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ABSTRACT

Charities often circulate widespread donation appeals to garner support for campaigns, but what impact do these campaigns have on the well-being of individuals who choose to donate, those who choose not to donate, and the entire group exposed to the campaign? Here we investigate these questions by exploring the changes in affect reported by individuals who donate in response to a charitable request and those who do not. We also look at the change in affect reported by the entire sample to measure the net impact of the donation request. Results reveal that large donors experience hedonic boosts from their charitable actions, and the substantial fraction of large donors translates to a net positive influence on the well-being of the entire sample. Thus, under certain conditions, donation opportunities can enable people to help others while also increasing the overall well-being of the population of potential donors.

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Societies often value generous action among citizens and support various forms of prosocial behavior, such as unpaid volunteer work and monetary donations. However, because charities frequently rely on contributions motivated by donor interest, people are commonly bombarded with charitable requests as many organizations hope that their initiative will generate support. But what are the emotional consequences, for both donors and non-donors receiving an invitation to contribute? Here we explore how the presentation of a donation request influences the well-being of both donors and non-donors.

A large literature has explored what factors lead people to give (e.g., Batson, Duncan, Ackerman, Buckley & Birtch, 1981; Benabou & Tirole, 2006; Cialdini, Brown, Lewis, Luce & Neuberg, 1997; Clary & Snyder, 1991; Hamilton, 1963; Nowak & Sigmund, 1998; Piff, Krause, Cote, Cheng & Keltner, 2010; Trivers, 1971), but only recently have researchers started to examine the emotional impact of giving. Indeed, this growing body of research has demonstrated that people are not only willing to offer aid to others, a tendency that begins early in life (Eisenberg & Mussen, 1989; Warneken & Tomasello, 2006), but that giving to others is emotionally rewarding. Correlational research suggests that people who engage in generous behavior – by way of giving either their time or money to others – are happier and healthier (e.g., Borgonovi, 2008; Brown et al., 2003; Helliwell & Wang, 2013; Konrath, Fuhrel,-Forbis, Lou & Brown, 2012; Thoits & Hewitt, 2001). For instance, individuals around the world who report donating money to charity in the last month also report higher levels of life satisfaction than those who report not donating at all (Aknin et al., 2013). Moreover, the link between giving and well-being is causal; several experiments demonstrate that giving to others leads to larger emotional rewards than giving to oneself (Aknin et al., 2013; Aknin, Hamlin & Dunn, 2012;

Dunn, Aknin & Norton, 2008, 2014; Gray, 2010; Weinstein & Ryan, 2010). Thus, giving to others yields emotional rewards for the giver.

Donation opportunities may therefore be beneficial for donors who reap the benefits of generosity outlined above, but what is the overall emotional impact of a donation opportunity on the whole range of subjects, including people who decide not to give (non-donors) or those who choose to give very little (low-donors)? Past research suggests that non-donors and low-donors fare worse than donors. Indeed, just as people engaging in prosocial behavior typically experience positive outcomes, people engaging in little or no prosocial action tend to experience relatively fewer benefits. For instance, examining mortality rates in large sample of older adults, Konrath and colleagues (2012) found that individuals who reported engaging in no volunteer work or low levels of volunteer work in the past decade had a higher level of mortality risk than highly active volunteers. Focusing specifically on the emotional consequences of donations, Dunn and colleagues (2010) detected a positive relationship between the amount of money students donated to a classmate and the donor's well-being; students offering less money reported lower levels of positive affect and higher levels of negative affect. Finally, some research has examined how non-helpers – defined in past research as individuals who were not asked to provide assistance to someone in need – compare to helpers on various well-being measures. Weinstein and Ryan (2010) found that participants not given the opportunity to help another participant reported lower levels of well-being than participants allowed to help, but only when assistance was initiated by the helper. Similarly, Williamson and Clark (1989) reported that participants not allowed to help a confederate experienced lower levels of well-being than participants asked and allowed to help. Thus, individuals for whom the opportunity to help is withheld tend to report lower well-being than individuals for whom help is requested and

permitted. Interestingly, however, past research has not measured whether non-donors and low-donors are worse off (i.e. experience lower well-being) as a result of *declining* a donation opportunity. As such, it remains unknown whether individuals who choose to forgo an opportunity to act generously experience negative emotional consequences, thereby offsetting, at least in part, the overall positive emotional consequences of donation requests.

