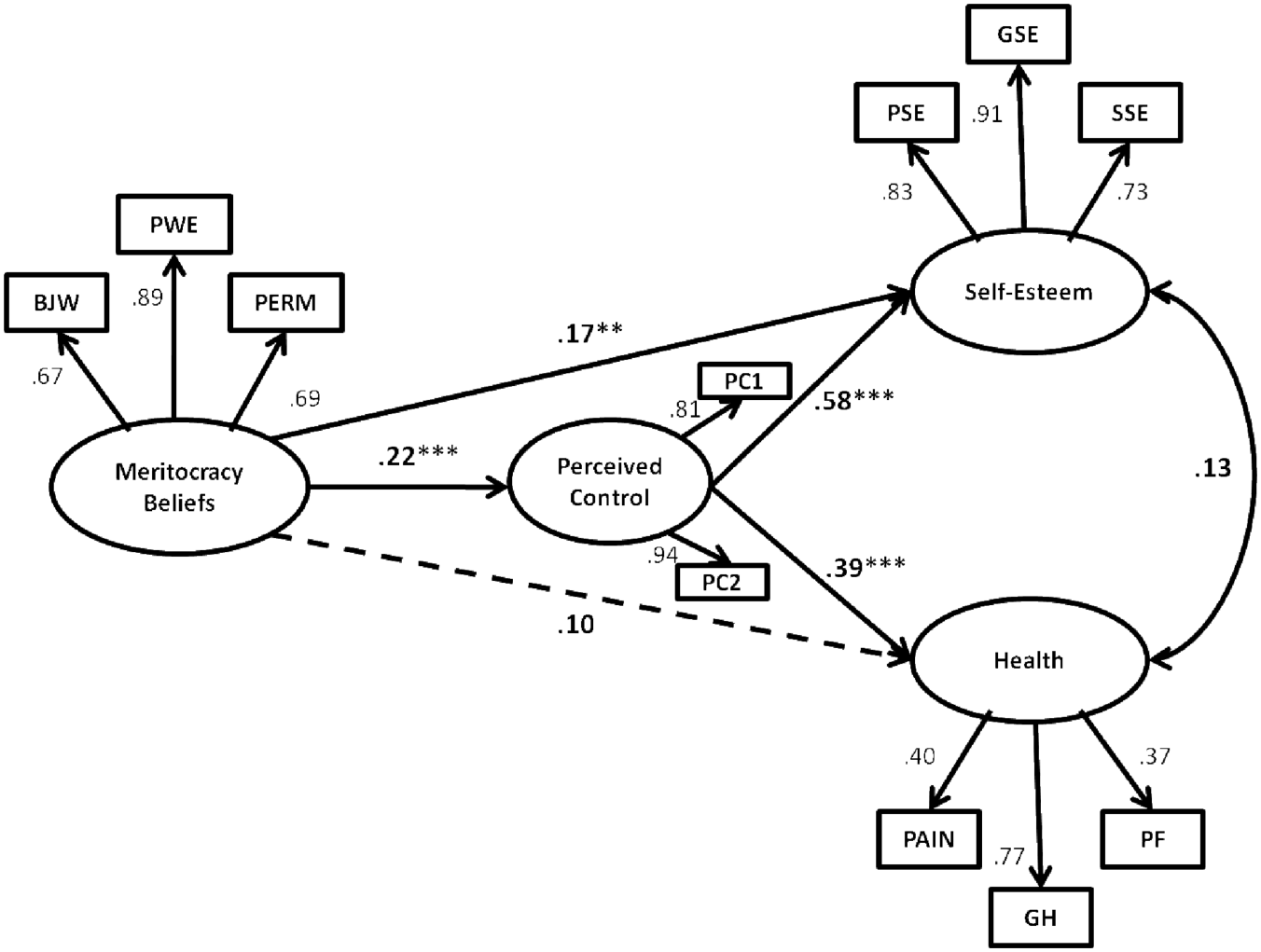


Figure 4.

Study 2: Perceived Control Mediates Effect of Belief in Meritocracy for Higher SES Women.

Note: *p<.05, **p<.01, ***p<.001. Standardized regression weights presented. All indicators loaded significantly on their respective factors. Model fits better without the dashed line.

