



2016-07-01

“No Good Deed Goes Unpunished”: The Costs of Helping Others

Michael Nolen Brown
Brigham Young University

Follow this and additional works at: <https://scholarsarchive.byu.edu/etd>

BYU ScholarsArchive Citation

Brown, Michael Nolen, "“No Good Deed Goes Unpunished”: The Costs of Helping Others" (2016). *All Theses and Dissertations*. 5961. <https://scholarsarchive.byu.edu/etd/5961>

This Thesis is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in All Theses and Dissertations by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

“No Good Deed Goes Unpunished”: The Costs of Helping Others

Michael Nolen Brown

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

Laura Padilla-Walker, Chair
Larry Nelson
Brian Willoughby

School of Family Life
Brigham Young University

July 2016

Copyright © 2016 Michael Nolen Brown

All Rights Reserved

ABSTRACT

“No Good Deed Goes Unpunished”: The Costs of Helping Others

Michael Nolen Brown
School of Family Life, BYU
Master of Science

Although prosocial behavior has been moving in directions that highlight complexity over the past few years, little research has assessed the cost of this behavior. This study created a scale assessing the tendency to perceive costs of prosocial behavior. This was validated via focus groups, content and discriminant validity. In six focus groups, 29 13- to 25-year olds described specific prosocial acts and the costs that they experienced from the act. A questionnaire was then given to 391 emerging adults. Exploratory and confirmatory factor analyses were conducted. Results suggest a four-factor solution with adequate model fit, suggesting cognitive, behavioral, emotional, and social costs. Convergent and discriminant validity add support to the scale. Discussion focuses on the implications of this measure for the prosocial behavior literature and important future directions.

Keywords: prosocial behavior, costs, scale construction, costs of volunteering, costs of helping behaviors

ACKNOWLEDGEMENTS

I would like to greatly thank my advisor, Laura Walker, for all of the help she has put into this. She has stuck with me through thick and thin. She has been there to support me when I needed it most. I would also like to thank my family and friends for their continued support throughout this process. They have helped me relax when the stress of writing was getting to me. I am so very grateful for all of those who have been around me during the writing of this thesis.

Table of Contents

List of Tables	vi
List of Figures	vii
Introduction.....	1
Need for Further Research	3
Prosocial Cost	3
Support for Multiple Types of Costs	7
Cognitive.....	7
Emotional	7
Behavioral	8
Need for multiple types.....	9
Current Study	10
Method	12
Scale Construction	12
Focus group participants	12
Procedure	13
Analysis.....	14
Scale Analysis.....	16
Participants.....	16
Procedure	16
Measures	16
Analysis.....	18
Results.....	19

Discussion 21

 Confirmatory Factor Analysis 22

 Validity 22

 Limitations and Future Directions 23

 Conclusion 26

References 28

List of Tables

Table 1. <i>Prosocial Behavior Costs Questionnaire (PBCQ) Items</i>	41
Table 2. <i>Exploratory Factor Analysis Loadings with a Four-Factor Solution</i>	42
Table 3. <i>Inter-item Correlations of Primary Items</i>	43
Table 4. <i>Factor Loadings of the Confirmatory Factor Analysis Model</i>	44
Table 5. <i>Summary Statistics and Correlations Among Second-Order and Primary Factors</i>	44
Table 6. <i>Correlations of Measurement Model for Convergent and Discriminant Validity</i>	45
Table 7. <i>Model Constraint Indices</i>	45

List of Figures

Figure 1. *Factor Structure of Prosocial Behavior Costs* 46

“No Good Deed Goes Unpunished:” The Costs of Helping Others

Introduction

Prosocial behavior, or actions meant to benefit another person (Eisenberg, Fabes, & Spinrad, 2006), is considered a central component of an individual’s moral identity and the surrounding literature is ever-expanding. Prosocial development during adolescence and emerging adulthood is increasingly being recognized as important by parents, educators, and psychologists (Knight, Carlo, Basilio, & Jacobson, 2015; Zuffianò et al., 2014). In recent years, an argument for the complexity of prosocial behavior has gained traction (Carlo & Randall, 2002; Padilla-Walker & Carlo, 2014a), in that prosocial behavior develops from a number of sources (Eisenberg-Berg, Cameron, Tryon, & Dodez, 1981; Jaureguizar, Ibabe, & Straus, 2013; Padilla-Walker, Carlo, Christensen, & Yorgason, 2012; Yoo, Feng, & Day, 2013; Yorgason, Padilla-Walker, & Jackson, 2011; Zimmer-Gembeck, 2005), changes as a function of target (Padilla-Walker & Christensen, 2011; Padilla-Walker, Dyer, Yorgason, Fraser, & Coyne, 2015), and may have alternate conclusions depending on the motivations one has for helping (Kiviniemi, Snyder, & Omoto, 2002).

Multiple methods, such as direct observation (e.g., Nielsen, Gigante, & Collier-Baker, 2014; Salter, Dickey, & Gulas, 1978; Svetlova, Nichols, & Brownell, 2010), self-report scales (Padilla-Walker et al., 2015), and focus groups (Bergin, Talley, & Hamer, 2003), have been employed in order to better understand the complexity of prosocial behavior. Each method has added new insights into the prosocial mind and behavior, such as associations with decreased aggression and externalizing problems (Caprara, Barbaranelli, & Pastorelli, 2001), as well as perspective taking abilities, moral reasoning capabilities (Eisenberg et al., 2006), sympathy (Eisenberg et al., 1989), and empathy (Roberts, Strayer, & Denham, 2014), among other

outcomes. Prosocial behavior has also been complex when assessing the age of the actor. Research shows that prosocial behavior increases as a function of age (Eisenberg et al., 2006) and persists into emerging adulthood, despite increased narcissistic tendencies (Twenge & Foster, 2010) and self-oriented processes during this age (Arnett, 2000).

Prosocial behavior during emerging adulthood is unique compared to other life stages due to a focus on the exploration of the self, different life options, worldviews, and social roles (Arnett, 2000; Nelson et al., 2007). During late adolescence and emerging adulthood, some individuals begin a “moral career,” where they develop and engage in a steady pattern of prosocial behavior, while others adopt a more self-interested path (Walker, 2014). Individuals may use prosocial behavior, in part, to build their self-esteem (Caprara & Steca, 2005) and personal narratives (Cox & McAdams, 2012). Since this age period is important in identity exploration (Arnett, 2000), the conflict between a focus on the self and identity construction through service to others make prosocial behavior during this age period of particular interest.

Although there is much research describing the complexity of prosocial behavior, and specifically the benefits from acting prosocially (Eisenberg et al., 2006), little research has explored the area of what individuals give up in order to be prosocial (Eisenberg & Shell, 1986; Padilla-Walker & Fraser, 2014), and their tendency to perceive such costs. Understanding the perceived toll (Hellman, Hoppes, & Ellison, 2006), or cost, associated with one’s behavior, such as worry (Hay & Pawlby, 2003), stress (Dong, 2015), during emerging adulthood may be especially impactful, since the costs of prosocial behavior can influence whether or not an individual will help (Dong, 2015; Yanay & Yanay, 2008) and one’s perception of competence (Hellman et al., 2006).

Need for Further Research

Much of the research that has assessed these costs is not in the prosocial literature, but in the volunteer literature, where the prosocial behavior is already considered high-cost due in part to the investment of time and interaction with strangers (Eisenberg et al., 1999; Eisenberg-Berg & Neal, 1981; Padilla-Walker & Fraser, 2014). Although volunteering is a type of prosocial behavior (Eisenberg et al., 2006), one distinction between volunteering and general prosocial behavior is that in volunteering, donors of time and money are not likely to know who they are helping (Cnaan, Handy, & Wadsworth, 1996). The focus on strangers has been the most studied target in the prosocial behavior literature (Padilla-Walker & Carlo, 2014b), and therefore, to build on this literature, this study will look at the perceived costs of prosocial behavior toward strangers in daily life.

Despite the few studies that have attempted to utilize cost in the prosocial behavior literature (Paciello, Fida, Cerniglia, Tramontano, & Cole, 2013), there is still no established measurement of the construct. This study, therefore, seeks to create and validate a measure of the perceived costs of prosocial behavior and to identify different dimensions of costs reported by emerging adults. This will be done by drawing on current literature and using focus groups to validate the perceived costs as assessed in the literature. The developed scale will then be given to a large emerging adult sample and tested for validity and reliability. The development of this scale will help research understand prosocial behavior in context of perceived costs, specifically in daily life toward strangers, by arguing a multidimensional approach to costs.

Prosocial Cost

Costs have such an influence on the act of volunteering (Dong, 2015; Wolff, Weisbrod, & Bird, 1993) and perseverance of volunteers (Yanay & Yanay, 2008) that organizations use

fewer volunteers as the costs to those volunteers increase (Handy & Mook, 2011). In fact, people may choose to not help in the face of some of these possible hazards (Dong, 2015). Theory of mind suggests that the perception of others and their mental states influences people's likelihood to help (Chakroff & Young, 2014). Similarly, the perception of costs may seem just as important, if not more important, than actual costs when determining whether or not individuals will help others. The creation of a scale assessing the perceived costs of prosocial behavior may help in understanding why individuals would choose not to help, or at what point the prosocial behavior is not worth the associated costs.

Similar to social exchange theory, which suggests that relationship decisions are based on a cost and reward analysis (White & Klein, 2008), the positive net-costs model (Cnaan et al., 1996; Handy et al., 2000) assumes that rational impure altruistic (Andreoni, 1989, 1990) volunteers calculate the private (e.g., the "warm glow," human capital, social capital) and public (e.g., progression of goods or services deemed valuable by the donor) benefits of volunteering and will only act if the sum of benefits outweighs the total perceived cost. Clearly prosocial behavior hinges on understanding perceived costs.

