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DIFFERENT LEVELS OF NEGATIVE EMOTIONS AND THEIR IMPACT ON
PROSOCIAL BEHAVIOR

An Abstract of a Thesis
Submitted
in Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Tsamchoe Dolma
University of Northern Iowa
July, 2015

ABSTRACT

In this fast and competitive world, people are becoming less likely to help others. According to the Bureau of Labor Statistics (2014), the volunteerism rate reached the lowest point in 2013 since 2002. This decrease in prosocial behavior makes the study of prosocial behavior important, especially with the increasing numbers of charitable organizations and their competition to attract more donors and volunteers. Public service advertisements (PSA) are used as a common medium to garner help and support, and many of them use emotional appeals to enhance persuasion. The literature on persuasion shows that emotions have persuasive power to change people's behavior. For example, participants induced with negative emotions are more careful and detailed as compared to those who are induced with positive emotions (Bohner, Crow, Erb, & Schwarz, 1992). Negative emotions can also increase helping behavior. The negative state relief model (Cialdini, Darby, & Vincent, 1973) states that people help in order to alleviate the discomfort caused by negative emotions. For example, guilty participants donate more blood and report a significant reduction in their guilty feeling after the donation (O'Malley & Andrews, 1983).

In this study, I expanded on Bagozzi and Moore (1994) to test whether different levels of negative emotions influence empathy and prosocial behavior differently. I also tested whether cognitive reappraisal moderated the relationship between negative emotions and prosocial behavior. Participants ($N= 163$) recruited from mTurk completed measures of cognitive reappraisal and social desirability and viewed one of three images (i.e., image of a young girl photoshopped to have no bruises, a few bruises, or many

bruises) with a message to support anti-child abuse efforts. Participants self-reported the negative emotions the advertisement made them feel. They also completed an empathy measure and indicated how willing they would be to help the child abuse cause through volunteer efforts and donation pledges.

Those who viewed the strong and medium negative emotional images (images of a girl with few or more bruises) reported more negative emotions than those viewed the image in the weak emotional condition (image without bruises). Participants who reported more negative emotions also reported more empathy, but the images seen had no effect on willingness to help or donation. Most people indicated a moderate level of willingness to help, but only 20% pledged a donation. Cognitive reappraisal did not moderate the relationship between negative emotions and helping behavior, but it significantly correlated with both negative emotions and willingness to help. This finding adds to research suggesting that individuals who better regulate their emotions are more prosocial (Eisenberg et al., 1996). Overall, consistent with theories of prosocial behavior (Batson, 1991; Cialdini et al., 1973), negative emotions were related to empathy, and both related to greater self-reported intentions to help, but contrary to both those theories and the research on persuasion, this did not translate into actual behavior.

Keywords: Prosocial behavior, empathy, persuasion, negative emotions, cognitive reappraisal

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This Study by: Tsamchoe Dolma

Entitled: Different levels of negative emotions and their impact on prosocial behavior

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CHAPTER 1

INTRODUCTION

Nonprofit organizations play a significant role in the social and economic lives of Americans as they provide various services including healthcare, education, and public safety (Chen, 2009). Most of these organizations run on charitable donations, volunteers, and grants (Khanna, Posnett, & Sandler, 1995). Unfortunately, fundraising has become problematic (Das, Kerkhof, & Kuiper, 2008), and 2013 had the lowest rate of volunteerism in the country since 2002 (Bureau of Labor Statistics, 2014). With the growing number of charity organizations (Venable, Rose, Bush, & Gilbert, 2005), there is a clear call for the analysis of charitable giving and the factors influencing such prosocial behaviors.

Prosocial behavior refers to helping behaviors such as caring, sharing, and cooperating to benefit others (Batson, 1998). Research has noted the importance of emotions in the persuasion process (Bagozzi & Moore, 1994; Rogers & Deckner, 1975), and strategies such as images (Burt & Strongman, 2005) and narrative case histories (Green, 2006) have been employed by charitable organizations to evoke stronger emotional reactions. However, stronger emotional responses do not always lead to successful persuasion. For example, high levels of fear may scare people into avoiding a message, resulting in unsuccessful persuasion (Lieberman & Chaiken, 1992). In contrast, moderate fear can successfully persuade by motivating people to evaluate a message more carefully (Roger, 1983). In contrast to some of the literature on persuasion, studies on prosocial behavior have shown that more negative emotions lead to greater helping

behavior. Bagozzi and Moore (1994) used an anti-child abuse advertisement to evoke negative emotions, and showed that more negative emotions were related to empathy and decisions to help.

The current study builds on Bagozzi and Moore's (1994) study, where negative emotions influenced empathy and prosocial behavioral intentions. The current study manipulated an anti-child abuse image to create different intensities of emotions (Strong, Moderate and Weak) and examine their influence on prosocial behavior using a print advertisement rather than a television commercial. Empathy in this study was measured using a more established scale (Batson et al., 1991) instead of asking open-ended questions as in Bagozzi and Moore (1994). This study also investigated cognitive reappraisal as a possible moderator between negative emotions and prosocial behavior, as the strategy has been shown to down-regulate negative emotions (Gross, 1998).

In this introduction, I first define prosocial behavior and describe how emotions relate to prosocial behavior, I then discuss theories of prosocial behaviors, and the importance of empathy in prosocial behavior. These will be followed by a discussion on the relationship between emotions and persuasion, highlighting some of main persuasion theories. I then describe emotion regulation strategies and how cognitive reappraisal may be related to prosocial behavior. Lastly, I explain how emotions, persuasion and prosocial behaviors are related to each other.

Prosocial Behavior

Eisenberg (1986) defined prosocial behavior as actions that help others such as sharing, caring, and comforting. Some examples include monetary donations, feeding the

homeless, volunteering for organizations, or simply picking up things people have dropped. There are several perspectives on factors that influence prosocial behavior. Evolutionary psychologists propose two main reasons for helping behavior: kin selection (Wilson, 1975), and reciprocal altruism (Trivers, 1971). Kin selection posits that people help others to increase their genes' survival, and according to reciprocal altruism, people engage in helping behavior with the hope of being helped in the future. Personality variables are also related to helping behavior. Extroverts contribute more to cooperative games than introverts (Clark, Thorne, Vann, & Cropsey, 2014), and volunteerism is related to extroversion and agreeableness (Carlo, Okun, Knight, & Guzman, 2005).

Prosocial behavior is also related to other factors such as motivations and situations. Both implicit (unconscious) and explicit (conscious) motivations enhance spontaneous helping such as charitable donations; however, only explicit motivation has an influence on planned helping such as volunteering (Aydinli, Bender, Chasiotis, Cemalcilar, & van de Vijver, 2014). Situational factors such as negative events also influence prosocial behavior. For example, participants who are rejected donate more than a control or inclusion group when they are made hopeful about reconnecting with other groups after rejection (Cuadrado, Taberner, & Steinel, 2014). People also tend to help because of social pressure (DellaVigna, List, & Malmendier, 2012) or out of prosocial norms of their culture (Greenberg, 2014). Individuals help more when they are physically attracted to the target (Bierhoff & Rohmann, 2004) or are closely related to the target (Maner & Gailliot, 2007). Emotions also play an important part in shaping

prosocial values and behavior (Eisenberg, Fabes, & Spinrad, 2006; Vecina & Fernando, 2013)

Role of Emotions in Prosocial Behavior

Emotions are associated with action tendencies, and thus have consequences for behaviors (Campos, Mumme, Kermoian, & Campos, 1994). Negative emotions are considered an important contributor to prosocial behavior, and several theories of prosocial behavior -- empathy-altruism (Batson, 1991), egoistic (Cialdini, Brown, Lewis, Luce & Neuberg, 1997), and negative state relief -- support this claim (Cialdini et al., 1973). Exposure to another's suffering can lead to distress or sadness. In order to reduce this sadness, people may engage in prosocial behavior (Cialdini, 1991).

Guilt and shame are referred to as moral emotions as they have a self-evaluative aspect and tend to arise when people act against their moral standards (Tangney, Stuewig, & Mashek, 2007). Guilt is defined as “an individual's unpleasant emotional state associated with possible objections to his or her actions, inaction, circumstances, or intentions” (Baumeister, Stillwell, & Heatherton, 1994, p. 245). Individuals' proneness to guilt is highly related to prosocial behavior (Bracht & Regner, 2013). For example, participants induced to feel guilt increased their cooperation in a dyadic game more than those in the control and shame groups (De Hooge, Zeelenberg, & Breugelmans, 2007).

Shame refers to the unpleasant or uncomfortable feeling one experiences after doing something wrong by one's own norms or by the norms of close others (Bowles & Gintis, 2002), or because of public disapproval (Tangney et al., 2007). Its action tendencies are either avoiding social condemnation (Tangney et al., 2007) or repairing the

damage to the self (De Hooge, Breugelmans, & Zeelenberg, 2008). In a prisoners' dilemma game, ashamed proself (more individualistic) participants showed cooperation in decision-making with their partners only when they could not hide their greediness (Declerck, Boone, & Kiyonari, 2014). In a similar study, shame was induced by making the participants imagine and read about a horrible presentation given by them. Later in a social dilemma game where they could contribute money to their partner, participants who met a partner who was present during the imagined presentation contributed significantly more than those participants who had a stranger as a partner (De Hooge et al., 2008).

Sadness is another common negative emotion that is related to prosocial behavior. It is defined as a negative emotion experienced as a result of loss, disappointment, or suffering (Rothbart, Ahadi, Hershey, & Fisher, 2001), and it is perceived as a cue for help and support (Edwards et al., 2015). Participants express care and support to those who are sad and distressed more than to those who are neutral or aggressive (Biglan, Rothland, Hops, & Sherman, 1989). Such evidence of helping is even found in small children; children as young as 6 years old are inclined to give comfort and proximity to a child in a vignette who expresses sadness (Jenkins & Ball, 2000). People prone to sadness are considered more sensitive towards such cues. For example, toddlers who cry more are more prosocial towards those who cry (Howes & Farver, 1987).

Emotions such as guilt, shame, and sadness clearly play an important role in motivating prosocial behavior. However researchers argue that the nature of prosocial behaviors shown depends on the arousal effect of the emotions (Penner, Dovidio,

Piliavin, & Schroeder, 2005). For example, sadness produces egoistically motivated helping (Cialdini et al, 1997), and other emotions such as empathy can produce altruistic helping (Batson, 1991). Such differences in the nature of helping as an impact of different emotions are supported by the main theories of prosocial behavior.

Theories of Prosocial Behavior

The relationship between emotions and helping is at the crux of three prominent theories of prosocial behaviors: egoistic theory (Cialdini et al., 1997), the negative state relief model (Cialdini, et al., 1973), and the empathy-altruism hypothesis (Batson, 1991). Both egoistic theory and the negative state model suggest that people help others to alleviate their own negative emotions. On the other hand, the empathy-altruism hypothesis suggests that empathy motivates helping even when the cost is higher than the reward (Batson, 1991).

