

ABSTRACT

Title of Document: MOTHERS' BEHAVIORS THAT PROMOTE
 PROSOCIAL BEHAVIORS IN CHILDREN

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Past research suggests that development of prosocial behavior is correlated with positive outcomes for children. Parents play a significant role in the development of children's prosocial behaviors. The present study investigated mothers' behaviors that may promote prosocial behaviors in their children. Specifically, the present research examines the associations, cross-sectionally and longitudinally, of four maternal behaviors -- 1) time spent doing chores with children, 2) mothers' philanthropic behavior, 3) mothers' volunteering, and 4) mothers' talking to children about making donations -- with child prosocial behavior. Mothers' warmth was tested as a potential moderator variable. It was hypothesized that each of the maternal behaviors would be positively related to prosocial behaviors in their children, and that mothers' warmth would moderate (enhance) the relationship between the parent behaviors and children's prosocial behavior. Results indicated that doing chores with children was significantly and positively associated with children's prosocial behavior. Other results are discussed.

MOTHERS' BEHAVIORS THAT PROMOTE PROSOCIAL BEHAVIORS IN
CHILDREN

By

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Dedication

To my parents, Kent and Diana Roerig.

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Norm: Any words of thanks I could use may sound trite, fall short, or both. Nevertheless, I want you to know how thankful I am for everything you did to help with this project. I know not all moments were as fun as the “data parties” – thank you for your help at every step.

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Statement of the Problem

The present study investigated Mothers' behaviors that may contribute to prosocial behaviors in their children. Prosocial behavior can be defined as behavior performed primarily for the benefit of another person (Eisenberg, 1982). Examples of prosocial behaviors include helping, cooperating, and comforting (Eisenberg, 1982). The presence of prosocial behaviors in children is generally viewed as desirable (Eisenberg, 1982) and has been linked with positive outcomes such as better mental and physical health in adults (Schwartz, Meisenhelder, Ma, & Reed, 2003). Prosocial behavior in adolescents has been linked with academic achievement (Caprara & Barbaranelli, 2000), greater intrinsic work values (Johnson, Beebe, Mortimer, & Snyder, 1998), and higher grade point average (Eccles & Barber, 1999). Furthermore, prosocial engagement in adolescents may serve as a protective factor against development of delinquent behaviors (Carlo, Crocket, Wilkinson, & Beal, 2011; Eccles & Barber, 1999, Ludwig & Pittman, 1999). These and other benefits make it worthwhile to evaluate parenting behaviors that may contribute to children's prosocial behaviors.

The benefit of engaging in prosocial behavior for children has been established empirically. Research has shown that adolescents who behave prosocially are more likely to be well-adjusted during adolescence and later in life (Eisenberg, 1982; Eisenberg, Fabes, & Spinrad, 2006). Adolescent prosocial behavior is also linked to better academic performance (Wentzl, 2003). Eccles and Barber (1989) found that adolescents' engagement in

prosocial activities (church and volunteer activities) was negatively correlated with incidence of risky behaviors (drug and alcohol use), and positively correlated with grade point average in school. Eisenberg, Fabes, and Spinrad (2006) found that adolescent altruism is correlated with moral reasoning, perspective taking and fewer aggressive behaviors. Thus, based on the research literature, prosocial behavior is positively associated with well-being in adolescents, although many of the studies are cross-sectional and correlational, so it is not possible to determine whether greater prosocial behavior leads to the other positive aspects of well-being, results from well-being, or whether a shared “third variable” causes both prosocial behavior and indices of well-being. The current study is important because it helps shed more light on what parents can do to promote prosocial behaviors in their children.