When using costly behavior in prosocial research, the focus has not been on the perceived costs but have often been on the difference between high and low-cost prosocial behavior (as assumed by the researcher), and has suggested that high-cost prosocial behavior is good, as this behavior is related to moral characteristics (Eisenberg & Shell, 1986; Eisenberg-Berg & Neal, 1981; Kayser, Greitemeyer, Fischer, & Frey, 2010) and positive emotional and cognitive attributes (Caprara et al., 2001; Eisenberg et al., 2006; Roberts et al., 2014). The highest-cost prosocial behavior is often thought to be behavior that is aimed at strangers, or those with whom the helper does not have a relationship, and the most often studied high-cost research toward

strangers is volunteering. The costs of volunteering have been of interest to both people and institutions, as costs may dissuade volunteers (Dong, 2015; Wolff et al., 1993) and organizations (Handy & Mook, 2011) from benefitting each other.

Examples of costs in the volunteering literature are often considered to be negative and include stress (Dong, 2015), property loss, sexual or physical assault, vehicular accidents (Groble & Brudney, 2015; Hobson, Sink, Fleisig, Lowery, & Mateo, 2012; Sink, Fleisig, Lowery, & Bingham, 2014), anger, frustration, agony (Yanay & Yanay, 2008), and the expenditure of time and money (Hellman et al., 2006). When specifically looking at the financial contributions of individuals, research has looked at foregone earnings, such as opportunity costs and leisure time, and direct expenses, such as transportation, childcare, and uniforms (Handy & Mook, 2011). These examples, though, have been measured through people's attitudes toward risks (Dong, 2015), answers from qualitative interviews (Yanay & Yanay, 2008), and crime reports (Sink et al., 2014). Negative costs to helping behavior can come from a variety of sources, such as lack of experience, insufficient training, (Paradis, Miller, & Runnion, 1987), careless behavior (Groble & Brudney, 2015), placement of volunteers, tension between those who help and others, burnout (Lammers, 1991; Wilson, 2000), confusion, overload, lack of knowledge of how to manage emotional difficulties, and vulnerability (Yanay & Yanay, 2008).

Despite the negative costs, previous research portrays high-cost prosocial behavior in a good light due to the developmental benefits and good characteristics associated with this behavior, such as moral courage (Kayser et al., 2010), moral reasoning (Eisenberg & Shell, 1986; Eisenberg-Berg & Neal, 1981), lower aggression, lower externalizing problems (Caprara et al., 2001), empathy (Roberts et al., 2014), and perspective taking abilities (Eisenberg et al., 2006). Research has found that prosocial moral reasoning is associated more with high-cost

helping (e.g., donating or volunteering) than it is low-cost helping (e.g., helping pick up dropped items) from childhood (Eisenberg & Shell, 1986; Eisenberg et al., 1999) through adolescence (Eisenberg et al., 1999). Consequently, an awareness of individuals' tendencies to see costs may procure further insight on developmental outcomes and progress.

The studies that have examined the costs of prosocial behavior have used different definitions of costly behavior, but have never consistently looked at a large range of costs (e.g., emotional and cognitive costs). For example, studies have defined high-cost behavior as other-oriented, non-hedonistic (Eisenberg et al., 1999; Eisenberg-Berg & Neal, 1981), morally brave and risky (Kayser et al., 2010), forfeiting a desirable activity for something of lesser appeal (Eisenberg & Shell, 1986), or the expenditure of more time and commitment (Padilla-Walker & Fraser, 2014). Much of the research in the prosocial behavior literature that has an element of high and low-cost, assesses behavioral costs, such as donating time or money versus small favors and helping (Eisenberg & Shell, 1986; Padilla-Walker & Fraser, 2014), which does not evaluate emotional forms of helping, such as listening and caring for others. The volunteering literature assesses costs in a variety of ways as well, stating that costs are comprised of the toll that engaging in said activities would have on the individual (Hellman et al., 2006), the loss of something valuable, or injury (Kaplan & Garrick, 1981), hazard, harm, or danger (Dong, 2015). It is hypothesized that there are multiple types of costs, namely cognitive, behavioral, and emotional costs, based on evidence in the prosocial behavior (Eisenberg, 1986), volunteering (Hellman et al., 2006), and helping professions (Arens & Morin, 2016) literature.

Support for Multiple Types of Costs

The vast literature on helping behaviors is replete with examples of the costs of being nice to others, without a formal assessment to evaluate the costs in charitable situations. These costs can be categorized into the types of cognitive, behavioral, and emotional costs.

Cognitive. Research has given support for, but has not fully investigated, the cognitive costs of prosocial behavior, such as perception of ability, attitude of helping (Hellman et al., 2006), memory, and attention. The literature has shed light on the relationships between cognitive factors and prosocial behavior in the form of predictors, such as moral judgement (Eisenberg, 1986), and mediators, such as religiosity (Hardy & Carlo, 2005), personal values (Padilla-Walker & Carlo, 2007), and self-regulation (Padilla-Walker, Harper, & Jensen, 2010), among other attributes (Eisenberg et al., 2006). But the research on costs in the cognitive realm is less abundant.

High-cost, or morally brave (Kayser et al., 2010), behavior has been related to moral reasoning (Eisenberg & Shell, 1986; Eisenberg et al., 1999), but the actual costs may stem from one's perception of ability and attitudes of helping (Hellman et al., 2006), and not their moral character. Research has shown a connection to one's prosocial tendencies and the amount one worries about family members and attachment figures in a subgroup of children (Hay & Pawlby, 2003), where costs were assessed through psychological problems of the helper. But these costs were evaluated as personality trait characteristics and not specifically in the context of helping others. Costs come in the form of cognitions, but little research recognizes this as a separate aspect, and even less research attempts to measure it.

Emotional. There is also evidence in the emotional facet of prosocial costs, conceptualized by the negative physiological and emotional outcomes of prosocial behavior, as

much of the prosocial behavior literature addresses emotional motivations, such as concern (Batson, 2010; Eisenberg et al., 2006; Eisenberg, 1986), and outcomes, such as unhappiness (Flouri & Sarmadi, 2016). Little has been done in the way of emotional costs, such as anger, feeling bad, and frustration (Yanay & Yanay, 2008) as outcomes of prosocial behavior in daily life, but what has been done has listed examples from qualitative data. Individuals in helping professions, ranging from teachers to those who work with the chronically ill, have expressed emotional costs such as burnout, compassion fatigue, and emotional exhaustion (Arens & Morin, 2016; Figley, 2002; Hickey, 2014; Schulz et al., 2007; N. Thomas, 2004; Wagaman, Geiger, Shockley, & Segal, 2015; Woodhead, Northrop, & Edelstein, 2014), that may stem from personal distress (J. Thomas, 2013). Personal distress may also be a cost from certain types of prosocial behavior in psychological professions (Charlemagne-Odle, Harmon, & Maltby, 2014), further suggesting that an emotional aspect to prosocial behavior costs be studied.

These previous studies have not specifically looked at emotional costs in the context of the helping behavior, however. These studies defined costs by using questionnaires that evaluated general occupational stress (Hickey, 2014), emotional capacity (Figley, 2002), and a single construct of distress (Charlemagne-Odle et al., 2014). The current study proposes a new scale that assesses costs in the context of helping strangers instead of general issues of individuals in emotional settings, and covering a range of emotional issues. Providing the context of helping in the wording of the questions helps narrow the possible foundations of the individual's state instead of a possible trait.

Behavioral. Most of the research on the costs of charitable behaviors clearly denotes that a behavioral aspect to costs exists, where the individual, his or her resources, and opportunities are threatened. Incurring behavioral costs as a result of prosocial behavior may include forfeiting

a desirable activity (Eisenberg & Shell, 1986), foregone earnings, direct expenses, (Handy & Mook, 2011), expenditure of time and money (Hellman et al., 2006), the loss of something valuable, injury (Kaplan & Garrick, 1981), assault (Hobson et al., 2012; Sink et al., 2014), hazard, harm, danger (Dong, 2015), vehicular accidents, intimidation, and lawsuits (Goble & Brudney, 2015; Hobson et al., 2012; Sink et al., 2014).

These are great examples of behavioral costs, but have mostly been applied to the volunteering literature and not the prosocial behavior literature. In addition to the lack of breadth of behavioral costs in the prosocial research, there is yet an established scale able to assess perceived behavioral costs. A scale may be applied to the numerous examples of prosocial behavior.

Need for multiple types. Taken together, it is therefore assumed that the perceived costs of prosocial behavior will include at least the cognitive, emotional, and behavioral types. The definition of cost used in this study is the perceived cognitive, emotional, or behavioral toll that participating in prosocial behavior has on an individual (Hellman et al., 2006), such as worry (Hay & Pawlby, 2003), stress (Dong, 2015), burnout (Wagaman et al., 2015), frustration (Yanay & Yanay, 2008), the loss of something valuable, (Kaplan & Garrick, 1981) or the expenditure of time and money (Hellman et al., 2006). The research has yet to identify types of cost, unify these ideas, assess one's tendency to see costs, nor has a scale been constructed to assess cost. This study argues that costs of prosocial behavior should be treated as a multidimensional construct, and not solely as a single construct that varies as a function of intensity (e.g., high versus low costs).

Current Study

Much of the research that assesses costs of prosocial behavior has used descriptive data and has been collected via direct observations, where cost was operationalized by not obtaining a jelly bean (Nielsen et al., 2014), the price of a stamp (Salter et al., 1978), or giving up a toy (Svetlova et al., 2010). Based on the reviewed literature and the apparent need for a scale assessing one's tendency to experience costs of prosocial behavior, the primary goal of the current study was to construct a self-report scale of prosocial costs. A questionnaire generally allows for data collection that is more time efficient, allows for larger samples, and can also be distributed with measures of other variables. Items were first developed based on the existing literature and theory on prosocial behavior and prosocial costs. Focus groups were utilized to verify the preconceived types of prosocial costs, as identified from the literature, to ascertain any additional facets of costs that emerging adults and adolescents may see in their daily lives, and to assist in the wording of the items.