Egoistic theory (Cialdini et al., 1997) states that people behave prosocially for various selfish reasons such as to receive rewards, avoid punishment, or reduce their own discomfort after seeing someone in pain. Helping is rewarding in many ways - the helper may be helped back in the future (Trivers, 1971), get public praise (Batson, Fultz & Schoenrade, 1987), think of him or herself as kind (Bandura, 1977), or avoid negative feelings like guilt or shame (Cialdini & Kenrick, 1976). One study that supported this theory showed that participants in the sad group helped more than those in the neutral group when they were told their mood could be changed; however, their behavior was no different than those in the neutral group when they were told their sad mood could not

change (Manucia, Baumann, & Cialdini, 1984). This study supports the idea that people help to benefit themselves.

Similarly, the negative-state relief model (Cialdini et al., 1973) claims the motivation behind helping behavior is to alleviate negative emotions, like sadness and distress. Because people do not enjoy being in a negative state, they are motivated to engage in activities that help them feel better (Carlson & Miller, 1987). In support of this model, guilty participants who donate report a significant reduction in their guilty feelings after the donation (O'Malley & Andrews, 1983); similarly, churchgoers are more likely to donate more before confession than after (Harris, Benson & Hall, 1975).

Proponents of the empathy-altruism hypothesis (Batson, 1991) acknowledge the selfish motivations behind helping behavior, but also believe in pure altruism, where people genuinely help others even when the costs are greater than the rewards. This theory suggests that such altruism can be possible only when one feels empathy for others (Batson, 1991). Strong empathetic concerns are associated with more helping, even when the costs of helping are high. For example, people who are high in empathy or those induced to feel empathy are willing to help a classmate (who missed class due to an accident) even though they had to help her every day, whereas low empathy students offered comparatively less help (Toi & Batson, 1982), thus demonstrating the existence of true altruism, where people are willing even in high cost scenarios.

Much of the research on the empathy - altruism hypothesis has tested this hypothesis using empathy by easy escape designs. They have consistently found that empathy predicts greater helping even when escape from the situation is easy, but low

empathy predicted a drop in helping behavior when escape is easy (Batson et al., 1988; Batson, Duncan, Ackerman, Buckley, & Birch, 1981). The hypothesis was supported even in the absence of social evaluation. For example, a positive correlation between empathy and helping was found even when the participants were told their denial of help would remain anonymous (Fultz, Batson, Fortenbach, McCarthy, & Vamey, 1986). Thus people who feel empathy for another will help regardless of whether the rewards outweigh the costs, but if they do not feel empathy they will only help when rewards outweigh the costs.

Empathy

Batson et al. (1997) defines empathy as an “other-oriented emotional response congruent with another's perceived welfare; if the other is oppressed or in need, empathic feelings include sympathy, compassion, and tenderness” (p. 105). It can be classified into affective and cognitive empathy (Underwood & Moore, 1982); affective empathy is an emotional reaction or feeling towards others (Hoffman, 1985), whereas cognitive empathy refers to an ability to understand and label the other person’s emotions and situations (Gladstein, 1983). In Davis’s (1980) empathy scale, the cognitive aspect is represented by the “perspective taking” subscale and the emotional aspect by the “empathetic concerns” subscale. Perspective taking refers to adopting the perspective of the person in need, and empathetic concern refers to the vicarious emotions felt for others in need (Davis, 1994).

Different methods are used to induce empathy. For example, some studies have had participants either view pictures or read short narratives about hypothetical events

(Eisenberg & Lennon 1983; Hoffman, 1982; Lennon, Eisenberg, & Carroll, 1983).

Similarly, participants may listen to interview tapes as a way to induce empathy (Batson et al., 1978; Batson, Chang, Orr, & Rowland, 2002; Coke, Batson, & McDavis, 1978; Toi & Batson, 1982). For example, participants in the perspective listening group felt more empathetic, and offered to volunteer more hours to help after listening to the interview of a member of stigmatized group (Batson et al., 2002).

Empathy has been extensively studied as both moderator and a mediator in prosocial behavior studies. As a moderator of a prosocial behavior, different levels of empathy influence helping behavior differently. Individuals with greater levels of empathy tend to offer greater help as compared to those who feel low levels of empathy (Toi & Batson, 1982). Students who read a story that leads them to feel more empathy are more likely help than those who experience low empathy (Johnson, 2012). Participants with high empathy offered more help with class notes to the victim even when the escape was easy, whereas the participants with low empathy did not offer much help (Toi & Batson, 1982). These studies are consistent with Batson's (1991) empathy altruism theory, where high empathy motivates people to help even in high cost scenarios.

Empathy also affects helping behavior as a mediator. When people are induced to feel empathy for a person, they are more likely to help. In many studies empathy has been induced in the participants using different methods such as watching sad videos, listening with perspective etc., and these variables such as sadness and perspective taking help the experimental group to feel empathetic concern, which eventually affects the helping behavior (Batson et al., 2002; Coke et al., 1978). For example, one of the early studies by

Coke et al. (1978) showed that empathy mediated the relationship between arousability and helping. Participants who were not aroused after listening to a student's appeal to help were given false feedback and told they were highly aroused to make them think the high arousal was a result of listening to victim's plight. These participants reported greater empathetic concerns and offered to volunteer more hours to help as compared to those who actually had high arousal after listening to the victim's appeal but were told they were not aroused, which led them to report lower empathy and hence offered less help. Another study showed that watching emotional advertisements caused participants to express more negative emotions and more empathy, which in turn led to greater helping than from those who had watched a less emotional advertisement (Bagozzi & Moore, 1994). Empathy also mediates the relationship between expressions of patients and observers' help; patients who overtly expressed their illness induced more empathy in the observers, which led observers to help more (Preston, Hofelich, & Stansfield, 2013).

Empathy thus increases prosocial behavior significantly (Batson et al., 2002; Coke et al., 1978). Empathy also enhances persuasion; a recent study on PSAs (public service advertisements) showed that an empathy inducing anti-smoking messages, was effective for regular smokers (Shen, 2015). Many PSAs use emotional appeals to increase the effectiveness of the message (Brader, 2006), implying that emotions are impactful in persuasion. Persuasion theories such as the elaboration likelihood model (Petty & Cacioppo, 1986), the heuristic-systematic model of persuasion (Eagly & Chaiken, 1993),

and the affect infusion model (Forgas, 1994) acknowledge the role of emotions in persuasion.

Emotions and Persuasion

The elaboration likelihood model (ELM; Petty & Cacioppo, 1986) discusses two routes to persuasion, central and peripheral. A highly involved person is more likely to use the central route, as his/her decision depends more on the evaluation of the content of the message, whereas a low involved person's decision is more likely to be driven by other aspects of the message rather than the content (Petty & Cacioppo, 1986). Therefore, if recipients process the information centrally, they pay attention, scrutinize the quality and the strength of the argument, and form a more enduring attitude. In peripheral route, recipients pay less attention to the message, and are influenced by superficial factors such as visual appeal or pleasant music.

Similar to the ELM is the heuristic-systematic model of persuasion (HSM; Eagly & Chaiken, 1993), which also suggests two routes for message processing - systematic and heuristic - where accuracy motivated people are likely to engage in the effortful process of systematic processing and others may base their judgment on simple cues or heuristics (Eagly & Chaiken, 1993).

Both models suggest that the recipient must have both ability and the motivation to process a message carefully to be persuaded effectively by message content. If both the motivation and the ability is high, then the recipient is more likely to choose central or systematic processing. Impairment in either one of these may result in persuasion via the heuristic or peripheral route (Eagly & Chaiken, 1993; Petty & Cacioppo, 1986).

Emotions can serve as an argument under central or systemic route persuasion (Cacioppo & Petty, 1989; Eagly & Chaiken, 1993), as when the attitude is based on affective properties of the object. When the motivation and ability is high, emotion becomes one of the arguments to assess the object or situation and thus plays an equally significant role as other arguments in influencing the decision or judgement (Petty & Brinol, 2015). People may prefer information that matches their mood; sad participants rated sad stories as more favorable than happy participants, whereas happy participants rate happy stories as more favorable (Martin, Abend, Sedikides, & Green, 1997). The possibility of changing an attitude is higher when the valence of the recipient's emotions matches the valence of the emotional appeal of the message as well. Sad participants were better persuaded than the angry participants when they were informed about the sad repercussion of not accepting the increase in sales tax to provide more emergency vehicles to the city (DeSteno, Petty, Rucker, Wegener, & Braverman, 2004). Under high elaboration, even irrelevant affective states influence the attitude by biasing the information, which comes to mind (Petty, Cacioppo, Sedikides, & Strathman, 1988). Consistent with this assumption, people in negative moods evaluate both content and context more carefully, and are better at recalling details than people who are in a positive mood (Bohner, Crow, Erb & Schwarz, 1992).

When the recipient has low motivation or ability to process the information, emotions serve as a peripheral cue (Petty et al., 1988), so a recipient's attitude towards an object will be influenced by factors as simple as pleasant music, a nice smell or a great presentation. For example, students in a non-decision making context (when they were

not motivated to buy the pen) preferred a pen advertised with a pleasant music over a pen advertised with information (Gorn, 1982). Greifeneder, Bless, and Pham (2011) in their review summarized that emotions under low elaboration have a direct and simple effect on judgment. For example, participants evaluated cartoon characters more positively when paired with pictures eliciting more positive emotions and viewed them more negatively when paired with negative affect inducing images (Jones, Fazio, & Olsen, 2009).

Unlike the previous persuasion theories, the affect infusion model (Forgas, 1994) assesses how emotions influence judgments. Affect infusion is a process by which affect-loaded information influences judgments and judgmental outcomes about situations. There are different information processing strategies individuals adopt- direct access, motivated, heuristic and substantive processing. The first two processing strategies depend more on preexisting evaluation, thus involving fewer constructive processes and low affect infusion; but heuristic and substantive strategies involve high constructive thinking and greater affect infusion processing, which affects judgment (Fiedler, 1990). Heuristic strategies entail low personal relevance, absence of motivation, and limited cognitive capacity (Forgas, 1995). Therefore, there is a stronger influence of emotions on the judgment; for example, after watching their own interviews in an experimental setting, sad participants identified more unskilled behaviors and less skilled behavior, and happy participants listed more skilled behaviors and less unskilled behavior (Forgas, Bower & Krantz, 1984).

