Social Class and Social Pain: Target SES Biases Judgments of Pain and Support for White Target Individuals

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Abstract

Social pain, defined as distress caused by negative interpersonal experiences (e.g., ostracism, mistreatment), is detrimental to health. Yet, it is unclear how social class might shape judgments of the social pains of low-socioeconomic status (SES) and high-SES individuals. Five studies tested competing toughness and empathy predictions for SES's effect on social pain judgments. Consistent with an empathy account, in all studies ($N_{cumulative}$ = 1,046), low-SES White targets were judged more sensitive to social pain than high-SES White targets. Further, empathy mediated these effects, such that participants felt greater empathy and expected more social pain for low-SES targets relative to high-SES targets. Social pain judgments also informed judgments of social support needs, as low-SES targets were presumed to need more coping resources to manage hurtful events than high-SES targets. The current findings provide initial evidence that empathic concern for low-SES White individuals sensitizes social pain judgments and increases expected support needs for lower class White individuals.

Social pain, operationalized as distress and negative affect caused by hurtful interpersonal experiences (e.g., exclusion, disrespect; MacDonald & Leary, 2005), is detrimental to the mind and body (e.g., Jaremka & Sunami, 2018). The negative health effects of everyday social pains are particularly significant considering they occur more frequently to members of culturally stigmatized groups than members of culturally dominant groups (e.g., Anderson et al., 2012; Lott, 2002). Yet, despite disparities in social hurts, stereotypes frequently bias judgments of expected social pains. For example, stereotypes about the toughening effects of hardship frequently lead people to expect socially painful events will harm Black individuals *less* than White individuals (e.g., Deska, Kunstman, Lloyd et al., 2020). Based on this previous research, we tested whether socioeconomic status (SES) also biases judgments of social pain. Low-SES individuals frequently experience socially painful events ranging from derogation and exclusion to social and physical distancing (Kunstman et al., 2016; Lott, 2002). Understanding how SES affects social pain judgments is of critical importance because inferences about distress directly inform various prosocial responses (e.g., Kunstman & Plant, 2008; Latané & Darley, 1970). Biases that minimize the social pain experiences of low-SES individuals may contribute to inequities in social support and care. Alternatively, emphasizing social

pain may offer one avenue for improving attention and support for the hurts of low-SES individuals.

Based on distinct stereotyping literatures, we identified two competing predictions for target SES' effect on social pain judgments. From a toughness perspective, stereotypes of low-SES individuals as hardened and resilient may lead people to predict that hurtful social events will pain low-SES White individuals *less* than high-SES White individuals (Summers et al., 2021). Alternatively, from an empathy perspective, the Stereotype Content Model (SCM) suggests that people are upset when groups stereotyped as low competence but high warmth experience harm (Cikara & Fiske, 2011). As a group stereotyped as low in competence but high in warmth (Durante et al., 2017), low-SES White individuals may elicit empathy and consequently be judged to experience *more* social pain than high-SES White individuals. Five

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experiments tested these competing predictions of social class's influence on social pain judgments.

Beliefs About Hardship and Toughness

Termed the *toughness hypothesis*, the belief that chronic adversity has toughened low-SES individuals may lead to the minimization of their social pain compared with high-SES individuals. Many people believe that stress and adversity can be enhancing (i.e., what doesn't kill you makes you stronger; Ben-Avi et al., 2018) and endorsing these beliefs has been linked with judgments of insensitivity to the negative effects of stress. For instance, those who endorsed a stress-as-enhancing perspective were less likely to notice burnout in a hypothetical colleague and provided less social support to those in need compared with those who viewed stress as debilitating (Ben-Avi et al., 2018).

Critically, lay beliefs about the effects of hardship have also been linked to group-based biases in pain judgments. For example, although people rightly recognize that Black Americans encounter more hardship than White Americans, people incorrectly conclude that this hardship has desensitized Black Americans to physical and social hurts (Deska , Kunstman, Lloyd et al., 2020; Hoffman & Trawalter, 2016). Deska, Kunstman, Llloyd and colleagues (2020) further found that toughness beliefs mediated race-related biases in social pain judgments, such that Black targets were judged to experience more life hardship, which in turn predicted judgments that Black targets were less sensitive to social pain than White targets. Importantly, both Black and White participants showed this bias, suggesting that social pain judgments are at least partially driven by broad cultural stereotypes about toughness (Deska, Kunstman, Bernstein et al., 2020, Deska, Kunstman, Lloyd et al., 2020).

Summers and colleagues (2021, 2022) further linked toughness beliefs with class-based biases in *physical* pain judgments. Low-SES targets were assumed to experience greater hardship and these beliefs were associated with judgments of less sensitivity to physical pain for low-SES compared with high-SES targets. This "thick skin bias," or belief that adversity is toughening, has been documented in a variety of settings; for example, Cheek and Shafir (2020) recruited professionals from various occupations and found—across numerous contexts—evaluators expected low-SES individuals would be harmed less by upsetting events than high-SES individuals (e.g., chefs judged low-SES guests would be less affected by poor service than high-SES guests). Informed by this work, the toughness hypothesis predicts that beliefs that adversity has toughened low-SES White individuals may lead people to expect that low-SES White individuals feel less social pain than high-SES White individuals.

Stereotypes and Empathy

There is also reason to predict that people will believe low-SES White individuals will feel *more* social pain than high-SES White individuals because they empathize with low-SES individuals more than high-SES individuals. As considerable pain and clinical research attests, empathy is key to identifying and responding to others' pain. Not only has empathy been positively linked with sensitivity to others' pain generally (e.g., Green et al., 2009), it has also been connected to social support in close relationships (e.g., Davis & Oathout, 1987; Winczewski et al., 2016), and in clinical assessments of psychological distress and treatment effectiveness (Nienhuis et al., 2018). Moreover, interventions geared at enhancing empathy have showe some promise for alleviating intergroup disparities in pain treatment (Drwecki et al., 2011). As this work attests, empathy is critical for recognizing others' pain and subsequent support needs.

In keeping with these findings, we predicted that greater empathy for low-SES people would increase social pain judgments for low- versus high-SES White individuals. Termed the *empathy hypothesis*, this prediction is grounded in the SCM. According to the SCM, warmth and competence are fundamental dimensions of social cognition that cue distinct emotional responses to various groups (Cuddy et al., 2008). High-SES individuals are consistently judged to be low warmth but high competence, and the wealthy elicit feelings like envy (Fiske et al., 2007). In contrast, research on low-SES stereotypes has been mixed. Although poor people are commonly judged low in competence (Croizet & Claire, 1998; Darley & Gross, 1983), judgments of warmth vary across studies. Sometimes low-SES individuals are viewed as warm (Durante et al., 2017; Durante & Fiske, 2017), whereas other times they are viewed as cold (Cozzarelli et al., 2001; Fiske et al., 2002). Moreover, discrete conceptualizations of low-SES subgroups (e.g., the working poor) are viewed more favorably than others (e.g., homeless individuals; Harris & Fiske, 2006). Consequently, employed low-SES individuals (i.e., the working poor) are likely stereotyped as warmer and generate more empathy than both other low-SES subgroups (e.g., homeless persons) and high-SES individuals. From this perspective, low-SES White individuals may elicit feelings of empathy, which subsequently increase judgments of social pain compared with high-SES White individuals.