Given that widespread charitable appeals often request involvement from many members of a population, how do the differential outcomes for high, low, and non-donors influence well-being of the full sample? To the best of our knowledge, this question has not yet been examined. Here, we provide a first look among a sample of undergraduate students provided with the opportunity to donate as much or as little of their study earnings to charity as they like. Because all participants were presented with the same donation request and reported their well-being before and after the donation, we are able to investigate how high, low, and non-donors respond emotionally –individually and as a larger collective – to being offered a chance to donate. Our four key hypotheses were as follows:

Hypothesis 1: Consistent with past research demonstrating that human prosocial tendencies emerge early in life and are visible across a wide variety of contexts, we predicted that the majority of participants would give a large portion (defined here as more than 50% of their earnings) when presented with the opportunity to donate to charity.

Hypothesis 2: Consistent with past research demonstrating that larger donations predict greater emotional rewards than smaller donations (e.g., Dunn et al., 2010), we predicted that high donors (people offering more than 50% of their earnings to charity) would experience larger emotional benefits as a result of their donation than low or non-donors (people offering less than 50% of their earnings to charity).

Hypothesis 3: We predicted that people offered the opportunity to give but who choose not to do so (non-donors) or only offer a little (low-donors) may experience a *reduction* in well-being, including a decrease in positive affect and increase in negative affect. To the best of our knowledge, this hypothesis has not been tested in previous research.

Hypothesis 4: Since there is no previous research assessing the aggregate net emotional consequences for donors and non-donors, it was not clear what to expect. However, because aggregate cross-national evidence demonstrates that life evaluations are higher in countries where generosity is more prevalent (Aknin et al 2013; Helliwell & Wang 2013), and these samples include both donors and non-donors, we hypothesized that among our sample with a high prevalence of donations (H1) that presenting participants with an opportunity to donate would have a positive net impact on the well-being of the entire sample, despite the emotional costs potentially incurred by non-donors and low donors (H3).

If the presentation of a charitable appeal does not lead to negative consequences for non-donors and low-donors as predicted by Hypothesis 3, but there are gains for large donors, then offering people the opportunity to give may provide an unalloyed good. However, if non-donors and low-donors do experience negative well-being consequences when forgoing the opportunity to donate, as Hypothesis 3 suggests, then the overall emotional consequences of the donation opportunity will require finding an appropriate way of measuring and comparing the gains of the donors against the emotional losses of the low-donors and non-donors.

Methods

Participants

Two hundred and eighty-seven students ($M_{age} = 19.75$, $SD = 2.90$, 64% female) at Simon Fraser University participated in this study in exchange for course credit. Five additional

participants completed the experiment but withdrew their consent upon completion; their data are not reported.

Procedure

Initial questionnaire. Participants registered for the study independently but were tested in pairs. When entering the lab, participants were asked to independently complete an initial questionnaire assessing their baseline emotion on the Positive and Negative Affect Scale (PANAS; Watson, Clark & Tellegen, 1989); this measure requires respondents to rate the extent to which they feel 10 positive and 10 negative affect emotions at the moment using a 5 point likert scale (*1-very little or not at all, 5- extremely*). In line with previous research (Aknin, Dunn, Whillans, Grant & Norton, 2012), the word “happy” was added to the PANAS because this emotion was of particular interest.

First die roll and second questionnaire. After participants completed the initial questionnaire, the research assistant told participants that they would have the chance to roll a six-sided die for a monetary payoff. Pairs of participants were randomly assigned to either a *team* or *self* condition. Participants in the self condition were told that each player would have the chance to roll the die. If the participant rolled a value of 1-3 they would earn \$3 cash and if the participant rolled a value of 4-6 they would earn \$6. Meanwhile, participants in the team condition were told that each player would have a chance to roll the die and if they, together as a team, rolled values that summed between 2-6, the team would earn \$6 cash to split equally. If the numbers summed to a value between 8-12, the team would earn \$12 to split equally. And if the team rolled values that summed to 7, both participants would roll again. If only one of the two research participants came to the assigned time slot, the sole participant was given the chance to roll the die with the “self” payoff scheme. The research assistant showed participants cash in a

money box to indicate that the earnings were real. Participants rolled the die and were paid accordingly. Afterward, participants were asked to independently complete a second emotion questionnaire assessing their current positive and negative affect on the same PANAS scale (Watson et al., 1989).

