Sadness Reduces Decisiveness
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Sadness makes people feel uncertain about outcomes and coping abilities. This uncertainty can spill over to unrelated domains, reducing decisiveness. In three experiments, we found that sadness increased choice deferral, reduced the commitment to a single course of action, and delayed purchase decisions, even when hesitation was costly.

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EXTENDED ABSTRACT

People often make decisions when feeling distressed. Sadness is a particularly prevalent and long-lasting emotion (e.g., Jordan et al. 2011), and therefore understanding its impact on decision-making is particularly important. Recent research has found that sadness can generate suboptimal decisions (e.g., increased willingness to pay and impatience; Lerner et al. 2004, 2013). However, beyond quality of decision-making, sadness may influence the willingness to actively engage in decision-making to begin with, an issue that has not been explored in research using forced-choice paradigms.

According to appraisal theory (Smith & Ellsworth 1985), the way people cognitively appraise their environment is both a cause and consequence of different emotions. Sadness, in particular, is characterized by a high sense of uncertainty (e.g., about one’s ability to cope; Tiedens and Linton 2001). Therefore, we propose that sadness can impair decision-making by reducing decisiveness. Indecisiveness may generate unnecessary search costs (Rassin et al. 2008). Moreover, waiting too long to select popular options may result in these becoming unavailable (students losing potential seats in a course, Palatano and Wengrovitz 2007). For consumers, indecisiveness can result in missed limited time offers opportunities.

Aside from costs to the consumer, indecisiveness can be costly for retailers. Purchase delays can increase stocking costs or turn into total revenue loss if the purchase is permanently deferred. Consumers’ difficulty in selecting a single alternative is one of the most important causes of delaying purchases (Greenleaf and Lehmann 1995).

Previous research has shown that negative affect integral to the decision increases status quo choices (Luce 1998), but whether incidental sadness reduces decisiveness more generally is still an open question. We demonstrate that the uncertainty that accompanies sad states increases perceived choice difficulty and, consequently, increase indecisive behavior.

Experiment 1A

One way that people can express decision avoidance is by circumventing the responsibility for deciding (Anderson 2003). Hence, in Study 1A we examine whether incidental sadness increases indecision in the context of gift giving (e.g., whether gift-givers prefer to buy a specific versus a generic gift card). In this context, there is room for higher uncertainty given that people are inherently more knowledgeable about their own preferences.

Method

One hundred forty one participants were recruited from Amazon MTurk (44.7% female, mean age = 33.9). We induced either sadness or a neutral emotional state with video clips validated in previous research (Gross and Levenson 1995, Lerner et al. 2004). Participants in the Sadness condition viewed a clip from The Champ that portrays the death of a boy’s father. Participants in the Neutral condition watched a video clip from a National Geographic documentary on coral reefs.

After the manipulation, all participants were told to imagine that they were going to a birthday party, and that they had decided to give their friend a gift card. Their friend and their friend’s spouse love dining out, so the participant had decided to give them a restaurant gift certificate. Participants selected among Groupon gift cards (all costing $35): a $60 gift card to a French restaurant, a $60 gift card to an Italian restaurant, or a $50 gift card redeemable at either restaurant. We anticipated that sad participants would be more likely to select the third option, which forces their friend to make the restaurant decision, even when doing so required sacrificing $10 in face value.

Results

We collapsed the first and second alternatives (French or Italian restaurant with a $60 face value), since both these options are equally specific and choosing either require the same level of decisiveness. As predicted, Sadness participants were more likely to defer the choice of restaurant to their friend (72%) than Neutral participants (44%; \( \chi^2 (1) = 11.46, p = .001 \)). Sadness increased indecisiveness when choosing for others, even when there is a cost ($10) associated with it.

Experiment 1B

One of the limitations from Experiment 1A is that the gift-giving context could be eliciting positive emotions, which could con- volute the interpretation of the results. Therefore, in experiment 1B we made the choice to be about a restaurant certificate to be used by the person making the decision. In addition, we expected sadness to increase choice difficulty in this context, so we included such measure in this design. We hypothesized that the effect of sadness on decisiveness would be explained by the increased decision difficulty.

Method

One hundred sixty two participants were recruited from Amazon MTurk (53.1% female, mean age = 36.5). Participants watched the same movie clips from Experiment 1A. After the emotion manipulation, all participants were told to imagine that they were going to purchase a restaurant voucher for an upcoming Restaurant Week in their hometown. The terms matched those of experiment 1A. Next, participants rated their choice difficulty (“How much difficulty did you experience when making the decision about which restaurant voucher to get?”).