In the last strategy, substantive processing, the individual has high motivation, strong personal relevance, and adequate cognitive capacity (Forgas, 1995). The affect infusion is much higher and extensive as the emotion is used as information to form the judgment towards an object or situation (Bower 1991). For example, in a more realistic study by Baron (1987), participants interviewed a same sex applicant for a job position, and participants induced with positive emotions rated the applicant more favorably on both personal dimensions and job related decisions than the participants induced with negative emotions or neutral emotions.

Although both positive and negative emotions influence the persuasion process, many researchers have highlighted that negative emotions such as sadness and fear seem to motivate participants to process information more centrally or systematically than peripherally, as the negative moods or feelings alert a person about something wrong or unsafe, in contrast to positive emotions, which signal safety and security (Bohner et al., 1992; Schwarz, 1990). For example, sad participants favored comprehensive exams more after reading strong arguments as compared to happy participants (Kuykendall & Keating, 1990). People with these negative emotions systematically engage in different activities (e.g., reading a persuasive message) to distract themselves to reduce the feelings of discomfort (Isen & Simmonds, 1978; Mitchell, Brown, Morris-Villagran, & Villagran, 2001). These views are consistent with the negative state relief model (Carlson & Miller, 1987; Cialdini et al., 1973), which suggests that people help others to alleviate their negative emotions. Negative emotions in particular can play a significant role in persuasion and prosocial behavior.

Not only are negative emotions related to helping, but prosocial behavior may be related to individual differences in emotion regulation (Eisenberg et al., 1996). Emotion regulation refers to the process where individuals influence the emotions they experience and express (Gross, 1998). For example, students with higher tolerance for delay of gratification donate more money as compared to those who report lower tolerance for delay of gratification (Long & Lerner, 1974), which implies that those who are more prosocial in general may be better at emotional regulation.

Emotion Regulation and Cognitive Reappraisal

Individuals who use better emotion regulation strategies are considered happier and have greater well-being (Gross, 1999). Cognitive reappraisal is one of the effective emotion regulation strategies (Meyer, Smeets, Giesbrecht, & Merckelbach, 2012). This reappraisal strategy refers to the ability to reframe the meaning of a stimulus in such a way that it changes the entire emotional experience (Gross, 2001). Cognitive reappraisers negotiate stressful situations by taking an optimistic attitude, reinterpreting what they find stressful, and making active efforts to repair their bad moods (Gross & John, 2003).

Cognitive reappraisal also reduces anger and blood pressure reactivity (Denson, DeWall, & Finkel, 2012). It up regulates positive emotions and down regulates negative emotions (Troy, Wilhelm, Shallcross, & Mauss, 2010), thus playing a key role in stress reduction (Gross, 1999). Frequent use of the strategy is also related to reductions in depressive symptoms, and increases in self-esteem (Gross & John, 2003). For example, participants under reappraisal instructions report less negative emotion after watching a negative emotional clip as compared to those in suppression and control groups (Troy et

al., 2010). Socially, frequent users of this strategy share more emotions with others and maintain relationships better than those who do not use the strategy often (Gross & John, 2003).

Because the strategy acts like a coping mechanism by re-evaluating stressful situations with an optimistic mindset to repair the mood, there is a possibility that individual differences in cognitive reappraisal may influence negative emotions, and thus relate to helping behavior. Emotion regulation influences empathetic responses (Eisenberg et al., 1996); individuals who are better at emotion regulation score higher on empathy, which is related to helping behavior (Batson, 1991, Fultz et al., 1986; Panfile & Laible, 2012).

Emotions, Persuasion and Prosocial Behavior

Persuading people to behave prosocially has become very important, especially with the ever-increasing number of charity organizations (Venable et al., 2005). Emotions can enhance persuasion (Freimuth, Hammond, Edgar & Monahan, 1990); negative emotions in comparison to positive emotions have better persuasive power as they compel people to act in a desired way to reduce their discomfort (Brennan & Binney, 2010).

Similarly, affect as information theory posits that negative emotions such as sadness, fear, and anger inform people of an insecure environment and therefore motivate recipients to choose the systematic (Eagly & Chaiken, 1993) or central route (Petty & Cacioppo, 1986) in persuasion, which leads to more successful behavioral change (Bohner et al., 1992; Schwarz, 1990). Fear, for example, is one of the most studied

negative emotions in context of persuasion, and meta-analyses (Boster & Mongeau, 1984; Witte & Allen, 2000) have shown that higher levels of fear lead to effective persuasion; when individuals read a message induced with fear, they perceive threat, which scares them to take suggested actions to reduce the fear (Leventhal, 1970; Rogers, 1975), consistent with the negative state relief model (Cialdini et al., 1973).

Empathy impacts persuasion by increasing people's engagement with a message (Edwards & La Ferle, 2003), and high empathy promotes helping (Batson et al., 2002).

Therefore, both negative emotions and empathy may increase persuasion and lead to greater prosocial behavior.

Present Study

Public service announcements (PSA) are a common medium for communication with others (O'Keefe & Reid, 1990), and many of these advertisements induce emotions (Dillard & Peck, 2001) as they enhance persuasion. However, different emotional levels have different persuasive power; a study on fear showed a moderate level of fear is more successful in persuading individuals than a high level of fear (Rogers, 1975). but the research on prosocial behavior has showed that higher level of emotions such as sadness and guilt have greater persuasive than the lower levels (Howes & Farver, 1987; O' Malley & Andrews, 1983). These results imply that different levels of negative emotions may have different effects

In one examination of the effects of emotional appeals, Bagozzi and Moore (1994) tested a PSA's persuasiveness on helping intentions. Their participants watched an emotional advertisement on child abuse, and those who felt more negative emotions

reported higher empathy and a greater willingness to help abused children. The current study was based on their study (Bagozzi & Moore, 1994) and their basic research question of whether more negative emotions leads to greater helping.

There are five main differences between my study and Bagozzi and Moore's (1994) study. First, I used a print advertisement instead of a video advertisement as print advertisements provide quick and clear information, which makes the information more memorable (Perez, 2013). Print advertisements for charitable organizations are also used frequently in mailings, magazines and on websites.

Second, they used high and low emotional levels for the video advertisement, but I added a third, moderate emotional level to the advertisement as some research has shown more persuasion in cases of moderately negative emotions than for higher or lower levels of emotions (Roger, 1983). An anti-child abuse image was manipulated to create three emotional levels- strong, moderate and weak. Third, Bagozzi and Moore (1994) used open-ended questions to measure empathy in the first study, where participants described their feelings after watching the child abuse video, which was later coded into four categories of Davis's (1980) empathy measure. In their second study, empathy was measured using six items related to participants' feelings and experiences of watching the video. I used Batson's (1991) affective empathy scale, which is a reliable and more commonly used measure of empathy in prosocial behavior studies (Batson et al., 2002; Toi & Batson 1986).

Fourth, I investigated cognitive reappraisal as a moderator of the effect of negative emotions on prosocial behavior, as cognitive reappraisal is an effective

regulation strategy that helps people deal with negative situations (Gross & John, 2003). Participants who use cognitive reappraisal when induced to feel negative emotions may act to down regulate the negative emotions, which may lead to more helping and donations. Finally my participants were Amazon mTurkers as compared to undergraduate students in the original study; mTurk attracts represents diverse participants in terms of age, educational background, location, and ethnicity (Buhrmester, Kwang, & Gosling 2011), and may provide a more representative sample than a group of undergraduate students (Henrich, Heine, & Norenzayan, 2010).

The participants evaluated one of three images for an anti-child abuse advertisement (Appendix B). All three images were accompanied by a message asking participants to support the child abuse cause. In the strong emotional condition, the participants viewed an image of child with many bruises. In the medium emotional condition, participants saw a child with some bruises, and in the weak emotional condition, participants viewed an image of the same child without any bruises. In addition to rating how the advertisement made them feel, they self-reported their willingness to help the cause of preventing child abuse and were given the opportunity to pledge a donation in support of the cause.

Hypotheses

The main hypotheses of the study were as follows:

1. The strong emotional group will pledge the most donations and report the most willingness to help.

2. The medium emotional group will donate more and report more willingness to help than the weak emotional group.
3. Negative emotions on negative emotions scale and PANAS will correlate positively with empathy.
4. Participants who report more empathy will pledge more donations and report a greater willingness to help.
5. Participants who score higher on both cognitive reappraisal and negative emotions will donate more and report greater willingness to help as compared to those who scored high on negative emotions and low on cognitive reappraisal.

CHAPTER 2

PILOT STUDY

In order to create different emotional intensities of the image, a photo shop expert manipulated the images and created six different versions - two images for each condition (the weak, the medium and the strong).

The images for the weak conditions were with and without tears with no bruises. The medium condition images had some bruises with and without tears, and lastly, the images in the strong condition had images with lots of bruises with and without tears. These images were presented in a random order to four undergraduates and nine graduate students at a research team meeting. They rated the extent to which each image made them feel emotional, sad, angry, tense and fearful. Based on these ratings, and the comments from the group and the committee members, three final images were chosen to represent the conditions (Appendix B)

I then conducted a pretest to examine whether there were in fact different emotions elicited by the images.

Method

Participants

One hundred and seven participants were recruited via amazon Mechanical Turk in exchange of \$0.40. The sample's age ranged from 19 to 70 ($SD = 13.17$). Most were American citizens ($N = 106$) and women ($N = 68$). Most of the participants were

Caucasian ($N = 86$) with some African American ($N = 9$), Hispanic ($N = 7$), and Asian or Pacific Islander ($N = 4$) participants.

Measures

Demographic questionnaire Participants self - reported their general demographic information such as race, gender, and religion (Appendix A).

Negative emotions scale Bagozzi and Moore (1994) created this measure in order to assess emotional reactions of participants toward the images (Appendix B). It consists of five negative emotions- emotional, sadness, tension, anger, and fear (Appendix C). The participants read “Please rate the extent to which you feel each of the emotions or feelings as you view this image” and rated each of these emotions on 5 point scale where “1” is *not at all* and “5” is *extremely*. In Bagozzi and Moore’s study (1994) a factor analysis showed that anger/sadness and fear/tension loaded on different factors and were positively correlated ($r = .59$). In the current study the items were combined into one scale with good reliability ($\alpha = .89$).

PANAS This scale has two subscales - positive emotions and negative emotions- each of which include 10 positive (e.g., determined, active, inspired, interested, strong, proud) and negative (e.g., upset, irritated, scared, nervous, guilty, hostile) emotions, respectively (Watson, Clark, & Tellegen, 1988; Appendix D). Participants rated the extent to which they felt each of these emotions on a 5 point scale, where “1” is *not at all* and “5” is *extremely*.

The positive emotions are negatively correlated with distress and depression, but the negative emotions are positively related to both these variables, supporting the

validity of the scale (Watson et al., 1988). The authors also reported the reliability of the subscales at $\alpha = .88$ for positive emotions and $\alpha = .87$ for negative emotions. For the current study, the positive emotions subscale had reliability of $\alpha = .77$, and negative emotions subscale had a reliability of $\alpha = .89$.