Second die roll and third questionnaire. Participants were then informed that they had the option of rolling the die again for a monetary gain or loss. Specifically, participants in the self condition were told that each player could decide to roll the die again and if they rolled a value of 1-3 they would lose \$2 cash. However, if the participant rolled a value of 4-6 they would earn \$3. Meanwhile, participants in the team condition were told that if they, together as a team, decided to roll again and rolled values that summed between 2-6, the team would lose \$4 cash. However, if participants rolled numbers that summed to a value between 8-12, the team would earn \$6 to split equally. And if the team rolled values that summed to 7, both participants would roll again. Participants made their decision, rolled the die, and earnings were adjusted accordingly. To assess the impact of gains and losses on well-being, participants were asked to complete a third emotion questionnaire assessing their current positive and negative affect on the same PANAS scale (Watson et al., 1989). In addition, participants were asked to provide their demographic information (e.g., age, gender, GPA, income).

Donation opportunity and final questionnaire. The research assistant indicated that the study was nearly complete and told participants that the lab was collecting money for Spread the Net, a charity affiliated with the United Nations International Emergency Fund (UNICEF) that purchases bed nets to stop the spread of malaria through Africa. The research assistant explained that every ten dollars donated buys a bed net that could save a child. Therefore, if participants wanted to support the charity, they could put a donation in a small envelope and put the envelope

in a box labeled “Spread the Net”. The research assistant then left the room to prepare the final questionnaire; this ensured that participants could make their donation decision without pressure from the researcher. Envelopes provided for donations were surreptitiously marked with each participant’s unique identifier so that we could determine how much money, if any, each participant donated to charity. When the research assistant returned, participants were asked to complete a final emotion questionnaire, which allowed us to assess the impact of donation on well-being.

Results

Hypothesis 1: Earning and donation rates

Participants earned an average of \$4.25 (SD = 2.72) and donated an average of \$2.80 (SD = 2.43) to charity. A large proportion of participants (90.6%) gave some money to charity. We calculated a “donation ratio” – dividing donation amount by earnings – and found that nearly two-thirds (60.62%) of participants gave more than half of their money to charity, while a subset of 11.1% of the full sample donated all or more of their earnings.

Hypotheses 2 & 3: Change in affect for individual donors

Given that slightly over half of our sample offered more than half of their earnings to charity, we focused our analyses on the emotional consequences of donating large (>50%) and small (<50%) earnings ratios to charity. Note that this means we have combined non-donors and low-donors to increase our statistical power; this strategy is supported by the finding that non-donors and low-donors provided similar emotional ratings on all well-being measures pre- and post-donation (see Supplementary Materials).

We focused on two particular positive emotions of specific interest (happiness and pride) as well as overall positive and negative affect.

Happiness. To examine the impact of large and small donation ratios on happiness we first looked at change in self-reported levels of happiness from pre- to post- donation questionnaires using paired samples t-tests. Analyses revealed that participants offering a small proportion of their earnings (<50%) reported a non-statistically significant drop in happiness (from $M = 3.54$, $SD = 1.10$ to $M = 3.47$, $SD = .87$), $t(111) = .85$, $p = .40$, while participants offering a larger proportion of their earnings (>50%) reported a statistically significant increase in happiness (from $M = 3.37$, $SD = .99$ to $M = 3.74$, $SD = 1.00$), $t(170) = 5.81$, $p < .001$ (see Figure 1). Thus, although there were no happiness differences between high and low donation groups before the donation opportunity, $t(281) = 1.29$, $p = .200$, participants who donated a larger proportion of their earnings to charity were happier post-donation than were participants who donated a smaller proportion of their earnings, $t(285) = 2.33$, $p < .03$.

Pride. Similarly, to examine the impact of large and small donation ratios on pride we looked at change in self-reported levels of pride from pre- to post- donation questionnaires using paired samples t-tests. Analyses revealed that participants offering a small proportion of their earnings (<50%) reported a non-statistically significant drop in pride (from $M = 2.37$, $SD = 1.20$ to $M = 2.32$, $SD = 1.10$), $t(112) = .51$, $p = .61$, while participants offering a larger proportion of their earnings (>50%) reported a statistically significant increase in pride (from $M = 2.52$, $SD = 1.13$ to $M = 3.08$, $SD = 1.28$), $t(171) = 6.94$, $p < .001$ (see Figure 1). Thus, once again, although there were no differences in pride between high and low donation groups before the donation opportunity, $t(283) = 1.04$, $p = .299$, participants who donated a larger proportion of their earnings to charity reported experiencing higher levels of pride post-donation than participants who donated a smaller proportion of their earnings, $t(285) = 5.19$, $p < .001$

