Special issue article

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

SHANNON K. MCCOY1*, JOSEPH D. WELLMAN1, BRANDON COSLEY2, LAURA SASLOW3 AND ELISSA EPEL4

1Department of Psychology, University of Maine, USA; 2Department of Psychology, University of South Carolina Beaufort, USA; 3University of California, San Francisco, USA

Abstract

Consensually held ideologies may serve as the cultural “glue” that justifies hierarchical status differences in society. 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 USA 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 two studies, among women, lower socioeconomic status 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, such as the belief in meritocracy, emphasize the perception of control over future outcomes. Copyright © 2013 John Wiley & Sons, Ltd.

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?

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, reinfesting 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”.

The goals of the current work are as follows: (i) to provide evidence that endorsement of a specific system justifying ideology in the USA, the belief in meritocracy, benefits the self-esteem of both high and low status groups and (ii) to 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 “dominant ideology” (Kleugel & Smith, 1986) in the USA revolves around the belief in meritocracy, that status differences are merit based. In the USA, 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., Ledgerwood, Mandisodza, Jost, & Pohl, 2011; McCoy & Major, 2007; Son Hing et al., 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 US 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.

*Correspondence to: Shannon K. McCoy, Department of Psychology, University of Maine, Orono, ME 04469-5742, USA.
E-mail: shannon.mccoy@umit.maine.edu


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groups (e.g., Jost et al., 2004). The more members of high status
groups endorse meritocracy beliefs the more legitimate their ad-
vantage, the more meritorious their group, and the more person-
ally 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 associa-
tions between meritocracy beliefs and well-being for high status
groups (e.g., Jost & Thompson, 2000; O’Brien & Major, 2005;
Waksłak, Jost, Tyler, & Chen, 2007).

The more novel proposition, however, is that meritocracy
beliefs are protective of self-esteem even for those who are disad
avantaged 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 legitimate the status
hierarchy do lead members of low status groups to blame
themselves (and their group) for their disadvantage. For exam-
ple, the higher women are in BJW, the more they perceive their
own low job status as reasonable (Hafer & Olson, 1993). 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, 1954/1979; 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, & Waksłak,
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 nonoverweight
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 & Tsarfaty, 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,
derendorsement of stereotypes, and 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 per-
ception 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, 2000; Lind & Tyler, 1988). In fact, per-
ceptions 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 sta-
tus is associated with higher life satisfaction for both men and
women (Napier, Thorsisdottir, & Jost, 2010).

Further, taking personal responsibility for negative outcomes
in one’s life has been shown to be positively associated with psy-
chological well-being because it preserves control over future out-
comes (Janoff-Bulman & Lang-Gunn, 1988; Tennen & Affleck,
1990). For example, the more individuals low in economic suc-
cess locate the responsibility for economic outcomes internally,
the more satisfied they report being (e.g., Kleugel & Smith,
1986; For these reasons, meritocracy beliefs may provide an indi-
rect benefit to self-esteem by encouraging the perception that fu-
ture 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, such as
meritocracy beliefs, function in part to reduce threat associated
with uncertainty by increasing perceptions of control (e.g.,
Greenberg, Pyszczynski, & Solomon, 1986; Jost et al., 2004;
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 et al., 1986). Further, the compensatory control
model (i.e., Kay, Whitson, Gaucher, & Galinsky, 2009) sug-
ests 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 meritoc-
try 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 socioeconomic status (SES). 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 I**

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. On the basis of 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 \((N = 508, 52.6\% \text{ women}, M_{age} = 19.44, SD = 2.73, \text{ race: } 91.3\% \text{ White students}, 2.4\% \text{ Native American students}, 1.8\% \text{ mixed Race students}, 1.6\% \text{ Asian students}, 1.2\% \text{ Black students}, 1.2\% \text{ Latino/a students}, 0.5\% \text{ Other})\) participated in partial fulfillment of a psychology research requirement. Participants completed measures of meritocracy beliefs, self-esteem, perceived control, group identification, 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 three measures used in previous research (e.g., O’Brien & Major, 2005): the belief in a just world for others (BJW, \(z = .85\); eight items, e.g., “I feel that people earn the punishments and rewards they get”; Rubin & Peplau, 1975), the Protestant work ethic (PWE, \(z = .60\); four 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, \(z = .85\); four items, e.g., “America is an open society where all individuals can achieve higher status.”; Levin et al., 1998).