Semantic differential scale The scale has 18 bipolar adjective pairs that assess the three-dimensional structure of an object or situation on pleasure, arousal, and dominance (Mehrabian & Russell, 1974). Participants read the instructions - *For each adjective pair, please click a button close to the adjective which you believe describes your reaction to the image better.* They then rated the 18 adjective pairs (Appendix E) on 9 point scales, from “-4” to “+4”. A sample item for the pleasure dimension is *Unhappy - Happy*, a sample for arousability dimension is *Dull - Jittery*, and a sample for dominance is *Awed – Important*. In the support of the validity of the measure, a study demonstrated significant correlations between the pleasure dimension of the scale and the computerized Self - Assessment Manikin (SAM) pleasure dimension, and between the arousability dimensions of SAM and a semantic differential (Bradley & Lang, 1994). The reliability for pleasure, arousability, and dominance in past research was good at, $\alpha = .91$ and $\alpha = .81$ (Boyson, Pryor & Butler, 1999), and $\alpha = .83$, respectively (Russell, Ward & Pratt, 1981). In the current study, the reliability for pleasure ($\alpha = .89$), arousability ($\alpha = .84$), and dominance ($\alpha = .72$) were acceptable.

Procedure

After completing a demographic questionnaire, participants were randomly assigned to one of the three conditions- strong, medium or weak (as described above).

They assessed the image by rating their emotional reactions on the positive and negative emotions in the PANAS scale (Watson et al., 1988) and the negative emotions scale (Bagozzi & Moore, 1994), which were presented in an intermixed order followed by Mehrabian and Russell's (1974)'s semantic differential scale of pleasure, arousability and dominance. They were then debriefed (Appendix F).

Results and Discussion

Data Cleaning

Some variables had three to four missing values. Missing values were excluded from the analyses including those variables.

Statistical Analyses

ANOVAs were used to analyze the differences in the dependent variables – negative emotions scale, PANAS negative emotions, PANAS positive emotions, and pleasure, arousability, and dominance -- between the three conditions, followed by Tukey's-b post hoc tests.

There was a main effect for condition on the Negative emotions scale $F(2, 103) = 22.369, p < .001, \eta_p^2 = .309$. The image in the strong condition ($M = 3.65, SD = .19$) elicited the most negative emotions, followed by the medium ($M = 3.05, SD = .19$) and the weak condition ($M = 1.85, SD = .19$). Post hoc Tukey's b tests further showed that differences were found between all three conditions (Table 1).

The differences between the conditions on both PANAS negative emotions, $F(2, 101) = 18.033, p < .001, \eta^2 = .269$, and PANAS positive emotions, $F(2, 101) = 4.140, p = .019, \eta^2 = .083$, were statistically supported. Tukey's b test on PANAS negative emotions,

showed that the differences were found only between two conditions - the weak ($M = 1.57, SD = .15$) versus the medium ($M = 2.50, SD = .16$) and the strong ($M = 2.87, SD = .15$). But for the positive emotions, a difference was found only between the weak and the medium condition versus the strong condition (Table 1).

Unexpectedly, the strong condition had the highest rating for positive emotions and the positive emotions were strongly correlated with both PANAS negative emotions ($r = .35$) and the negative emotions scale ($r = .30$). This unexpected direction of the result could be because of the ambiguous emotions such as alert, interested, determined, attentive and strong. It is possible that the image positively motivated participants to feel strong positive emotions such as alert, strong, determined, attentive, and interested towards the issue inferred from the image. Also the strong correlation between positive emotions and arousability ($r = .30$) suggests that these emotions are arousing, which explains why the strong condition participants felt more determined and inspired than those in the medium and weak condition seeing image.

Because there are three dimensions to the semantic differential scale, we conducted three ANOVAS separately. The main effect of condition was statistically significant for pleasure, $F(2, 104) = 30.50, p < .001, \eta_p^2 = .377$, and arousability, $F(1, 104) = 7.710, p = .001, \eta_p^2 = .136$, but not for dominance $F(1, 104) = .199, p = .820, \eta_p^2 = .004$. Tukey's b test showed that the only significant difference was between the strong and medium versus the weak condition for pleasure. For arousability, Tukey's b test showed the significant difference was only between the weak and the strong condition (Table 1).

Table 1

The difference between the conditions on all the dependent variables.

<u>Dependent</u> <u>Variables</u>	<u>Weak</u>		<u>Medium</u>		<u>Strong</u>		η_p^2
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Negative emotions	1.85 _a	.19	3.05 _b	.19	3.65 _c	.19	.309
PANAS (Negative emotions)	1.57 _a	.16	2.50 _b	.15	2.87 _b	.16	.269
PANAS (Positive emotions)	2.22 _a	.58	2.12 _a	.57	2.56 _b	.71	.083
Pleasure	-.58 _a	.20	-2.29 _b	.21	-2.75 _b	.20	.377
Arousability	-.18 _a	.87	.89 _{ab}	1.75	1.18 _b	1.56	.136
Dominance	-.39 _a	.78	-.22 _a	1.14	-.35 _a	1.47	.004

Note. Means with the different subscripts in row differ at $p < .05$.

Across the various emotions scale (i.e., PANAS, the semantic differential scale), the medium emotional condition was sometimes equivalent to the weak and sometimes to the strong. On the negative emotions scale, however, the ratings of each image were significantly different in the expected direction. Because this measure was the one used by Bagozzi and Moore (1994) and was the main emotional measure for the main study, I retained the three levels of emotional advertisement for that study to better test whether there is linear or curvilinear relationship between negative emotions and helping.

CHAPTER 3

METHOD

Participants

One hundred and sixty-three participants were recruited via Amazon Mechanical Turk in exchange for \$0.40. Their ages ranged from 18 to 73 ($M = 36.65$, $SD = 13.50$), and most of the sample was female (58%; $N = 92$). The majority of the sample was Caucasian (74.8%; $N = 119$) with some African American (7.8%; $N = 13$) Hispanic (7.8%; $N = 13$), and Asian or Pacific Islander (6%; $N = 10$) individuals. All but three of the participants were U.S. citizens.

According to a power analysis using the G-power computer program (Erdfelder, Faul, & Buchner, 1996) to detect medium effects ($d = .25$) with 80% power, and at $\alpha = .05$ significance level, the study required at least 158 participants.

Measures

Cognitive Reappraisal Questionnaire

The cognitive reappraisal questionnaire (Gross & John, 2003; Appendix G) is a 6-item scale with items rated on a 7-point Likert scale ranging from 1 to 7, where “1” is *strongly disagree*, and “7” is *strongly agree*. A sample item of the scale is “When I want to feel more positive emotion, I change the way I’m thinking about the situation.” In terms of validity, a past study showed that the measure was positively related to coping through reinterpretation and negatively related to neuroticism, which shows the measure has both convergent and discriminant validity (Gross & John, 2003). The questionnaire

has acceptable internal consistency with $\alpha = .79$ (Gross & John, 2003). Reliability in the present study was $\alpha = .89$.

The Marlowe-Crowne Social Desirability Scale (MCSDS)

This social desirability scale (Crowne & Marlowe, 1960; Appendix H) is a 33-item dichotomously scaled (i.e., True or False) instrument. This measure controls potential response bias arising from the tendency towards socially desirable responding. The participants indicated whether or not each item was true or false for them. Out of 33 items, 18 are attribution items (e.g., 'I have never intensely disliked anyone. '), and 15 are denial items (e.g., 'I like to gossip at times. '). Higher scores indicate the tendency to respond in a socially desirable manner.

The scale's high correlation with MMPI scales ($r = .95$) and test-retest correlation of .89 shows that it is both valid and reliable (Crowne & Marlowe, 1960). The original study reported good internal reliability of $\alpha = .88$, and the current study showed lower reliability ($\alpha = .72$).

Negative Emotions Scale

Participants self-reported the extent to which they felt emotional, sadness, fear, tension, and anger (Bagozzi & Moore, 1994; Appendix C). The participants rated these emotions on a 5 point Likert scale, where "1" is *not at all* and "5" is *extremely*. Although the factor analysis in the original study by Bagozzi and Moore (1994) showed that anger and sadness loaded on one factor and tension and fearfulness loaded on another, these two factors were highly correlated ($r = .59$). In the current study, these five negative

emotions showed high reliability within each condition - the weak ($\alpha = .92$), the medium ($\alpha = .80$), and the strong condition ($\alpha = .81$).

PANAS-I-SF

This short version of the positive and negative emotions scale (Thompson, 2007; Appendix I) consists of five negative emotions - hostile, afraid, upset, ashamed and nervous, and five positive emotions - alert, inspired, determined, attentive and active. All these emotions were rated on a 5-point-scale where “1” is *not at all* and “5” is *extremely*. The subscale of positive emotions is positively correlated with subjective well-being and happiness, whereas the negative emotions are negatively correlated with both the variables, supporting the validity of the scale (Thompson, 2007). The Cronbach alpha for positive and negative emotions were .75 and .76 respectively in past research (Thompson, 2007). For the present study, the reliability for positive emotions was $\alpha = .89$ and negative emotions was $\alpha = .84$. The scale also showed good reliability for negative emotions within each condition – in the weak condition, $\alpha = .85$, the medium condition, $\alpha = .72$, and the strong condition, $\alpha = .79$. For the positive emotions, the internal reliability within the conditions were - weak ($\alpha = .89$), medium ($\alpha = .82$), and strong ($\alpha = .86$).

Affective Empathy

The empathy scale (Batson, 1991; Appendix J) consists of six adjectives. Participants rated the extent to which they felt each of these emotions after viewing the image. For example “Please rate your emotional responses towards the “anti-child abuse” image you just viewed on your screen. How did it make you feel? -- Sympathetic, soft-

hearted, warm, compassionate, tender, and moved.” They rated each of the adjectives on the scale of 1 to 7, where “1” is *not at all* and “7” is *extremely*.

The empathy scale is correlated with perspective taking, one of the subscales of a reliable empathy measure (Batson et al., 1997). The Cronbach alpha for this measure in past research (Batson et al., 1997) and the present study were similar at $\alpha = .88$ and $.89$, respectively. The reliabilities for within condition were high also – weak ($\alpha = .91$), medium ($\alpha = .89$), and strong ($\alpha = .88$).

Willingness to Help

This measure was adapted from the behavioral commitment scale, which is an 8-item scale that assesses people’s commitment towards helping homeless people (Hocking, & Lawrence, 2000; Appendix K). One of the items was very specific to helping the homeless, therefore it was removed from current measure. The 7-item willingness to help scale measured participants’ intention to support the cause in terms of contributing time and money. A sample item of this measure would be “I would be willing to volunteer to serve as a sponsor for a victim of child abuse.” All the items were rated on 7 point Likert scale where “1” is *not at all* and “7” is *most definitely*. The original authors did not address scale validity; however, they reported the reliability of the measure as $\alpha = .75$ (Hocking, & Lawrence, 2000). The internal reliability of the present study was $\alpha = .90$.