Consistent with this prediction, people are distressed when groups judged as high in warmth but low in competence experience adversity (e.g., low-SES individuals; Cikara & Fiske, 2012). Groups stereotyped as warm but incompetent elicit emotions of pity and compassion and people feel concerned when these individuals are harmed (Cikara & Fiske, 2011). For example, participants were least willing to volunteer others for electric shock if those individuals belonged to pitied groups. Complementary functional magnetic resonance imaging (fMRI) data revealed neurological activation associated with empathic concern for members of pitied groups and this activation was associated with decreased willingness to harm those individuals (Cikara &

Fiske, 2011). Thus, to the extent their interpersonal hurts elicit greater empathy, low-SES White individuals may be judged more sensitive to social pain than high-SES White individuals.

Simultaneously, low-SES White individuals may be judged to feel more social pain than high-SES White individuals because as members of an envied group, people lack empathy for the rich. Indeed, people often feel less distress—and sometimes savor—the misfortune of envied groups (e.g., high-SES individuals; Cikara & Fiske, 2011). For example, participants' facial muscle responses indicated more positive affect (i.e., smiling) when members of envied groups experienced negative versus positive events (Cikara & Fiske, 2012). This lack of distress following harm is consistent with an empathy gap for members of envied groups. Consequently, it may be that low empathy for high-SES individuals contributes to judgments that low-SES individuals feel greater social pain than high-SES individuals.

In summary, the empathy hypothesis suggests that people may judge low-SES White individuals to feel more social pain than high-SES White individuals for two complementary reasons. Warmth judgments may lead low-SES White individuals to elicit empathy and cue participants to the hurts of the lower class, whereas envy may obstruct empathy for the pains of the affluent.

The Current Work

The current work presents five experiments that (a) document consistent class-based biases in social pain judgments, (b) test competing toughness and empathy accounts of this bias, and (c) assess downstream consequences of social pain biases for judgments of social support needs. Studies 1 and 2 first present evidence for social class's effect on judgments of social pain. Study 3 next tested a toughness account of this bias to determine whether beliefs about toughness inform social pain judgments. Study 3 also included judgments of physical pain to test whether social class has parallel or divergent effects on judgments of social and physical pain and determined whether toughness beliefs mediate these effects. Study 4 then tested an empathy account of social class's effect on social pain judgments. Finally, Study 5 tested the implications of social pain biases for judgments of social support. We hypothesized that class-based biases in social pain would inform judgments of social support. Social support is a critical resource that buffers individuals from adversity through emotional comfort, affirming self-esteem, and instrumental aid (Feeney & Collins, 2015; Sturgeon & Zautra, 2016). Moreover, recognizing and empathizing with others' distress are critical to engaging in prosocial responses to offer support (Eisenberg & Miller, 1987; Latané & Darley, 1970). As such, biases that influence beliefs about others' pain and care needs are likely to shape intentions to provide social support. All materials and data are available at https://osf.io/7njsw/?view_only=45edfde449474c3b86a007 c5fd44ebf5. No studies were pre-registered.

Study 1

The current study tested competing toughness and empathy predictions for class's effects on social pain judgments. To test these distinct hypotheses, we modified an established paradigm in which participants made social pain judgments for pictured target individuals (Deska, Kunstman, Lloyd et al., 2020, 2020b; see also Trawalter et al., 2012 for similar procedures). Social class was manipulated by pairing target images with annual incomes denoting high (e.g., US$179,900) and low (e.g., US$18,200) SES. We operationalized social class with annual income because income has been identified as a critical predictor of subjective social class identification and past work on SES and pain judgments has shown similar effects across multiple operationalizations of social class (Cohen et al., 2017; Summers et al., 2021, 2022). Participants viewed 20 White male targets labeled with low-SES and high-SES incomes.

To simplify this first test of hypotheses, we held target sex constant. We return to target sex in Study 2. In addition, target race was held constant across all reported studies. Prior research highlights the intersectionality of race and class stereotypes (Brown-Iannuzzi et al., 2017; Fiske et al., 2002), and we anticipated that SES may lead to distinct social pain biases for White targets compared with targets of color. The current research includes only White targets and is subsequently limited in making claims about the effects of SES on social pain judgments for people of color. We return to this limitation in the general discussion.

Participants judged how much pain target individuals were expected to feel in response to several aversive social scenarios (e.g., being dumped by a romantic partner, being disrespected by colleagues). The toughness hypothesis predicted participants would judge low-SES White targets to feel *less* social pain than high-SES White targets, whereas the empathy hypothesis anticipated low-SES White targets would be judged to feel *more* social pain than high-SES White targets.

Method

Participants. A power analysis with a small-medium effect ($d = .30$) suggested a minimum sample of 71 participants would provide at least 80% power (G*PowerV3.1; Faul et al., 2007). Data were collected across a full academic year yielding a sample of 206 undergraduates ($M_{age} = 19.17$, $SD_{age} = 1.84$; 77.7% White, 9.2% Asian, 5.8% bi- or multiracial, 2.4% Black/African American, 2.4% Latino/a, .5% Native Hawaiian/Pacific Islander, 2% unlisted or did not disclose; 83% female, 16.5% male, .5% did not disclose). There were no participant exclusions. Sensitivity analyses revealed the current sample had 80% power to detect effect sizes as small as $d = .17$.

Procedure. In a fully within-subjects design, participants viewed 20 White male faces selected from the Chicago Face Database (CFD; Ma et al., 2015). Targets were paired with low (M = US$17,400; SD = US$1,648.27) or high (M = US$172,290; SD = US$13,481.86) incomes. The low income reflects a wage of approximately US$9 per hour for full-time work (40 hours/week, 48 weeks/year). The values for low and high SES in the current study align with income brackets defined by the Pew Research Center (Horowitz et al., 2020). Using norming data provided by the CFD, low-SES and high-SES targets were matched for traits including age, anger, attractiveness, dominance, and masculinity. There were no significant target differences on these traits (F_{range} = 0.004–2.896; p_{range} = .356–.755).