Table 1

Study 1: Correlations and Means for Men and Women

	1	2	3	4	5	6
1. Perceived Control	–	.48**	.16*	.27**	.25**	.31**
2. Global Self-Esteem	.54**	–	.23**	.26**	.19**	.27**
3. Belief in a Just World	.12*	.16**	–	.38**	.43**	.14*
4. Status Permeability	.14*	.13*	.32**	–	.42**	.19**
5. Protestant Work Ethic	.25**	.16**	.42**	.38**	–	.05
6. Group Public Regard	.31**	.28**	.23**	.28**	.27**	–
Men Mean(SD)	4.51_a (.91)	5.05_a (.84)	2.84_a (.99)	3.27_a (1.16)	2.91_a (.91)	4.17_a (.92)
Women Mean (SD)	4.32_b (.92)	4.71_b (.92)	2.69_a (.88)	2.96_b (.96)	2.94_a (.87)	3.63_b (.89)

Note:

* p<.05

** p<.01

Correlations presented above the diagonal are for men and those below the diagonal are for women. Means containing different subscripts within the same column are significantly different (p <.05) from one another.

Table 2

Study 2: Demographics by SES group

	Lower SES (N=294)	**Higher SES (N=303)**
Race		
European American	59.9%	56.8%
Asian	13.6%	22.1%
Latino	7.5%	5.9%
African American	8.2%	4.6%
Other	9.8%	10.3%
Declined to Identify	1.0%	.3%
Age		
Mean (SD)	27.02 (7.19)	29.72 (6.75)
Education		
Mean (SD)	3.71 (1.07)	5.29 (.81)
Income	N=258	N=227
Mean (SD)	$30,796.01 ($22,433.20)	$78,366.21 ($47,303.14)

Table 3

Study 2: Correlations, Standard Deviation and Means for Observed Variables by SES Group, Study 2

	1	2	3	4	5	6	7	8	9	10	11
1. Perceived Control	–	.54**	.37**	.49**	.31**	.18**	.07	.08	.14*	.20**	.19**
2. Global Self-Esteem	.61**	–	.67**	.75**	.26**	.14*	.05	.22**	.17**	.20**	.22**
3. Social Self-Esteem	.46**	.70**	–	.61**	.23**	.18**	.01	.23**	.21**	.24**	.20**
4. Performance Self-Esteem	.53**	.75**	.61**	–	.24**	.14*	.04	.20**	.16**	.23**	.25**
5. General Health	.34**	.42**	.32**	.33**	–	.29**	.29**	.14*	.06	.11	.10
6. Physical Pain	.19**	.24**	.22**	.26**	.46**	–	.20**	.10	−.02	.06	.11
7. Physical Functioning	.09	.09	.05	.10	.24**	.20**	–	.15**	.07	.09	.11
8. Status Permeability	.17**	.10	.05	.07	−.06	.02	−.03	–	.45**	.61**	.04
9. Belief in a Just World	.13*	.13*	.04	.09	.16**	.14*	.04	.45**	–	.60**	.15**
10. Protestant Work Ethic	.24**	.13*	.05	.10**	.07	.01	−.01	.59**	.58**	–	.07
11. Subjective Status	.25**	.30**	.17**	.31**	.08	.07	−.001	.004	.07	.02	–
Mean(SD) Lower SES	5.42_a (1.01)	4.90_a (1.02)	4.26_a (1.43)	5.23_a (1.04)	19.09_a (3.14)	9.58_a (1.64)	28.79_a (2.50)	3.26_a (1.22)	3.19_a (.96)	3.30_a (.98)	4.63_a (1.24)
Mean(SD) Higher SES	5.42_a (1.03)	4.87_a (1.02)	4.14_a (1.34)	5.34_a (1.01)	19.27_a (2.86)	9.46_a (1.55)	28.91_a (2.00)	3.45_b (1.16)	3.09_a (1.06)	3.42_a (1.03)	5.15_b (1.16)

Note: Correlations presented above the diagonal are for Higher SES women and those below the diagonal are for Lower SES women. Means containing different subscripts within the same column are significantly different from one another.

*p<.05

**p<.01