**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.”; \(z = .89\)).

**Perceived Control**

Participants answered seven questions assessing perceived control over life outcomes (e.g., “What happens to me in the future mostly depends on me”; Pearlin & Schooler, 1978; \(z = .78\)).

**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 (four items; “In general others respect women/men as a group”; Luhtanen & Crocker, 1992; \(z = .60\)).

**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 three scales, \(z = .84\), centered at the mean) and Status \((0 = \text{Men})\), Step 2: Meritocracy X Status interaction) to predict self-esteem. Meritocracy beliefs were positively related to self-esteem \((\beta = .25, p < .01)\) and this relationship did not vary by gender (Interaction: \(\beta = -.03\); \(\Delta R^2 = .00, p > .70\); \(\beta_{\text{women}} = .20, p < .01; \beta_{\text{men}} = .29, p < .01\)). The same effects are observed when examining each meritocracy belief separately (all \(\Delta R^2 = .00, ps > .40\)). 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.
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,3 the use of latent variable modeling provides the benefits 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 – x)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 three items) to form our latent variables of self-esteem (three parcels: SE1, SE2, SE3) and perceived control (two 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 0.05 or lower, a standardized root mean square residual (SRMR) of 0.08 or lower, and a comparative fit index (CFI) greater than 0.95. 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 ($\chi^2(17) = 16.60, p = .48; CFI = 1, RMSEA = 0.00 (CI: 0.00, 0.04); SRMR = 0.02; AIC = 54.59$) and was an improvement over the saturated ($\Delta AIC = 17.41$) and independence models ($\Delta AIC = 1754.70$). 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 ($\chi^2(5) = 4.65, p = .46$), 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 ($\chi^2(3) = 2.85, p = .42$) 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 ($\chi^2(17) = 18.22, p = .38; CFI = 0.99, RMSEA = 0.02 (CI: 0.00, 0.06); SRMR = 0.03; AIC = 56.23$; Model comparison: $\Delta AIC_{saturated} = 15.76; \Delta AIC_{independence} = 890.76$). The total effect of meritocracy on self-esteem was positive ($\beta = .26, p < .01$). Perceived control mediated the positive relationship between meritocracy beliefs and self-esteem (indirect effect point estimate = 0.21; BC 95% CI: 0.12, 0.37; see middle panel Figure 1). With perceived control in the model, meritocracy beliefs were unassociated with self-esteem ($\beta = .05, p = .49$). In fact, we tested an alternative model omitting this direct path and it did not adversely affect model fit ($\chi^2(18) = 18.70, p = .41; CFI = 0.99; RMSEA = 0.01 (CI: 0.00, 0.06); SRMR = 0.03; AIC = 54.70$; Model comparison: $\chi^2_{diff}(1) = 0.48, p = .49; \Delta AIC = -1.52$). 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 ($\chi^2(17) = 12.59, p = .76; CFI = 1, RMSEA = 0.00 (CI: 0.00, 0.04); SRMR = 0.03; AIC = 50.59; $\Delta AIC_{saturated} = 21.41; \Delta AIC_{independence} = 801.20$). The total effect of meritocracy on self-esteem was positive ($\beta = .37$,

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Table 1. Correlations and means for men and women, Study 1