Participants made 10 social pain judgments per target (e.g., "this person's best friend gossips about them behind their back," "this person invites friends over to celebrate their birthday and no one comes"; Deska, Kunstman, Lloyd et al., 2020). Pain judgments were made on a 1 (*no pain*) to 4 (*extreme pain*) scale (α = .877). Targets and pain items were randomized. After the judgment task, demographics (e.g., race, gender, family income[1]) were collected.

Results

Means were computed for each target and combined to form composites for low-SES and high-SES groups.[2] These means were compared with a paired samples *t*-test. Consistent with the empathy hypothesis, low-SES targets (M = 2.61, SD = 0.41) were judged *more* sensitive to social pain than high-SES targets (M = 2.52, SD = 0.37), $t(205)$ = 3.032, p = .003, 95% CI [.03, .15], d = .21.

Discussion

Study 1's results provide initial support for the empathy hypothesis. Low-SES White targets were judged more sensitive to social pain than high-SES White targets. Ancillary analysis revealed this effect remained significant even after accounting for participants' self-reported income. These findings suggest that social class has distinct effects on social—relative to physical—pain judgments. Whereas past work on physical pain judgments finds low-SES individuals are judged less sensitive to pain than high-SES individuals (Summers et al., 2021), the opposite occurs for judgments of social pain (i.e., low-SES individuals were judged to feel more social pain than high-SES individuals). These results hint at the possibility of distinct mechanisms shaping the effects of social class on different types of pain judgments. This is an important distinction from work on race-based biases in pain judgments, which has found that beliefs about life hardship produce parallel biases in judgments of physical (Trawalter & Hoffman, 2015) and social pain (Deska, Kunstman, Lloyd et al., 2020).

Because Study 1 only included male targets, Study 2 aimed to test these hypotheses with female targets. In light of

evidence that sex/gender and class interact to modify social stereotypes (Cuddy et al., 2004), we thought it important to test effects with female targets. Study 2 also provided an opportunity for replication to determine whether participants consistently expect low-SES targets will feel less social pain than high-SES targets.

Study 2

The current study tested whether effects generalized to judgments of female targets. Testing effects with female targets was important because extant research on pain judgments and stereotype processes leads to mixed predictions for how social class and sex/gender might inform social pain judgments. In line with research on gender and pain (e.g., Chen et al., 2008), we reasoned target sex and SES might interact and prevent sensitization effects from generalizing to low-SES female targets. In medical settings, care providers often mistrust the distress of women and low-SES people, resulting in their pain being minimized and invalidated (e.g., Anastas et al., 2020; Lloyd et al., 2020). Consistent with these findings, the co-occurrence of these commonly mistrusted identities might drive down pain judgments for low-SES female targets.

Alternatively, we considered that sex and SES may have independent but noninteractive effects on social pain judgments. People tend to view women as warmer and more likable than men (Fiske et al., 2002) and also more sensitive to pain (Robinson & Wise, 2003). As such, female targets may be judged more sensitive to social pain independent of social class. Indeed, past work finds that although target sex produces main effects on judgments of social and physical pain, these effects do not interact with other social categories (Deska, Kunstman, Lloyd et al., 2020; Summers et al., 2021). Consistent with this research, target sex and class may independently contribute to pain judgments, such that female and low-SES targets are judged more sensitive to pain than their respective sex and class counterparts.

Method

Participants. A priori power analysis suggested a minimum sample of 82 participants. Across an academic term, 166 undergraduates participated (M_{age} = 18.88, SD_{age} = 1.04; 80.1% White, 7.8% Asian, 5.4% Latino/a, 2.4% Black/African American, 1.8% bi- or multiracial, 2.4% unlisted/did not disclose; 79.5% female, 20.5% male). There were no exclusions. Sensitivity analyses suggested the current sample provided 80% power to detect effect sizes as small as d = .14.

Procedure. In a fully within-subjects 2 (income) × 2 (target gender) design, participants viewed 10 male and 10 female targets (i.e., 20 total targets) from the CFD. Targets were paired with either a low or high annual income. Using norming data provided by the CFD, all targets were matched for

age and attractiveness. There were no differences between low-SES and high-SES targets or male and female targets for age or attractiveness, $ts(18) < 1.53$, $ps > .14$. Male targets were matched for anger, dominance, and masculinity, and there were no differences across groups for these traits, $ts(8) < .92$, $ps > .39$. SES labels were counterbalanced across targets (i.e., targets were paired with low incomes half the time and high incomes other times). There were no effects of counterbalancing, $ts(164) < 1.01$, $ps > .32$.

Pain judgments were made using Study 1's measure ($\alpha = .91$). Targets and items were randomized. Demographic information was subsequently collected.

Results

Target pain ratings were submitted to a 2 (target SES: low-SES vs. high-SES) $\times$ 2 (target sex: male vs. female) repeated-measures analysis of variance (ANOVA). This analysis revealed a significant main effect of target SES, $F(1, 165) = 37.35$, $p < .001$, $\eta_p^2 = .185$. Consistent with the empathy hypothesis, low-SES targets ($M = 2.71$, $SD = 0.46$) were judged *more* sensitive to social pain than high-SES targets ($M = 2.55$, $SD = 0.42$), $t(165) = 6.11$, $p < .001$, 95% CI [.03, .11], $d = .47$. There was also a main effect of target sex, $F(1, 165) = 80.65$, $p < .001$, $\eta_p^2 = .328$. Female targets ($M = 2.75$, $SD = 0.44$) were judged more sensitive to social pain than male targets ($M = 2.51$, $SD = 0.45$), $t(165) = 8.98$, $p < .001$, 95% CI [.19, .29], $d = .70$. The target SES-by-sex interaction was non-significant, $F(1, 165) = 1.22$, $p = .271$, $\eta_p^2 = .007$.

Discussion

The results from Study 2 provide further evidence in support of the empathy hypothesis. Low-SES White targets were again judged more sensitive to social pain than high-SES White targets. Importantly, although several predictions were possible given research on pain and stereotype processes, results suggest that sex and SES had distinct, noninteracting effects on pain judgments. Critically, just like male targets, low-SES female targets were judged more sensitive to social pain than their affluent counterparts.

Although these first two studies provide consistent support for the empathy hypothesis, these findings appear out of key with previous research on physical pain judgments for low-SES and high-SES targets. Past research suggests low-SES targets are judged less sensitive to physical pain compared with high-SES targets and this bias is connected to hardship judgments (Summers et al., 2021). To better understand how judgments of physical and social pain operate for low-SES and high-SES targets, we included both factors in a single experiment and measured toughness judgments. By testing both social and physical pain judgments simultaneously, Study 3 aimed to integrate the current work with existing research on physical pain and test how toughness

judgments relate to potentially distinct biases in physical and social pain judgments.

