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Cleansing the Soul by Hurting the Flesh: The Guilt-Reducing Effect of Pain

Brock Bastian1, Jolanda Jetten1,2, and Fabio Fasoli3
1School of Psychology, University of Queensland; 2School of Psychology, University of Exeter; and 3Department of Cognitive Sciences and Education, University of Trento

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Pain purifies. History is replete with examples of ritualized or self-inflicted pain aimed at achieving purification (Glucklich, 2001). Some people feel that they can achieve reparation for their sins by simply experiencing pain; this may be why seeking self-punishment is a basic response to feelings of guilt (Freud, 1916/1957; Nelissen & Zeelenberg, 2009).

Why are pain and suffering believed to serve as atonement for sin? One reason may be that the experience of physical pain alleviates feelings of guilt associated with immoral behavior (Tangney, Stuewig, & Mashek, 2007). There has been very little research on the psychological benefits of experiencing pain. We tested two hypotheses relating to when and why people are likely to be motivated to experience pain—that people should be more motivated to subject themselves to a painful experience when they are reminded of their own immoral deeds, and that the experience of pain should reduce feelings of guilt.

Method

In return for $10, 62 undergraduates (22 men, 40 women; mean age = 22.74 years) participated in a study that they were told focused on mental acuity. They were allocated to one of three conditions. In the pain (n = 20) and no-pain (n = 19) conditions, participants wrote for 10 to 15 min about a time when they behaved unethically, that is, a time when they “rejected or socially excluded another person.” In the control condition (n = 23), participants wrote about “an everyday interaction [they] had with another person yesterday.” All participants subsequently completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), which included an item assessing their experience of guilt.

Next, participants were informed that they would participate in a different study on physical acuity. Participants in the no-pain condition (n = 20) and pain condition (n = 23), participants wrote about “an everyday interaction [they] had with another person.” In the control condition (n = 23), participants wrote about “an everyday interaction [they] had with another person yesterday.” All participants subsequently completed the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), which included an item assessing their experience of guilt.

Results

Three participants who left their hands submerged in the ice bath for an unusually long period of time (> 3 min, more than 2 SD above the mean) were removed from analyses, leaving 21 participants in the control condition, 19 in the pain condition, and 19 in the no-pain condition. A manipulation check revealed that recalling an act of ostracism activated more immoral thoughts about the self (M = 4.07, SE = 0.29) than recalling an everyday interaction did (M = 1.28, SE = 0.10), t(57) = 7.04, p < .001. An analysis of variance (ANOVA) on the time (in seconds) participants’ hands were submerged in water revealed an effect of condition, F(2, 56) = 3.30, p < .05, η² = .11. Participants in the pain condition (M = 86.74, SE = 7.92) held their hands in the ice bath longer than participants in the control condition did (M = 64.43, SE = 7.53), p < .05, but for a duration equivalent to the time limit enforced in the no-pain condition, p = .772. An ANOVA on pain ratings also revealed an effect of condition,

Corresponding Author:
Brock Bastian, School of Psychology, University of Queensland, St. Lucia, Queensland, 4072, Australia
E-mail: b.bastian@uq.edu.au
Discussion

When reminded of an immoral deed, people are motivated to experience physical pain. Participants who wrote about an unethical behavior rated the ice-bucket task as more painful than did participants who wrote about an everyday interaction.

To determine whether pain reduced guilt, we conducted an ANOVA with condition as a between-subjects variable and guilt as a repeated measure at Time 1 and Time 2. This analysis revealed a main effect of condition, $F(1, 56) = 32.22, p < .001, \eta^2 = .37$. As predicted, this effect was qualified by a Time x Condition interaction, $F(2, 56) = 6.53, p < .01, \eta^2 = .19$. Comparisons revealed that participants in the pain condition experienced a significant reduction in guilt (Time 1: $M = 2.53, SE = 0.26$; Time 2: $M = 1.11, SE = 0.13$), as did participants in the no-pain condition (Time 1: $M = 2.21, SE = 0.26$; Time 2: $M = 1.53, SE = 0.13; p < .01$). Critically, the magnitude of change was more than twice as large in the pain condition (pain condition: mean difference = 1.42; no-pain condition: mean difference = 0.68). There was no change for participants in the control condition (Time 1: $M = 1.33, SE = 0.25$; Time 2: $M = 1.19, SE = 0.13$). Time 1 guilt was significantly higher in the pain and no-pain conditions compared with the control condition ($p < .05$), and Time 2 guilt was higher in the no-pain condition compared with the other conditions ($p < .05$).

References


$F(2, 56) = 37.83, p < .001, \eta^2 = .58$. Follow-up comparisons revealed significant differences in pain ratings between all conditions (pain condition: $M = 2.79, SE = 0.22$; control condition: $M = 1.91, SE = 0.21$; no-pain condition: $M = 0.11, SE = 0.22; p < .006$), indicating that participants who wrote about an unethical behavior rated the ice-bucket task as more painful than did participants who wrote about an everyday interaction.

Physical pain is experienced as a penalty, and paying that penalty reestablishes moral purity. Second, subjecting oneself to pain communicates remorse to others (including God) and signals that one has paid for one’s sins, and this removes the threat of external punishment. Third, tolerating the punishment of pain is a test of one’s virtue, reaffirming one’s positive identity to oneself and others.

Previous work has demonstrated that giving meaning to pain affects people’s management of that pain (e.g., Morris, 1991). By introducing the judicial model of pain, we emphasize that giving meaning to pain can also affect other psychological processes. Although additional research is needed, our findings demonstrate that experiencing pain as a penalty can cause people to feel that their guilt is resolved and their soul cleansed.