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<th>6</th>
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<tbody>
<tr>
<td></td>
<td>1. Perceived control</td>
<td>0.48**</td>
<td>0.16*</td>
<td>0.27**</td>
<td>0.25**</td>
<td>0.27**</td>
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<td></td>
<td>2. Global self-esteem</td>
<td>0.54**</td>
<td>—</td>
<td>0.23**</td>
<td>0.26**</td>
<td>0.19**</td>
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<tr>
<td></td>
<td>3. Belief in a just world</td>
<td>0.12*</td>
<td>0.16**</td>
<td>—</td>
<td>0.38**</td>
<td>0.43**</td>
</tr>
<tr>
<td></td>
<td>4. Status permeability</td>
<td>0.14*</td>
<td>0.13*</td>
<td>0.32**</td>
<td>—</td>
<td>0.42**</td>
</tr>
<tr>
<td></td>
<td>5. Protestant work ethic</td>
<td>0.25**</td>
<td>0.16**</td>
<td>0.42**</td>
<td>0.38**</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>6. Group public regard</td>
<td>0.31**</td>
<td>0.28**</td>
<td>0.23**</td>
<td>0.28**</td>
<td>0.27**</td>
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Note: 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.

*p < .05; **p < .01
p<.01; see bottom panel, Figure 1). Although the indirect effect was significant indicating mediation by perceived control (point estimate = 0.18; BC 95% CI: 0.09,0.30), 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: $\chi^2_{\text{diff}}(1) = -4.95$, p < .05, $\Delta$AIC = 3.28).

Thus, although the multigroup analysis demonstrates that the direct path between meritocracy beliefs and self-esteem does not differ significantly by gender ($\beta_{\text{men}} = .19$ vs $\beta_{\text{women}} = .05$), 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 because of 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 college students. 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: (i) by using a community sample with varied race and SES and (ii) 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, because of 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 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, and newspaper advertisements). Participants completed our online questionnaire as a preliminary step in a paid study on women of methods (e.g., Craigslist posts, community years, and 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. 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 (Belief in a Just World, Permeability, Protestant Work Ethic)**

We used the same three measures described in Study 1 (BJW, \(\alpha=0.88\); PERM, \(\alpha=0.79\); PWE, \(\alpha=0.71\)) as separate indicators of our latent meritocracy beliefs variable.

**Self-Esteem (Global Self-esteem, Performance Self-esteem, Social Self-esteem)**

We used global self-esteem (see Study 1; GSE; \(\alpha=0.89\), and 2 subscales from Heatherton and Polivy’s (1991) self-esteem scale: performance (“I feel confident about my abilities”; PSE; \(\alpha=0.84\)) and social (“I am worried about what other people think of me”; SSE; \(\alpha=0.90\)) as indicators of our latent self-esteem variable.

**Physical Health (Physical Functioning, General Health, Physical 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”; \(\alpha=0.89\); PF), general health (five items; “My health is excellent”; \(\alpha=0.71\); GH), and experience of physical pain (two items; “How much bodily pain have you had in the last 4 weeks?”; \(\alpha=0.79\); 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 seven items (\(\alpha=0.84\)) in the correlations and descriptive statistics in Table 3 as the parcels are redundant.

**Socioeconomic 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, Castellazzo 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.

**Subjective Socioeconomic Status**

Participants ranked themselves relative to other members of their community on a ladder with seven rungs with higher

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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 full information maximum likelihood 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. One participant declined to state both income and education and was dropped from analyses.
rungs representing increasing levels of income, education, and occupational status (MacArthur scale of subjective SES; Adler et al., 2000).

RESULTS

Preliminary Analyses

Creating Socioeconomic status Groups

To examine whether the effect of meritocracy beliefs on self-esteem and physical health differed for women lower and higher in SES, we split the file at 0 on our standardized measure of SES. 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 two 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 (Table 3). There were no significant race differences (White versus non-White women) in levels of education or income ($ps > .23$). Including race as a covariate did not alter the significance or strength of any of the paths in the