Study 3

Study 3 had two primary goals. First, it aimed to reconcile seemingly contradictory findings related to social class's effect on judgments of social and physical pain. That is, unlike research on race where biases in social and physical pain judgments run parallel (Deska, Kunstman, Lloyd et al., 2020; Trawalter et al., 2012), Studies 1 and 2 suggest social class may have divergent effects on judgments of social and physical pain. Specifically, these studies found that low-SES targets were judged to feel more social pain than high-SES targets, whereas previous work on social class and physical pain consistently finds low-SES targets are judged to feel less pain than their high-SES targets (Summers et al., 2021). By including both pain types in a single study, the current work sought to integrate these effects by testing whether, relative to high-SES targets, low-SES targets were simultaneously judged as sensitive to social pain but insensitive to physical pain.

Second, the current work tested how toughness judgments relate to these distinct effects. We reasoned that toughness judgments may be influenced by their physical versus social context. We predicted that physical contexts would cue beliefs about bodily strength, durability, and physical formidability. In keeping with past research, participants who believed low-SES targets had tougher bodies than high-SES targets may judge low-SES targets to suffer less physical pain than high-SES targets (Summers et al., 2021).

Alternatively, in social contexts, we reasoned that toughness judgments would activate beliefs about mental and emotional durability. Past work has found that low-SES individuals are sometimes viewed as emotionally weaker and less strong than other-class groups (Cozzarelli et al., 2001). With emotions spotlighted, we reasoned low-SES targets—as members of a group stereotyped as low competence and high warmth—would engender feelings of empathy, which would undermine expectations of toughness and enhance judgments of social pain. In other words, when emotions loom large, empathic concern for low-SES individuals may become salient, which leads low-SES individuals to be judged less tough and more sensitive to social pain than high-SES individuals.

Method

Participants. Using Study 1's power analysis ($n = 71$), 116 undergraduates participated ($M_{age} = 19.39$, $SD_{age} = 1.39$; 66.7% White, 21.4% Asian, 2.6% Black/African American, 2.6% Latino/a, 2.6% bi- or multiracial, 2.6% unlisted/did not disclose; 54.7% female, 42.7% male, .9% did not disclose). There were no exclusions. Sensitivity analysis indicated the current sample provided 80% power to detect effect sizes as small as $d = .26$.
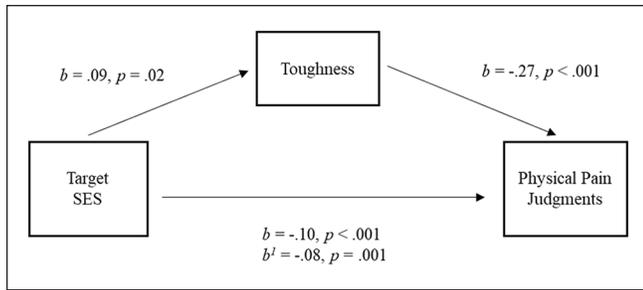
Figure 1. The Mediation Model Predicting Physical Pain Judgments as a Function of Target SES (Low–High) Indirectly Through Toughness Judgments in Study 3.
Note. The indirect effect is significant, $b = -.02$, $SE = .02$, 95% CI [−.06, −.002]. SES = socioeconomic status; CI = confidence interval; SE = standard error.

Procedure. Using a 2 (pain type: social vs. physical) $\times$ 2 (target SES: low-SES vs. high-SES) within-subjects design, participants viewed 20 White male targets (10 low-SES, 10 high-SES). Targets were rated on traits including tough, strong, resilient, hardened, and sensitive (reverse-scored). Targets were also paired with either social or physical pain judgments (10 judgments/pain type). Targets and pain type (social/physical) were randomized. Social pain judgments were made using Study 1's measure. Physical pain judgments were made on an established index (e.g., "this person gets an injection in their arm," "this person stubs their toe on a chair leg"; Summers et al., 2021). All pain judgments used the same 1 (*no pain*) to 4 (*extreme pain*) scale. Counterbalancing varied whether targets were paired with low-SES or high-SES incomes and whether they were paired with social or physical pain judgments. There were no significant effects of counterbalancing, $ts(114) < 1.27$, $ps > .208$. Demographics were assessed after the judgment task.

Results

We computed mean values for social pain, physical pain, and toughness-related trait ratings for each target. Means for social and physical pain and toughness traits were computed for low-SES and high-SES targets. Toughness judgments were analyzed with a 2 (target SES: low-SES vs. high-SES) $\times$ 2 (toughness context: social pain vs. physical pain) repeated-measures ANOVA. This analysis revealed a significant main effect for toughness context, such that targets were judged as tougher in physical versus social contexts, $F(1, 115) = 5.29$, $p = .023$, $\eta_p^2 = .044$. The main effect of target SES was not significant, $F(1,115) = 2.27$, $p = .134$, $\eta_p^2 = .019$. This analysis also revealed a significant interaction between target SES and toughness context, $F(1, 115) = 39.56$, $p < .001$, $\eta_p^2 = .256$. To investigate this interaction, separate paired samples *t*-tests were conducted for physical and social pain contexts. In the *physical pain* context,

low-SES targets ($M = 2.53$, $SD = 0.38$) were judged to be *more* tough than high-SES targets ($M = 2.44$, $SD = 0.36$), $t(115) = 2.34$, $p = .021$, 95% CI [.01, .17], $d = .22$. Conversely, in the *social* pain context, low-SES targets ($M = 2.35$, $SD = 0.34$) were judged to be *less* tough compared with high-SES targets ($M = 2.53$, $SD = 0.32$), $t(115) = -5.21$, $p < .001$, 95% CI [−.25, −.11], $d = .48$.

Pain judgments were analyzed with a 2 (target SES: low-SES vs. high-SES) $\times$ 2 (pain type: social vs. physical) repeated-measures ANOVA. Although the main effect for SES was non-significant $F(1,115) = 0.002$, $p = .963$, $\eta_p^2 < .001$, this analysis produced a significant main effect for pain type, such that targets were judged to feel more social pain ($M = 2.51$, $SD = 0.35$) than physical pain ($M = 2.18$, $SD = 0.34$), $F(1, 115) = 111.53$, $p < .001$, $\eta_p^2 = .492$. This main effect was qualified by a significant interaction between target SES and pain type, $F(1, 115) = 26.66$, $p < .001$, $\eta_p^2 = .188$. To decompose this interaction, we conducted separate paired samples *t*-tests for judgments of physical and social pain. Low-SES targets ($M = 2.12$, $SD = 0.37$) were judged *less* sensitive to *physical* pain compared with high-SES targets ($M = 2.23$, $SD = 0.37$), $t(115) = -4.18$, $p < .001$, 95% CI [−.15, −.05], $d = .39$. Conversely, low-SES targets ($M = 2.56$, $SD = 0.38$) were judged *more* sensitive to *social* pain compared with high-SES targets ($M = 2.46$, $SD = 0.41$), $t(115) = 3.20$, $p = .002$, 95% CI [.04, .17], $d = .30$.