The goal was to develop items for a scale of prosocial costs and statistically validate those items and subscales using confirmatory factor analysis. It was hypothesized that three types of prosocial behavior cost would be found through focus groups and an exploratory factor analysis. Second, in order to assess convergent and discriminant validity for each of the subscales of prosocial behavior cost, measures of life satisfaction, moral identity, volunteering, sympathy, perspective taking ability, and personal distress were used. It was hypothesized that constructs that are related to prosocial behavior would be inversely related to prosocial behavior costs.

More specifically in relation to the second research question, empathic emotions have been divided into sympathy and personal distress (Davis, 1983), where sympathy is an other-

oriented emotional reaction, such as concern (Tolmacz, 2008), and personal distress is a self-oriented and aversive reaction, such as anxiety, to another's emotional condition (Eisenberg et al., 1989). Research has shown that sympathy and perspective taking, both components of empathy (Litvack-Miller, McDougall, & Romney, 1997), are related to prosocial behavior (Carlo, Allen, & Buhman, 1999; Eisenberg et al., 2006; Litvack-Miller et al., 1997), and since there are emotional costs to prosocial behavior (J. Thomas, 2013; Wagaman et al., 2015), it is assumed that sympathy and perspective taking may be negatively related to the emotional costs subscale. Similarly, it is hypothesized that perspective taking, which is a cognitive function (Eisenberg et al., 2006), may be more strongly related to the cognitive costs of prosocial behavior than it is to the emotional costs of prosocial behavior. Personal distress has been shown to help predict costs of time, emotional functioning, and cognitions (J. Thomas, 2013), and so a positive correlation between personal distress and all subscales of prosocial costs will assist in the validation of this scale.

How satisfied one is with life was asked since it is believed that an increase in costs may be related to a decrease in the thoughts and feelings about life. Previous research has shown how costs are related to career and social dissatisfaction (N. Thomas, 2004), thus prompting research on life satisfaction and its relation to costs. Similarly, one's sense of competence and prosocial behavior is associated with life satisfaction (Caprara & Steca, 2005). Thus, lacking a sense of competence, and other cognitive costs, as well as emotional costs such as burnout (Wagaman et al., 2015), may be related to the satisfaction one has about his or her life. Life satisfaction is not theoretically related to behavioral and social costs since these costs are more external (e.g., expenditure of money, resources, and social capital). Volunteering behavior was assessed due to the volume of research on costs in the volunteering literature, and how the idea of prolonged

service can influence emotional costs, such as burnout (N. Thomas, 2004). It is believed that the amount of volunteering will be positively related to costs, since more opportunities will be present, and that behavioral and social costs will be most strongly correlated with volunteering behavior, since individuals may volunteer for socially related reasons (Putnam, 2000; Taylor & Pancer, 2007), building and adding experience to a résumé (Handy & Mook, 2011; Hartenian & Lilly, 2009), and expend their own resources to do so, such as opportunity costs (Freeman, 1997) and direct costs (Handy & Mook, 2011).

A hierarchical (Schmid & Leiman, 1957), or second order, confirmatory factor analysis was also used to discriminate and to explore the varying types of prosocial behavior costs. Non-trivial, or in other words significant, residual variances would suggest that each subscale of prosocial behavior costs adds unique information to the construct of prosocial costs. Any residual variance that is equal to zero, or not significant, would suggest a redundant factor. If any factors are found to be redundant, the models will be run again with one less factor, starting with an exploratory factor analysis to determine the location of the items.

Method

Scale Construction

In order to develop the wording of items for the cognitive, behavioral, and emotional dimensions of the scale, and to gather any additional dimensions that were not extracted from previous research, focus groups were used.

Focus group participants. Focus groups were conducted with 29 adolescents and emerging adults from the Western United States. The 29 interviewees that participated in the focus groups ranged in age from 13 to 25. The current education status varied amongst the participants, where 9 were in high school, 16 were in college, and 4 had graduated high school

but were not in college. Participants were recruited through convenience sampling and snowballing methods. Research assistants walked around a college campus and talked to their friends, asking for volunteers. Volunteers also suggested their friends and family to participate in the focus groups. Focus groups ranged between 4 and 10 individuals. Each group had a purposeful composition. One group was composed of all males, while another was all female, yet another group included both genders. This helped establish possible gender differences, as research has shown gender differences in prosocial behavior (Espinosa & Kovářik, 2015). Each group met once, and pizza was offered to the participants of each focus group in compensation.

Procedure. The focus groups lasted about an hour on average (between 45 and 75 minutes), were conducted in the same location for all participants (on a local college campus), and were transcribed and analyzed to produce items for survey assessment. The interviews were conducted by four different interviewers: the researcher himself, two additional female research assistants, and a male research assistant, trained for this purpose. At the start of each interview, the interviewees were presented with the topic and purpose of the interview, were asked to consent to recording, and the principles of the concepts of prosocial behavior and costs in the context of the study were explained. After the short introduction, the interview began with a general question about prosocial behavior (“Can you remember a time when you did something nice for someone else?”). The focus groups were then directed to concentrate on the costs of their prosocial actions (“What are some different ways that you can be negatively impacted from helping someone?”). First the interviewees were asked to freely recall relevant cases and issues from their daily lives. Participants were asked to give specific and concrete details of their behaviors and examples of costs that they perceived. When these efforts were exhausted, usually understood from a lack of response from participants, efforts were made, if required, to direct the

discussion to additional content areas, identified from previous research, that had not been discussed thus far (“Many people have experienced situations where they spend time helping someone but regret it or worry about it afterward. This is a cognitive cost. Do you have examples like this?”). Participants spontaneously expounded on others’ examples and comments. Many behaviors and costs were discussed that most participants had experienced. Using a white board, the moderators recorded ideas of costs that the participants mentioned. The research assistants also encouraged all individuals to participate by rotating who spoke and asked for input from those who often remained silent.

Analysis. The focus groups were audio taped and the tapes were transcribed verbatim. All four researchers reviewed all of the transcripts and extracted descriptions of prosocial costs (e.g., worry, emotional fatigue) separate from one another (Krueger, 1998). The transcripts were analyzed to ascertain items, which were then categorized into different dimensions of the costs of prosocial behavior. To assess dimensions, researchers grouped together scale items that were conceptually similar. The purpose of this step was to confirm the previously theorized, and identify any additional, dimensions of prosocial costs. Since there were three original dimensions from the literature (viz., cognitive, behavioral, emotional), items were first separated into these categories. The cognitive costs referred to processes such as memory and attention, the emotional costs often referred to one’s mood and physiology, and behavioral costs referred primarily to one’s physical actions and use of resources. One of the four researchers placed two items into the emotional subscale that the other researchers had placed in the cognitive subscale. All four researchers agreed on items that belonged to the rest of these dimensions. When items were not unanimously grouped into the same category, both with the hypothesized dimensions and the newly postulated dimensions, all researchers discussed their reasons for including said

item into their chosen category, and a single dimension was agreed upon. Items that did not seem to fit into these dimensions were considered separately.

Several items that did not fit into the initial three categories were grouped into a new social dimension, where the items referred to topics such as social capital (“Helping strangers has hurt my reputation”). The coders once again were mostly in agreement with these items. Discussion and agreement ensued. The rest of the items were split into other various categories, not unanimously established. After further discussion, all researchers agreed on a dimension for each item to be placed in or the item was removed due to a lack of clarity (e.g., “I worry that helping strangers will hurt my reputation” is both cognitive and social). This left the researchers with 90 items. If items included examples that seemed too specific (e.g., “I help others with their homework assignments and in turn, I cannot get my own work done”), an attempt was made to generalize it, and possibly consolidate it with similar items (e.g., “I do not get important things done because I am helping strangers”).

After further review and discussion, many items seemed to not assess costs, but other aspects of helping behavior such as an inability to not help (e.g., “It is difficult for me to say no when someone has asked for help”), avoiding costs of not helping (e.g., “I feel guilty when I pass up the opportunity to help someone”), and identity (e.g., “I am a people pleaser”), and thus were excluded from further analysis. Several items, after additional consideration, were removed since the items felt redundant. Items with the simplest phrasing were kept (e.g., “When I help strangers, I worry they will keep coming back to me for help” was removed in favor of “I worry that strangers will become dependent on me after I help them.”). Statements made by participants that referred to a previously mentioned cost, were consolidated and considered a reinforcement of that cost and not a separate example. There were 21 items that were finalized for the

exploratory factor analysis (EFA). The final themes were classified into four main categories: (1) Cognitive; (2) Behavioral; (3) Emotional; and (4) Social (for a list of the items see Table 1).

Scale Analysis

After the structure of the scale was supported by focus groups, further testing was done to statistically confirm the structure and to validate the subscales. This was done via an online questionnaire.

Participants. Participants for survey assessment were gathered using Amazon Mechanical Turk (MTurk; Buhrmester, Kwang, & Gosling, 2011; Hauser & Schwarz, 2014) and included 391 emerging adults from the United States, ranging between the ages of 18 and 30 ($M_{\text{age}} = 23.59$, $SD_{\text{age}} = 3.35$). This sample included 190 males (48.59%), 200 females (51.15%), and one person who marked bi-gender (0.26%). The majority of emerging adults reported being Caucasian (66% Caucasian, 11% Black or African American, 8% Hispanic or Latino, 8% Asian, 3% mixed race, 2% Native American, 1% Middle Eastern, 1% Indian). Participants were compensated with \$0.50 for their efforts.

Procedure. Participants were told that the study concerned the costs of being nice toward others. The new Prosocial Behavior Costs Questionnaire (PBCQ) includes 19 items assessing the costs of prosocial behavior in the form of thoughts, feelings, and behaviors (see the 19 items in Table 1). Participants were asked to read each item and to rate the extent to which each item was like them. Ratings were done on a 5-point scale, ranging from 1 (*not at all like me*) to 5 (*just like me*), where higher scores indicated a stronger tendency to see costs as a result of prosocial behavior.

Measures. The following measures were included in the questionnaire to help validate the PBCQ using convergent and discriminant validity.