Table 2. Demographics by socioeconomic status (SES) group, Study 2

<table>
<thead>
<tr>
<th>Race</th>
<th>Lower SES ($N = 294$)</th>
<th>Higher SES ($N = 303$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European-American</td>
<td>59.9%</td>
<td>56.8%</td>
</tr>
<tr>
<td>Asian</td>
<td>13.6%</td>
<td>22.1%</td>
</tr>
<tr>
<td>Latino</td>
<td>7.5%</td>
<td>5.9%</td>
</tr>
<tr>
<td>African-American</td>
<td>8.2%</td>
<td>4.6%</td>
</tr>
<tr>
<td>Other</td>
<td>9.8%</td>
<td>10.3%</td>
</tr>
<tr>
<td>Declined to identify</td>
<td>1.0%</td>
<td>0.3%</td>
</tr>
</tbody>
</table>

| Age Mean (SD) | 27.02 (7.19)         | 29.72 (6.75)          |
| Education Mean (SD) | 3.71 (1.07)       | 5.29 (.81)            |
| Income Mean (SD) | $30,796.01 ($22,433.20) | $78,366.21 ($47,303.14) |

Table 3. Correlations, standard deviation, and means for observed variables by socioeconomic status (SES) group, Study 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lower SES</th>
<th>Higher SES</th>
<th>Lower SES</th>
<th>Higher SES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived control</td>
<td>0.54**</td>
<td>0.37**</td>
<td>0.49**</td>
<td>0.31**</td>
</tr>
<tr>
<td>Global self-esteem</td>
<td>0.61**</td>
<td>0.67**</td>
<td>0.75**</td>
<td>0.26**</td>
</tr>
<tr>
<td>Social self-esteem</td>
<td>0.46**</td>
<td>0.70**</td>
<td>0.61**</td>
<td>0.23**</td>
</tr>
<tr>
<td>Performance self-esteem</td>
<td>0.53**</td>
<td>0.75**</td>
<td>0.61**</td>
<td>0.24**</td>
</tr>
<tr>
<td>General health</td>
<td>0.34**</td>
<td>0.42**</td>
<td>0.32**</td>
<td>0.33**</td>
</tr>
<tr>
<td>Physical pain</td>
<td>0.19**</td>
<td>0.24**</td>
<td>0.22**</td>
<td>0.26**</td>
</tr>
<tr>
<td>Physical functioning</td>
<td>0.09</td>
<td>0.09</td>
<td>0.05</td>
<td>0.10</td>
</tr>
<tr>
<td>Status permeability</td>
<td>0.17**</td>
<td>0.10</td>
<td>0.05</td>
<td>0.07</td>
</tr>
<tr>
<td>Belief in a just world</td>
<td>0.13*</td>
<td>0.13*</td>
<td>0.04</td>
<td>0.09</td>
</tr>
<tr>
<td>Protestant work ethic</td>
<td>0.24**</td>
<td>0.13*</td>
<td>0.05</td>
<td>0.10**</td>
</tr>
<tr>
<td>Subjective status</td>
<td>0.25**</td>
<td>0.30**</td>
<td>0.17**</td>
<td>0.31**</td>
</tr>
</tbody>
</table>

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
models. Thus, we present the more parsimonious models omitting the race covariate.

Additional Analysis

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 ($\chi^2(38) = 42.68, p = .28$; $CFI = 0.99$, $RMSEA = 0.01$ (CI: 0.00, 0.03); $SRMR = 0.02$; $AIC = 120.68$; $\Delta AIC_{saturated} = 33.32$; $\Delta AIC_{independence} = 2322.39$) and accounted for 44% of the variance in self-esteem and 18% in health. The total effects of meritocracy on self-esteem ($\beta = .21, p < .001$) and health ($\beta = .13, p < .05$) were positive and significant, as were the indirect effects of perceived control on self-esteem (point estimate = 0.16; BC 95% CI: 0.01, 0.23) and health (point estimate = 0.10; BC 95% CI: 0.06, 0.16; see Figure 2). The absence of significant direct effects of meritocracy beliefs on self-esteem ($\beta = .05, p > .22$) and health ($\beta = .02, p > .64$) 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 ($\chi^2(39) = 113.99, p < .001$; $RMSEA = 0.06$ (CI: 0.05, 0.07); $CFI = 0.96$; $AIC = 189.99$). 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: −0.01, 0.04) or health (point estimate = 0.006; BC 95% CI: −0.02, 0.3), 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 Socioeconomic Status Model

The model fit the data well ($\chi^2(38) = 50.32, p = .09$; $CFI = 0.99$, $RMSEA = 0.03$ (CI: 0.00, 0.05); $SRMR = 0.03$; $AIC = 128.31$).

