Mood Induction and Charity Giving: Empathic Concern and Warm Glow

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Abstract

Charities use emotional videos in charity appeals to induce moods and stimulate subsequent donation behavior. The evidence concerning the effectiveness of positively and negatively valenced charity appeals on actual donation behavior is mixed. Two motivational accounts for charity giving include the warm glow account - deriving individual pleasure and satisfaction from benefiting society, and the empathic concern account - serving other-oriented feelings of sympathy, tenderness, compassion and soft-heartedness. We construct two questionnaires measuring empathic concern motivation (ECM) with a modified version of the Interpersonal Reactivity Index (IRI) and warm glow motivation (WGM) with an adapted measure from pro-environmental research. In an online experiment, we invite 258 participants and manipulate participants' moods through short, either negatively or positively valenced video clips, and measure donations to charity before and after the manipulation with a modified dictator game. Mood inductions successfully changed self-reported mood in the desired directions and participants tended to donate more money after negative and positive mood inductions. The effect of the negative mood induction on charity giving was more pronounced for individuals scoring high on ECM. WGM and ECM predicted average charitable donations. Results support the use of mood inductions in charity appeals and promote the investigation of underlying donor motivations.

Charities generate a vast amount of their income through donations (The 2020 DAF Report., 2021). Sharing common goods and financial means anonymously with others is an important component of the survival of less fortunate groups in society (Graber, 2006). In a rapidly globalizing world problems like political instability, armed conflicts, economic inequality or a lack of resources force people into poverty or mass migration (Heshmati, 2007). While charitable donations may not solve these problems, they are necessary to

alleviate humanitarian crises around the world. Therefore, charities need effective means to stimulate donations and understand underlying donor motivations. Insights into the mechanisms of donation behavior may inform the fundraising strategy of charitable organizations. Emotions are commonly used in charity appeals, but their efficacy in eliciting charitable donations remains questionable. Therefore, the present study examines whether positive and negative mood induction affects donation behavior to charitable organizations in a dictator game. Secondly, the study investigates the role of warm glow motivation and empathic concern as underlying motivations in the relationship between mood induction and charity giving.

The experience of emotion may guide altruistic and (pro)social behavior (Schroeder et. al, 2015). The voluntary motivation of sharing resources with strangers with the primary goal of intending to benefit another may be defined as altruism (Batson, & Powell, 2003). Prosocial behavior may be defined as any voluntary act of intending to benefit another individual or group, irrespective of the motivation (Eisenberg, & Mussen, 1989). Central to the experience of every emotion, we may attribute core affect states which carry either positive or negative valence (Russel, 2003). The elicitation of aversive emotional states may result in negative mood states and the elicitation of positive emotions may evoke positive mood. However, individuals differ in their emotional reactions towards the same stimulus. In the present study, the valence dimension of emotional experience is targeted as a means of impacting prosocial behavior.

A common paradigm to measure prosocial behavior in the laboratory is the dictator game (DG hereafter; Engel, 2010). In the DG participants are endowed with a sum of money and asked to split the money between themselves and another person or institution. The act of giving money to strangers in economic decision-paradigms like the dictator game violates the assumption of classical economic theories presuming utility maximization (List, 2007). Yet,

participants in the DG share on average 28% of their endowed money (Engel, 2010), despite no apparent benefit. Therefore, the DG is used as a measure of prosocial behavior in the present study.

Eliciting negative moods is associated with an increased likelihood to behave prosocially in a range of different settings. Negative donation appeals emphasizing the negative consequences of not helping a child in need increased donations in the form of donating raffle tickets to charity (Erlandsson et al., 2017). In a different experiment, people reported experiencing sadness when exposed to sad faces on a screen. Participants who experienced higher degrees of sadness upon exposure to sad faces donated higher amounts of money to victims in a subsequent task (Small & Verrochi, 2009). Thus, perceiving negative emotions may be associated with behaving prosocially as a response to the emotional experience.

There is evidence in favor and against the notion that negative mood fosters altruistic behavior in the DG. Inducing negative moods through exposure to ten different anxiety-evoking pictures increased skin conductance, self-reported negative mood and subsequent likelihood to choose the altruistic option in the DG (Pérez-Dueñas et. al, 2018). Similarly, Shuang-Hu et al. (2012), Capra (2004) and Tan and Forgas (2010) found that inducing negative moods increased the chance to split money with a second player in the DG. Ibanez et al. (2017) experimentally manipulated sadness, fear, awe or happiness with emotional pictures derived from the "International Affective Picture Database" and measured subsequent donations to an environmental NGO. However, in the study by Ibanez et al. (2017), participants earned an endowment and could donate the endowment afterwards. The negative mood induction of fear or sadness had no significant effect on the amount of money donated to an environmental NGO in the DG.

Across a range of studies, we have identified negative mood induction as a means of fostering prosocial and donation behavior across different experimental settings. However, in the experiment by Ibanez et al. (2017) negative mood induction failed to increase donations to a pro- environmental NGO. A potential explanation for the absence of an effect of the negative mood induction on donations is the disconnect between the emotional content and the objective of the target charity. Moral congruence between the evoked emotion and the objective of a charity increases the effectiveness of donation appeals (Goenka, & van Osselaer, 2019). Accordingly, in line with Small and Verrochi (2009), the sad expression on faces may evoke sadness. However, the induced emotion may be incongruent with the objectives of pro-environmentalism which may account for the absence of an increase in donation behavior.

Empathic concern may provide the link between perceiving negatively valenced charity appeals and donation behavior. Empathy refers to the feeling of sharing and understanding the feelings of others and may motivate prosocial behavior (Batson et al., 1991). The empathy-altruism hypothesis proposes that the feeling of compassion, tenderness and sympathy for another individual is associated with an altruistic motivation to behave prosocially (Batson, 2010). Central to this motivation is the experience of empathic concern, an other-oriented emotional response evoked by and congruent with the welfare of someone in need (Schroeder et al., 2015). Empathic concern is conceptually different from other components of empathy. It is distinct from knowing, thinking, feeling or imagining to feel like someone else. Further, it does not refer to mimicking the neural response of another or feeling distress. Empathic concern is solely focused on feeling for someone, not feeling like someone.

Empirical evidence supports the claim of the empathy-altruism hypothesis that perceiving negatively valenced emotion should activate empathic concern motivations of

perceivers and stimulate donations. Correlational evidence by Mesch et al. (2011) indicates a positive relationship between empathic concern and charitable donations. In a study by Edele et al. (2013), participants were exposed to slideshows of faces depicting individuals with sad facial expressions. Successively, trait empathic concern and affective empathy predicted DG giving. This finding is corroborated by an fMRI study suggesting that higher trait empathic concern predicted altruistic choices in the DG and activation in brain areas responsible for social attachment and caregiving (FeldmanHall, et al., 2015). Taken together, these research findings indicate that empathic concern for others in need may serve an evolutionary function of promoting the survival of the group and thereby foster prosocial behavior and charitable donations.

The tendency to behave prosocially as a response to the experience of empathic concern seems to be more pronounced in women as they tend to report higher levels of empathic concern and donate more to charity in an incentivized DG (Mesch et al., 2011; Engel, 2010). In a modified DG, experimentally inducing EC through exposing participants to a charity appeal depicting children in need led to increased self-reported EC for both men and women. However, only women donated more money after the intervention and EC accounted for 17% of the gender difference in donation behavior (van Rijn et.al, 2019). Conclusively, empathic concern may be tied to an evolutionary caregiving function and its effects on prosocial behavior may be more pronounced in women.