Pledge to Donate

Participants read a few lines on an N.G.O. called CAPA (Child Abuse Prevention Association; Appendix L) which fights against child abuse and helps the victims of this

abuse. After reading, participants were given an option to support the organization by pledging a donation.

Demographics

Participants were asked about their age, race, hometown, and socio-economic status (Appendix M). Three sensitive items related to child abuse and abuse in general were also included. These items specifically asked whether they had experienced child abuse or other types of abuse, and whether they knew of a victim of child abuse.

General Prosocial Behavior

The participants self-reported on three items, which assessed their general helping behavior in terms of monetary donations, donations in kind, and volunteering (Appendix N). A sample question was “How often do you engage in any kind of charitable monetary donation?” Participants responded on a 5-point-scale, where “1” is *never* and “5” is *almost always*. These items had good reliability ($\alpha = .73$).

Procedure

After giving their consent, participants completed the cognitive reappraisal questionnaire (Gross & John, 2003; Appendix G), followed by the social desirability scale (Crowne & Marlowe, 1960; Appendix H). Participants were then randomly assigned to one of the three conditions - strong, medium or weak - as manipulated by the images (Appendix B) they viewed with a message on their screen. The same images described in the pilot study were used in this study.

The message for all the groups read “It is time we all should come together and fight against child abuse.” Participants evaluated the advertisement by rating the extent to

which they felt different negative and positive emotions from the I-PANAS-SF (Thompson, 2007; Appendix I) and the negative emotions scale (Bagozzi & Moore, 1994; Appendix C), which were intermixed.

Participants then completed the empathy scale (Appendix K) by rating the extent to which they felt sympathetic, soft-hearted, warm, compassionate, tender, and moved towards the image. They then completed the willingness to help measure (Hocking, & Lawrence, 2000; Appendix L) and had an opportunity to pledge a donation (Appendix J). On the pledge to donate item, participants read about an N.G.O., which works for the prevention of child abuse. They then read the instruction written in bold text “Please fill out the following information **ONLY** if you want to pledge a donation.” They were then given option to enter any amount of money they wanted to donate. These quasi-behavioral measures were presented in a counterbalanced order. Finally, the participants completed a demographic questionnaire (Appendix M) in which they responded to items on their experiences with child abuse or other types of abuse

Participants then read a debriefing (Appendix O). The deception involved and the purpose of the study were explained. A disclaimer was also included, which stated that the researchers were not associated with any non-profit organizations. Acknowledging the seriousness of the issue, we gave them a web link to a child help organization where they could express support to the cause, and they were also provided a help line number for child abuse in case they were aware of any child abuse incidents.

CHAPTER 4

RESULTS

Data Management

Missing Values

There were three to four missing values across the variables, and pairwise deletion was used. Out of the 163 participants, 140 participants chose not to enter any amount for pledge to donate. For the remaining 26 participants, two participants chose “0” as their donation amount, which means that only 24 participants made pledges to donate. Because those who did not respond to the pledge donation seemed to intend not to donate, I entered “0” as the amount for those participants.

For the general prosocial behavior variables such as “About how many hours of volunteer work for charitable organizations did you do in the last year?” and “What is the approximate value in dollars of the money/goods you donated to all charitable organizations?” I entered “0” as response where they had entered “none” or similar terms. Two participant entered “50000” and “1600” hours as response to number of hours they worked; these outliers were excluded in the analysis.

The average time spent viewing images and answering the intermixed emotions scale ranged from 8 - 103.78 seconds.

Manipulation Checks

Negative emotions scale Participants in all three conditions rated five negative emotions - sadness, emotional, fear, tension, and anger (Bagozzi & Moore, 1994) after viewing the respective images. An ANOVA was used to compare the ratings of negative

emotions between the conditions, and a significant difference in the ratings was found, $F(2, 157) = 21.636, p < .001, \eta_p^2 = .226$. However, the post hoc test Tukey's - b revealed that the only significant differences were between the strong ($M = 3.77, SD = .89$) and the medium ($M = 3.67, SD = .96$), versus the weak condition ($M = 2.56, SD = 1.17$; Table 1).

PANAS-I-SF. Similarly, in the second manipulation check, participants rated five negative and five positive emotions from the short PANAS-I-SF scale (Thompson, 2007). We ran two separate ANOVAs to analyze both the dependent variables by condition.

Negative emotions An ANOVA showed a significant difference between the conditions on the ratings of negative emotions $F(2, 153) = 13.451, p < .001, \eta_p^2 = .152$. A post hoc Tukey's-b test showed a significant difference was only between the medium ($M = 2.88, SD = .90$) and the strong condition ($M = 2.84, SD = .95$), versus the weak condition ($M = 2.02, SD = .98$). There was no significant difference between the medium and the strong conditions (Table 1).

Positive emotions There was a difference by condition on positive emotions as well, $F(2, 157) = 5.839, p = .004, \eta_p^2 = .070$. Unexpectedly, the weak condition ($M = 2.63, SD = 1.06$) had the lowest mean ratings and the strong condition the highest ($M = 3.29, SD = 1.00$; Table 2). Further, a Tukey's - b test showed that the significant difference was found between the weak versus the medium and the strong condition.

Table 2

PANAS-I-SF and the negative emotions scale means and standard deviation scores by conditions

Conditions	<u>Positive emotions</u>			<u>Negative emotions</u>			<u>Negative emotions</u>		
	<u>(PANAS-I-SF)</u>			<u>(PANAS-I-SF)</u>			<u>scale</u>		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Weak	53	2.63 _a	1.06	52	2.02 _a	.98	51	2.56 _a	1.17
Medium	52	3.07 _b	.93	52	2.88 _b	.90	52	3.67 _b	.96
Strong	43	3.29 _b	1.00	49	2.84 _b	.95	48	3.77 _b	.89

Note: Means in a column with different subscripts differ at $p < .05$.

Hypothesis Testing

Hypotheses 1 and 2- Participants in the strong emotion condition will pledge the highest donations and report the most willingness to help and those in the medium condition will donate more than those in the weak condition.

Two separate ANOVAs with condition as the independent variable (IV) and willingness to help and pledge to donate as dependent variables were conducted.

Willingness to help There was no significant difference between the conditions in willingness to help, $F(2, 158) = .130, p = .861, \eta_p^2 = .002$. The mean ratings for all the conditions were similar as shown in Table 3.

Table 3

Means scores of willingness to help and pledge to donate by conditions.

Conditions	<u>Willingness to help</u>			<u>Pledge to donate</u>			N_I	Donation (\$)
	N	M	SD	N	M^*	SD		
Weak	52	4.73	1.40	53	1.13	.54	12	26.90
Medium	54	4.87	1.39	54	.61	1.04	8	22.00
Strong	52	4.85	1.59	53	1.16	.75	6	38.50

Note. N_I = number of people who entered an amount greater than zero. Donation = amount donated by the participants in conditions. M^* = log transformed means of pledge to donate.

Pledge to donate After 0 values were replaced with .001, a new variable with the log transformed value was created to help normalize the highly skewed distribution.

There were no statistically significant differences between the conditions in pledges to donate, $F(2, 160) = 1.597, p = .206, \eta_p^2 = .020$ (Table 3).

A chi square test of independence was also conducted on donations by condition. Those who donated any amount were coded “1”, and a “0” code was given to those who did not donate. No significant difference was found between number of donators versus non-donators across the conditions, $\chi^2(2, N = 160) = 2.216, p = .270$.

Hypothesis 3. Participants who report more negative emotions will report more empathy.

Correlations between the negative emotions scale, the negative emotions subscale from PANAS-I-SF, and empathy were done separately by conditions. I then used fisher-z transformations to calculate average within-cell correlations.

As expected, within all the conditions, empathy was significantly positively correlated with both the negative emotions scale and negative emotions in PANAS-I-SF (Table 4).

Table 4

Correlations of empathy with negative emotions scale and PANAS-I-SF (negative emotions) by conditions and across conditions.

Conditions	<i>N</i>	Empathy
<u>The Weak condition</u>		
PANAS-I-SF (Negative emotions)	50	.43**
Negative emotions scale	49	.50***
<u>The Medium condition</u>		
PANAS-I-SF (Negative emotions)	51	.29*
Negative emotions scale	51	.40*
<u>The Strong condition</u>		
PANAS-I-SF (Negative emotions)	48	.26
Negative emotions scale	49	.31*
<u>Average within-condition correlations</u>		
PANAS-I-SF (Negative emotions)		.33**
Negative emotions scale		.41**

*Note. * $p < .05$, ** $p < .01$, ***

Hypothesis 4. Participants who report more empathy will pledge more donations and report a greater willingness to help.

Correlations were conducted between empathy, pledge to donate, and willingness to help by condition and were then averaged across the conditions using fisher z transformations.

Empathy significantly correlated with willingness to help in all the conditions; however, empathy only related to pledge to donate in the weak condition (Table 5).

Table 5

Correlations of empathy with willingness to help and pledge to donate by conditions.

Conditions	<i>N</i>	Empathy
<u>The Weak condition</u>		
Pledge to donate	51	.38*
Willingness to help	50	.62***
<u>The Medium condition</u>		
Pledge to donate	53	.14
Willingness to help	53	.45***
<u>The Strong condition</u>		
Pledge to donate	53	.18
Willingness to help	52	.50***
<u>Average within-condition correlations</u>		
Pledge to donate		.17
Willingness to help		.43**

*Note. * $p < .05$, ** $p < .01$, *** $p < = .001$

Hypothesis 5. Participants who score high on cognitive reappraisal and high on negative emotions will donate more and score higher on willingness to help as compared to those who scored low on cognitive reappraisal and low on negative emotions.

First I correlated the two measures of negative emotions with cognitive reappraisal, willingness to help, and pledge to donate, both within conditions and as average within cell correlations (Table 6).

Those who reported more cognitive reappraisal reported more positive emotions in the weak and the medium conditions and pledged higher donations in the weak condition. They also reported more negative emotions in the strong condition. Those who used cognitive reappraisal more frequently self-reported higher negative emotions (the negative emotions scale) in the strong condition, but cognitive reappraisal was not related to negative emotions (PANAS-I-SF) in any of the conditions.

Participants who use more cognitive reappraisal also reported greater willingness to help in the medium and strong condition, and donated more only in the weak condition.

Table 6

Correlations moderator with independent variables with the dependent variables by conditions.