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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 lines.

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**Figure 2.** Perceived control mediates effect of belief in meritocracy for women, Study 2.
and was an improvement over the saturated ($\Delta AIC = 25.69$) and independence models ($\Delta AIC = 1174.29$). 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 ($\beta = .13, p < .05$; Health: $\beta = .09, p = .21$). Perceived control mediated the positive relationship between meritocracy beliefs and self-esteem (indirect effect point estimate = 0.20; BC 95% CI: 0.09, 0.31) and between meritocracy beliefs and health (indirect effect point estimate = 0.12; BC 95% CI: 0.05, 0.21; see Figure 3). With perceived control in the model, meritocracy beliefs were unassociated with self-esteem ($\beta = -.05, p = .35$) and health ($\beta = -.03, p = .67$).

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 ($\chi^2(2) = 3.83, p = .15, \Delta AIC = 0.15; \chi^2(40) = 54.15, p = .07$; $\Delta AIC = 25.69$) and was an improvement over the saturated ($\Delta AIC = 1174.29$) and independence models ($\Delta AIC = 1174.29$).

Figure 3. Perceived control mediates effect of belief in meritocracy for lower SES women, Study 2.

Figure 4. Perceived control mediates effect of belief in meritocracy for higher SES women, Study 2.
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. Because of 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).² Contrary to our intentions, we 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, consistent with 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 SES as a possible moderator of the effects of meritocracy beliefs on self-esteem among other 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 USA is another possible marker of low status. Accordingly, we pursued an alternative analysis testing our model separately for White and Non-White respondents.⁸ Consistent with our hypotheses are the following: (i) the measurement models were invariant across race; (ii) the models fit the data well for both groups (White women: N=348; χ²(38) = 42.72, p = .28; CFI = 0.99, RMSEA = 0.02; (CI: 0.00, 0.04); SRMR = 0.03; AIC = 120.71); non-White women: N= 245; (χ²(38) = 41.13, p = .34; CFI = 0.99, RMSEA = 0.02 (CI: 0.00, 0.05); SRMR = 0.03; AIC = 119.13); and (iii) meritocracy exerted a significant and positive total effect on self-esteem (White women: β = .21, p < .001; non-White women: β = .18, p < .05). The results reported here hold whether or not Asian-Americans are included in non-White group.

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

³We thank a thoughtful reviewer for this suggestion.
⁴Inclusion 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.
women: $\beta = .18$; $p < .05$) and a marginal positive total effect on health (White women: $\beta = .12$, $p = .07$; non-White women: $\beta = .16$, $p = .06$). We also observed significant indirect effects on self-esteem (White women: point estimate = 0.14, BC 95% CI: 0.05, 0.22; non-White women: point estimate = 0.22, BC 95% CI: 0.12, 0.33) and health (White women: point estimate = 0.08, BC 95% CI: 0.03, 0.15; non-White women: point estimate = 0.17, BC 95% CI: 0.09–0.28) via perceived control and no direct relationship between meritocracy beliefs and self-esteem or health for non-White women (self-esteem: $\beta = -.04$, $p = .55$; health: $\beta = -.01$, $p = .88$). 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 USA, 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 et al., 2009). For example, in contrast to our findings with meritocracy beliefs, Rankin and colleagues (2009) found that endorsement of general system justification (e.g., eight 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, such as 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 $5000 and $9000 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 USA 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 have 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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