In sum, the empathy-altruism hypothesis and empathic concern may explain why people are willing to donate to charity after being exposed to negative stimuli but fail to explain why individuals are willing to donate money as a response to experiencing positive emotions.

However, a wide range of evidence suggests that positive moods are associated with prosocial behavior. Anik et. al (2009) reviewed evidence from studies of adult, children and

primate samples using correlational and experimental data to conclude that happier people tend to act prosocially and that giving more increases happiness. For instance, participants in a positive mood were twice as likely to agree to take part in a subsequent study and the helping duration doubled (Schnall et al., 2010). State positive mood was positively related to prosocial behavior at the workplace (George, 1991). Most relevant to the present research, inducing a positive mood was associated with subsequent charitable donations in controlled experimental studies (Fiala, & Noussair, 2017; Erlandsson et al. 2017). Conclusively, positive moods may promote prosociality and increase donation behavior in the lab and the real world.

The link between positive mood induction and prosocial behavior in the DG is less clear. While some studies suggest that positive mood facilitates prosocial choice by increasing the likelihood of an equal split in the DG (Capra, 2004), other studies found that participants in a happy mood tend to choose a more selfish option by keeping more than an equal split (Shuang-Hu et al., 2012; Tan and Forgas, 2010). Moreover, Pérez-Dueñas et. al (2018) found no significant effect of inducing positive mood on splitting an endowment with a second player in the DG.

Accordingly, the evidence concerning the emergence of prosocial behavior in the DG after positive mood was induced is mixed. Importantly, in studies in which positive mood induction fostered selfish choice or had no effect on sharing in the DG, the receiver of the endowment was a second player instead of a charitable organization. In an experiment, inducing the positive emotion awe led to higher donations to an environmental NGO in the DG, whereas inducing happiness did not affect DG giving (Ibanez, et al. 2017). As charitable behavior does not universally result from a positive mood, motivational factors likely determine whether or not an individual engages in charitable actions when moods are induced.

One such dispositional factor is the motivation to donate. In the present paper, we examine the motivational forces underlying the relationship between mood induction and charitable donations. However, a purely other-oriented empathic concern account of charity giving may not explain the interactions between positive mood and charity giving.

In the “impurely altruistic” warm glow (WG, hereafter) theory of charity giving, giving to others may be driven by egoistic concerns to relieve normative pressure and serve the purpose of boosting one's self-esteem, win prestige or derive psychological benefits like pleasure and satisfaction from donating to charity (Andreoni, 1990; Korenok et al., 2013). In a modified version of the DG, participants spent 20% of their endowment to a charity despite purely altruistic explanations of charity being ruled out (Crumpler, & Grossman, 2008). Further, charity giving is associated with elevated activity in brain regions related to pleasure (Park et al., 2017). Conclusively, it is likely that self-interested motives like satisfaction and pleasure derived from donating may account for an increased likelihood to donate to charity.

The present studies' definition of WG is derived from a study in pro-environmental behavior: "Warm Glow Giving is an emotional construct of feelings of pleasure and satisfaction derived from the appraisal of contributing to the well-being of society and the less fortunate" (Hartmann et al., 2017, p. 5). Hence, WG is neither purely altruistic nor purely self-interested.

Batson, & Powell (2003) drew the distinction between altruism which is oriented towards increasing the welfare of others - and egoism which is set out to increase own welfare. In the present study, this theoretical distinction is reflected in empathic concern motivation, which is solely focused on the well-being of others and warm-glow motivation, which is both self-focused as individuals derive pleasure from the act of donating, but also other-directed as the ultimate goal of the donation is to benefit society. It is assumed that there is theoretical overlap between warm-glow and empathic concern motivation since both

are to some degree other-oriented and serve the same behavioral outcome of helping people in need.

The present study adds to the literature on charity giving in two respects: Firstly, it resembles an indirect test of the empathy altruism hypothesis. Participants' level of empathic concern motivation is passively observed first and related to the effect of inducing negative moods through video clips onto charitable donations. If an individual experiences negative emotions because of the perception of distressed individuals, empathic concern should be activated and lead to elevated charitable donations. If an individual is driven by the experience of deriving personal pleasure from the act of donating to charity (WGM), a positive mood induction should lead to increased charitable donations. Thus, the research question adds to the existing body of literature by examining whether and under what circumstances the experience of varying affective states impacts prosocial behavior. To our knowledge, no study has yet associated motivations for charitable donations derived from the empathy altruism hypothesis and the warm glow theory of giving with the induction of negative and positive mood.

The empathy-altruism account of charity giving and experimental evidence support the notion that induced negative mood predicts donation behavior in an ecologically valid experiment, (Erlandsson, et al., 2017; Small & Verrochi, 2009) and in the DG (Capra, 2004; Pérez-Dueñas, et al., 2018; Shuang-Hu et al., 2012; Tan and Forgas, 2010). Therefore, the first hypothesis is that participants donate more money to charity after exposure to the negative mood induction than before.

Based on the predictive power of trait empathic concern for prosocial behavior and donations in the DG (Edele et al., 2013; FeldmanHall et. al, 2015; Mesch et al., 2011), the second hypothesis states that empathic concern motivation is positively related to average charitable donations.

Based on an elevated susceptibility to experience negative affect when exposed to negative stimuli among individuals who score high on empathic concern (FeldmanHall et. al, 2015; Small & Verrochi, 2009), the effect of the negative mood induction on charitable donations should be more pronounced for individuals who report being motivated to donate by empathic concern. Accordingly, the third hypothesis is that we expect an interaction effect between empathic concern motivation (ECM) and time (negative/neutral) on charity giving. More specifically, we expect that the effect of the negative mood induction on charity giving will be stronger for individuals scoring high on ECM.

In line with a positive feedback loop between giving and happiness (Anik et. al, 2009), the WG account of charity giving and the empirical findings of Fiala and Noussair (2017), Capra (2004) and Erlandsson et al. (2017), the fourth hypothesis is that participants donate more money to charity after the positive mood induction than before.

In line with Crumpler and Grossman (2008) and Andreoni (1990), the fifth hypothesis is that warm glow motivation is positively related to average donation behavior.

If the participant's goal and motivation to donate to charity is primarily self-interested by deriving pleasure and satisfaction from charity giving, we propose that inducing positive moods should be more effective in increasing donations to charity among such participants. Therefore, the sixth hypothesis is that we expect an interaction effect of warm glow motivation and time (baseline/ posttest) on charity giving. More specifically, we expect that the effect of positive mood induction on charity giving will be stronger for individuals scoring high on WGM.

To explore the research question and hypotheses, we run an online experiment on Qualtrics. Firstly, participants are asked to indicate donation motivations. After a distractor task, participants provide baseline measures of mood and charitable donations. Each participant is randomly allocated to either the negative or positive mood induction condition.

After a third mood measurement, participants indicate charity giving for a second time, and mood is measured for the fourth time. Measures of charity giving before and after the experimental manipulations are taken as the dependent measure, the relative change in mood and the donation motivations (ECM and WGM) are taken as the independent variables.