The SPSS MEMORE macro (model 1; 10,000 bias-corrected bootstrapped samples; Montoya & Hayes, 2017) tested whether toughness mediated SES' effect on pain judgments. Two separate analyses tested each pain type (social/ physical). The effect of target social class on physical pain judgments was mediated by toughness judgments, $b = -.02$, $SE = .02$, 95% CI [−.06, −.002], such that low-SES targets were judged as more tough and consequently less sensitive to *physical* pain than high-SES targets (see Figure 1). Likewise, target social class operated through toughness judgments to shape social pain judgments, $b = .09$, $SE = .03$, 95% CI [.04, .15], such that low-SES targets were judged to be less tough and consequently more sensitive to *social* pain than high-SES targets (see Figure 2).

Discussion

The current results offer multiple insights into class's effect on pain judgments. First, these results replicate and integrate distinct effects for judgments of physical and social pain for low-SES and high-SES White targets. When judging physical pain, participants believed low-SES White targets would be hurt *less* than high-SES White targets, whereas this pattern of results reversed for judgments of social pain (i.e., low-SES White targets were judged to feel *more* social pain than high-SES White targets). These results provide initial evidence for an intergroup context where judgments of physical and social pain are unique and do not represent an assessment of
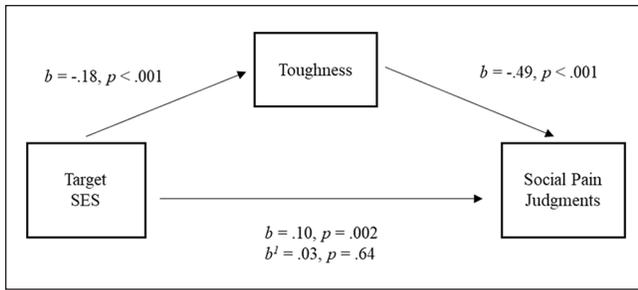
Figure 2. The Mediation Model Predicting Social Pain Judgments as a Function of Target SES (Low–High) Indirectly Through Toughness Judgments in Study 3.
Note. The indirect effect is significant, $b = .09$, $SE = .03$, 95% CI [.04, .15]. SES = socioeconomic status; CI = confidence interval; SE = standard error.

generalized pain tolerance. Unlike race-based judgments, where judgments of physical and social pain run in tandem (Deska, Kunstman, Lloyd et al., 2020; Trawalter et al., 2012), class-based pain judgments yielded discrete and inverse effects for low-SES and high-SES targets. These results integrate research on judgments of physical and social pain and highlight a target dimension (i.e., social class) in which these types of pain judgments yield unique and opposing effects.

Second, both effects were related to judgments of toughness. Critically, toughness judgments varied as a function of their physical versus social context, such that compared with high-SES individuals, low-SES individuals were judged to be tougher in physical contexts but weaker in social contexts. These results replicate previous work's finding that in physical domains, low-SES individuals are judged as tougher and less sensitive to physical pain than high-SES individuals (Summers et al., 2021). However, in social contexts, low-SES individuals were viewed as less tough and more sensitive to social hurts than their high-SES counterparts. Although speculative, it may be that in physical contexts, people think of tough bodies, whereas in social contexts they think of tough minds. By emphasizing minds and emotions, social contexts may engender empathy for low-SES targets, which decreases judgments of toughness and subsequently increases judgments of social pain.

Third, the current findings suggest that judgments of social and physical pain have unique relationships with the actual hurts of low-SES people. Whereas elevated judgments of social pain are concordant with the greater emotional distress experienced by low-SES relative to high-SES individuals (e.g., Jachimowicz et al., 2022), judgments of physical pain are discordant with the greater physical pain felt by low-SES compared with high-SES persons (e.g., Chou et al., 2016; Summers et al., 2021). We speculate these distinct effect patterns may relate to lay beliefs about stress and socially painful experiences versus beliefs about toughness and physical injury. Specifically, although people vary in their beliefs about the consequences of social stressors, most

people recognize that chronic stress is debilitating (Crum et al., 2013) and empathize with those they believe to be under strain (Ben-Avi et al., 2018). To the extent that people also realize that low-SES individuals have more daily stressors than high-SES individuals (Summers et al., 2021), their beliefs about chronic stress may cue empathic concern, which ultimately leads them to correctly infer that low-SES individuals experience more social pain than high-SES individuals. Conversely, since physical injuries (e.g., broken bones) are not daily occurrences, they may be guided primarily by class-based stereotypes of physical toughness and formidability (Summers et al., 2021). In other words, beliefs about chronic social stress and mistreatment may bring judgments of social pain into line with actual experiences of low-SES individuals, whereas beliefs about physical toughness create discordant judgments of low-SES individuals' physical pain.

Study 4

The previous studies offer consistent support for the empathy hypothesis. Across three studies, low-SES targets were judged more sensitive to social pain than high-SES targets. Guided by this indirect evidence, the current study aimed to directly test if class's effect on social pain judgments was mediated by empathy judgments. To address this question, participants made empathy and social pain judgments for low-SES and high-SES White targets. We predicted greater feelings of empathy toward low-SES White targets compared with high-SES White targets would mediate the relationship between target SES and social pain judgments.

Method

Participants. Consistent with Study 1's power analysis ($n = 71$), 258 undergraduates participated. One attention check was included (i.e., "select '1' No Pain"), and produced 14 exclusions, leaving a final sample of 244 participants ($M_{age} = 19.43$, $SD = 1.38$; 69.7% White, 12.3% Asian, 5.7% bi- or multiracial, 4.5% Black/African American, 3.7% Latino/a, .4% American Indian/Alaska Native, .4% Native Hawaiian/ Pacific Islander, 2.4% unlisted/did not disclose; 63.9% female, 34.4% male, 1.2% other or did not disclose). Sensitivity analysis suggested the sample provided 80% power to detect effect sizes as small as $d = .16$.