Volunteer behavior. Participant volunteering behavior was measured by asking the number of hours an individual participated in volunteering behavior in the last twelve months in different types of volunteering, namely religious, educational, political, senior, and other types. Each type of volunteering was a separate item, but all were analyzed together as a latent variable.

Moral identity. Participant moral identity was assessed using a 10-item self-report measure (Aquino & Reed, 2002). The Likert-type response scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*), where higher scores indicate greater importance in having moral characteristics. Sample items included, “It would make me feel good to be a person who has these characteristics,” and “The kinds of books and magazines that I read identify me as having these characteristics.” For the current sample, the Cronbach’s Alpha coefficient was found to be $\alpha = .83$ for the entire measure.

Life satisfaction. Life satisfaction was assessed by asking how happy the individual considers him or herself generally. This Likert-type response scale ranged from 1 (*very unhappy*) to 7 (*very happy*) and higher scores indicate greater happiness in life.

Empathy. Participant empathy was assessed using a 9-item self-report measure with three subscales: Sympathy, Perspective Taking, and Personal Distress (Davis, 1983). The Likert-type response scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*) and higher scores indicate greater sympathy, perspective taking ability, and personal distress. Sample items included, “I try to look at everybody’s side of a disagreement before I make a decision,” “Other people’s misfortunes do not usually disturb me a great deal (reverse scored),” and “Being in a tense emotional situation scares me.” For the current sample, the Cronbach’s Alpha coefficient was found to be $\alpha = .84$ for sympathy, $\alpha = .75$ for perspective taking ability, and $\alpha = .83$ for personal distress.

Analysis. First, an exploratory factor analysis (EFA) model was run to compare the preliminary factor structure to the structure proposed from theory and focus groups. The Principle Axis Factor Analysis with a Geomin rotation was employed using structural equation modeling with Mplus 7 software (Muthén & Muthén, 2011). Differing dimensions of prosocial behavior costs were not speculated to be mutually exclusive; therefore, an oblique method of rotation (Geomin) was believed to be the most appropriate rotation technique and the pattern matrix was interpreted (Devellis, 2012; Yates, 1987). Model fit was assessed by noting the chi-square significance test (significant outcomes should be noted, but allowed to continue), a comparative fit index (CFI) score above .95, a Tucker Lewis Index (TLI) above .90, and a root mean square error of approximation (RMSEA) score below .08 (Little, 2013). Eigenvalues greater than one, parallel analysis (Patil, Singh, Mishra, & Todd Donovan, 2008), the scree plot (Comrey & Lee, 1992), theory, and goodness-of-fit indices of the EFA were used to assess the number of factors to retain.

Second, a hierarchical (Schmid & Leiman, 1957), or second order, confirmatory factor analysis (CFA) was conducted on the subscales of prosocial behavior costs produced in the EFA, using structural equation modeling with Mplus 7 software (Muthén & Muthén, 2011). A second order model was chosen since scholars have noted that factor analyses using oblique rotations implicitly have higher order factors (Gorsuch, 2003). Model fit was assessed by noting the chi-square significance test, a CFI score above .95, a TLI above .90, and an RMSEA score below .08 (Little, 2013). After the model fit was deemed at least acceptable, the factor analysis was performed and factor loadings were assessed. Factor loadings were deemed acceptable if $\beta > .40$. A CFA will verify the factor structure of the subscales produced in the EFA and from theory. A second order factor was analyzed to discriminate between the subscales by accounting for the

shared variance between the theoretically identified subscales of prosocial behavior cost. Non-trivial, or significant, variance of the first order factors suggest additional understanding to the overall construct of costs that the other subscales did not address. Modification indices were consulted to improve model fit and assess cross-loading items.

Third, convergent and discriminant validity were assessed. The measures of life satisfaction, volunteering, moral identity, personal distress, sympathy, and perspective taking were included in a measurement model with the model from the CFA. The second order factor was excluded to clearly identify which first order factors of prosocial behavior cost correlate with the validating measures. Model fit was assessed by noting the chi-square significance test, a CFI score above .95, a TLI above .90, and an RMSEA score below .08 (Little, 2013). Modification indices were then consulted to improve model fit.

Results

An EFA model was run with Mplus 7 software (Muthén & Muthén, 2011) to statistically verify the structure proposed from theory and focus groups. Parallel analysis (Patil et al., 2008), and the scree plot (Comrey & Lee, 1992) suggested a three-factor solution, while theory and model fit indices of the EFA suggested a four-factor solution. Three eigenvalues were greater than one, while the fourth eigenvalue was .99, thus eigenvalues also suggested a four-factor solution, with the best model fit (CFI = .99, TLI = .99, RMSEA = .06). One item loaded on a subscale by itself, not related to theory, so the three-factor solution was consulted. On the three-factor solution, this same item did not load, thus this item was removed and an EFA was rerun. A four-factor model was again chosen since it fit with the proposed theory, and had the best model fit (CFI = .99, TLI = .99, RMSEA = .05). Another item that cross-loaded was removed, and all other items loaded well. The factors separated in the theoretical way, suggesting cognitive,

behavioral, emotional, and social subscales of prosocial costs (for factor loadings, see Table 2; for inter-item correlations, see Table 3).

Using structural equation modeling with Mplus 7 software (Muthén & Muthén, 2011) a CFA was conducted to measure the structure proposed in the EFA. Model fit was acceptable (CFI = .98, TLI = .98, RMSEA = .08). Factor loadings ranged from .58-.95 for first order factors (see Table 4), and were deemed acceptable. A second order factor was analyzed to account for the shared variance between the theoretically identified subscales of prosocial behavior cost. Factor loadings ranged from .76-.96 for second order factors (see Table 4). Although the first order factors were strongly correlated (Cohen, 1992) to one another, all variances were non-trivial (see Table 5), and thus suggested that each factor added a unique contribution to the overall construct of prosocial behavior costs. The omega coefficient was used to determine factor reliability since a hierarchical model was used (Green & Yang, 2015; Revelle & Zinbarg, 2009). Reliability was strong for cognitive ($\omega = .85$), behavioral ($\omega = .96$), emotional ($\omega = .94$), and social costs ($\omega = .95$), and was also strong for the second order factor ($\omega = .96$; see Table 5).

After the CFA was deemed acceptable, convergent validity was assessed. The measures of life satisfaction, volunteering, moral identity, personal distress, sympathy, and perspective taking were included in a measurement model with the model from the CFA. The second order factor from the CFA was removed to determine further validity of the subscales. The moral identity measure (Aquino & II, Reed, 2002) included five items that did not load when included in the measurement model, thus those items were removed. The new Cronbach's alpha for the moral identity measure was $\alpha = .83$. The measurement model fit the data well (CFI = .96, TLI = .95, RMSEA = .06, WRMR = 1.34). Sympathy, perspective taking, and moral identity were all negatively related to all costs, whereas personal distress and volunteering were positively related

to all prosocial costs (see Table 6). Life satisfaction was negatively related to cognitive ($r = -.24$, $p < .001$) and emotional costs ($r = -.21$, $p < .001$), and not correlated to behavioral ($r = -.02$, ns) and social costs ($r = -.04$, ns). When constraining covariates to be equal to see if the correlations across subscales were different, model fit was not significantly different (see Table 7).

Discussion

Many studies that have attempted to assess the costs of prosocial behavior have used descriptive data (e.g., direct observations) or made assumptions about what constituted high-cost behavior. In order to incorporate more quantitative studies on the costs of prosocial behavior and to avoid possible incorrect assumptions of costly behavior, this study aimed to create a measure that assesses the perceived costs of prosocial behavior. This scale is the first step in formalizing the potential negative impacts of prosocial behavior. As of yet, little research has assessed the area of what individuals give up in order to be prosocial (Eisenberg & Shell, 1986; Padilla-Walker & Fraser, 2014), especially during the time period of emerging adulthood.

Emerging adulthood is an important time to study prosocial behavior (Knight et al., 2015; Zuffianò et al., 2014) and its associated costs since it is a time period where individuals are perceived as being more narcissistic (Twenge & Foster, 2010), focused on the self, and develop patterns that will guide the rest of their lives (Arnett, 2000; Nelson et al., 2007). This focus on the self might raise perceptions of cost that are not present at other times in the lifespan. The struggle between a focus on the self (Arnett, 2000) and identity construction through service to others (Caprara & Steca, 2005; Cox & McAdams, 2012) is clear during emerging adulthood, as noted in previous research (Walker, 2014). If costs hinder prosocial activity, a better understanding of costs during emerging adulthood may also help uncover further understanding of moral identity development during this time period.

Confirmatory Factor Analysis

The results of this study have demonstrated that the Prosocial Behavior Costs Questionnaire (PBCQ) is an internally consistent measure of a multidimensional construct of the costs of prosocial behavior, measuring four types of costs (viz., cognitive, behavioral, emotional, and social costs). While the omega coefficients were high for these measures, suggesting a strong measurable construct, non-trivial variances indicated that each subscale added a unique contribution to the understanding of prosocial behavior costs. This suggests that, similar to prosocial behavior (Padilla-Walker & Carlo, 2014a), prosocial cost is not simply a unidimensional construct, but that emerging adults see a variety of costs from their helping behaviors. This may also help in understanding the characteristics of individuals with peculiar helping patterns such as pathological altruists (McGrath & Oakley, 2011; Oakley, Knafo, Madhavan, & Wilson, 2011; Seelig & Rosof, 2001), and those with pathological concern (Shavit & Tolmacz, 2014). Future research may be able to more accurately assess costs to determine when people choose not to help in certain situations, what costs people avoid the most, and what forms of helping are associated with certain facets of costs.