Methods

Participants

Based on an effect size of $f = .2$ (Ibanez, Moureau, & Roussel, 2017), at 0.8 power and an *alpha* of 0.05, we estimated a sample size of 199 participants in G*power, Version 3.1. The final sample consisted of 248 participants (212 female, 31 male, 2 other, 3 missing, $M_{age} = 19.6$, $SD_{age} = 2.65$). There were 124 participants in the negative mood condition (106 female, 17 male, 1 missing) and 124 participants in the positive mood condition (106 female, 14 male, 2 other, 2 missing). Participants were approached through the participant system of Tilburg University in exchange for course credit. Participants were volunteers and could withdraw at any given point during the study. Ethical approval was cleared from the ethics committee of Tilburg University. Concerning potential disturbances caused by the exposure to the negative mood induction, we provided participants with the contact information to consult with a psychologist.

Design

The present study adopted a 2x2 mixed design with mood induction (positive/ negative) as independent between-subject factor, time (baseline/ post-intervention) as within-subject factor, and charitable donations as the dependent measure.

Materials

The instruction letter contained information about the purpose, content, compensation and data storage of the study. Further, potential negative drawbacks were complemented with contact information to consult with a psychologist. The negative and positive mood induction videos were operationalized with modified video footage from a promotional campaign of UNICEF depicting face shots of children showing neutral, emotional expressions (*UNICEF | for Every Child*, 2016). Any audio and labeling were removed from the video and sad or happy instrumental music was added. We chose video as a means of mood induction because

previous studies have shown that video and sound are effective measures to induce positive and negative moods in laboratory settings (Tan & Forgas, 2010; Siedlecka, & Denson, 2018).

The questionnaire measuring emotional concern motivation included six items and is taken from the emotional concern - subscale of the Interpersonal Reactivity Inventory (IRI) and adapted to reflect global motivations to donate to charities (Davis, 1983). Items reflected hypothetical donation motivations to a charity which were independent of actual donation behavior. This was done to rule out the financial background of students as an explanation for the absence of donation motivations. A sample question of the ECM questionnaire was: "I would donate money to charities because I have tender, concerned feelings for people who are less fortunate than me." (for the complete questionnaire, see Appendix A). Response options are given on a 7-point Likert-scale ranging from 1 which equals to "strongly disagree" to 7 which equals to “strongly agree”. The convergent validity of the IRI with other measures of empathy is moderate (Cliffordson, 2001). The internal consistency of the EC subscale is moderate (*alpha* = .7), and test-retest reliability for each subscale ranges from .61 to .81 (Keaton, 2017).

The operationalization of warm glow motivation is assessed with four items derived from the questionnaire used in Hartmann et al. (2017). A sample item was: "Doing something for people by donating to charity would give me a pleasant feeling of personal satisfaction." (for the complete questionnaire, see Appendix B). Response options are given on a 7-point Likert-scale ranging from 1 which equals "strongly disagree" to 7 which equals “strongly agree”. PCA revealed a single factor structure for the original items with factor loadings ranging from 0.95 to 0.98. The internal scale reliability was high (*Cronbach’s alpha* = 0.97).

Mood was assessed with the question “How do you feel?” in the baseline measure of mood. The posttest mood question was: “While making your choice to allocate these points

to UNICEF, how did you feel?" Participants could indicate their mood on a slider ranging from 0 resembling "very bad" to 100 resembling "very good".

The dependent measure of charity giving was assessed with a modified version of the DG. In the DG, participants were endowed with a sum of 200 cents and asked to split the money between themselves and the three charities "Unicef", "Terres des Hommes" and "Save the Children". The dictator could allocate money on a slider between a minimum of zero and a maximum of 200 cents to each one of the three charities. The one-shot nature of the paradigm rules out self-interest and expected reciprocity as motives to give money. Therefore, splitting money with the target institution may be regarded as an act of prosociality. Moreover, the DG is easy to apply in an online setting and used in different studies to assess prosocial behavior and charity giving (Hartmann et. al, 2017; Engel, 2010). Therefore, the DG served as a measure of prosocial behavior in the present study.

Procedure

Participants entered the experiment through a link to the Qualtrics platform which was distributed online. On the landing page participants were welcomed and received the general information that the topic of the study concerned decision-making, the duration of the experiment was approximately 30 minutes and the compensation was 0.5 study points per 30 minutes. Additionally, participants were informed that one of the participants was randomly drawn to receive money based on the decisions made in the experiment. The financial incentive was given to increase the motivation to provide real answers. Next, participants read the instruction letter and were asked to agree to the informed consent.

In the following part, participants first answered questions about their donation motivations. Afterwards, there was a distractor task to redirect participants' attention away from the initial motivational questions. Next, their baseline mood was assessed and participants were asked how much money they wanted to allocate between themselves and

one of the three charities "Unicef", "Terres des Hommes" and "Save the Children" as a baseline measure of charity giving. Hereafter, participants were asked how the participants felt while allocating money to the charity as the second mood measurement. This was done, because mood changes from the first post-donation measure of mood to the baseline may be attributed only to the mood effect of the charitable donations. Then, participants were randomly allocated to the negative or positive mood induction condition and watched the respective one-minute-long video. At the end of the video, a third mood measure and a second donation measure was taken. The third mood measure reflects changes in the mood induction and potential carry-over effects from the first donation task. After the donation task, participants did the fourth and last mood measurement relevant to the present study. For a different study, participants completed one more mood assessment, underwent a music mood manipulation and indicated charity giving for the third time. Mood manipulations were taken before and after the donation task to rule out mood increases as a function of charity giving as a confound. The order of presentation of the three charities was randomized to control for preference effects for particular charities. At the end of the study, participants filled in demographic data and were thanked for their participation.

Plan of Analysis

Data were analyzed in IBM SPSS Statistics for MacOS, Version 25.0. We computed a change of mood control variable assessing the difference score between baseline and the first post-donation mood measure without prior exposure to the experimental manipulation. Moreover, we computed the mean charity giving scores from the baseline and the post-test measure of charity giving. We deviated from the original plan of analysis because we compared the effect of the mood induction on charity donations within-subjects instead of between subjects. Accordingly, we ran repeated measures ANCOVAs with log-transformed scores of the baseline and posttest measure of charity giving instead of one-way ANCOVAs

with the difference scores of charity giving as dependent variables. This was done to evaluate the interaction effects between the treatment and covariates. The independent variables in the proposed model remained the same.

Firstly, we ran two separate t-tests of paired samples in the positive and negative mood induction condition separately with baseline and posttest measures of charity giving as dependent variables to test the expected main effects stated in H1 and H4.

Secondly, we ran linear regression analyses with ECM and WGM as independent predictors and mean charity giving as the dependent measure to test H2 and H5.

Thirdly, we ran a repeated measures ANCOVA with time (baseline/posttest) as an independent, within-subjects factor, warm glow motivation and mood control as independent covariates and charity giving as the dependent variable.

Lastly, we ran a repeated measures ANCOVA with time (baseline/posttest) as an independent, within-subjects factor, gender as between-subjects factor, empathic concern motivation and mood control as covariates and charity giving as the dependent variables. This was done to test the main effect of negative mood induction on charity giving and the empathic concern motivation by time interaction on charity giving. Gender is controlled for as empathic concern may affect donation more strongly for women than men (van Rijn, Quinones, & Barham, 2019). In both models, the change of mood variable is added as a covariate to control for the variation in charity giving that may be attributed to mood effects of the donation task and not to the mood manipulation.