Positive Affect. A paired samples t-test revealed that participants offering a small proportion of their earnings (<50%) reported a statistically significant drop in positive affect (from $M = 2.71$, $SD = 1.02$ to $M = 2.42$, $SD = .81$), $t(108) = -5.22$, $p < .001$, while participants offering a larger proportion of their earnings (>50%) reported a statistically significant increase in positive affect (from $M = 2.74$, $SD = .79$ to $M = 2.83$, $SD = .84$), $t(168) = 2.46$, $p < .02$ (see Figure 1). High and low donation groups reported similar levels of positive affect before the donation opportunity, $t(279) = 2.99$, $p = .765$, but participants who donated a larger proportion of their earnings to charity reported higher levels of positive affect post-donation than participants who donated a smaller proportion of their earnings, $t(282) = 4.07$, $p < .001$.

Negative Affect. A paired samples t-test revealed that participants offering a small proportion of their earnings (<50%) reported a non-statistically significant drop in negative affect (from $M = 1.25$, $SD = .34$ to $M = 1.21$, $SD = .33$), $t(110) = 1.53$, $p = .13$, while participants offering a larger proportion of their earnings (>50%) reported a statistically significant decrease in negative affect (from $M = 1.27$, $SD = .39$ to $M = 1.16$, $SD = .27$), $t(160) = 5.11$, $p < .001$ (see Figure 1). High and low donation groups reported similar levels of negative affect before the donation opportunity, $t(281) = .47$, $p = .637$. Because both groups reported a decrease in negative affect, participants donating a larger proportion of their earnings to charity did not report statistically significant lower levels of negative affect post-donation than participants who donated a smaller proportion of their earnings, $t(273) = 1.30$, $p = .20$.

Hypothesis 4: Change in affect across the full sample

How did these emotional consequences influence the entire sample? To find out, we examined the change in happiness, pride, positive affect, and negative affect from pre- to post-donation across all participants. Analyses revealed a statistically significant increase in happiness

(from $M = 3.44$, $SD = 1.03$ to $M = 3.63$, $SD = 0.96$, $t(282) = 3.79$, $p < .001$), a statistically significant increase in pride (from $M = 2.46$, $SD = 1.16$ to $M = 2.78$, $SD = 1.27$, $t(284) = 4.74$, $p < .001$), a statistically significant *drop* in positive affect (from $M = 2.73$, $SD = 0.89$ to $M = 2.67$, $SD = 0.85$, $t(277) = 1.97$, $p < .05$), and a statistically significant drop in negative affect (from $M = 1.27$, $SD = 0.37$ to $M = 1.18$, $SD = 0.30$, $t(271) = 4.89$, $p < .001$; see Figure 1). These changes in emotion reflect the generally positive consequences of offering the donation opportunity, with large and strongly statistically significant increases in happiness and pride, and a corresponding decrease in negative affect. However, it is worth investigating further why there is a small but significant drop in full-sample positive affect despite the significant full-sample increases in happiness and pride (and also “inspired”). This appears to happen because four of the PANAS positive affect markers that reflect increasing fatigue as the experiment progresses – alertness, attentiveness, excitement and determination – fall significantly over the second half of the experiment. If these affect declines that take place between the third and fourth evaluations (before and after the donation opportunity) are factored out of our calculations, then the remaining sum of positive affect changes becomes significantly above zero for the sample as a whole. We conclude that the donation opportunity resulted in an unambiguous improvement in the average level of subjective well-being.

General Discussion

The findings reported here suggest that a single donation request can have net positive influence on the well-being of an entire sample. While those who donate little or no money at all in response to a charitable request experience some hedonic costs, such as a drop in positive affect, those who chose to donate a substantial portion of their earnings to charity experience large hedonic gains, seen here as an increase in happiness, pride, positive affect, and drop in

negative affect. Given that the majority of our sample donated a large proportion of their earnings to charity and experienced emotional rewards, the overall impact of presenting a donation request to the sample was positive.

To what extent is the net positive impact of the donation opportunity dependent upon having a majority of large donors? To answer this question, we used the changes in happiness and pride reported in the results section to compute the smallest percentage of high donors that would result in subjective well-being improvement for the full sample.¹ Analyses reveal that the net change in happiness is estimated to be positive if 16% or more of the subjects donate more than half of their earnings. The corresponding figure for the net change in pride is 9%. Thus, while nearly two-thirds of the present sample donated over half of their earnings in response to a donation request, fewer than one-sixth of the donors must do the same for the net subjective well-being change to be positive if the magnitude of change matches that in our experiments.