Conditions	1	2	3	4	5
<hr/> The Weak condition <hr/>					
1.Negative emotions scale					
2.PANAS-I-SF	.90***				
(Negative emotions)					
3.PANAS-I-SF	.68***	.63***			
(Positive emotions)					
4.Cognitive reappraisal	.01	-.01	.34**		
5.Willingness to help	.34*	.22	.36**	.22	
6.Pledge to donate	.19	.16	.43***	.31*	.34**
<hr/> The Medium condition <hr/>					
1.Negative emotions scale					
2.PANAS-I-SF	.82***				
(Negative emotions)					
3.PANAS-I-SF	.46***	.45***			
(Positive emotions)					
4.Cognitive reappraisal	.22	.06	.41**		
5.Willingness to help	.52***	.38**	.59**	.38*	

(table continues)

6.Pledge to donate	.15	.11	.03	.18	.18
<hr/>					
The Strong condition					
<hr/>					
1.Negative emotions scale					
2.PANAS-I-SF	.78***				
(Negative emotions)					
3.PANAS-I-SF	.63***	.64***			
(Positive emotions)					
4.Cognitive reappraisal	.36**	.11	.25		
5.Willingness to help	.33*	.10	.19	.51***	
6.Pledge to donate	-.02	.08	.12	-.08	.19
<hr/>					
Average within the conditions					
<hr/>					
Negative emotions scale					
PANAS-I-SF	.57***				
(Negative emotions)					
PANAS-I-SF	.51***	.51***			
(Positive emotions)					
Cognitive reappraisal	.33*	.11	.33*		
Willingness to help	.31*	.10	.19	.44***	
Pledge to donate	-.02	.08	.17	.05	.18

Note. *N* in all the conditions ranged from 49 to 55. * $p < .05$, ** $p < .01$, *** $p < = .001$

Moderator analyses The independent variables – the negative emotions scale and the PANAS-I-SF negative emotions, and the moderator, cognitive reappraisal were centered, along with the dependent variables- pledge to donate and willingness to help. Then new interaction variables – centered negative emotions and centered cognitive reappraisal, and centered negative emotions (PANAS-I-SF) and centered cognitive reappraisal, were created. In a linear regression, I entered the centered negative emotions (PANAS-I-SF), centered negative emotions scales, and the centered cognitive reappraisal in step 1, followed by the interaction variables (centered negative emotions scale X centered cognitive reappraisal, and centered negative emotions (PANAS-I- SF) X centered cognitive reappraisal) in step 2 to predict the dependent variables – centered willingness to help and centered pledge to donate.

The independent variables (negative PANAS-I-SF and the negative emotions scale) and the moderator significantly explained 25% of the variance in willingness to help, $F(1, 141) = 15.05, p < .001, R^2 = .25$. However, the interactions between the independent variables and the moderator did not significantly add to the prediction of willingness to help, $F(1, 140) = .45, p = .63, \Delta R^2 = .005$.

Table 7 shows the standardized Beta weights in the equation. The negative emotions scale and cognitive reappraisal significantly related to willingness to help, but the effect of negative emotions on the PANAS-I-SF was not significant.

Table 7

Summary of moderated regression of negative emotions predicting willingness to help.

Willingness to help	<i>N</i>	β	<i>t</i>	<i>p</i>	
Negative emotions scale	141	.54	3.54	.001	
Negative emotions (PANAS-I-SF)	141	-.25	-1.64	.102	
Cognitive reappraisal	141	.29	3.87	.000	
R^2					.25
Negative emotion scale X cognitive reappraisal	141	-.05	-.36	.714	
Negative emotions(PANAS-I-SF) X cognitive reappraisal	141	.11	.75	.454	
ΔR^2					.01

Note. β = Standardized coefficient beta.

For pledge to donate, I used the log transformed value instead of the actual amount. Table 8 shows neither the independent variables nor the moderator, $F(1, 20) = 1.76, p = .15, R^2 = .04$, nor the interaction variables explained a significant amount of variance, $F(1, 20) = .79, p = .45, \Delta R^2 = .01$.

Table 8

Summary of moderated regression of negative emotions predicting pledge to donate.

Pledge to donate	N	B	t	p	
Negative emotions scale	143	-.10	-.61	.53	
Negative emotions (PANAS-I-SF)	143	.14	.82	.41	
Cognitive reappraisal	143	.18	2.10	.03	
R ²					.04
Negative emotion X cognitive reappraisal	143	-.10	-.62	.53	.62
Centered negative emotions(PANAS-I-SF) X cognitive reappraisal	143	.00	-.02	.99	.60
ΔR^2					.01

Note. β = Standardized coefficient beta.

Exploratory Analyses

I also correlated demographic variables such as gender, age, belief in god, amount donated last year, hours volunteered last year, general prosocial behavior (which was assessed by how often participants donate and volunteer in their life), and whether someone had been abused with the main study variables- the negative emotions scale, PANAS-I-SF (both negative and positive), cognitive reappraisal, empathy, willingness to help, and pledge to donate. I excluded two outliers in total number of hours volunteered last year (50,000 and 1600).

The correlations were conducted within conditions and averaged using fisher z transformations. In the weak condition, there was only one significant correlation; people who reported more cognitive reappraisal reported working fewer volunteer hours.

Table 9

Correlations between demographic variables and dependent variables in the weak condition.

<u>Demographic variables</u>	<u>Dependent variables</u>							
	1	2	3	4	5	6	7	8
Gender	-.16	-.13	-.16	-.04	-.16	.05	-.17	-.12
General prosocial behavior	.17	.20	-.02	-.11	.02	.06	-.09	-.16
Amount donated last year	-.09	-.08	-.13	-.26	.01	-.01	-.01	.08
Hours volunteered last year	-.04	.02	-.08	-.29*	-.01	.01	-.13	-.04
Age	.04	-.03	.09	-.07	.10	-.13	.17	-.19
Belief in God	-.17	-.13	-.12	.14	-.21	-.19	-.15	.05
Child abuse experienced	.00	.09	.00	-.17	-.00	.02	-.27	-.25
Other abuse experienced	-.19	-.08	-.25	-.18	-.15	.01	-.08	-.01

Note. * $p < .05$. N s ranged from 49 to 53. 1= Negative emotions, 2= Negative emotions PANAS-I-SF, 3= Positive emotions (PANAS-I-SF), 4= Cognitive reappraisal, 5=Empathy, 6 = Willingness to help, 7 = pledge to donate, and 8 = Social desirability.

In the medium condition, gender significantly correlated with the negative emotions scale, positive emotions of PANAS-I-SF, empathy, and willingness to help. Women expressed more negative emotions and positive emotions as compared to men. Women also empathized more and reported greater intentions to help (Table 10). Table 10 also shows how general prosocial behavior is positively correlated with willingness to help, suggesting that those who are generally more prosocial showed more willingness to support the cause. Social desirability correlated negatively with general prosocial behavior those who donated more last year were less likely to act in a social desirable way.

Table 10

Correlations between demographic variables and dependent variables in the medium condition.

<u>Demographic variables</u>	<u>Dependent variables</u>							
	1	2	3	4	5	6	7	8
Gender	.32*	.26	.31*	-.05	.35*	.34*	-.19	.02
General prosocial behavior	.26	.08	.21	.26	.20	.48**	.11	-.19
Amount donated last year	-.14	-.23	-.09	.16	.03	.00	-.11	-.35*
Hours volunteered last year	.01	-.01	-.01	-.00	-.11	.23	-.01	-.16
Age	-.13	-.26	.13	.23	.13	-.17	.11	-.08
Beliefs in God	-.10	-.05	-.23	-.14	-.23	-.02	.03	.15
Child abuse experienced	-.04	.03	-.13	.02	-.17	-.09	.18	.01
Other abuse experienced	-.21	-.15	-.12	.01	-.11	-.15	.04	-.07

Note. * $p < .05$, ** $p < .001$, N ranged from 49 to 53. 1 = Negative emotions, 2 = Negative emotions, PANAS-I-SF, 3 = Positive emotions (PANAS-I-SF), 4 = Cognitive reappraisal, 5 = Empathy, 6 = Willingness to help, 7 = pledge to donate and 8 = Social desirability.

In the strong condition, women reported significantly more negative emotions than men. Prosocial individuals used cognitive reappraisal more frequently, and reported greater willingness to help (Table 11). People who were higher in general prosocial behavior also reported more negative and positive emotions. Surprisingly those who experienced some kind of abuse were those who reported using cognitive reappraisal more frequently. Those who believe in god expressed less negative and positive emotions. Participants who were younger showed more socially desirable response styles.

Table 11

Correlations between demographic variables and dependent variables in the strong condition.

<u>Demographic variables</u>	<u>Dependent variables</u>							
	1	2	3	4	5	6	7	8
Gender	.43**	.10	.11	.23	.18	.09	-.10	-.26
General prosocial behavior	.32*	.13	.43**	.35*	.84	.30*	.13	.06
Amount donated last year	.02	-.26	.17	.28	-.06	.18	.14	-.12
Hours volunteered last year	.07	-.03	.27	.22	.04	.18	.09	-.10
Age	-.19	-.25	.01	-.13	.18	-.04	.08	-.44*
Belief in God	-.29*	-.31*	-.31*	-.03	-.18	.01	-.03	.10
Child abuse experienced	-.23	-.03	-.03	-.14	-.06	-.12	.07	.04
Other abuse experienced	-.24	-.10	-.18	-.36**	-.01	-.14	.12	-.01

Note. * $p < .05$, ** $p < .01$, N ranged from 49 to 53. 1 = Negative emotions, 2 = Negative emotions, PANAS-I-SF, 3 = Positive emotions (PANAS-I-SF), 4 = Cognitive reappraisal, 5 = Empathy, 6 = Willingness to help, 7 = pledge to donate, and 8 = Social desirability.

The averaged within cell correlations are shown in Table 12. Participants who were more prosocial in general reported more negative and positive emotions, and reported using cognitive reappraisals more frequently. Women expressed more negative emotions than men and those who had experienced child abuse in their life reported less positive emotions. Age was inversely related with social desirability, implying that younger people tended to respond in a more socially desirable way.

Table 12

Correlations between demographic variables and dependent variables averaged across the conditions.

<u>Demographic variables</u>	<u>Dependent variables</u>							
	1	2	3	4	5	6	7	8
Gender	.38**	.10	.11	.22	.17	.09	-.10	-.25
General prosocial behavior	.29*	.12	.38**	.32*	.08	.28	.13	.06
Amount donated last year	.02	-.24	.16	.26	-.06	.01	.14	.12
Hours volunteered last year	.07	-.02	.25	.19	.04	.17	.09	.10
Age	-.19	-.24	.00	-.12	.17	-.03	.08	.39**
Beliefs in God	-.27	-.28	-.28	-.02	-.17	.00	-.03	.10
Child abuse experienced	-.22	-.02	-.31*	-.14	-.06	-.12	.07	.04
Other abuse experienced	-.23	-.09	-.18	-.33	-.01	-.14	.12	-.01

Note. * $p < .05$, ** $p < .01$, $N = 153$, 1= Negative emotions, 2= Negative emotions PANAS-I-SF, 3= Positive emotions (PANAS-I-SF), 4= Cognitive reappraisal, 5=Empathy, 6 = Willingness to help, 7 = pledge to donate, and 8=Social desirability.