Results

Main Analyses were conducted in IBM SPSS Statistics 25. One participant did not provide the second measure of charity giving. However, all 248 participants were included in the analysis.

Manipulation check

The manipulation check showed that the manipulations of positive and negative mood were effective. In the positive condition, a T-test of paired samples revealed a small, significant increase in mood between baseline (M = 62.67, SD = 16.55) and posttest (M = 68.34, SD = 15.43) measures of mood; $t(121) = -3.487$, *Cohen's d* = .316, $p = .001$. In the negative mood condition, a T-test of paired samples revealed a large, significant decrease in mood between baseline mood (M = 66.35, SD = 15.92) and posttest mood (M = 48.94, SD = 17.16); $t(123) = 10.248$, $p = .00$, *Cohen's d* = .920.

Testing assumptions

Shapiro Wilk's test showed a significant deviation from normality for the baseline donation ($W(247) = .71$, $p < .001$) and the posttest measure of charity giving ($W(247) = .68$, $p < .001$). The skewness values of the dependent measures charity giving exceeded the recommended value from -2 to 2 for univariate distributions (George, & Mallery, 2020, see Appendix D). Therefore, a natural log transformation was performed on the reversed scores of the baseline and posttest measure of charity giving to follow a normal distribution more closely. Higher scores on the log-transformed variable indicated a lower score on the raw scores of charity giving. Changyong (2014) raised concerns about the comparability of analyses on log-transformed data with analyses of raw data. Therefore, histograms of the raw and transformed scores (see Appendix C), descriptive statistics (see Appendix D), and confirmatory analyses (see Appendix E and F) with the raw baseline and posttest donation scores as dependent variables are added to the Appendices. The skewness of the distribution

of the reversed and log-transformed baseline and posttest measures of charity giving was respectively 0.542 and 0.735 in the positive mood condition and 1.271 and 1.313 in the negative mood condition and fell within the acceptable range for parametric testing of -2 to +2 for univariate distributions (George, & Mallery, 2020). Additionally, we supplemented parametric confirmatory analyses with nonparametric tests of main effects and correlations.

Confirmatory Analysis

Hypothesis 1: Negative mood induction

To test the main effects of the negative mood induction on charitable donations, we ran a paired samples t-test with the log-transformed scores of the baseline and posttest measure of charity giving as dependent variables. The analysis revealed that the log-transformed scores of charity giving did not differ significantly between the baseline (M = .76, SD = .97) and posttest measure (M= .68, SD = .95) of charity giving in the negative mood condition; $t(123) = .21$, $p < .834$. This means that the difference in charity giving did not reach statistical significance and the null hypothesis could not be rejected.

Based on the high percentage of participants donating the maximum amount of 200 cents in the first donation task, the raw data was skewed to the left (see Appendix C). Therefore, we supplemented the analysis with nonparametric comparisons of repeated measures using raw scores of charitable donations as a dependent measure for Friedman's tests. Results revealed a significant, small increase of charity giving rank scores between baseline (M = 1.44) and posttest (M = 1.54) in the negative mood condition ($\chi 2(124) = 7.759$, $p = 0.005$, Kendall's W= 0.063). This means that participants tended to raise charitable donations after exposure to the negative mood induction video.

Hypothesis 2: Relationship Empathic Concern Motivation and Charity Giving

Spearman's correlations indicated a weak, positive relationship between ECM and mean charity giving (rs = .17, $p < .008$). In other words, the more participants self-reported to

be motivated by empathic concern for others, the more they tended to donate on average during the first two rounds of the dictator game.

Hypothesis 3: Interaction Time and Empathic Concern Motivation

Table 1:

Repeated Measures ANCOVA Negative Mood Condition

Source	df	F	p	η
Time	1	7.506	.007	.059
Time * Gender	1	.002	.964	.000
Time * Control Mood	1	.138	.711	.001
Time * ECM	1	6.928	.010	.055
Error (Time)	119			

Note: Model with time as within-subject factor and gender, control mood and empathic concern motivation (ECM) as covariates and the reversed log-transformed scores of charitable donations as dependent variables

In the negative mood condition, a one-way repeated measures ANCOVA showed that the reversed log-transformed scores of charity giving differed significantly between baseline and posttest. Secondly, there was a significant empathic concern motivation by time interaction on charity giving. This means that an individual's change in charity donations in the negative mood condition between the first and second donation task depended on the extent to which they were motivated to donate by empathic concern for others.

Hypothesis 4: Main Effect Positive Mood Induction

To test the main effects of the positive mood induction (H1), we ran a second t-test of paired samples with the log-transformed scores of the baseline and posttest measure of charity giving as dependent variables. The analysis revealed that the log-transformed scores of charity giving did not differ significantly between the baseline (M = .48, SD = .95) and posttest measure (M= .47, SD = .84) of charity giving; $t(123) = 1.55$, $p < .125$. This means that we did not detect a significant change of monetary donations in participants after a positive mood was induced.

Friedman's test revealed a significant, small increase in charitable donations between the baseline rank scores (M = 1.44) and the posttest rank scores of charity giving (M = 1.54); $\chi 2(123) = 6.081$, $p = 0.014$, Kendall's W = 0.049. This indicates that participants tended to raise their donations relative to the baseline measure after seeing the positive mood induction.

H5: Relationship Warm Glow Motivation and Charity Giving

Spearman's correlations indicated a weak, positive relationship between WGM and mean charity giving (rs = .23, p = .001). In other words, the more participants self-reported to be motivated by a feeling of personal satisfaction when donating to charity (WGM), the more they tended to donate on average during the first two rounds of the dictator game.

H6: Interaction Time and Warm Glow Motivation (WGM)

Table 2:

Repeated Measures ANCOVA Positive Mood Condition

Source	df	F	p	η
Time	1	.435	.511	.004
Time * Control Mood	1	.535	.466	.004
Time * Warm Glow Motivation	1	.762	.384	.006
Error(Time)	120			

Note: Model with time as within-subject factor and control mood and warm glow motivation as covariates and the reversed log-transformed scores of charity giving as dependent variables.

A one-way repeated measures ANCOVA revealed that the difference of the reversed log-transformed scores of charity giving between baseline and posttest measures of charity giving in the positive mood condition was not statistically significant. Further, there was no significant time by warm glow motivation interaction on the reversed log-transformed scores of charity giving in the positive mood condition. This means that we did not detect a significant change in monetary donations between baseline and posttest measures of charity giving in the positive mood condition, independent of the extent to which participants indicated to be motivated by a feeling of personal satisfaction associated with donating to charity (WGM).

Exploratory Analysis

The distribution of the raw baseline and posttest measures of charity giving suggested a ceiling effect as 67.7% of participants donated the maximum amount in the first donation. To further explore this issue, we excluded participants who donated 200 cents on the first trial. Next, we ran a repeated measures ANCOVA with the baseline and posttest measure of charity giving as dependent variables and condition (positive/negative) and time (baseline/ posttest) as independent variables. The results revealed a significant difference between baseline (M = 96.4, SD = 55.38) and posttest (M = 118.04, SD = 61.15) measures of charity giving ($F(1,77) = 18.04$, $p < .001$, $\eta 2 = .19$). This means that participants who donated less than the maximum amount of 200 cents in the first donation task, increased their donation on the second donation task. There was no significant time (baseline/ posttest) by condition (positive/ negative) interaction on charity giving ($F(1, 77) = .008$, $p < .932$). In other words, we did not detect that the size of the effect of the mood induction was significantly different between the positive and negative mood conditions.