These findings dovetail with a growing body of research documenting the emotional rewards of generous actions. Indeed, while numerous studies have demonstrated that people enacting kind deeds – using either their time or money in service of others – experience a boost in well-being from doing so, the findings reported here indicate that the well-being benefits of generosity are detectable across an entire sample including non-donors and low-donors as well. To the best of our knowledge, this is the first examination of a large-scale, net result of a donation request. As such, these findings may provide helpful guidance when considering the emotional consequences of wide-spread donation requests and opportunities.

Our results may offer helpful insight for policy directed at increasing prosocial behavior and citizen well-being. Specifically, our results suggest that presenting opportunities for

prosocial action are beneficial in that they offer citizens the opportunity to contribute to their community or causes of interest and reap emotional rewards of doing so. While we focused on monetary requests, it is possible that similar outcomes may occur in response to other charitable campaigns, such as requests to assist with community clean-up initiatives or to volunteer at a local homeless shelter. Thus, policy supporting prosocial campaigns might not only make prosocial behavior more prevalent, but also foster greater well-being for citizens.

While these initial results offer exciting possibilities for increasing prosocial and well-being outcomes, caution should be exercised when extrapolating from this single, small-scale investigation to the real world because this study has limitations. First, our sample consisted of undergraduate students, a population that does not represent the large range of adults targeted by donation requests. Although students may not reflect the demographics of the population, past research has shown that students respond to donation requests in similar ways to nationally representative adult samples (e.g., Aknin et al., 2013; Dunn et al., 2008), suggesting that our convenience sample does not raise obvious concerns for generalizability. Second, participants were asked to donate a small amount of money that they had just earned participating in the study, not their hard earned cash. This may seem problematic to the extent that the emotional consequences of donating may differ when people contribute their hard earned resources instead of “house money”. While this presents an intriguing possibility, previous work has shown that people take ownership of newly acquired resources quickly and value them accordingly. For instance, classic research on the *Endowment Effect* indicates that moments after being given a mug, new owners require double the original value to sell their item (Kahneman, Knetsch & Thaler, 1990). Moreover, the emotional benefits of giving tend to be *greater* when giving requires sacrificing one’s own personally costly resources than when giving an identical, non-

personally costly item; 22-month old toddlers in a giving experiment smiled significantly more when sharing their own treats with a recipient than when giving an identical treat that did not belong to them (Aknin et al., 2012). Thus, these findings suggest that the emotional rewards of giving detected here may have *underestimated* the true effect. Finally, it is worth noting that participants were asked to donate to charity with a clear positive impact on recipients. Given that the emotional rewards of giving are greatest when donors are aware of how their donation positively influences others (Aknin, Dunn, Whillans, Grant & Norton, 2013), the donation target – and especially the transparency of the aid – may be of critical importance. Thus, future research may wish to examine whether the observed findings replicate with various donation targets.

Moving to the bigger picture, any conclusion that expanding the opportunities for generosity improves well-being needs to be able to make the connection between the short-term emotional consequences we have found and some broader and more long-lasting measures of well-being. We do not expect that short-term, small-scale experiments – like the one used here – would increase life evaluations; indeed it is better for the plausibility of both measures that they do not. Thus we find, as expected, that there is a small and non-significant increase in life satisfaction among the high donors. What we need is some plausible link between this small-scale experimentation and what might be happening in societies with very different patterns of generosity. In earlier work, we combined lab experiments on the emotional benefits of giving with large scale survey evidence showing a significant partial linkage between the national prevalence of donations and average life evaluations (Aknin et al, 2013). This suggests that sustained patterns of giving are associated with life evaluations that are on average higher, with donors and non-donors both included in the sample. Further research is needed to clarify the

channels through which the positive emotions from sustained giving translate into higher life evaluations, perhaps through the health and social connections channels proposed by Kok and colleagues (2013).

More broadly, large-scale implementations of donation opportunities require careful consideration of unintended outcomes. For instance, past research on donor fatigue and moral licensing (Monin & Miller, 2001) suggest that individuals respond generously to an *initial* donation request but may abstain from subsequent opportunities to engage in prosocial behavior. To the extent that multiple donation requests turn high-donors into low-donors or non-donors, the emotional costs of each donation request increase, decreasing the net positive impact experienced by the population. Of course, it is also possible that positive emotions could promote subsequent prosocial action (Aknin, Norton & Dunn, 2010; Isen & Levin, 1972), making repeat donations *more* likely. Thus future work should examine the long-term impact of multiple donation requests. In addition, we did not have the statistical power to explore which participants were the most likely to forgo the opportunity to donate to charity. Seeing as individuals choosing not to donate bear the emotional costs of donation requests, it is worth investigating whether these individuals represent a vulnerable population (e.g., low income individuals) requiring further consideration of whether emotional costs should be preferentially weighed.