Parents are typically viewed as one of the most significant socializing agents in a child’s life (Bengston, 1975; Hartrup & Rubin, 2013, Hoffman, 2000). Studies have shown that parents play a significant role in the development of prosocial behavior in adolescent children (Eberly & Montemayer, 1999; Stukas, Switzer, Dew, Goycola, & Simmons, 1999). Observational learning from nurturant models may help produce the internalization of prosocial values (Clary & Miller, 1986; Rushton, 1976). Padilla-Walker and Christensen (2010) found that positive mothering (defined as involvement and connection) was positively related to adolescent prosocial behavior toward family members. Others have found that children who

recalled that their parents modeled prosocial behaviors were more likely to behave prosocially (Bekkers, 2004; Clary & Miller, 1986). Stukas, Switzer, Dew, Goycoolea, and Simmons (1999) found that adolescents with prosocial parent models were more likely to have an altruistic self-image. Shen, Carlo, and Knight (2013) found that parental inductions (teaching children through verbal reasoning) predicted prosocial moral reasoning in children. Overall, a theme throughout previous studies is that *parent modeling* (teaching children through observational learning) and *parent inductions* (direct messages about positive and negative consequence of particular behaviors) positively influence adolescents' prosocial behavior. Yet, no studies were found that compare the relative influence of these two means of socialization.

Furthermore, the results of previous studies have been limited for a variety of reasons. These limitations include reliance on retrospective reporting (Bekkers, 2004), failure to take into account the quality of the parent-child relationship (e.g., parent warmth) as a possible moderator (Mustillo, Wilson, & Lynch, 2004), and cross-sectional correlational designs (Stukas, et al., 1999).

Regarding the quality of the parent-child relationship, theory and empirical evidence suggest that parental warmth may be a moderating factor in the socialization process with children. Hoffman (2000), a moral development theorist, suggested that parent warmth is a key part of moral development socialization. Parental warmth provides an ideal environment for socialization because children who feel that their parents are warm and supportive are more likely to attend to and care about messages they receive

from parents (Eisenberg & Valiente, 2002; Hoffman, 1970). Research validating this notion suggests that children are more likely to understand and internalize their parents' values when their parents are warm and responsive (Hardy, Carlo & Roesch, 2010). Carlo and Miller (1986) found that parental warmth may be a key factor in the intergenerational transmission of prosocial behaviors. Overall, research suggests that parental warmth is an influential part of the socialization process, yet few studies on the intergenerational transmission of prosocial behaviors have included it as a variable. It appears that only one study has attempted to account for parent modeling, inductions and warmth in the process of socializing children to become prosocial (Clary & Miller, 1986), yet this study has a variety of limitations; for example, their measure of prosocial behavior seems to be mixed with a measure of commitment. Furthermore, the study performed by Clary and Miller (1986) is outdated and has yet to be replicated.

Purpose of the Present Study

Parents are one of the most powerful socializing agents in a child's life, especially when their parenting style is warm (Clary & Miller, 1986; Rushton, 1976). Although studies have made it clear that parents play an important role in socializing prosocial behaviors in children, researchers report that more work is needed (Padilla-Walker, & Christensen, 2010). In the present study, several behaviors exhibited by mothers were hypothesized to influence children's prosocial behaviors. Mothers' behaviors were used primarily because mothers were the principal respondents in the dataset used for the

current research. No prior study was found that provided any comparison of the influences of different parent behaviors, such as the mothers doing chores with the child, mothers modeling philanthropic behavior, the mothers modeling volunteer behavior, and the mothers talking with the child about making donations. Thus, one purpose of the present study is to examine simultaneously the associations of different maternal behaviors involving modeling and induction with degrees of adolescent prosocial behavior. Furthermore, the longitudinal design of the current study may address the limitations of previous studies that relied on retrospective reporting and help establish a causal link between parental behaviors and children's prosocial behaviors. Finally, the present study helps fill a gap in research by taking into account mothers' warmth as a moderator that may enhance the intergenerational transmission of prosocial behavior.

Although some research has been conducted regarding parent behaviors that are associated with prosocial behaviors in their children, several researchers report that more work is needed (Carlo, McGinley, Hayes, Batenhorst & Wilkinson, 2007; Padilla-Walker & Christensen, 2010). In a review of evidence about ways that educators can promote prosocial behaviors in the classroom, Kidron (2006) reported that the research base on how to promote prosocial behaviors is less substantial than research about ways to decrease antisocial behavior. Given that a decrease in negative behavior does not automatically lead to more positive behavior, there is a

need for more information about factors that can contribute to the development of prosocial behavior in children.