CHAPTER 5

DISCUSSION

Charitable organizations mainly run on the donations received, and they use different strategies to get individuals to support them. Using images is one of the common ways to attract donations, as they evoke emotions in people. The present study tested whether different levels of emotionality of images evoked different intensities of emotions in the recipients and influenced their prosocial behavioral intentions.

Participants who saw an image of young girl with several bruises reported more negative emotions (on the negative emotions scale and the PANAS-I-SF) than those who saw the image without any bruises. Although the image with fewer bruises was expected to elicit lower negative emotions as compared to those who viewed the image with more bruises (and did so in the pilot study), there was no difference in the main study, indicating that regardless of the number of bruises (few or more), and the images had similar emotional impacts.

As discussed earlier, the images elicited positive emotions as well, and those in the strong condition reported the highest level of positive emotion. These emotions correlated with the negative emotions and arousability, indicating they were arousing and impacted the participants in a same direction as negative emotions. This leads to a possibility that the negative emotions elicited from image and may have also positively motivated the participants to support the issue. Hence, they felt more positive emotions such as alert, determined, attentive, inspired, and interested towards the issue.

Despite eliciting more emotional responses, the strong image did not elicit higher willingness to help. In fact, there were no difference across the conditions. All participants reported fairly high willingness to help. It may be that all participants felt fairly strongly that child abuse is wrong and thus regardless of the image, they felt they should help.

Overall, the number of participants who pledged donation was very low; only 20% of the participants pledged a donation, which is similar to other studies, where only 27% of the participants who pledged donations made the actual contribution (Brockner, Guzzi, Kane, Levine, & Shaplen, 1984). These results show that there is a gap between intention and behavior when it comes to helping. People tend to express high willingness to help, but their actual helping rate may be low. This may be because of many reasons. In this study some participants explicitly expressed reasons such as lack of trust or unfamiliarity with the organization, lack of money, and willingness to help in different ways such as donating food and clothes. Most of participants did seem to believe the images were real as shown by their empathetic responses, but two participants expressed in the comments that the images might have been manipulated. Excluding their data had no effects on the results.

One of the items on the willingness to help scale asked participants' willingness to donate towards anti-child abuse organization. I correlated that item with the pledge to donate to check whether those who expressed higher desire to donate actually donated after viewing the image, and I found there was a positive correlation between the item

and the pledge to donate ($r = .26$). This finding suggests that the pledge to donate item was valid and that people who intended to donate often pledged to donate.

Consistent with the literature on empathy and prosocial behavior (Batson, 1991; Batson et al., 2002; Toi & Batson, 1986) empathy in this study was significantly related to both the negative emotions scale and willingness to help in all conditions. These findings show that those who reported more negative emotions felt greater empathy, and those who self-reported greater empathy also expressed more desire to help the cause.

Cognitive reappraisal did not moderate the relationship between the negative emotions and donations or willingness to help. However, people who used cognitive reappraisal as a strategy more often reported more willingness to help. This evidence of a relationship between cognitive reappraisal and willingness to help lends support to the idea that effective regulation of emotions also contributes to prosocial behavior. Positive emotions are related to helping behavior (Michie, 2009), and cognitive reappraisal was related to positive emotions in this study. It is possible that the relationship between cognitive reappraisal and helping could be due to the high presence of positive emotions by users of the strategy.

It is also possible, however, that cognitive reappraisal could also reduce helping behavior; participants may have wanted to donate but because they reappraised the situation in other ways (such as “I donated last time” or “I will donate food to homeless”), their negative emotions such sadness and guilt were lessened and they did not donate. This possibility may be tested by having two conditions in future research: one with reappraisal instruction and another without. After viewing the sad image and

filling out all the emotional measures participants with or without reappraisal instruction would listen to their respective instructions and then fill out pledge to donate and other helping measures. More studies on the role of cognitive reappraisal in helping behavior would be useful in determining the relationship between emotion regulations and helping behavior.

Limitations and Future Directions

One of the main drawbacks of this study is that more than 80% of the participants did not pledge to donate and most of them who did pledge, pledged a small amount (less than \$20). In contrast, the participants, regardless of emotional condition of reported a high willingness to help. Such a contrast may reflect the gap between their intentions to help and actual helping behavior, as expressing general intentions to help in the future does not cost anything but pledging a donation does. However, based on participants' comments, it seems like many people genuinely supported the cause but either lacked money to pledge a donation or wanted to help in a different ways such as by volunteering.

In a real world setting, people usually learn and enquire about the organizations before they donate and the pledge is made directly to the organization. To make the situation more realistic in this study, I initially planned to get the email of the participants, presumably to follow up on the amount they pledged to donate, but I could not do it because of mTurk rules. Because the current study had a less realistic setting, participants may not have trusted that I actually was collecting donation pledges for the

organization. Conducting a study in a more realistic environment might make the study more believable and elicit more honest prosocial behavior.

Quite a few of the participants genuinely shared their dire need for money in the comments, which naturally stopped them from pledging. This might be particularly true for mTurkers as they participate in studies for very small amounts of money. Moreover, the study used a social issue which virtually everyone would agree on, and there was no range set on the amount to be donated. Future studies could choose a different population such as working people or at least provide some anchors for the amounts. It might also be helpful to gain information on why participants did not donate. It is always helpful to have some information to provide as guide for their behavior. For example, if the participants were given optional amount of donation like 10 or 25 cents, they may have made more contributions, knowing the amount is acceptable and affordable.

Because it was an online study, there was little control of the situation in which participants were in when they completed the study. Some of the participants took much more than the modal time to complete the study, which may mean they had distractions that might have disturbed the emotional influence the images in the advertisement. Replicating the study in a more experimental situation might reduce distraction levels.

Despite having three emotional levels, the main differences in the emotional reactions of the participants were found only between those who saw the images with bruises and those who saw the image without bruises. So it may be that in reality there were only two levels of emotions instead of three. No difference was detected on the willingness to help measure regardless of the different images participants viewed. This

could be the impact of the image and the issue. It will be interesting to add two more conditions; one without the issue and one without the image, to test which has a greater impact on helping behavior.

In this study, the child abuse issue may be too powerful to detect the impact of the image differences on helping behavior. Using an issue that was less emotional and agreed-on as important might have led to more differences in helping intentions. Other suggestions for future studies are to test whether negative emotional appeals also elicit positive motivations and positive emotions, as participants in this study generally rated their positive emotions as high as the negative emotions.

Theoretical Implications

This study showed that more emotional images evoked more negative emotions, and that more negative emotions related to greater empathy and greater empathy to more willingness to help, consistent with previous findings (Bagozzi & Moore, 1994). Contrary to the study I partially replicated, however, viewing more emotional images itself did not relate to greater feelings of empathy or willingness to help. In this study, I also tested whether the participants would help or not by asking them to pledge a donation, and the results showed a huge gap between their reported willingness to help and actual help.

The results show some support for different theories of prosocial behavior. Consistent with the empathy-altruism hypothesis (Batson, 1991), participants who reported higher empathy reported greater willingness to help. The negative-state relief model (Cialdini et al., 1973) suggests that negative emotions influence people to behave in a prosocial way; participants who experienced more negative emotions in this study

expressed greater willingness to help. Neither empathy nor negative emotions related to actual helping behavior (donations), however, contrary to what these theories would predict. The difference between helping intentions and helping behavior may be due to the way that behavior was measured, as noted above.

Similarly, several persuasion theories suggest that negative emotions may lead to greater persuasion, in this case, to donate to the child abuse cause. Research using the ELM (Petty & Cacioppo, 1986) has found that negative emotions are more likely to lead people to process information centrally (Bohner et al., 1992; Schwarz, 1990), which may lead to greater and more enduring persuasion (Petty & Cacioppo, 1986), and that emotions under high elaboration are treated as an influential argument (Petty & Brinol, 2015). The HSM (Eagly & Chaiken, 1993) would predict similar results. The affect infusion model (Forgas, 1994) also suggests that negative emotions would lead to a more substantive processing strategy. As noted above, the more that participants reported negative emotions related to the advertisement, the more they reported being willing to help, but there was no relation to actual helping. Such results might be because the participants did not find the issue personally relevant to them or because the message did not contain strong arguments to motivate them to donate. In this study, the negative emotions might have served as a peripheral cue influencing participants toward heuristic processing, therefore leading to less persuasion.

Although cognitive reappraisal did not moderate the relationship between negative emotions and helping behavior as expected, it did correlate with helping intentions and negative emotions. This finding provides evidence that emotion regulation

relates to prosocial behavior. Some prosocial studies acknowledge the relationship between positive emotions and helping as well (Aknin Dunn, & Norton, 2012; Michie, 2009), and cognitive reappraisal also correlated with positive emotions. These correlations suggest that cognitive reappraisal is related to prosocial behavior positively.

Practical Implications

Negative emotions increased empathy, and both negative emotions and empathy influenced helping intentions in a positive way. Negative emotions strongly correlated with empathy, and both strongly correlated with willingness to help in all the conditions. However there was no relationship between viewing a particular image and helping intentions or behavior. These findings suggest that the images affected people differently—what seems to be important in predicting intentions was what the participant felt rather than the strength of the image itself.

I tested one potential individual difference that I hypothesized would affect how the images affected people—cognitive reappraisal—but in this study, cognitive reappraisal did not moderate participants' responses. It may be that other factors such as prosocial personality, the relevance of the issue, or socio economic status may relate to how people respond to the images and the extent to which they feel negative emotions. Participants who are more prosocial in their personality, or who might have experienced abuse personally or through someone close to them might have felt more negative emotions and thus been more likely to help. There is also a possibility that those who could afford to donate pledged more donations. NGOs should consider individual differences in who may be more susceptible to messages for support for their cause.

In order for charity organizations to elicit maximum support, they must consider a few factors that may enhance the persuasion process; first, knowing their target population is important as it helps prepare a more realistic goal for help requested. For example, people in rural areas are more likely to help strangers than are those from urban areas (Amato, 1983). Second, having some sort of rules or information on helping may lead more to successful persuasion; so instead of saying just that donations are needed, specifying what kind of donations, whether money or time or food, may help potential donors realize whether they can help or not. Providing a range of optional amounts for monetary donations may also attract greater range of donors; an organization accepting even a quarter dollar for contribution is making almost every individual a possible donor.