Validity

Although the general directions of the correlations went as hypothesized, the correlations did not seem to help discriminate between the subscales. Since non-trivial variances were found when accounting for the shared variance between the subscales, thus helping discriminate between subscales, there is a further need to theorize about the costs of prosocial behavior and what their correlates should be. Additional correlates should be considered in future research, such as types of prosocial behavior (Carlo & Randall, 2002), moral courage (Kayser et al., 2010), moral reasoning (Eisenberg & Shell, 1986; Eisenberg-Berg & Neal, 1981), religiosity (Hardy &

Carlo, 2005), perception of competence and attitude (Hellman et al., 2006), and concern (Tolmacz, 2008).

The results support the hypothesis that sympathy and perspective taking were negatively related to prosocial behavior costs, but no support was given for perspective taking being more strongly correlated with cognitive costs. Also, the hypothesis that personal distress would be positively related to all costs was supported, giving further evidence that personal distress is tied to costs of time, emotions, and cognitions (J. Thomas, 2013). Life satisfaction was negatively correlated to both cognitive and emotional costs, but not to behavioral and social costs, as hypothesized. The amount of volunteering, including religious, educational, political, senior, and a section for other types of volunteering, was negatively related to all costs. Lastly, moral identity was strongly (Cohen, 1992) and negatively related to all costs.

Limitations and Future Directions

There are, of course, relevant limitations to this study. The recruiting for the focus groups resulted in a sample that may have been more familiar with the concept of prosocial behavior than the general public. This study also only assessed prosocial behavior toward a single target, that of strangers. Future research should apply this scale to multiple targets (e.g., family and friends; Padilla-Walker & Christensen, 2011) for three main reasons. The first would be to see if this scale is the same across targets, or in other words, to see if people view and experience costs the same regardless of who they are helping. For example, it may be that individuals will not see emotional costs for helping someone unless they have a connection or relationship with the person they are trying to help. Second, it would be beneficial to see if the tendency, or the intensity, to which emerging adults see costs varies as a function of the target of prosocial behavior. Although volunteering and prosocial behavior toward strangers are currently

considered higher cost than prosocial behavior toward family members (Eisenberg et al., 1999; Eisenberg-Berg & Neal, 1981; Padilla-Walker & Fraser, 2014), it may be that individuals report seeing more costs when helping family members. Third, the relationship between costs and other outcomes may also change as a function of target, in that high costs toward strangers reported at one time point may lead to less helping behavior toward strangers at later time points, whereas that relationship might be absent for family members.

Another limitation was that the items measuring cognitive costs did not hold together well until items were removed. Items that were kept seemed to focus on stress and worry of the helper, and not additional cognitive aspects such as attention. It is possible that the cognitive items could be assessing an underlying anxiety trait, and so future research may need to compare one's anxiety to cognitive costs in order to fully determine the unique contribution of the cognitive scale. This will help determine if perceived cognitive costs are different than anxiety, and may lead to understanding more cognitive costs of prosocial behavior.

This study focused on emerging adulthood since a focus on the self (Arnett, 2000; Nelson et al., 2007) and narcissistic tendencies (Twenge & Foster, 2010) make this life stage unique, especially from the prosocial behavior lens. This study is, therefore, not meant to be generalizable to individuals of all age groups, but it is encouraged that future research assess the costs of prosocial behavior among varying ages. Much of the prosocial behavior cost research already focuses on children (Eisenberg-Berg & Neal, 1981; Nielsen et al., 2014; Paciello et al., 2013), and thus has been primed for the use of this scale at varying ages.

Another limitation of this study is the method of data collection. This study gathered data using Amazon's Mechanical Turk (MTurk), which has accrued mixed feelings about its reliability. Some researchers suggest that MTurk data is high-quality data (Buhrmester et al.,

2011) where participants pay better attention to survey assessment (Hauser & Schwarz, 2014), while others suggest that data gathered via MTurk is less reliable (Rouse, 2015), and may or may not be representative of specific populations (Berinsky, Huber, & Lenz, 2012), prompting a question as to the generalizability of the study. In addition, the data used in this study were not systematically assessed for over or underreporting, which may affect findings. In general, little is known about whether prosocial costs are associated with over or underreporting patterns, as this is the first scale assessing prosocial costs.

The current study only collected data that was self-reported and therefore the correlations reported between prosocial costs and study variables may be inflated due to shared method variance. Some of the omega reliabilities were high, suggesting possible item redundancy. Using Item Response Theory (IRT) analyses would help identify item redundancy, and further strengthen the measure. This study also only used cross-sectional data, and so predictive validity could not be assessed. Lastly, when creating and testing a measure, it is ideal to use two separate samples. This study conducted all tests on one sample of emerging adults from the United States, collected at the same time and in the same way. Future research should use multiple samples and IRT methods to further flesh out the construct of prosocial behavior costs.

Although the purpose of this study was to create and validate a scale, it also pushes for future research to consider the direction and strength of the correlations of prosocial costs. The results of this study showed that both sympathy and perspective taking were negatively related to all subscales of costs. Personal distress, on the other hand, was positively related to all costs, suggesting that individuals report seeing more costs when they have a tendency to become overwhelmed and self-focused emotionally. Taken together, this may suggest that many of the

costs emerging adults experience may stem from focusing on the self, instead of others, which may be the result of the focus of this time of life (Arnett, 2000).

Life satisfaction was negatively correlated to both cognitive and emotional costs, but not to behavioral and social costs. The lack of correlation with behavioral and social costs suggests that life satisfaction may stem from internal costs (e.g., worry and emotional exhaustion), and not external costs (e.g., expenditure of money, resources, and social capital). The amount of volunteering, was negatively related to all costs. Emotional and cognitive costs will need to be studied more in the volunteering literature, since they have not been of focus, but still occur from volunteering behaviors (Gallarza, Arteaga, & Gil-Saura, 2013).

Moral identity was strongly (Cohen, 1992) and negatively related to all costs. It may be that those who report having a high moral identity may not notice as many costs to the self, as “concerns of the self become defined by their moral sensibilities” (Colby & Damon, 1992, p. 304). This also prompts further research in the high-cost prosocial behavior literature, since high-cost behavior is often associated with moral attributes (Eisenberg & Shell, 1986; Kayser et al., 2010). This study suggests that higher moral attributes may not be related to a self-report of higher costs, which may suggest that highly moral individuals may view prosocial situations differently (Frimer & Walker, 2009; Walker & Frimer, 2007) than those who are not highly moral.

Lastly, one great strength of this tool for future research is the ability to assess individual differences. For example, shy individuals, who are less likely to engage in prosocial activities (Eisenberg et al., 2006), may perceive more costs than the average person, thus inhibiting their desire to help and belief of competence in a prosocial situation. Understanding how individuals perceive costs may uncover trends and add to theory across different areas of study.

Conclusion

In summary, the PBCQ appears to be a reliable and valid measure of prosocial behavior costs. It also prompts further investigation into the theory and application of what people give up in order to be prosocial. The costs of volunteering and helping professions are no longer the only forms of prosocial behavior costs that can readily be assessed. This scale opens up a new field in the prosocial behavior literature.

References

- Andreoni, J. (1989). Giving with impure altruism: Applications to charity and Ricardian equivalence. *Journal of Political Economy*, *97*(6), 1447–1458.
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *Economic Journal*, *100*(401), 464–477. <http://doi.org/10.2307/2234133>
- Aquino, K., & II, Reed, A. (2002). Self-importance of moral identity scale. *Psyctests*, *83*, 10–11. <http://doi.org/10.1037/t08774-000>
- Arens, A. K., & Morin, A. J. S. (2016). Relations between teachers' emotional exhaustion and students' educational outcomes. *Journal of Educational Psychology*. Advance online publication. <http://doi.org/10.1037/edu0000105>
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469–480. <http://doi.org/10.1037/0003-066X.55.5.469>
- Batson, C. D. (2010). Empathy-induced altruistic motivation. In M. Mikulincer & P. R. Shaver (Eds.), *Prosocial motives, emotions, and behavior: The better angels of our nature*. (pp. 15–34). Washington, DC: American Psychological Association. <http://doi.org/10.1037/12061-001>
- Bergin, C., Talley, S., & Hamer, L. (2003). Prosocial behaviours of young adolescents: A focus group study. *Journal of Adolescence*, *26*(1), 13–32. [http://doi.org/10.1016/S0140-1971\(02\)00112-4](http://doi.org/10.1016/S0140-1971(02)00112-4)
- Berinsky, A. J., Huber, G. A., & Lenz, G. S. (2012). Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis*, *20*(3), 351–368. <http://doi.org/10.1093/pan/mpr057>

- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science*, 6(1), 3–5. <http://doi.org/10.1177/1745691610393980>
- Caprara, G. V., Barbaranelli, C., & Pastorelli, C. (2001). Prosocial behavior and aggression in childhood and pre-adolescence. In A. C. Bohart & D. J. Stipek (Eds.), *Constructive & destructive behavior: Implications for family, school, & society*. (pp. 187–203). Washington: American Psychological Association. <http://doi.org/10.1037/10433-009>
- Caprara, G. V., & Steca, P. (2005). Self-efficacy beliefs as determinants of prosocial behavior conducive to life satisfaction across ages. *Journal of Social and Clinical Psychology*, 24(2), 191–217. <http://doi.org/10.1521/jscp.24.2.191.62271>
- Carlo, G., Allen, J. B., & Buhman, D. C. (1999). Facilitating and disinhibiting prosocial behaviors: The nonlinear interaction of trait perspective taking and trait personal distress on volunteering. *Basic and Applied Social Psychology*, 21(3), 189–197. <http://doi.org/10.1207/15324839951036362>
- Carlo, G., & Randall, B. A. (2002). The development of a measure of prosocial behaviors for late adolescents. *Journal of Youth and Adolescence*, 31(1), 31 – 44. <http://doi.org/10.1023/A>
- Chakroff, A., & Young, L. (2014). The prosocial brain. In L. M. Padilla-Walker & G. Carlo (Eds.), *Prosocial development* (pp. 90–111). New York, NY: Oxford University Press.
- Charlemagne-Odle, S., Harmon, G., & Maltby, M. (2014). Clinical psychologists' experiences of personal significant distress. *Psychology and Psychotherapy: Theory, Research and Practice*, 87(2), 237–252. <http://doi.org/10.1111/j.2044-8341.2012.02070.x>
- Cnaan, R. A., Handy, F., & Wadsworth, M. (1996). Defining who is a volunteer: Conceptual and empirical considerations. *Nonprofit and Voluntary Sector Quarterly*, 25(3), 364–383.