Specifically, the present research examines the associations of the following four maternal behaviors with degrees of prosocial behavior enacted by their children: 1) time spent doing chores with children, 2) mothers' philanthropic behavior, 3) mothers' volunteering, and 4) mothers' talking to children about making donations. In addition, level of the mother's warmth toward the child is tested as a potential moderator variable, increasing the magnitude of the association between positive parental behaviors and children's prosocial behavior.

The five maternal behaviors examined in this study were expected to influence children primarily through socialization processes involving social learning principles. Social learning theory refers to learning from one's interpersonal environment (Bushman, 2007). *Modeling* and *induction* are two specific types of socialization that informed the selection of the variables in this study. Modeling refers to observational learning (sometimes known as imitation), a process through which individuals acquire new behavioral responses through observing and then imitating the acts they see others perform (Betz, 2008). Parental inductions are a supportive parenting practice in which a parent provides explanations to help children understand the consequences of their actions – whether positive or negative (Carlo, Knight, McGinley, & Hayes, 2010). Inductions involve conveying concepts about causes and effects. Three of the mothering variables examined in this study –

doing chores together, parent philanthropic behavior, and parent volunteering – were expected to influence children through modeling. The fourth variable – talking to children about donating – was expected to influence children through induction. No prior studies were found that examined these four types of parent behavior as influences on children’s prosocial behavior, so the present study’s findings could identify which maternal behaviors may be most effective in socializing children.

Finally, the current study takes into account mothers’ warmth as a potential moderator variable. As previously noted, Hoffman suggested that parental warmth provides an ideal environment for socialization because children who feel their parents are warm and supportive are more likely to attend to and care about messages they receive from parents (Eisenberg & Valiente, 2002, Hoffman, 1970). Prior research has also indicated that parent warmth may be essential for intergenerational modeling to take effect (Clary & Miller, 1986; Speicher, 1992).

The present study fills a gap in research by testing the associations of a few forms of maternal behaviors with degrees of prosocial behaviors exhibited by their children. Because the design of the present study allows examination of both cross-sectional and longitudinal relationships between parent and child behaviors, it may help establish a causal relationship between mothers’ behavior and their children’s prosocial behavior, whereas much of the past research has been correlational in nature. This study measures the relationships of doing chores with children, mothers’

philanthropic behaviors, mothers' volunteering, and talking with children about donating with degrees of prosocial behavior by children, while also taking into account mothers' warmth as a moderator variable.

Review of the Literature

This review of the literature begins with a review of research that demonstrates the benefits of child and adolescent prosocial behavior and, by extension, the importance of the present study's focus. The discussion of the benefits of children's prosocial behavior is followed by a review of the theoretical concepts of socialization, focused on social learning theory, in particular the processes of modeling and induction. These socialization concepts informed the selection of the independent variables for the study: 1) the parent spending time doing chores with the child, 2) parents' own philanthropic behavior, 3) parents' volunteering behavior, 4) parent messages to the child regarding the importance of making donation, and 5) parental warmth (a moderator). Again, the first three variables were expected to influence children's behavior primarily through modeling, whereas the fourth variable was expected to influence children through a verbal socializing process sometimes labeled as induction. Finally, research on parental warmth demonstrates the need to include it in the current study as a moderator variable.

Prosocial Behavior in Children and Adolescents

For the purposes of this project, prosocial behavior is conceptualized as actions that are enacted primarily for the benefit of others (Eisenberg,

1982). Examples of prosocial behaviors include helping, cooperating, and comforting actions (Eisenberg, 1982). Two types of prosocial behavior that have been studied commonly are altruism, or selfless helping (Post, 2007), and volunteer work. Thus, research on altruism and volunteer work are included in the present review of the literature on prosocial behavior. Numerous studies have shown that when children engage in prosocial behaviors they experience present and future benefits.