Secondly, we computed a categorical variable with participants who either increased or decreased their charitable donations between the first and the second donation task. From the total sample of 248 participants, 66 remained. Next, we ran a test of proportions with donation (raise/lower) as an input variable. Results from the binomial test revealed that proportions were significantly different between participants who raised (73%) and lowered (27%) their donation between baseline and posttest measures of charity giving ($p < .001$). In the negative mood condition, 22 (76%) raised and the remaining 7 lowered their donation. In the positive mood condition, 26 out of 37 (70%) raised their second donation, and the remaining 11 (30%) lowered their donation.

To rule out an alternative explanation, we ran an ANCOVA with the subjects in the negative mood condition with ECM as covariate, gender (male/female) as between subjects

factor and the average donation as dependent variable to explore role of gender in the empathic concern and donation behavior relationship. Results revealed a small difference between men (M = 143.94, SD = 79.04) and women (M = 181.45, SD = 38.9) in charitable donations in the negative mood condition; $F(2,119) = 19.17$, $p < .001$, $\eta 2 = .14$. There was a significant interaction between ECM and gender on average charitable donations ($F(2,119) = 18.45$, $p < .001$, $\eta 2 = .24$)

Lastly, we explored the relationship between warm glow motivation and empathic concern motivation. Results from Pearson's correlations revealed a strong, positive relationship between ECM and WGM ($r = .61$, $p < .001$).

Discussion

The present study examined whether positive and negative mood induction affected donation behavior to three charitable organizations in a dictator game and the role of warm glow motivation and empathic concern motivation as moderators in the relationship between mood induction and charity giving. Inducing positive and negative moods through short video clips led to small increases in donations to charitable organizations. Secondly, empathic concern motivation (ECM) and warm glow motivation (WGM) was positively associated with average charity giving. Individuals who were motivated by ECM were more likely to increase their donations after the induction of negative mood. The change in charitable donations for individuals in the positive mood condition did not depend on their level of WGM.

Firstly, we may conclude that the manipulations effectively changed self-reported mood in the desired directions. This confirms the efficacy of video as a medium to induce positive and negative moods in an online setting (Siedlecka, & Denson, 2018). The change in mood was more than twice as large in the negative condition than in the positive condition.

First parametric evidence did not find conclusive proof of an effect of the negative mood induction on charitable donations. However, there was an increase in donation behavior, when accounting for the empathic concern motivation by time interaction in the analysis. This means that participants in the negative mood condition tended to increase their donations when the influence of empathic concern motivation on the change of charity giving was considered. However, outcomes of parametric tests have to be interpreted with caution as the distributions of the log-transformed and raw charity giving scores were skewed (see Appendix C). Therefore, further analyses of nonparametric comparisons of repeated measures were conducted and revealed that monetary donations slightly increased after exposure to the negative and positive mood induction.

If participants' mood had affected their willingness to donate more in the second donation task, they may have not been able to act upon this intention. Exploratory analysis among participants who had not donated the maximum amount of 200 cents in the first donation task revealed that there was a small, significant increase on the posttest measure of charity giving. Additionally, participants were three times more likely to raise rather than decrease their donations, if they had changed their donations at all. Taken together, the results of the present study confirm the first and fourth hypotheses which respectively predicted that the negative and positive mood induction leads to increased monetary donations.

The rise of prosocial choice in the DG after exposure to a negative mood induction is in line with research by Shuang-Hu, Ben-Xian, & Hao (2012), Capra (2004) and Tan and Forgas (2010) in which participants were more likely to select an altruistic over an egoistic split between themselves and a second player in the DG. This prosocial tendency was observed in the entire sample, but particularly present among participants whose donations had changed between the first and second donation task. The results are not in line with experimental evidence by Ibanez et al. (2017) in which inducing sadness and happiness failed to increase the amount of money donated to an environmental NGO in the DG. Research by Goenka and van Osselaer (2019) may explain this divergence as positive emotions were more effective at eliciting donations when they were morally congruent with the purpose of the charitable organization. Additionally, contrary to evidence by Ibanez et al. (2017), both mood inductions prompted more donations expressed in the tendency to raise the stakes. Taken together, the results of the present study suggest that positive and negative moods foster prosocial behavior in the DG and this effect may be attributed to the emotional congruency between the mood induction method and the target charity.

In line with the findings of Mesch et al. (2011) and FeldmanHall et al. (2015), the results of the present study support the second hypothesis which proposed that empathic

concern motivation predicts average charitable donations. The results extend the work of FeldmanHall et al. (2015) as not only the trait empathic concern, but also the expression of motivational tendencies to be driven by other-oriented concern predicted charitable donations.

The third hypothesis was confirmed as empathic concern motivation moderated the effect of the negative mood induction on charity giving. This means that the effect of the negative mood induction on charity giving was more pronounced for participants who scored high on empathic concern motivation. This finding is in line with the empathy-altruism hypothesis which proposes that perceiving distressed individuals activates empathic concern which in turn leads to altruistic motivation (Batson, 2010). Moreover, the results suggest that the induction of negative mood does not only lead to altruistic motivation but actual donation behavior. In sum, the visual exposure to people in distress may be more effective at driving donations among individuals who are motivated by empathic concern for others. However, these effects were small and should be interpreted with caution given the ceiling effect observed in both charity giving measures.

The rise of charitable donations in the positive mood condition confirmed the fourth hypothesis and is in line with evidence from the lab and field, in which positive mood induction increased subsequent charitable donations (Anik et al., 2009; Erlandsson et al., 2017; Fiala, & Noussair, 2017). Further, results from the present study corroborate the notion that positive mood promotes prosocial behavior in the DG (Capra, 2004) and contradict Shuang-Hu et al. (2012) and Tan and Forgas (2010), who found that dictators chose more selfishly after positive mood induction. This inconsistency may be explained by warm glow theory (Andreoni, 1990). Individuals strive for a positive self-image and donating money to charity is associated with favorable self-perceptions (Sargeant, 2004). Sharing money with another player may not lead to the same pleasurable feeling that is associated with giving

money to charity. If an individual is driven to donate by warm glow, the target of the donation may be indicative of the level of generosity. In sum, we can conclude that individuals tend to raise donations in the DG as a response to positive mood inductions and warm glow may play a role in this effect.

This is corroborated by the finding that WGM had a weak, positive relationship with average charity giving which confirms the fifth hypothesis. In line with Andreoni's (1990) warm glow theory of giving, participants who were motivated by individual psychological benefits of donating, tended to donate more money to charity on the first two measures of charity giving.

Overall, the findings support both the impurely altruistic warm glow giving theory and empathic concern-driven account of charity giving as both altruistic and selfish motives were associated with average donations. This is confirmed by a strong correlation between ECM and WGM which suggests that the altruistic and impurely altruistic conceptions have a strong overlap and may be hard to distinguish.

However, the sixth hypothesis was rejected as we did not find that the change in charity giving in the positive mood condition depended on participants' self-reported WGM. This means that the effect of the positive mood induction seems to not be stronger for individuals who reported to be motivated by experiencing feelings of personal satisfaction when donating money to a charity. The hypothesis was based on the idea that an increase in charitable donations is more likely to occur in participants when they are exposed to a positive mood induction since they strive for the experience of pleasurable emotion when donating. The absence of the effect in the sample may be attributed to the smaller change in mood between baseline and posttest in the positive mood induction condition.