Results

Participants in the Sadness condition were marginally more likely to select the more flexible, but lower value option (27%) than were participants in the Neutral condition (15%; \( \chi^2 (1) = 3.42, p = .065 \)). The choice shares of the flexible, but lower value option, were smaller in the context of choice for the self, versus choice for others (as expected, due to higher certainty regarding one’s own preferences).

We ran regression analysis using PROCESS macro for SPSS (Hayes 2013) to test the hypothesis that choice difficulty mediates the effect of sadness on decisiveness. Sadness condition was a significant predictor of choice difficulty (\( \beta = .614, SE = .22, p = .006 \)). Choice difficulty significantly predicted preference for the flexible option (\( \beta = .404, SE = .131, p = .002 \)). Sadness is not a significant predictor of flexible option when controlling for choice difficulty (\( \beta = .463, SE = .222, p = .273 \)). The indirect effect of Sadness on choice of flexible option (i.e. indecisiveness) through choice difficulty was significant and positive (\( \beta = .248, SE = .132, 95\% CI [.0493, .6008], 1,000 bootstrap samples \)). Therefore, we conclude that sadness increases perceived choice difficulty, which in turn increases preference for the flexible – and less decisive – option.
Experiment 2

Experiment 2 extends the findings of Experiment 1A and 1B in two ways. First, Experiment 2 sheds additional light on the hypothesized process (lack of certainty present when one experiences sadness) by manipulating anger, an emotion as aversive as sadness, but not high in uncertainty (Smith and Ellsworth 1985). Second, it examines the influence of sadness on indecisiveness in a personal finance domain. Specifically, we gave participants a debt repayment scenario where they could allocate all of their money to one of two credit card accounts, or they could act more indecisively and split the payment between accounts. We hypothesized that sadness would increase the tendency to split one’s available money across cards (arguably, a proxy for indecisiveness), while anger would not since it is not associated with an uncertainty appraisal.

Method

We conducted a pre-test to test whether they perceived splitting the payment between accounts to be reflective of indecisive behavior. One hundred participants (recruited through MTurk) completed the pre-test for a small payment (29% female, mean age = 32.5). They were asked to judge a target based on his/her decision in a debt repayment scenario (Amar et al. 2011). Participants were asked to imagine that the target received $100 windfall from the government. The target had two debts where the money could be allocated: a Mastercard with a $100 balance and 10% APR and a Visa with a $1,000 balance and 15% APR. Participants were randomly assigned to one of three conditions: the target (i) paid off the smallest account, (ii) split payments evenly, or (iii) reduced the debt of the large, high-APR debt (the normative action). Participants rated the extent to which they thought the target was feeling indecisive, uncertain, and risk-averse. We ran a repeated measures ANOVA to test whether participants perceived the three targets differently. Pairwise comparisons show that the target who split the funds between the cards was perceived as being more indecisive, and uncertain. Importantly, this target was not perceived to be risk-averse, therefore splitting was not perceived as a strategy to reduce risk (which would conflict with the proposed explanation that people split due to uncertainty). Participants also stated that splitting was not a decision they would have made, and did not believe that splitting made targets feel good. Therefore, we conclude that participants perceived splitting as reflecting indecisiveness and uncertainty.

Two hundred and four participants (MTurk) completed the main experiment (37% female, mean age = 32). We first induced sadness, anger, or neutral emotional states with video clips validated in previous research (Gross and Levenson 1995, Lerner et al. 2004, Rottenberg, Ray and Gross 2007). Participants in the Anger condition viewed a four-minute clip from My Bodyguard that portrays a bullying incident. Participants were then presented with the scenario from the pretest and asked to indicate how much of their $100 windfall they would use to repay each card. The decision is difficult, because participants must choose between completely repaying the small balance with a small APR (which is tempting) and chipping away at the high balance with a high APR (which is financially optimal).

Results

We computed an indecisiveness score, which captured the extent to which participants split their windfall evenly between the two debts. Specifically, indecisiveness scores range from 0 to 50 and are equal to min(Mastercard payment, Visa payment). If participants equally split their windfall between debts, their indecisiveness score is $\min(50, 50) = 50$. If they allocate their entire windfall to one debt, their score is $\min(100, 0) = 0$. We ran a one-way between subjects ANOVA to test whether emotional condition predicts indecisiveness scores. The omnibus test was marginally significant ($F(2, 201) = 2.50, p = .085$). Pairwise comparisons show that indecisiveness scores were significantly greater in the Sadness condition ($M = 9.43$, SD = 16.41) than in the Anger condition ($M = 4.83$, SD = 11.07; $t(134) = 1.99, p = .049$) and the Neutral condition ($M = 4.80$, SD = 12.91; $t(129) = 1.94, p = .054$). Indecisiveness scores did not differ among Anger and Neutral conditions ($p = .99$).