Schwartz, Meisenhelder, Ma, and Reed (2003) investigated the relationship between prosocial behavior (giving and receiving help), and mental and physical health. The study investigated whether giving or receiving help was a stronger predictor of mental and physical health. Their sample included 997 members and 1019 elders (leaders) from 425 Presbyterian congregations. Participants were predominantly white, employed, educated, and averaged 56 years old. The researchers used two Likert-scale questions that inquired how often participants had “made others feel loved and cared for” and “listened to others’ concerns.” Receiving help was measured through two similar questions asking how often the “congregation made me feel loved and cared for” and how often the “congregation listened to you talk about your private concerns.” There were four possible responses to the questions ranging from “never” to “very often.” Mental and physical health was measured by the Short Form 36 Health Survey (Ware & Sherbourne, 1992). Results indicated that both giving and receiving help were positively associated with reported physical functioning

and mental health. Furthermore, giving help was a stronger predictor of mental health than receiving help. This study is limited in that it sampled adult members of a particular religious denomination. Nevertheless, the results support the notion that engagement in prosocial behaviors, especially giving help, is positively associated with mental and physical health, although the causal direction between help giving/receiving and mental health could not be determined.

Caprara and Barbaranelli (2000) studied prosocial and aggressive behaviors in children as predictors of later academic achievement during adolescence. "Prosocialness" included behaviors such as helping, cooperating, and sharing. Antisocial behaviors were conceptualized as proneness to be verbally and physically aggressive. They studied 294 children (166 boys, 128 girls) in Rome, Italy using a longitudinal research design. Although the sample was culturally homogenous, the children came from a variety of socioeconomic backgrounds. The children's third grade prosocial behavior was used to predict their eighth grade academic achievement. Children and their teachers each rated the child's "prosocialness" on the same 10-item scale that asked about their degree of helpfulness, cooperation, and sharing. A sample of 100 children (from the original 294) was evaluated for academic achievement 5 years later. Academic achievement was determined by averaging the student's grades from six different teachers. Caprara and Barbaranelli (2000) did not report how the 100 children were selected. Results indicated that academic

achievement was predicted by prosocial behavior five years earlier, whereas prior aggressive behavior did not predict academic achievement. These findings suggest that prosocial behavior in childhood is a predictor of academic achievement in adolescence.

A study by Johnson, Beebe, Mortimer, and Snyder (1998) investigated the causal relationship between adolescent volunteerism and various positive outcomes, using a longitudinal research design. Researchers sampled 1,000 ninth graders from a public school district in Minnesota. Participants filled out the surveys annually during all four years of high school. Of the original sample, 93% completed all four waves of the questionnaire. The independent variable (volunteerism) was measured by inquiring whether participants had participated in volunteer work (work not for pay), how many times they participated in volunteer work weekly, and what types of volunteer work they engaged in. The dependent variables were school-related outcomes (i.e., educational plans, academic self-esteem, grade point average), psychological outcomes (i.e., depressive affect, self-esteem), work-related outcomes (i.e., the importance to the respondent of having a career in the future), and social outcomes (i.e., the importance of being involved in the community in the future). The researchers controlled for gender, race, education of parents, family composition, and family income. Results indicated a positive relationship between adolescent volunteerism and intrinsic work values, as well as anticipated future involvement in the community. However, there was a negative correlation between volunteerism and reported importance of a

future career. The other relationships tested in this study produced non-significant findings. This study suggests that adolescents who behave in a more prosocial manner may be more likely to continue prosocial behaviors into adulthood.

Eccles and Barber (1999) investigated the relationship between prosocial adolescent engagement and risk behaviors. Their sample included 1,259 primarily European American adolescents from Michigan. These respondents completed surveys in 10th grade and later in 12th grade. In order to gather the data on the independent variable, participants were given a list of 16 sports and 30 community and club organizations and were asked to indicate all the activities in which they participated. The activities were then grouped into five clusters; prosocial activities, performance activities, team sports, school involvement, and academic clubs. The researchers defined prosocial behavior as adolescent involvement in church or volunteer work. The dependent variables were risk behaviors (drinking, skipping school, using drugs). Their measure of academic outcomes involved a 7-item self-report that assessed how much the adolescent liked school, as well as a measure of grade point average. Results indicated that participation in all 5 extracurricular activities during 10th grade was associated with increased grade point average. Participation in prosocial activities was associated with lower increases in alcohol and drug use, whereas participation in sports was actually positively associated with alcohol use (perhaps due to alcohol use being part of a sports team “culture”). Of the five types of adolescent activity

clusters, only involvement in prosocial activities appeared to be protective against increases in alcohol and drug use, and truancy. These findings suggest that adolescent prosocial behavior is a protective factor against engaging in risky behavior, and it is associated with achieving a higher GPA. Other researchers have similarly found that adolescent prosocial values and self-efficacy were negatively correlated with delinquency, risky sexual behavior and drug use (Ludwig & Pittman, 1999).