Procedure. With a two-group within-subjects design (low-SES/high-SES), empathy and social pain judgments were assessed for 10 White male targets (five low-SES, five high-SES). Empathy was assessed with one item ("I feel a sense of empathy for this person") scored on a 1 (*strongly disagree*) to 4 (*strongly agree*) scale. Social pain judgments were made with the measure from Studies 1 to 3. Demographics were then reported.
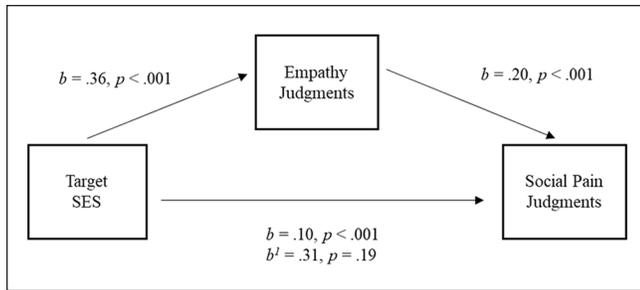
Figure 3. The Mediation Model Predicting Social Pain Judgments as a Function of Target SES (Low–High) Indirectly Through Empathy Judgments in Study 4.
Note. The indirect effect is significant, $b = .07$, $SE = .02$, 95% CI [.05, .10]. SES = socioeconomic status; CI = confidence interval; SE = standard error.

Results

Empathy and pain averages were calculated for low-SES and high-SES targets and analyzed with paired samples *t*-tests. Consistent with the empathy hypothesis, participants empathized with low-SES targets ($M = 2.27$, $SD = 0.67$) more than high-SES targets ($M = 1.91$, $SD = 0.64$), $t(243) = 9.49$, $p < .001$, 95% CI [.29, .44], $d = .61$. Low-SES targets ($M = 2.68$, $SD = 0.41$) were again judged more sensitive to social pain compared with high-SES targets ($M = 2.58$, $SD = 0.42$), $t(243) = 5.06$, $p < .001$, 95% CI [.06, .14], $d = .32$.

The SPSS MEMORE macro (model 1; 10,000 bias-corrected bootstrapped samples; Montoya & Hayes, 2017) tested a mediation model for target social class predicting social pain judgments as a function of empathy ratings. Target SES' effect on social pain judgments was mediated by empathy, $b = .07$, $SD = .02$, 95% CI [.05, .10], such that participants empathized more with low-SES targets and consequently judged them to feel more pain than high-SES targets (see Figure 3).

Discussion

The current study provides direct evidence for empathy's role in class-based biases in social pain judgments. Participants expressed more empathy for low-SES White targets than high-SES White targets while again expecting low-SES White targets to feel more social pain than high-SES White targets. These heightened feelings of empathy accounted for class-based biases in social pain judgments. Feelings of empathy facilitated judgments that social hurts would pain low-SES White individuals more than high-SES White individuals.

When considered collectively, the preceding studies provide consistent support for the empathy hypothesis (Studies 1-4), demonstrate diverging results by pain type (Study 3), and provide evidence for empathy as a relevant mechanism for social pain judgments (Study 4). Having established SES' effect on social pain judgments and identified an antecedent

mechanism, Study 5 aimed to test a downstream consequence of class's effect on social pain judgments: social support needs.

Study 5

Building on the effects of Studies 1 to 4, we tested whether class-based biases in social pain judgments informed judgments of social support needs. In light of consistent evidence highlighting class-based disparities in health and well-being (e.g., Liem & Liem, 1978; Taylor & Seeman, 1999; Turner & Marino, 1994), we thought testing social pain's effect on support judgments is important because it offers a potential mechanism for increasing coping and care resources for low-SES individuals. Since judged distress informs numerous prosocial responses (e.g., Deska, Kunstman, Lloyd et al., 2020; Kunstman & Plant, 2008; Latané & Darley, 1970) and social support is a critical buffer of social pain's negative effects on health (e.g., Pascoe & Smart Richman, 2009), recognizing low-SES individuals' sensitivity to social hurts may facilitate judgments of support and care and help mitigate the long-term harms of socially painful experiences for low-SES individuals. In other words, recognizing low-SES individuals' sensitivity to social pain may lead people to increase the support resources they believe are needed by low-SES individuals.

To test these relations, participants completed the social pain judgment task from the previous studies. In addition to social pain judgments, participants also judged the social support necessary for targets to cope with these hurtful events. We hypothesized that low-SES White targets would be judged more sensitive to social pain than high-SES White targets and these beliefs would inform judgments of coping resources needed to deal with these aversive social situations.

Method

Participants. Oversampling past Study 1's recommended sample, 300 mTurk workers completed the current study. Seven respondents were excluded for duplicate IP addresses, yielding 293 analyzable participants ($M_{age} = 36.42$, $SD = 10.06$; 63.7% White, 23.6% Black/African American, 4.8% Asian, 4.1% Latino/a, 2.1% American Indian/Alaska Native, .7% bi- or multiracial, 1% unlisted/did not disclose; 68.2% male, 31.5% female, .3% did not disclose). Sensitivity analyses estimated this sample had 80% power to detect minimum effects of $d = .14$.

Procedure. Using a two-group within-subjects design (target SES: low-SES/high-SES), participants completed the social pain judgments task from the previous studies with one addition. Participants also rated the social support needed to cope with each painful experience. Social support judgments were made on a 5-point scale ranging 1 (*no action necessary*), 2
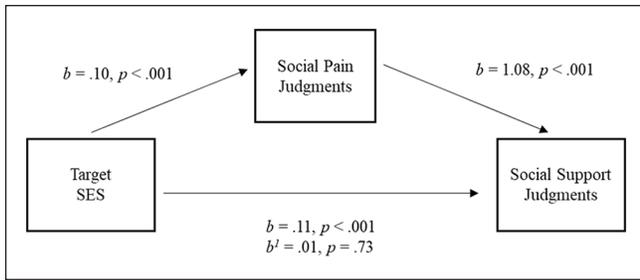
Figure 4. The Mediation Model Predicting Social Support Judgments as a Function of Target SES (Low–High) Indirectly Through Social Pain Judgments in Study 5.
Note. The indirect effect is significant, $b = .07$, $SE = .02$, 95% CI [.05, .10]. SES = socioeconomic status; CI = confidence interval; SE = standard error.

(*use personal coping strategies*; e.g., do a calming activity, take a walk, pray/mediate), 3 (*seek minor informal support from friends and family*), 4 (*seek maximum informal support from friends and family*), and 5 (*request formal support from a mental health professional*; e.g., clinical psychologist, counselor, psychiatrist). Preliminary analyses indicated that randomization and counterbalancing did not impact judgments on this task, $ts(292) < .28$, $ps > .781$. Demographics were then reported.

Results

Social pain and support judgments were averaged for low-SES and high-SES groups and tested with paired samples t-tests. Low-SES targets ($M = 2.82$, $SD = 0.45$) were judged more sensitive to social pain than high-SES targets ($M = 2.73$, $SD = 0.51$), $t(291) = 4.252$, $p < .001$, 95% CI [.05, .14], $d = .26$. Low-SES targets ($M = 3.26$, $SD = 0.75$) were also judged to need more social support than high-SES targets ($M = 3.15$, $SD = 0.83$), $t(291) = 3.839$, $p < .001$, 95% CI [.05, .17], $d = .23$.