These considerations notwithstanding, this research presents a first look at how a single donation request can influence the well-being of potential donors, both as individuals and as a larger collective. Our findings suggest that a donation request can have net positive influence on the well-being of the group targeted by a donation request. Although low-donors and non-donors may experience hedonic costs, high donors experience larger hedonic gains. Given that the

majority of people are large donors, the emotional benefits outweigh the emotional costs, suggesting that donation requests provide an opportunity for people to help others and experience a boost in well-being from doing so.

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Footnote

¹ Let a denote the increase in subjective well-being that high donors experience as a result of the donation opportunity, and let b denote the decrease in the subjective well-being of high-donors. If p denotes the proportion of high donors, then the average change is $pa - (1-p)b$. Hence, the overall change is positive as long as p is larger than $b/(a+b)$.

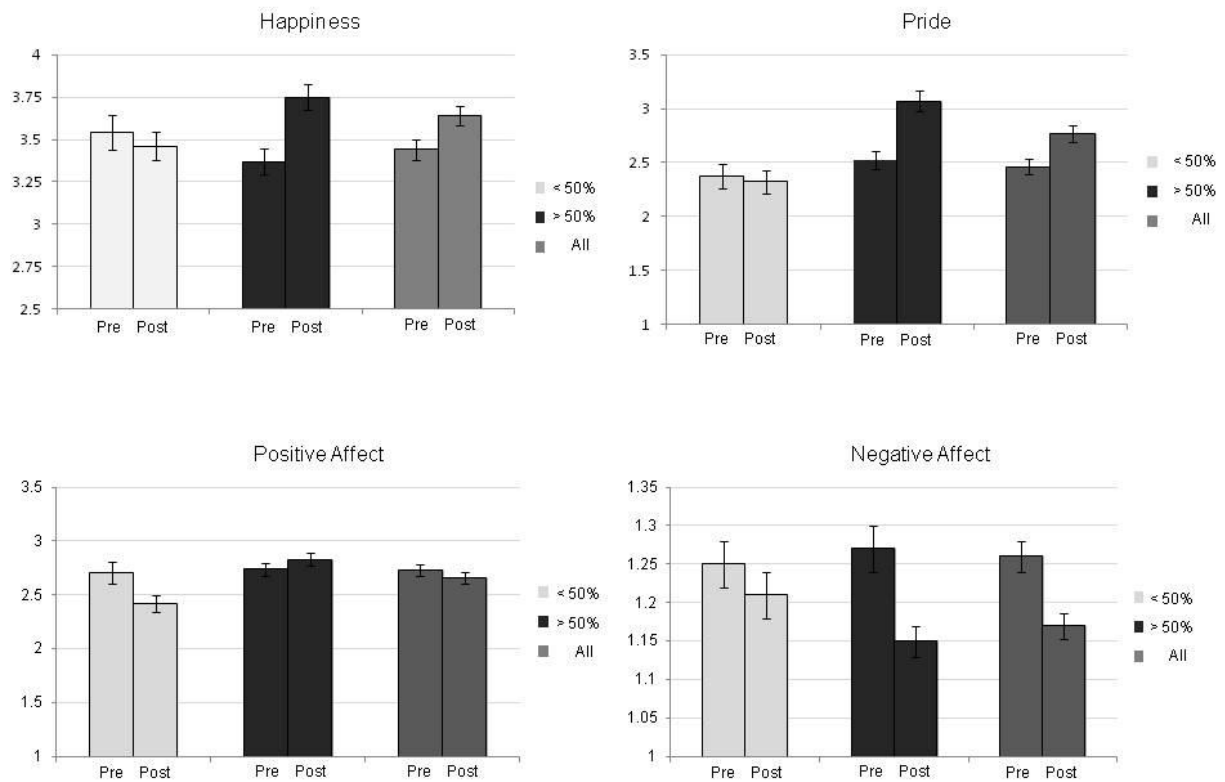


Figure 1. Change in happiness, pride, positive affect, and negative affect for low givers (< 50%), high givers (> 50%), and the full sample.