<http://doi.org/10.1177/0899764096253006>

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159.

<http://doi.org/10.1037/0033-2909.112.1.155>

Colby, A., & Damon, W. (1992). *Some do care: Contemporary lives of moral commitment*. New York, NY: The Free Press.

Comrey, A. L., & Lee, H. B. (1992). *A first course in factor analysis*. Hillsdale, New Jersey:

Lawrence Erlbaum Associates, Publishers. <http://doi.org/10.1037/0011756>

Cox, K., & McAdams, D. P. (2012). The transforming self: Service narratives and identity change in emerging adulthood. *Journal of Adolescent Research*, *27*(1), 18–43.

<http://doi.org/10.1177/0743558410384732>

Davis, M. H. (1983). The effects of dispositional empathy on emotional reactions and helping: A multidimensional approach. *Journal of Personality*, *51*(2), 167–184.

<http://doi.org/10.1111/j.1467-6494.1983.tb00860.x>

Devellis, R. F. (2012). *Scale development: Theory and applications*. Los Angeles, CA: Sage Publications Ltd.

Dong, H.-K. D. (2015). The effects of individual risk propensity on volunteering. *Nonprofit Management and Leadership*, *26*(1), 5–18. <http://doi.org/10.1002/nml.21139>

Eisenberg, N. (1986). *Altruistic emotion, cognition, and behavior* (1st ed.). Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publishers.

Eisenberg, N., Fabes, R. A., Miller, P. A., Fultz, J., Shell, R., Mathy, R. M., & Reno, R. R.

(1989). Relation of sympathy and personal distress to prosocial behavior: A multimethod study. *Journal of Personality and Social Psychology*, *57*(1), 55–66.

<http://doi.org/10.1037/0022-3514.57.1.55>

- Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial development. In N. Eisenberg, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology: Social, emotional, and personality development* (6th ed., Vol. 3, pp. 646–718). New York: John Wiley & Sons, Inc.
- Eisenberg, N., Guthrie, I. K., Murphy, B. C., Shepard, S. A., Cumberland, A., & Carlo, G. (1999). Consistency and development of prosocial dispositions: A longitudinal study. *Child Development, 70*(6), 1360–1372. <http://doi.org/10.1111/1467-8624.00100>
- Eisenberg, N., & Shell, R. (1986). Prosocial moral judgment and behavior in children: The mediating role of cost. *Personality and Social Psychology Bulletin, 12*(4), 426–433. <http://doi.org/10.1177/0146167286124005>
- Eisenberg-Berg, N., Cameron, E., Tryon, K., & Dodez, R. (1981). Socialization of prosocial behavior in the preschool classroom. *Developmental Psychology, 17*(6), 773–782. <http://doi.org/10.1037/0012-1649.17.6.773>
- Eisenberg-Berg, N., & Neal, C. (1981). Children's moral reasoning about self and others: Effects of identity of the story character and cost of helping. *Personality and Social Psychology Bulletin, 7*(1), 17–23. <http://doi.org/10.1177/014616728171004>
- Espinosa, M. P., & Kovářík, J. (2015). Prosocial behavior and gender. *Frontiers in Behavioral Neuroscience, 9*, 1–9. <http://doi.org/10.3389/fnbeh.2015.00088>
- Figley, C. R. (2002). Compassion fatigue: Psychotherapists' chronic lack of self care. *Journal of Clinical Psychology, 58*(11), 1433–1441. <http://doi.org/10.1002/jclp.10090>
- Flouri, E., & Sarmadi, Z. (2016). Prosocial behavior and childhood trajectories of internalizing and externalizing problems: The role of neighborhood and school contexts. *Developmental Psychology, 52*(2), 253–258. <http://doi.org/10.1037/dev0000076>
- Freeman, R. B. (1997). Working for nothing: The supply of volunteer labor. *Journal of Labor*

Economics, 15(1), 140–166. <http://doi.org/10.1086/209859>

Frimer, J. A., & Walker, L. J. (2009). Reconciling the self and morality: An empirical model of moral centrality development. *Developmental Psychology*, 45(6), 1669–1681.

<http://doi.org/10.1037/a0017418>

Gallarza, M. G., Arteaga, F., & Gil-Saura, I. (2013). The value of volunteering in special events: A longitudinal study. *Annals of Tourism Research*, 40(1), 105–131.

<http://doi.org/10.1016/j.annals.2012.08.001>

Gorsuch, R. L. (2003). Factor analysis. In I. B. Weiner (Ed.), *Handbook of psychology*. (pp. 255) Hoboken, New Jersey: John Wiley & Sons, Inc.

<http://doi.org/10.1002/0471264385.wei0206>

Green, S. B., & Yang, Y. (2015). Evaluation of dimensionality in the assessment of internal consistency reliability: Coefficient alpha and omega coefficients. *Educational Measurement: Issues and Practice*, 34(4), 14–20.

<http://doi.org/10.1111/emip.12100>

Groble, P., & Brudney, J. L. (2015). When good intentions go wrong: Immunity under the Volunteer Protection Act. *Nonprofit Policy Forum*, 6(1), 3–24.

<http://doi.org/10.1515/npf-2014-0001>

Handy, F., Cnaan, R., Brudney, J., Ascoli, U., Meijs, L. C. M. P., & Ranade, S. (2000). Public perception of “who is a volunteer”: An examination of the net-cost approach from a cross-cultural perspective. *International Journal of Voluntary and Nonprofit Organizations*,

11(1), 45–65. <http://doi.org/10.1023/a:1008903032393>

Handy, F., & Mook, L. (2011). Volunteering and volunteers: Benefit-cost analyses. *Research on Social Work Practice*, 21(4), 412–420.

<http://doi.org/10.1177/1049731510386625>

Hardy, S. A., & Carlo, G. (2005). Religiosity and prosocial behaviours in adolescence: The

mediating role of prosocial values. *Journal of Moral Education*, 34(2), 231–249.

<http://doi.org/10.1080/03057240500127210>

Hartenian, L. S., & Lilly, B. (2009). Egoism and commitment: A multidimensional approach to understanding sustained volunteering. *Journal of Managerial Issues*, 21(1), 97–118.

Hauser, D. J., & Schwarz, N. (2014). Attentive Turkers: MTurk participants perform better on online attention checks than subject pool participants. *Behavior Research Methods*, 400–407. <http://doi.org/10.3758/s13428-015-0578-z>

Hay, D. F., & Pawlby, S. (2003). Prosocial development in relation to children's and mothers' psychological problems. *Child Development*, 74(5), 1314–1327.

<http://doi.org/10.1111/1467-8624.00609>

Hellman, C. M., Hoppes, S., & Ellison, G. C. (2006). Factors associated with college student intent to engage in community service. *The Journal of Psychology*, 140(1), 29–39.

<http://doi.org/10.3200/JRLP.140.1.29-39>

Hickey, R. (2014). Prosocial motivation, stress and burnout among direct support workers. *Journal of Applied Research in Intellectual Disabilities*, 27(2), 134–144.

<http://doi.org/10.1111/jar.12058>

Hobson, E., Sink, D., Fleisig, D., Lowery, E., & Mateo, J. B. De. (2012). *Annual report of volunteer safety* (Vol. 12). Retrieved from

<http://files.peacecorps.gov/multimedia/pdf/policies/volsafety2010.pdf>

Jaureguizar, J., Ibabe, I., & Straus, M. A. (2013). Violent and prosocial behavior by adolescents toward parents and teachers in a community sample. *Psychology in the Schools*, 50(5), 451–470. <http://doi.org/10.1002/pits.21685>

Kaplan, S., & Garrick, B. J. (1981). On the quantitative definition of risk. *Risk Analysis*, 1(1),

11–27. <http://doi.org/10.1111/j.1539-6924.1981.tb01350.x>

Kayser, D. N., Greitemeyer, T., Fischer, P., & Frey, D. (2010). Why mood affects help giving, but not moral courage: Comparing two types of prosocial behaviour. *European Journal of Social Psychology, 40*(7), 1136–1157. <http://doi.org/10.1002/ejsp.717>

Kiviniemi, M. T., Snyder, M., & Omoto, A. M. (2002). Too many of a good thing? The effects of multiple motivations on stress, cost, fulfillment, and satisfaction. *Personality and Social Psychology Bulletin, 28*(6), 732–743. <http://doi.org/10.1177/0146167202289003>

Knight, G. P., Carlo, G., Basilio, C. D., & Jacobson, R. P. (2015). Familism values, perspective taking, and prosocial moral reasoning: Predicting prosocial tendencies among Mexican American adolescents. *Journal of Research on Adolescence, 25*(4), 717–727. <http://doi.org/10.1111/jora.12164>

Krueger, R. A. (1998). *Analyzing and reporting focus group results*. Thousand Oaks, CA: Sage Publications Ltd.

Lammers, J. C. (1991). Attitudes, motives, and demographic predictors of volunteer commitment and service duration. *Journal of Social Service Research, 14*(3-4), 125–140. http://doi.org/10.1300/J079v14n03_07

Little, T. D. (2013). *Longitudinal structural equation modeling*. New York, NY: Guilford Press.

Litvack-Miller, W., McDougall, D., & Romney, D. M. (1997). The structure of empathy during middle childhood and its relationship to prosocial behavior. *Genetic, Social, and General Psychology Monographs, 123*(3), 303–324. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/9259121>

McGrath, M. G., & Oakley, B. A. (2011). Codependency and pathological altruism. In B. A. Oakley, A. Knafo, G. Madhavan, & D. S. Wilson (Eds.), *Pathological altruism*. New York,

NY: Oxford University Press.