We next tested whether target SES' effect on social support was mediated by pain judgments with the MEMORE macro (model 1; 10,000 bias-corrected bootstrapped samples; Montoya & Hayes, 2017). As hypothesized, low-SES targets were judged as more sensitive to social pain than high-SES targets and these judgments mediated social class' effect on coping judgments (see Figure 4), $b = .10$, $SD = 0.03$, 95% CI [.05, .16].

Discussion

In keeping with Studies 1 to 4, low-SES White targets were judged more sensitive to social pain compared with high-SES White targets. Study 5 also demonstrated one implication of these pain judgments, such that low-SES White targets were judged to need more resources to cope with socially painful experiences than high-SES White individuals. Furthermore,

social pain judgments mediated the relation between target class and resource judgments, suggesting that judgments of social pain serve as a mechanism for determining the extent of support people believe individuals needed to cope with mistreatment. Although speculation, when considered in conjunction with Study 4's empathy findings, these results may speak to a possible mechanism for building support for policies to reduce class-based inequality. Specifically, interventions that emphasize empathy may bolster support for policies that increase resources to help low-SES individuals. Consistent with this prediction, past research has linked sympathy for low-SES people with support for policies geared at reducing class-based inequality (Piston, 2018).

General Discussion

As members of a culturally stigmatized group, low-SES individuals experience more day-to-day social pains than their high-SES counterparts (Lott, 2002). Yet, despite experiencing more socially painful events, it remains unclear how people judge the social pain of low-SES and high-SES individuals. The current research addressed this gap in the literature and tested competing toughness and empathy accounts for class's effect on social pain judgments. Evidence from five experiments provides consistent support for an empathy account of class's effect on social pain judgments.

In Study 1, participants judged low-SES White targets to be more sensitive to social pain compared with high-SES White targets. Study 2 replicated this effect and demonstrated that this pattern of social pain judgments generalizes to female targets. Study 3 provided evidence that individuals make distinct judgments for the physical and social pain experienced by low-SES and high-SES White targets. Specifically, participants believed low-SES targets would feel less *physical* pain than high-SES targets, but judged low-SES targets to feel more *social* pain than high-SES targets. Moreover, toughness judgments mediated both physical and social pain judgments, as low-SES targets were viewed as tougher in physical contexts but weaker in social contexts. Study 4 directly tested the empathy hypothesis and found that participants reported more empathy for low-SES White targets than high-SES White targets and these empathy judgments mediated class's effect on social pain judgments. Finally, Study 5 tested one implication of class-based differences in social pain judgments: judgments of social support. In keeping with an empathy account, participants judged low-SES White targets to experience more social pain than high-SES White targets and these judgments informed beliefs about coping support. People believed low-SES individuals would feel more social pain and consequently need more social support than high-SES individuals. Altogether, these studies provide consistent support for the empathy hypothesis and indicate that people believe low-SES White individuals are more sensitive to social pain compared with high-SES White individuals.

Implications

The current research makes several contributions to the study of social class and pain judgments. Research examining group-based biases in social pain sensitivity is an emerging literature and most research to date has focused on race-based judgments. These results extend this nascent literature by demonstrating that social identities beyond Black and White racial identification (e.g., Deska, Kunstman, Lloyd et al., 2020, 2020b) shape judgments of social pain. Data from five studies illustrate that target SES shapes social pain judgments, such that low-SES individuals are expected to feel more pain than high-SES individuals. These results extend research on social pain biases beyond race into other social identities like social class.

Critically, these results identify a context in which judgments of social and physical pain diverge. Whereas past work using Black and White target individuals consistently finds social pain judgments parallel physical pain judgments (e.g., Deska, Kunstman, Lloyd et al., 2020; Trawalter et al., 2012), social class seems to have distinct effects on judgments of social and physical hurts. People expect low-SES individuals will experience more social pain than high-SES individuals, but these effects reverse for judgments of physical injuries. People anticipate low-SES individuals will feel less physical pain than high-SES individuals. These results indicate that social and physical pain judgments are related but distinct phenomena and provide evidence for one context in which these forms of pain judgments diverge.

The current work also contributes to research on pain by introducing empathy as a mechanism underlying class-based biases in social pain judgments. These results extend research on pain judgments by providing evidence for a socioemotional mechanism (i.e., empathy) to a literature that has primarily focused on trait-driven accounts of biased pain judgments. For instance, stereotypes related to biological racism, the superhumanization of Black bodies, and adversity have been implicated in race- and class-based biases in pain judgments (e.g., Hoffman et al., 2016; Summers et al., 2021; Waytz et al., 2015). The current work builds on these past findings by providing evidence that target-specific feelings (i.e., empathic concern) can also inform pain judgments.

The current work also contributes to research on the SCM. The SCM states that the warmth and competence dimensions underlying social stereotypes facilitate distinct emotional responses to social groups (Fiske et al., 2002). Groups stereotyped as high in warmth but low in competence are expected to elicit pity and empathic concern (Cuddy et al., 2008), and the current studies find that people report greater empathy and consequent social pain sensitivity for members of groups typically stereotyped as high warmth but low competence (i.e., low-SES, work poor targets). These results reinforce tenets of the SCM and connect the SCM to work on social pain judgments.

Finally, the current work offers a potential avenue for building support for the social and mental health needs of low-SES individuals. The results of the current study indicate that feelings of empathy for low-SES White individuals inform social pain and support judgments. Intervention strategies that highlight those feelings of empathy may help build public support for more equitable social policies. Indeed, people often support redistributive and equity-based policies when they feel sympathy for low-SES groups (e.g., Piston, 2018). Empathy-based strategies that sensitize the public to the social hurts of low-SES individuals may benefit class-based policies.

Limitations and Future Directions

Limitations of the current work highlight future research directions. First, the generalizability of the current findings is constrained by its cultural context, the dynamic and changing nature of social class stereotypes, and biases specific to WEIRD samples (i.e., Western, Educated, Industrialized, Rich, and Democratic; Simons et al., 2017). For example, the current research was conducted in the United States and thus may not generalize to other contexts (e.g., countries with less economic inequality). Countries with higher income inequality tend to have more ambivalent class-based stereotypes, as these mixed stereotypes serve to justify unfair social systems (Durante et al., 2013). In more unequal countries, low-SES targets are viewed as particularly low in competence but *especially* high in warmth and this ambivalence leads to the paternalistic stereotypes that evoke feelings of empathy and pity. In contrast, equitable societies with less ambivalent class-based stereotypes may not feel the empathy implicated in the current effects. Future work should test whether the current effects generalize to other contexts (e.g., countries varying in income equity, time-points, more geographically diverse samples) and identify potential boundary conditions like social (in)equity.