An alternative explanation for the increase in donations in both mood conditions is that cognitive availability of issues pertaining to the causes of the charitable organizations

rather than the mood induction itself led to an increase of charitable donations. The visual exposure to the video clips depicting children may have primed social norms in the viewers which were not present during the baseline measure of mood. As participants' change in donation behavior was observed within-subjects and there was no control group, we can not rule out that participants would have raised their donations independent of their self-reported mood. Therefore, third variables like the influence of social norms may explain some of the variation in the dependent donation variables.

A second alternative explanation is that the high proportion of 86% female participants in the sample may have led to more charitable donations. Females tend to experience higher levels of empathic concern and donate more to charity (Mesch. et al., 2011). This is confirmed by the results of the present study as empathic concern motivation was indeed higher for women than for men. Further, we find support for the findings of van Rijn et al. (2019) as women donated more money than men in the negative mood condition and the difference in donation behavior depended on their level of ECM. However, we found no support that the change in donation behavior in the negative mood induction depended on gender. This means that empathic concern motivated donations more for women in the DG, but the negative mood condition was equally effective for men and women in raising donations. Conclusively, gender and empathic concern play a role in donation behavior, but they did not explain the increased donations as a response to the mood inductions.

There are at least three potential limitations concerning this study. One is related to the interpretability of the findings, because of the low within-subjects variability of the dependent measures associated with the observed ceiling effect. The amount of money may have been regarded as insignificant by the participants, leading to inflated average charitable donations. Participants allocated 84% of their endowment across the first two donations. This high proportion of sharing may have occurred because of the tendency of individuals to act

upon their feelings of empathy when financial stakes are small (Neuberg et al., 1997). The participants' mean donation was inconsistent with the meta-review on the DG by Engel (2010) suggesting that participants split an average of 28% of their endowment. Taken together, the small stakes may have distorted the average donations in the study and compromised the interpretability of the outcome.

Secondly, self-reported mood and donation motivations may be distorted due to social desirability. In an experimental study, social desirability led to inflated self-reports of work motivation when a financial incentive was offered (Antin, & Shaw, 2012). Further, previous research comparing self-reported mood and physiological measures of mood showed inconsistencies between self-reported and objective indicators of affect. While participants reported positive affect when donating to charity, facial cues evaluated by face reading software suggested that mood decreased as a response to donating money to charity (Fiala, & Noussair, 2017). Therefore, social desirability in the questionnaire may lead to systematic overestimations of mood and donation motivation indicators.

Thirdly, there are concerns about the ecological validity of DG experiments. In a natural field experiment, people did not allocate any money to a stranger when asked to split an endowment (Winking, & Mizer, 2013). Thus, effects from DG experiments may be weaker or not replicate in real-life scenarios.

Therefore, future research may supplement self-report measures of mood with physiological indicators to control for social desirability concerning charitable behavior. Moreover, the use of specific emotions and interactions with donation motivations may be investigated. Additionally, future research may employ larger endowment sums to ensure sufficient variability in the dependent measure. Lastly, charitable donations as a response to the manipulation of mood may be investigated in more ecologically valid settings.

The present study raises ethical concerns about the practice of manipulating emotions to raise donations. Subtly influencing the decisions of individuals poses an ethical challenge and may be regarded as a form of soft paternalism. This means that the set of choices is not restricted (e.g. individuals may still lower their contribution to charity), but individuals are steered towards a desired outcome. The results of the present study suggest that individuals who are concerned with the well-being of others are more susceptible to negative mood manipulations. Especially, since the application of mood manipulations is not only limited to charitable organizations, but is also adapted to influence consumer behavior (Gardner, 1985), it is important to protect vulnerable groups from overspending.

While the use of emotion in charity appeals is widespread, the efficacy of such methods remains questionable. The present study suggests that short audiovisual clips may be used to induce positive and negative moods in an online setting and increase subsequent charitable donations. Additionally, experiencing a negative mood seems to affect donations more among individuals who are driven to give out of empathic concern for others. Experiencing a positive mood, on the other hand, does not seem to affect charity giving more for individuals who are motivated by deriving personal pleasure from contributing to the well-being of society. Taken together, charity appeals aimed at altering mood states may be effective at eliciting donations and donor motivations may inform about which mood states are appropriate in light of the target audience. Future research may identify underlying mechanisms of how mood induction affects prosociality and identify specific emotions that foster charitable behavior.

References

The 2020 DAF Report. (2021, February 12). Retrieved from https://www.nptrust.org/reports/daf-report/

Anik, L., Aknin, L. B., Norton, M. I., & Dunn, E. W. (2009). Feeling Good About Giving: The Benefits (and Costs) of Self-Interested Charitable Behavior. *SSRN Electronic Journal*. doi:10.2139/ssrn.1444831

Antin, J., & Shaw, A. (2012). Social desirability bias and self-reports of motivation. *Proceedings of the 2012 ACM Annual Conference on Human Factors in Computing Systems - CHI '12*. doi:10.1145/2207676.2208699

Batson, C. D., & Powell, A. A. (2003). Altruism and Prosocial Behavior. *Handbook of Psychology*. doi:10.1002/0471264385.wei0519

Batson, C. D. (2010). Testing the Empathy-Altruism Hypothesis. *Altruism in Humans,* 110-134. doi:10.1093/acprof:oso/9780195341065.003.0006

Capra, C. M. (2004). Mood-Driven Behavior in Strategic Interactions. *American Economic Review, 94*(2), 367-372. doi:10.1257/0002828041301885

Crumpler, H., & Grossman, P. J. (2008). An experimental test of warm glow giving. *Journal of Public Economics, 92*(5-6), 1011-1021. doi:10.1016/j.jpubeco.2007.12.014

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113-126. doi:10.1037/0022-3514.44.1.113

Edele, A., Dziobek, I., & Keller, M. (2013). Explaining altruistic sharing in the dictator game: The role of affective empathy, cognitive empathy, and justice sensitivity. *Learning and Individual Differences, 24*, 96-102. doi:10.1016/j.lindif.2012.12.020

Engel, C. (2010). Dictator Games: A Meta Study. *SSRN Electronic Journal*. doi:10.2139/ssrn.1568732

Erlandsson, A., Nilsson, A., & Västfjäll, D. (2018). Attitudes and Donation Behavior When Reading Positive and Negative Charity Appeals. *Journal of Nonprofit & Public Sector Marketing, 30*(4), 444-474. doi:10.1080/10495142.2018.1452828

Feldmanhall, O., Dalgleish, T., Evans, D., & Mobbs, D. (2015). Empathic concern drives costly altruism. *NeuroImage, 105*, 347-356. doi:10.1016/j.neuroimage.2014.10.043

Fiala, L., & Noussair, C. N. (2017).

, Emotions, And The Default Effect. *Economic Inquiry, 55*(4), 1792-1812. doi:10.1111/ecin.12459

Gardner, M. P. (1985). Mood States and Consumer Behavior: A Critical Review. *Journal of Consumer Research, 12*(3), 281. doi:10.1086/208516

George, D., & Mallery, P. (2020). *IBM SPSS statistics 26 step by step: A simple guide and reference*. Routledge.