Muthén, L. K., & Muthén, B. O. (2011). *Mplus user's guide* (Sixth). Los Angeles, CA: Muthén & Muthén.

Nelson, L. J., Padilla-Walker, L. M., Carroll, J. S., Madsen, S. D., Barry, C. M., & Badger, S. (2007). "If you want me to treat you like an adult, start acting like one!" Comparing the criteria that emerging adults and their parents have for adulthood. *Journal of Family Psychology, 21*(4), 665–674. <http://doi.org/10.1037/0893-3200.21.4.665>

Nielsen, M., Gigante, J., & Collier-Baker, E. (2014). Direct cost does not impact on young children's spontaneous helping behavior. *Frontiers in Psychology, 5*, 1–7. <http://doi.org/10.3389/fpsyg.2014.01509>

Oakley, B. A., Knafo, A., Madhavan, G., & Wilson, D. S. (Eds.). (2011). *Pathological altruism*. New York, NY: Oxford University Press.

Paciello, M., Fida, R., Cerniglia, L., Tramontano, C., & Cole, E. (2013). High cost helping scenario: The role of empathy, prosocial reasoning and moral disengagement on helping behavior. *Personality and Individual Differences, 55*(1), 3–7. <http://doi.org/10.1016/j.paid.2012.11.004>

Padilla-Walker, L. M., & Carlo, G. (2007). Personal values as a mediator between parent and peer expectations and adolescent behaviors. *Journal of Family Psychology, 21*(3), 538–541. <http://doi.org/10.1037/0893-3200.21.3.538>

Padilla-Walker, L. M., & Carlo, G. (Eds.). (2014a). *Prosocial development*. New York, NY: Oxford University Press.

Padilla-Walker, L. M., & Carlo, G. (2014b). The study of prosocial behavior: Past, present, and future. In L. M. Padilla-Walker & G. Carlo (Eds.), *Prosocial development* (pp. 3–16). New

York, NY, USA: Oxford University Press.

- Padilla-Walker, L. M., Carlo, G., Christensen, K. J., & Yorgason, J. B. (2012). Bidirectional relations between authoritative parenting and adolescents' prosocial behaviors. *Journal of Research on Adolescence*, 22(3), 400–408. <http://doi.org/10.1111/j.1532-7795.2012.00807.x>
- Padilla-Walker, L. M., & Christensen, K. J. (2011). Empathy and self-regulation as mediators between parenting and adolescents' prosocial behavior toward strangers, friends, and family. *Journal of Research on Adolescence*, 21(3), 545–551. <http://doi.org/10.1111/j.1532-7795.2010.00695.x>
- Padilla-Walker, L. M., Dyer, W. J., Yorgason, J. B., Fraser, A. M., & Coyne, S. M. (2015). Adolescents' prosocial behavior toward family, friends, and strangers: A person-centered approach. *Journal of Research on Adolescence*, 25(1), 135–150. <http://doi.org/10.1111/jora.12102>
- Padilla-Walker, L. M., & Fraser, A. M. (2014). How much is it going to cost me? Bidirectional relations between adolescents' moral personality and prosocial behavior. *Journal of Adolescence*, 37(7), 993–1001. <http://doi.org/10.1016/j.adolescence.2014.07.008>
- Padilla-Walker, L. M., Harper, J. M., & Jensen, A. C. (2010). Self-regulation as a mediator between sibling relationship quality and early adolescents' positive and negative outcomes. *Journal of Family Psychology*, 24(4), 419–428. <http://doi.org/10.1037/a0020387>
- Paradis, L. F., Miller, B., & Runnion, V. M. (1987). Volunteer stress and burnout: Issues for administrators. *The Hospice Journal*, 3(2), 165–183. http://doi.org/10.1300/J011v03n02_09
- Patil, V. H., Singh, S. N., Mishra, S., & Todd Donovan, D. (2008). Efficient theory development and factor retention criteria: Abandon the “eigenvalue greater than one” criterion. *Journal*

- of Business Research*, 61(2), 162–170. <http://doi.org/10.1016/j.jbusres.2007.05.008>
- Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York, NY: Simon & Schuster. Retrieved from <http://www.jstor.org/stable/3089235?origin=crossref>
- Revelle, W., & Zinbarg, R. E. (2009). Coefficients alpha, beta, omega, and the glb: Comments on Sijtsma. *Psychometrika*, 74(1), 145–154. <http://doi.org/10.1007/s11336-008-9102-z>
- Roberts, W., Strayer, J., & Denham, S. (2014). Empathy, anger, guilt: Emotions and prosocial behaviour. *Canadian Journal of Behavioural Science / Revue Canadienne Des Sciences Du Comportement*, 46(4), 465–474. <http://doi.org/10.1037/a0035057>
- Rouse, S. V. (2015). A reliability analysis of Mechanical Turk data. *Computers in Human Behavior*, 43, 304–307. <http://doi.org/10.1016/j.chb.2014.11.004>
- Salter, C. A., Dickey, M. J., & Gulas, D. L. (1978). Prosocial behavior as a function of location and cost of helping. *The Journal of Social Psychology*, 106(1), 133–134. <http://doi.org/10.1080/00224545.1978.9924158>
- Schmid, J., & Leiman, J. (1957). The development of hierarchical factor solution. *Psychometrika*, 22, 53–61.
- Schulz, R., Hebert, R. S., Dew, M. A., Brown, S. L., Scheier, M. F., Beach, S. R., ... Nichols, L. (2007). Patient suffering and caregiver compassion: New opportunities for research, practice, and policy. *The Gerontologist*, 47(1), 4–13. <http://doi.org/10.1093/geront/47.1.4>
- Seelig, B. J., & Rosof, L. S. (2001). Normal and pathological altruism. *Journal of the American Psychoanalytic Association*, 49(3), 933–959. <http://doi.org/10.1177/00030651010490031901>
- Shavit, Y., & Tolmacz, R. (2014). Pathological concern: Scale construction, construct validity,

- and associations with attachment, self-cohesion, and relational entitlement. *Psychoanalytic Psychology*, 31(3), 343–356. <http://doi.org/10.1037/a0036560>
- Sink, D., Fleisig, D., Lowery, E., & Bingham, J. (2014). *Statistical report of crimes against volunteers 2013*. Retrieved from <http://files.peacecorps.gov/multimedia/pdf/policies/volsafety2013.pdf>
- Svetlova, M., Nichols, S. R., & Brownell, C. A. (2010). Toddlers' prosocial behavior: From instrumental to empathic to altruistic helping. *Child Development*, 81(6), 1814–1827. <http://doi.org/10.1111/j.1467-8624.2010.01512.x>
- Taylor, T. P., & Pancer, S. M. (2007). Community service experiences and commitment to volunteering. *Journal of Applied Social Psychology*, 37(2), 320–345. <http://doi.org/10.1111/j.0021-9029.2007.00162.x>
- Thomas, J. (2013). Association of personal distress with burnout, compassion fatigue, and compassion satisfaction among clinical social workers. *Journal of Social Service Research*, 39(3), 365–379. <http://doi.org/10.1080/01488376.2013.771596>
- Thomas, N. (2004). Resident burnout. *The Journal of the American Medical Association*, 292(23), 2880–2889. <http://doi.org/10.1001/jama.292.23.2880>
- Tolmacz, R. (2008). Concern and empathy: Two concepts or one? *American Journal of Psychoanalysis*, 68(3), 257–275. <http://doi.org/10.1057/ajp.2008.22>
- Twenge, J. M., & Foster, J. D. (2010). Birth cohort increases in narcissistic personality traits among American college students, 1982-2009. *Social Psychological and Personality Science*, 1(1), 99–106. <http://doi.org/10.1177/1948550609355719>
- Wagaman, M. A., Geiger, J. M., Shockley, C., & Segal, E. A. (2015). The role of empathy in burnout, compassion satisfaction, and secondary traumatic stress among social workers.

Social Work, 60(3), 201–9. <http://doi.org/10.1093/sw/swv014>

- Walker, L. J. (2014). Prosocial exemplarity in adolescence and adulthood. In L. M. Padilla-Walker & G. Carlo (Eds.), *Prosocial development* (pp. 433–454). New York, NY: Oxford University Press.
- Walker, L. J., & Frimer, J. A. (2007). Moral personality of brave and caring exemplars. *Journal of Personality and Social Psychology*, 93(5), 845–860.
- White, J. M., & Klein, D. M. (2008). *Family theories* (3rd ed.). Los Angeles, CA: Sage Publications Ltd.
- Wilson, J. (2000). Volunteering. *Annual Review of Sociology*, 26(1), 215–240. <http://doi.org/10.1146/annurev.soc.26.1.215>
- Wolff, N., Weisbrod, B. A., & Bird, E. J. (1993). The supply of volunteer labor: The case of hospitals. *Nonprofit Management and Leadership*, 4(1), 23–45. <http://doi.org/10.1002/nml.4130040104>
- Woodhead, E. L., Northrop, L., & Edelstein, B. (2014). Stress, social support, and burnout among long-term care nursing staff. *Journal of Applied Gerontology: The Official Journal of the Southern Gerontological Society*. <http://doi.org/10.1177/0733464814542465>
- Yanay, G. V., & Yanay, N. (2008). The decline of motivation?: From commitment to dropping out of volunteering. *Nonprofit Management and Leadership*, 19(1), 65–78. <http://doi.org/10.1002/nml.205>
- Yates, A. (1987). *Multivariate exploratory data analysis: A perspective on exploratory factor analysis*. Albany, NY: State University of New York Press.
- Yoo, H., Feng, X., & Day, R. D. (2013). Adolescents' empathy and prosocial behavior in the family context: A longitudinal study. *Journal of Youth and Adolescence*, 42(12), 1858–

1872. <http://doi.org/10.1007/s10964-012-9900-6>

Yorgason, J. B., Padilla-Walker, L., & Jackson, J. (2011). Nonresidential grandparents' emotional and financial involvement in relation to early adolescent grandchild outcomes. *Journal of Research on Adolescence*, *21*(3), 552–558. <http://doi.org/10.1111/j.1532-7795.2010.00735.x>

Zimmer-Gembeck, M. J. (2005). Relational and physical aggression, prosocial behavior, and peer relations: Gender moderation and bidirectional associations. *The Journal of Early Adolescence*, *25*(4), 421–452. <http://doi.org/10.1177/0272431605279841>

Zuffianò, A., Alessandri, G., Luengo Kanacri, B. P., Pastorelli, C., Milioni, M., Ceravolo, R., ... Caprara, G. V. (2014). The relation between prosociality and self-esteem from middle-adolescence to young adulthood. *Personality and Individual Differences*, *63*, 24–29. <http://doi.org/10.1016/j.paid.2014.01.041>

Table 1.