Future research might also test social pain and support judgments for middle-class individuals. Guided by work from the SCM that finds members of the middle class are judged as high in both warmth and competence (Fiske et al., 2002), we anticipate that people would feel greater empathy and make greater pain judgments for middle-class White targets than both low-SES and high-SES White targets. Past work has found middle-class targets are judged similarly high in warmth relative to low-SES targets and similarly high in competence relative to high-SES targets (Durante et al., 2017). However, low-SES stereotypes are also tinged with many negative traits (e.g., primitive, stupid, lazy, dirty, violent) that lead the middle class to generally be viewed more favorably (Cozzarelli et al., 2001; Loughnan et al., 2014). The pronounced positive regard for the middle class may lead people to be particularly empathic and attentive to the expected pains of middle-class individuals (Durante et al., 2017).

Another limitation of the current work is its exclusive use of White targets. Target race was held constant to isolate class's effect on social pain judgments. However, by holding race constant, it remains unclear how race and class interact to shape social pain judgments. We anticipate a number of possible outcomes for studies that test class's effect with targets from other racial and ethnic groups. First, it is possible the current effects generalize to target individuals of color, as social class may similarly influence empathy across racial groups. Alternatively, due to the overlapping content of race and class stereotypes for some groups, people may apply different stereotypes to targets of color when considering their social pain experiences. For example, low-SES Black individuals tend to be stereotyped as low competence and low warmth, whereas Black professionals are viewed favorably for both competence and warmth dimensions (Fiske et al., 2002). If low-SES Black targets are associated with more unambivalently negative stereotypes (e.g., welfare recipients; Brown-Iannuzzi et al., 2017), people may feel less empathy toward them and consequently minimize their social pain. In addition, positive stereotypes associated with high-SES Black individuals may result in greater empathic concern and higher estimates of social pain. Future research should test social class's effect among targets of color and integrate race and class information to test how these factors intersect to shape social pain judgments.

Although beyond the scope of the current work, future research might also delineate the role of empathy in social versus physical pain judgments. As an emotion-focused process (Davis, 1983; Eisenberg & Miller, 1987), empathy might be particularly effective at sensitizing individuals to social rather than physical pain because social pain judgments fundamentally tap beliefs about negative affect and distress following hurtful interpersonal experiences (e.g., MacDonald & Leary, 2005). Moreover, since social pains are an unfortunate but common aspect of social living (Williams, 2007), most people have firsthand experience with these events and as a consequence, they may be better at empathizing with everyday social hurts than physical injuries that they rarely experience (e.g., having a hand slammed in a car door). Future research might test whether shared emotional underpinnings and personal experience lead empathy to drive judgments of social pain more than physical pain.

Future research might also employ alternative operationalizations of social class. The current work operationalized SES as annual income. Recent research suggests income may be particularly important to defining social class (Cohen et al., 2017), but other indices (e.g., occupation, education, access to opportunities) are also important facets of class identity. Although we predict that using alternative operationalizations of class would produce similar results (see Summers et al., 2021, 2022), it may also be that using occupation and education to manipulate social class may change social pain judgments by eliciting different stereotype information. For example, low-income jobs are often stigmatized and the workers who occupy these jobs are stereotyped as dirty, unambitious, and unintelligent (Ashforth & Kreiner, 1999; Glick et al., 1995). These stereotypes may impact social pain judgments if they elicit feelings of contempt rather than empathy toward low-income workers. Future research might test how diverse manipulations of social class impact social pain judgments.

Future research should assess potential moderators of the current effects. Although a majority of participants in the current research judged low-SES targets as more sensitive to social pain than high-SES targets, a proportion of participants across studies (range = 33-42%) showed the opposite bias in pain judgments. As such, we anticipate there are likely moderators that may influence class-based biases in social pain judgments. For example, individual differences in preferences for social hierarchies and strict social order may influence judgments of low-SES and high-SES individuals' social pains. Individuals high in social dominance orientation (SDO; Pratto et al., 1994; Hudson et al., 2019) and right-wing authoritarianism (Duckitt & Bizumic, 2013) may be less likely to feel empathy toward lower status individuals. As a result, they may judge low-SES individuals to be desensitized to social pain. Moreover, their motivations to preserve social order may evoke greater empathy for high-status individuals, leading them to judge high-SES targets more sensitive to social pain than low-SES individuals. Future research should identify individual difference moderators of class-based social pain biases.

Future research should also test whether the social pain-to-support relation documented in the current work translates to tangible responses that benefit low-SES individuals. For example, although numerous structural factors affect the stress and social pain of low-SES Americans (e.g., class stratification in schools and universities; distrust in and lack of access to health care, health-related information, and mental health support; Bell, 2014; Kramer et al., 2017), emerging evidence suggests that social capital (e.g., meaningful economic and social connections with higher SES individuals) can attenuate some of these effects and benefit the life course of low-SES individuals (e.g., Chetty et al., 2022). Future research should test whether social pain judgments for low-SES individuals predict attitudes and action toward structural changes that improve the social capital and supports available to low-SES people. For example, in university settings, researchers might test whether sensitivity to the pains of low-SES individuals predicts concrete efforts to recruit and retain first-generation students and faculty.

Concluding Remarks

Although recognizing others' distress is a critical antecedent to support those in need (e.g., Latané & Darley, 1970), social stereotypes sometimes shape judgments of others' pain experiences, often to the detriment of members of stigmatized

groups. The current research identifies an intergroup context where empathic concern for low-SES White individuals seems to sensitize social pain judgments and in turn increases judgments of social support needs. With these data in mind, biases of low-SES individuals as sensitive to social pain may be leveraged to provide interpersonal support and advocate for public policies that better serve the needs of low-SES individuals. In this context, recognizing the social hurts of low-SES individuals may set the stage for actions to alleviate class-based health inequities.

Declaration of Conflicting Interests

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Supplemental Material

Supplemental material is available online with this article.

Notes

1. Additional analyses covaried participants' self-reported household income. The effect of target social class remained significant after accounting for participant SES ($F = 9.43$, $p = .002$).
2. Data can also be analyzed with multilevel models (MLMs) to capture stimuli effects. However, because the current studies were not designed to be analyzed with MLM, such analyses are largely underpowered (e.g., 25% power in Study 1). In the interest of completeness, the online supplement includes alternative, multilevel treatments of the data from all studies and discussions of power and changes in significance between in-text and MLM results.

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