Experiment 2 demonstrates that sadness reduces decisiveness, while anger does not (relative to a Neutral control condition). These results suggest that not all negative emotions reduce decisiveness, and that the appraisal of uncertainty that accompanies sadness is a potentially significant driver of the effect of sadness on decisiveness. We replicated this finding in a follow-up correlational study ($N = 114$, 55.3% female, mean age = 36.6) where participants rated their naturally occurring emotions and completed the debt repayment task (order counterbalanced). As predicted, sadness scores correlated positively and significantly with indecisiveness scores ($r(112) = .33, p < .001$). Indecisiveness did not correlate significantly with pride, hope, indifference or happiness (all $r$’s < .10), but it correlated significantly with anger ($r(112) = .20, p < .05$). When both anger and sadness are entered in a multiple regression, only sadness predicts indecisiveness (sadness: $\beta = .211$, $t(100) = 2.86, p = .005$; anger: $t(100) < 1$).

Experiment 3

Larger choice sets have been shown to increase decision avoidance (Tversky and Shafir 1992), so if sadness reduces decisiveness, people experiencing sadness would be better off when facing smaller choice sets. Ironically, given that people experiencing sadness have increased uncertainty over their preferences, they might believe that they are better off by having larger assortments available. Therefore, in Experiment 3 we tested whether sad participants would be willing to incur higher search costs to obtain a larger choice set.

Method

Two hundred seventy five students from a US Midwestern university completed the experiment for course credit (39.6 female, mean age = 21). We elicited sadness or a neutral state with the same videos used in the previous experiments. Then, we gave participants a short decision task where there is a trade-off between assortment and search costs. Participants are told that they are going to buy new eyeglasses, and they found two stores online. From store A, one mile away, they want to try 3 models. From store B, they want to try 15 models, but store B is further. Participants are then asked how many miles they are willing to drive in order to reach the store with the larger assortment (Inesi et al. 2011).

Results

Four participants with answers 3 standard deviations above the mean were excluded from the analysis, two in each condition. As predicted, participants in the Sadness condition were willing to drive significant more miles to reach the store with larger assortment ($M = 21.34$, SD = 15.49) than participants in the Neutral condition ($M = 17.60$, SD = 12.86, $t(269) = 2.15, p = .032$). Although having a larger assortment will likely make their choice even more difficult (Tversky and Shafir 1992), participants in the Sadness condition seem to be coping with their uncertainty by having a stronger preference for the larger assortment, even if this implies higher search costs.

General Discussion

Prior work has shown that sadness can either be detrimental or beneficial to decision-making, depending on the context and type of decision. Although this body of literature has documented
directional effects of sadness on decision-making (e.g., increasing impatience; Lerner et al. 2013), we propose and find across multiple experiments that sadness can actually reduce the propensity to be decisive. We show that sadness increases indecisiveness in the context of financial decision-making regarding one’s current debts and in the context of selecting gifts for others and for themselves. This effect is explained by higher levels of choice difficulty and uncertainty over preferences. We also showed that sadness increases the propensity to engage in more search costs to acquire a product, which exacerbates choice difficulty for people experiencing this emotion.

A potential limitation of the current findings is that the indecisive behavior we observed could be interpreted as people seeking more variety (i.e., paying off more debt accounts, selecting the gift card option that can be used in more restaurants). Arguably, the gift card holder will still go to only one restaurant, and the debt holder will still have to pay both debts, so it is not clear that the flexible choices in our manipulations provide any variety in consumption.

Alternatively, choosing more variety might be a coping mechanism of people experiencing indecisiveness, and not a desire to consume more variety per se. Another possibility is that sad people may simply have an enhanced desire for multiple units (e.g., two small candies rather than one large candy). Multiple units may appeal to sad people for a number of reasons (e.g., being able to share with others, or spreading out therapeutic consumption over time). Future research should also investigate this possibility.

Our work suggests that sadness reduces decisiveness due to increased perceived choice difficulty, even when hesitation is costly. Alternatively, indecisiveness may prove beneficial when sadness-tinged decisions are suboptimal. It is possible that indecisiveness protects sad decision-makers from larger blunders.

**REFERENCES**