Prosocial Behavior Costs Questionnaire (PBCQ) Items

-
1. Helping strangers stresses me out.
 2. I worry that strangers will become dependent on me after I help them.
 3. After I have helped strangers, I worry that I didn't help enough.
 4. After helping strangers, I worry that I made the situation worse.
 5. I do not get important things done because I am helping strangers.
 6. I don't get enough sleep because I am so busy helping strangers.
 7. I help strangers so much that my own needs are not met.
 8. I don't get to use my resources (car, property, money, etc.) because I let strangers use them.
 9. I have to go without because I'm giving to strangers in need.
 10. I feel emotionally drained after I listen to strangers talk about their problems.
 11. I do not have enough emotional capacity to meet my own needs after helping strangers with their problems.
 12. Helping strangers makes me feel badly.
 13. After helping strangers, I feel weighed down.
 14. When I help strangers, I feel frustrated.
 15. When I help strangers I spend less time with those close to me.
 16. Helping strangers has hurt my reputation.
 17. My relationships are hurt because I help strangers so much.
 18. I cancel social plans in order to help strangers.
 19. I am made fun of for helping strangers.
-

Table 2.

Exploratory Factor Analysis Loadings with a Four-Factor Solution

	Factor 1: Cognitive	Factor 2: Behavioral	Factor 3: Emotional	Factor 4: Social
Item 1	0.647	-0.026	0.288	-0.006
Item 2	0.617	-0.024	0.083	0.235
Item 3	0.408	0.253	-0.024	0.02
Item 4	0.793	0.242	-0.01	0.001
Item 5	0.053	0.873	0.042	-0.008
Item 6	-0.035	0.872	0.087	0.016
Item 7	-0.027	0.853	0.038	0.052
Item 8	0.003	0.896	0.043	0.019
Item 9	0.032	0.854	-0.033	0.054
Item 10	0.061	0.024	0.889	-0.131
Item 11	0.167	0.217	0.613	0.045
Item 12	-0.068	0.122	0.558	0.378
Item 13	0.11	0.153	0.729	0.037
Item 14	-0.018	-0.149	0.699	0.387
Item 15	0.103	0.049	0.032	0.749
Item 16	0.017	-0.027	0.065	0.916
Item 17	0.133	0.057	0.001	0.832
Item 18	0.012	0.291	-0.168	0.689
Item 19	-0.021	0.031	0.05	0.828

Note: Items are identified in Table 1. Bolded items load on specific factor

Table 3.

Inter-item Correlations of Primary Items

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Item 1	-																	
Item 2	0.56	-																
Item 3	0.24	0.30	-															
Item 4	0.59	0.59	0.45	-														
Item 5	0.32	0.33	0.30	0.42	-													
Item 6	0.29	0.33	0.25	0.38	0.75	-												
Item 7	0.25	0.34	0.28	0.38	0.72	0.70	-											
Item 8	0.28	0.32	0.24	0.40	0.73	0.76	0.74	-										
Item 9	0.23	0.31	0.29	0.38	0.69	0.70	0.70	0.75	-									
Item 10	0.42	0.33	0.28	0.39	0.30	0.30	0.27	0.31	0.28	-								
Item 11	0.46	0.41	0.32	0.51	0.54	0.51	0.45	0.52	0.46	0.57	-							
Item 12	0.36	0.35	0.21	0.40	0.54	0.57	0.60	0.60	0.55	0.47	0.65	-						
Item 13	0.47	0.44	0.26	0.46	0.53	0.50	0.42	0.50	0.46	0.66	0.72	0.63	-					
Item 14	0.40	0.38	0.25	0.39	0.43	0.47	0.44	0.43	0.40	0.55	0.57	0.66	0.67	-				
Item 15	0.31	0.35	0.30	0.44	0.56	0.56	0.49	0.52	0.57	0.32	0.48	0.54	0.49	0.50	-			
Item 16	0.31	0.43	0.24	0.40	0.58	0.59	0.60	0.64	0.56	0.32	0.52	0.65	0.50	0.52	0.61	-		
Item 17	0.34	0.41	0.29	0.47	0.61	0.64	0.60	0.64	0.63	0.35	0.53	0.63	0.53	0.50	0.70	0.77	-	
Item 18	0.16	0.27	0.34	0.34	0.58	0.56	0.59	0.57	0.54	0.19	0.38	0.50	0.38	0.39	0.62	0.62	0.63	-
Item 19	0.26	0.34	0.24	0.36	0.57	0.55	0.55	0.57	0.53	0.30	0.50	0.54	0.46	0.48	0.61	0.75	0.68	0.55

Note: All correlations were significant at the $p < .001$ level, so to simplify the table, stars have been removed

Table 4.

Factor Loadings of the Confirmatory Factor Analysis Model

	Factor 1: Cognitive	Factor 2: Behavioral	Factor 3: Emotional	Factor 4: Social
Item 1	.78			
Item 2	.81			
Item 3	.58			
Item 4	.88			
Item 5		.92		
Item 6		.91		
Item 7		.91		
Item 8		.94		
Item 9		.89		
Item 10			.75	
Item 11			.90	
Item 12			.93	
Item 13			.90	
Item 14			.84	
Item 15				.87
Item 16				.94
Item 17				.95
Item 18				.84
Item 19				.87
Overall Factor	.76	.90	.86	.96

Note: Items are identified in Table 1.

Table 5.

Summary Statistics and Correlations Among Second-Order and Primary Factors

	1	2	3	4	M	SD	Ω	Residual Variance
1. Cognitive Costs	-				2.43	.93	.85	.42***
2. Behavioral Costs	.47***	-			1.68	.83	.96	.20***
3. Emotional Costs	.59***	.61***	-		1.93	.89	.94	.26***
4. Social Costs	.51***	.77***	.64***	-	1.65	.80	.95	.08***
5. Overall Costs	.76***	.85***	.85***	.87***	1.90	.72	.93	

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

Table 6.

Correlations of Measurement Model for Convergent and Discriminant Validity

	1	2	3	4	5	6	7	8	9	10
1. Cognitive Costs	-									
2. Behavioral Costs	.61***	-								
3. Emotional Costs	.77***	.75***	-							
4. Social Costs	.68***	.88***	.81***	-						
5. Sympathy	-.15*	-.19***	-.29***	-.15**	-					
6. Perspective Taking	-.35***	-.23***	-.31***	-.24***	.62***	-				
7. Personal Distress	.41***	.35***	.36***	.31***	-.05	-.06	-			
8. Volunteering	.22***	.53***	.39***	.53***	-.07	-.03	.15**	-		
9. Life Satisfaction	-.25***	-.02	-.21***	-.04	.26***	.21***	-.22***	.10	-	
10. Moral Identity	-.44***	-.58***	-.58***	-.62***	.51***	.68***	-.33***	-.32***	.16**	-

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

Table 7.

Model Constraint Indices

Constraint	CFI	TLI	RMSEA
Null	.96	.95	.06
Sympathy	.96	.95	.06
Perspective Taking	.96	.95	.06
Personal Distress	.95	.95	.06
Moral Identity	.95	.95	.07
Volunteering	.95	.94	.07
Life Satisfaction	.96	.95	.06

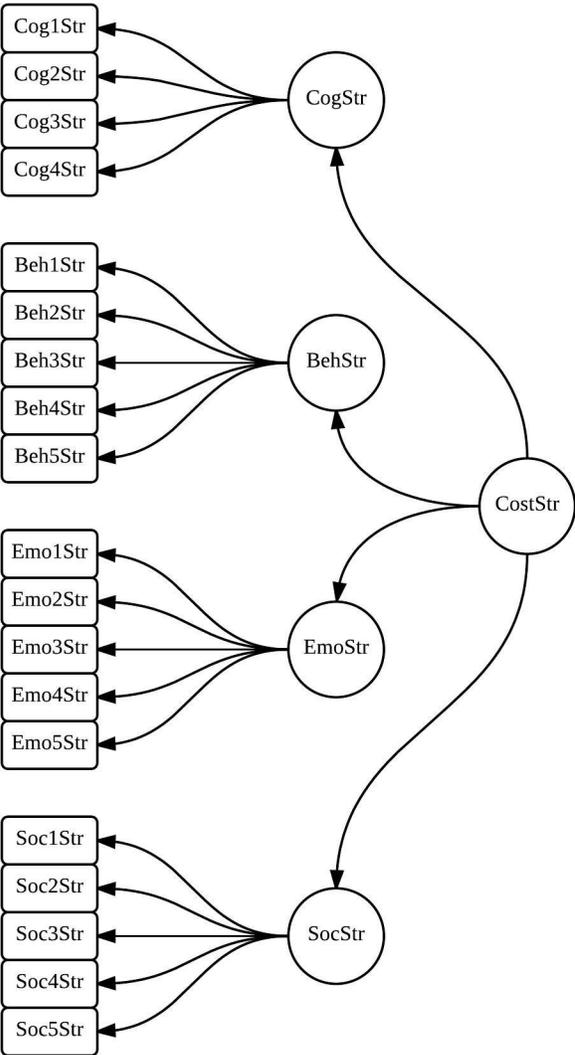


Figure 1. *Factor Structure of Prosocial Behavior Costs*