Conclusion

Although there were no differences in the helping intentions elicited by the different levels of negative emotions due to the images in this study that does not imply that emotional advertisements do not work. It may be that all the advertisements in this study were sufficiently emotional that helping was affected and would have been significantly higher than in a control group. The negative emotions that people felt were related to empathy and empathy to helping, suggesting that to the extent that an advertisement can cause people to feel negative emotions, it may be more effective in spurring people to act toward that cause.

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APPENDIX A

DEMOGRAPHIC QUESTIONNAIRE

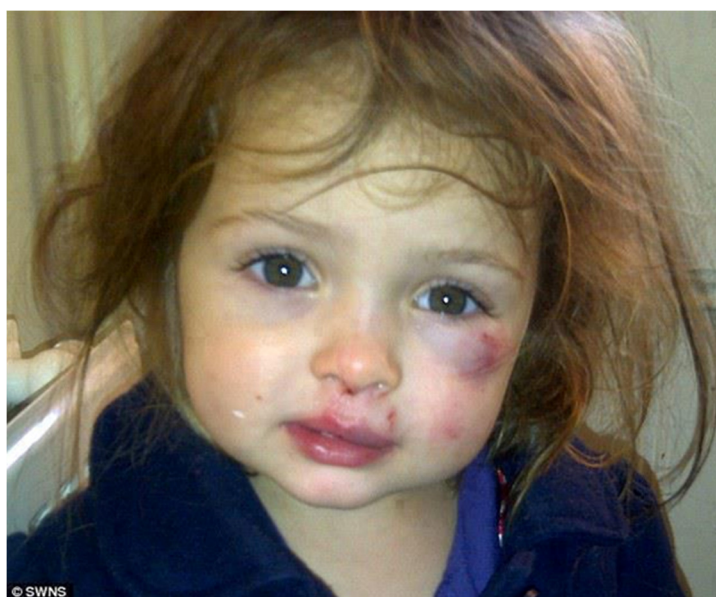
1. What is your Gender?
 - Male _____
 - Female _____
 - Other _____
2. What is your ethnicity?
 - Caucasian/ White _____
 - African American/ Black _____
 - American Indian _____
 - Asian or Pacific Islander _____
 - Hispanic _____
 - Multiracial _____
 - Other, Please specify: _____
4. Do you believe in existence of a higher being or a god?
 - Yes
 - No
5. Which of the following religions do you identify with?
 - Christianity
 - Hinduism
 - Judaism
 - Islam
 - Buddhism
 - Atheism
 - Agnosticism
 - None
 - Other
6. Which state are you from? _____

APPENDIX B
IMAGES

1. Strong emotional image



2. Medium emotional image



3. Weak emotional image



APPENDIX C

NEGATIVE EMOTIONS SCALE

Please rate the extent to which you feel the following emotions as you view the image.

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

Emotional

Sad

Fear

Anger

Tension

APPENDIX D

PANAS SCALE

Please rate the extent to which you feel the following emotions as you view the image.

1	2	3	4	5
Very Slightly or Not at All	A Little	Moderately	Quite a Bit	Extremely

Nervous
Determined
Attentive
Active
Afraid
Upset
Hostile
Alert
Ashamed
Inspired
Interested
Distressed
Excited
Strong
Guilty
Scared
Enthusiastic
Proud
Irritable
Jittery

APPENDIX F

DEBRIEFING FORM

Past research has shown that images play an important role in evoking various emotional responses in people. In this study an image of child was manipulated to show three different emotional intensities—strong, medium, or weak. You were requested to evaluate the image on various positive and negative emotions to test whether our assumptions were correct about which were most emotional.

Thank you so much for your valuable participation. If you have any further comments or questions, please feel free to contact Tsamchoe Dolma at dolmataa@uni.edu.

APPENDIX G

COGNITIVE REAPPRAISAL QUESTIONNAIRE

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions; how you show your emotions in the way you talk, gesture, or behave.

1-----2-----3-----4-----5-----6-----7
Strongly disagree Strongly agree

- When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.
- When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.
- When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
- When I want to feel more positive emotion, I change the way I'm thinking about the situation.
- I control my emotions by changing the way I think about the situation I'm in.
- When I want to feel less negative emotion, I change the way I'm thinking about the situation.

APPENDIX H
SOCIAL DESIRABILITY SCALE

Read each item and decide whether it is true (T) or false (F) for you.

- Before voting I thoroughly investigate the qualifications of all the candidates.
- I never hesitate to go out of my way to help someone in trouble.
- It sometimes hard for me to go on with my work if I am not encouraged.
- I have never intensely disliked anyone.
- On occasion, I have doubts about my ability to succeed in life.
- I sometimes feel resentful when I don't get my way.
- I am always careful about my manner of dress.
- My table manners at home are as good as when I eat out in a restaurant.
- If I could get into a movie without paying and be sure I was not seen I would probably do it.
- On few occasions, I have given up doing something because I thought too little of my ability.
- I like to gossip at times.
- There have been times when I felt like rebelling against people in authority even though I knew they were right.
- Though matter who I am talking to, I am always a good listener.
- I can remember "playing sick" to get out of something.
- There have been occasions when I took advantage of someone.
- I am always willing to admit it when I make a mistake.
- I always try to practice what I preach.
- I do not find it particularly difficult to get along with loud mouthed obnoxious people.
- I sometimes try to get even rather than forgive and forget.
- When I do not know something, I don't at all mind admitting it.
- I am always courteous even to people who are disagreeable.
- At times, I have really insisted on having things on my own way.
- There have been occasions when I felt like smashing things.
- I would never think of letting someone else be punished for my wrong doings
- I never resent asked to return a favor.
- I have never been irked when people expressed ideas very different from my own.
- I never make a long trip without checking the safety of my car.
- There have been times when I was quite jealous of good fortunes of others.
- I have almost never felt the urge to tell someone off.
- I am sometimes irritated by people who ask favors of me.
- I have never felt that I was punished without a cause.
- I sometimes think when people have misfortune they only got what they deserved.
- I have never deliberately said something that hurt someone's feelings

APPENDIX I

PANAS-I-SF

Please rate the extent to which you feel each of these emotions as you view this image.

1-----2-----3-----4-----5---
Not at all A little Moderately Quite a bit Extremely

Nervous
Determined
Attentive
Active
Afraid
Upset
Hostile
Alert
Ashamed
Inspired

APPENDIX J

AFFECTIVE EMPATHY

Please rate your emotional responses towards the “anti-child abuse” image you just viewed on your screen. How did it make you feel?

1-----2-----3-----4-----5-----6-----7
Not at all Extremely

- Sympathetic
- Soft-hearted
- Warm
- Compassionate
- Tender
- Moved

APPENDIX K

WILLINGNESS TO HELP

To what extent will you take following measures to help the cause of child abuse?

Not at all 1-----2-----3-----4-----5-----6-----7
Most definitely

- I would be willing to volunteer to serve as a “sponsor” for a victim of child abuse.
- I would be willing to allow an abused child to move in with me until the child is taken care of.
- I would be willing to volunteer to spend time helping an organization to give those children a moral support.
- I would be willing to others to get involved in helping abused children.
- I would be willing to vote for a candidate who was going to make ending child abuse a very high priority for the federal government.
- I would be willing to donate money to an organization that prevents child abuse.
- I would be willing to donate clothes or toys to an organization that helps victims of child abuse.

APPENDIX L

PLEDGE A DONATION

Some people after seeing such images have expressed their desire to help by giving donations for the cause, so I have created the possibility here for you to pledge a donation.

CAPA is a non-governmental organization that fights against child abuse, and supports children who are victims of abuse. They have been dedicated to this cause for past 35 years. It is now your opportunity to do something for these innocent children. Be a hero by pledging a donation now and you will be contacted via your email address at a later date for actual donation.

Please fill out the following information ONLY if you want to pledge a donation.

Please enter the amount you wish to donate \$ _____

APPENDIX M

DEMOGRAPHIC QUESTIONNAIRE

1. What is your Gender?
 - Male _____
 - Female _____
 - Other _____
2. What is your ethnicity?
 - Caucasian/ White _____
 - African American/ Black _____
 - American Indian _____
 - Asian or Pacific Islander _____
 - Hispanic _____
 - Multiracial _____
 - Other, Please specify: _____
4. Do you believe in existence of a higher being or a god?
 - Yes
 - No
5. Which of the following religions do you identify with?
 - Christianity
 - Hinduism
 - Judaism
 - Islam
 - Buddhism
 - Atheism
 - Agnosticism
 - None
 - Other
6. Do you have any children?
 - Yes
 - No
7. The following items are sensitive. Please respond only if you are comfortable.
 - a. Do you know anyone close to you who was abused as child?
 - Yes
 - No
 - b. Have you ever been victim of child abuse?
 - Yes
 - No

c. Have you ever been a victim of other types of abuse (e.g., sexual, emotional, or physical)?

- Yes
- No

8. How often do you engage in any kind of charitable monetary donation?

1-----2-----3-----4-----5
 Never Rarely Sometimes Often Almost always

9. How often do you engage in any kind of volunteer activities?

1-----2-----3-----4-----5
 Never Rarely Sometimes Often Almost always

9. How often do you engage in a charitable donations of any kind?

1-----2-----3-----4-----5
 Never Rarely Sometimes Often Almost always

10. What is the approximate value in dollars of the money/goods you donated to all charitable organizations in the last year?

11. About how many hours of volunteer work for charitable organizations did you do in the last year?

APPENDIX N

GENERAL PROSOCIAL BEHAVIOR

1. How often do you engage in any kind of charitable monetary donation?
1-----2-----3-----4-----5
Never Rarely Sometimes Often Almost always
2. How often do you engage in any kind of volunteer activities?
1-----2-----3-----4-----5
Never Rarely Sometimes Often Almost always
3. How often do you engage in a charitable donations of any kind?
1-----2-----3-----4-----5
Never Rarely Sometimes Often Almost always

APPENDIX O

DEBRIEFING FORM

This study investigates whether different levels of negative emotions influence prosocial or helping behaviors. People saw one of three pictures designed to evoke strong, moderate, or weak emotional reactions. All these images were accompanied by a message asking participants to support the cause. The pro-social behaviors were measured by your willingness to support the cause and by the amount of donation you pledged towards the Child Abuse Prevention Association.

It was important to ask for donations because we wanted to measure what people were actually willing to do, not what they just said they would do. **We will not contact you again about your pledge, and we will delete your email address before we examine the data. However, if you do want to contribute to the prevention of child abuse, you can click on the link below.**

<https://donate.childhelp.org/page/contribute/default>

Thank you so much for the participation for this study. If you have any further questions or comments, please contact Tsamchoe Dolma at dolmataa@uni.edu