George, J. M. (1991). State or trait: Effects of positive mood on prosocial behaviors at work. *Journal of Applied Psychology, 76*(2), 299-307. doi:10.1037/0021-9010.76.2.299

Goenka, S., & Osselaer, S. M. (2019). Charities Can Increase the Effectiveness of Donation Appeals by Using a Morally Congruent Positive Emotion. *Journal of Consumer Research, 46*(4), 774-790. doi:10.1093/jcr/ucz012

Hartmann, P., Eisend, M., Apaolaza, V., & D'souza, C. (2017). Warm glow vs. altruistic values: How important is intrinsic emotional reward in proenvironmental behavior? *Journal of Environmental Psychology, 52*, 43-55. doi:10.1016/j.jenvp.2017.05.006

Heshmati, A. (2007). The Relationship between Income Inequality, Poverty and Globalization. *The Impact of Globalization on the World's Poor,* 59-93. doi:10.1057/9780230625501_3

Keaton, S. A. (2017). Interpersonal Reactivity Index (IRI). *The Sourcebook of Listening Research,* 340-347. doi:10.1002/9781119102991.ch34

Korenok, O., Millner, E. L., & Razzolini, L. (2013). Taking, giving, and impure altruism in dictator games. *Experimental Economics, 17*(3), 488-500. doi:10.1007/s10683-013-9379-3

Mesch, D. J., Brown, M. S., Moore, Z. I., & Hayat, A. D. (2011). Gender differences in charitable giving. *International Journal of Nonprofit and Voluntary Sector Marketing, 16*(4), 342-355. doi:10.1002/nvsm.432

Neuberg, S. L., Cialdini, R. B., Brown, S. L., Luce, C., & Al, E. (1997). Does empathy lead to anything more than superficial helping? Comment on Batson et al. (1997). *Journal of Personality and Social Psychology, 73*(3), 510-516. doi:10.1037/0022-3514.73.3.510

Park, S. Q., Kahnt, T., Dogan, A., Strang, S., Fehr, E., & Tobler, P. N. (2017). A neural link between generosity and happiness. *Nature Communications, 8*(1). doi:10.1038/ncomms15964

Pérez-Dueñas, C., Rivas, M. F., Oyediran, O. A., & García-Torres, F. (2018). Induced Negative Mood Increases Dictator Game Giving. *Frontiers in Psychology, 9*. doi:10.3389/fpsyg.2018.01542

Richerson, P. J., & Boyd, R. (2004). Not By Genes Alone. doi:10.7208/chicago/9780226712130.001.0001

Rijn, J. V., Quiñones, E. J., & Barham, B. L. (2019). Empathic concern for children and the gender-donations gap. *Journal of Behavioral and Experimental Economics, 82*, 101462. doi:10.1016/j.socec.2019.101462

Russell, J. A. (2003). Core affect and the psychological construction of emotion. *Psychological Review, 110*(1), 145-172. doi:10.1037/0033-295x.110.1.145

Sargeant, A., West, D. C., & Ford, J. B. (2004). Does perception matter?: An empirical analysis of donor behaviour. *The Service Industries Journal, 24*(6), 19-36. doi:10.1080/0264206042000299167

Schnall, S., Roper, J., & Fessler, D. M. (2010). Elevation Leads to Altruistic Behavior. *Psychological Science, 21*(3), 315-320. doi:10.1177/0956797609359882

Schroeder, D. A., Graziano, W. G., & Davis, M. H. (2015). Empathy and Prosocial Behavior. *The Oxford Handbook of Prosocial Behavior*. doi:10.1093/oxfordhb/9780195399813.013.026

Shuang-Hu, F., Ben-Xian, Y., & Hao, D. (2012). Effects of Emotions on Interpersonal Strategies in the Dictator Game. *Advances in Intelligent and Soft Computing Affective Computing and Intelligent Interaction,* 169-178. doi:10.1007/978-3-642-27866-2_21

Siedlecka, E., & Denson, T. F. (2018). Experimental Methods for Inducing Basic Emotions: A Qualitative Review. *Emotion Review, 11*(1), 87-97. doi:10.1177/1754073917749016

Tan, H. B., & Forgas, J. P. (2010). When happiness makes us selfish, but sadness makes us fair: Affective influences on interpersonal strategies in the dictator game. *Journal of Experimental Social Psychology, 46*(3), 571-576. doi:10.1016/j.jesp.2010.01.007

Winking, J., & Mizer, N. (2013). Natural-field dictator game shows no altruistic giving. *Evolution and Human Behavior, 34*(4), 288-293. doi:10.1016/j.evolhumbehav.2013.04.002

Ying, L. U. (2014). Log-transformation and its implications for data analysis. *Shanghai archives of psychiatry*, *26*(2), 105.

Zhang, L., & Ortmann, A. (2012). On the Interpretation of Giving, Taking, and Destruction in Dictator Games and Joy-of-Destruction Games. *SSRN Electronic Journal*. doi:10.2139/ssrn.2190240

Unicef. (2016, December 11). UNICEF | for every child. Retrieved from https://www.youtube.com/watch?v=E1xkXZs0cAQ

Appendix A

Questionnaire empathic concern motivation

1) I would donate money to charities, because I have tender, concerned feelings for people who are less fortunate than me.

2) I would donate money to charities, because I feel very sorry for people when they are having problems.

3) I would donate money to charities, because when people are being taken advantage of I feel protective towards them.

4) I would donate money to charities, because the misfortunes of people disturb me a great deal.

5) I would donate money to charities, because when i see someone being treated unfairly, I sometimes feel very much pity for them.

6) I would donate money to charities, because I am often quite touched by things that I see happen.

Appendix B

Warm Glow Motivation questionnaire

1) Doing something for people by donating to charity would give me a pleasant feeling of personal satisfaction.

2) Donating money to charities, I would feel happy contributing to human well-being and the quality of children's lives.

3) Helping to prevent poverty through charity donations, I would feel pleased to be doing something good for society.

4) Donating to charity would make me feel satisfied, giving something back to society and the people.

Appendix C

Histogram charity giving dependent measures

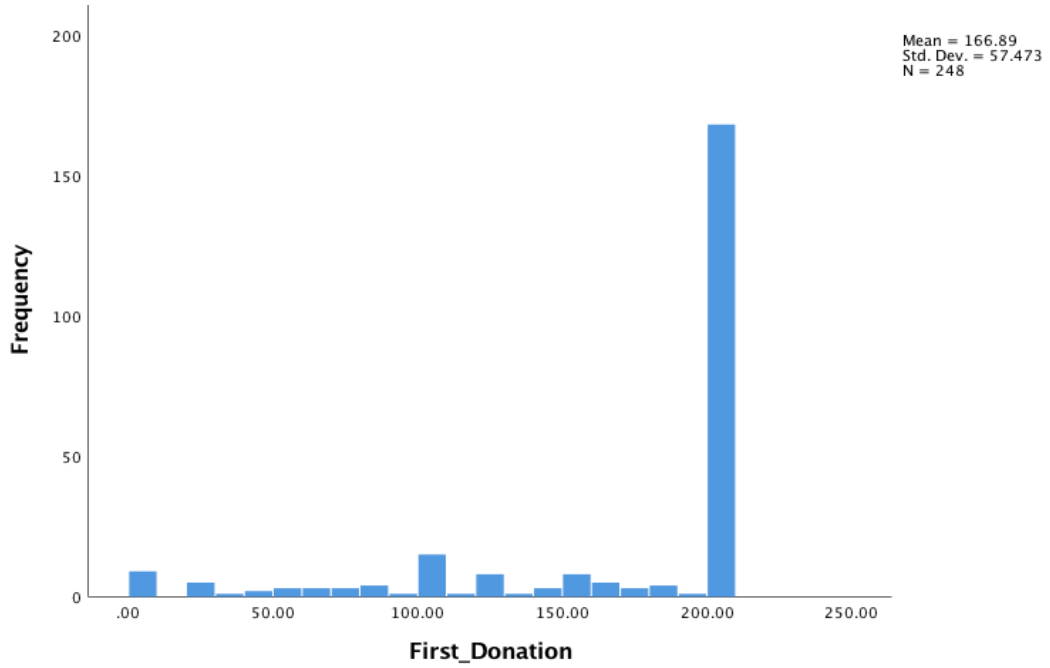

Figure 1. Histogram of raw first donation scores (in Cents)

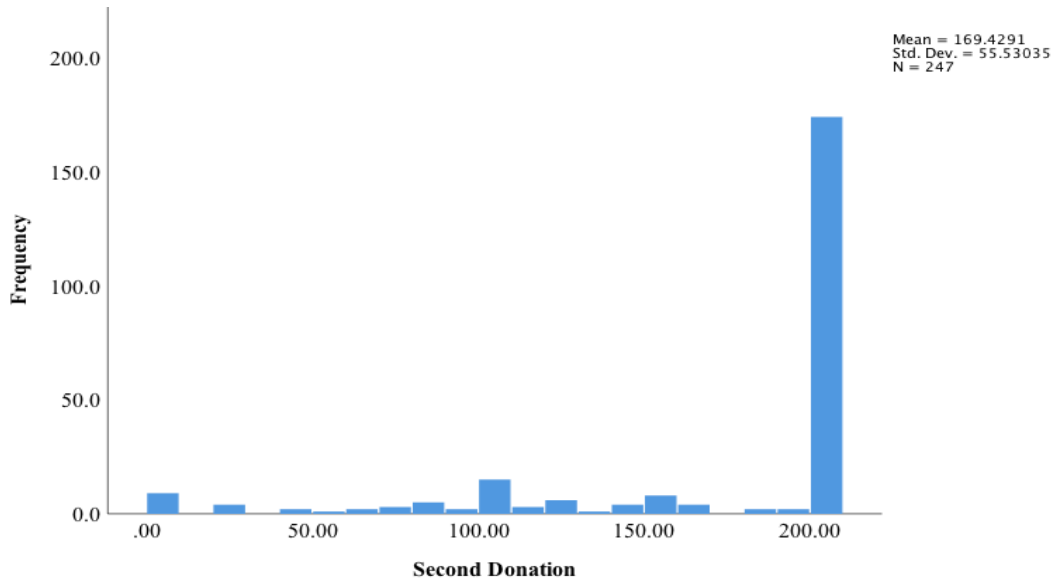

Figure 2. Histogram of raw scores second donation (in Cents)

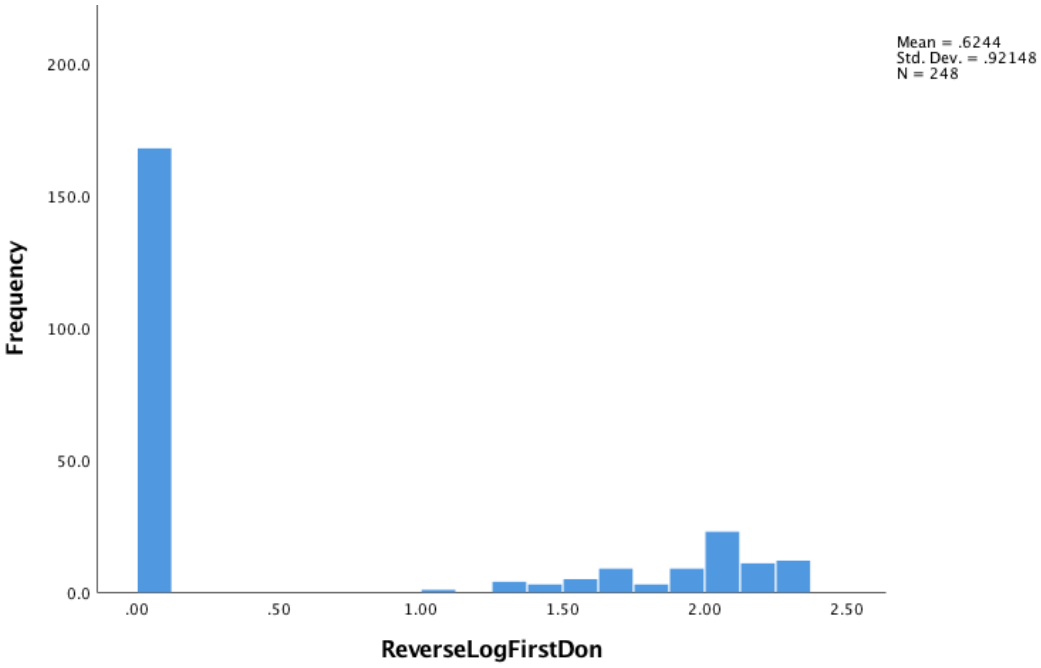

Figure 3. Histogram of Reversed Log Transformed First Donation Scores

Appendix D

Descriptives charity giving

Descriptives raw donation scores

		Condition	Statistic	Std. Error
First Donation	NMI	Mean	174.5968	4.75071
		Median	200.0000	
		Std. Deviation	52.90165	
		Skewness	-2.148	.217
		Kurtosis	3.675	.431
	PMI	Mean	159.0732	5.51698
		Median	200.0000	
		Std. Deviation	61.18625	
		Skewness	-1.262	.218
		Kurtosis	.282	.433
Second Donation	NMI	Mean	175.1048	4.71825
		Median	200.0000	
		Std. Deviation	52.54016	
		Skewness	-2.193	.217

	Kurtosis	3.918	.431
PMI	Mean	163.7073	5.23353
	Median	200.0000	
	Std. Deviation	58.04263	
	Skewness	-1.425	.218
	Kurtosis	.900	.433

Note. Descriptives of raw scores of charity giving on the first and second donation measure in the positive mood induction condition (PMI) and negative mood induction condition (NMI).

Appendix E

Parametric Tests with Raw Scores in Positive Mood Condition

Repeated Measures ANCOVA Raw Scores Positive Mood Condition

Source	df	F	p	η
Time	1	.044	.834	.000
Time * Control_mood	1	.253	.616	.002
Time * WGM_mean	1	.141	.708	.001
Error (Time)	120			

Paired Samples T-Test Raw Charity Giving Positive Mood Induction

		Mean	t	df	p (2-tailed)
Pair 1	First Donation - Second Donation	-4.63415	-1.199	122	.233

Appendix F

Parametric Tests with Raw Scores in Negative Mood Condition

Repeated Measures ANCOVA Raw Scores Negative Mood Condition

Source	F	p	η
Time	8.656	.004	.068
Time * Control Mood	.156	.693	.001
Time * ECM	7.491	.007	.059
Time * Gender	.102	.750	.001
Error(Time)			

Paired Samples T-Test Negative Mood Condition Raw Charity Giving

		Mean	t	df	p (2-tailed)
Pair 1	First Donation - Second Donation	-.50806	-.177	123	.860