Regarding volunteerism, one large scale study looked at the association between adolescent volunteerism and developmental markers of what these researchers called “indicators of [adolescent] thriving” (Benson, Clary, & Scales, 2007, p.102), as well as patterns of risk behavior. The study’s sample included more than 200,000 6th through 12th graders in 318 communities throughout the United States. Participants completed a 156-item survey. Adolescent volunteerism was measured by asking students to report the approximate average number of hours that they volunteered per week (0, 1, 2, 3-5, 6-10). The survey included items to measure “thriving” and risk behaviors. Eight thriving behaviors were conceptualized and measured through the survey, including school success, valuing diversity, helping friends or neighbors, exhibiting leadership, maintaining good health, resisting danger, overcoming adversity, and delaying gratification. Risk behaviors included behaviors such as alcohol use, illicit drug use, violence, and school problems. The study’s results indicated a significant positive correlation between adolescent volunteerism and each of the developmental indicators of

thriving. The researchers also found a significant negative correlation between volunteering and frequency of high-risk behaviors, although the association was weaker than with the indicators of thriving.

Thus, overall the research findings have suggested that the benefits of children and adolescents engaging in prosocial behavior, including forms of altruism and volunteerism, are substantial and numerous. These benefits may include improved mental and physical wellbeing, as well as decreased involvement in risky behaviors common to adolescence.

Primary Theoretical Model: Social Learning Theory

Parents are viewed as one of the most influential socializing agents for children (Bengston, 1975; Hartrup & Rubin, 2013, Hoffman, 2000). Bandura's social learning theory is one of the most widely accepted theories used to explain how children learn from their environment (Bushman, 2007). Social learning theory suggests that children need not experience direct consequences (i.e., reinforcement and punishment) for their own actions in order to learn to enact particular behaviors; rather, they may learn through observing and imitating the behaviors they see in others, such as their parents (Bandura, 1977; Bushman, 2007). Bandura suggested that verbal reasoning (*inductions*) and observational learning (*modeling*) are both important parts of the social learning process.

According to Bandura, most human behavior is learned through observation, or *modeling* (Bandura, 1977; Bushman 2007). The modeling process involves several components. First, "*attentional processes*," refer to

the fact that people cannot learn by observation unless they first notice and accurately perceive a model's behavior. Second, the "*retention process*," involves remembering the modeled behavior. The third component, the "*motor reproduction process*," involves enacting the modeled behavior, and finally, "*motivational processes*," determine whether the behavior will be continued based on the consequences that follow (Bandura, 1977, pp. 24-28). Steinberg's (2004) first of 10 parenting principles -- "what you do matters" (p. 9) -- also suggests that modeling is influential for children. Steinberg explains that parents are "on stage" all the time, and their children are the front-row audience members. Children learn from observing the example of their parents. Thus, modeling is a major social learning process through which children learn from their parents, so the present study examines such modeling processes in the acquisition of children's prosocial behavior.

A related process through which parents can socialize their children involves *inductions*, a supportive parenting practice by which parents provide explanations to help children understand values and the consequences of their actions (Carlo, Knight, McGinley, & Hayes, 2010). Communication with children goes hand in hand with the modeling process. According to Bandura, modeling is likely to be more effective when parents communicate with children beforehand about the benefits of adopting certain behaviors (Bandura, 1977). Researchers and theorists have given the name *induction* to the process by which parents talk with children about the consequences of their actions (Carlo, Knight, McGinley & Hayes, 2011; Hoffman, 2000; Shen,

Carlo & Knight, 2013). Thus, this is also a form of social learning. As Bandura (1977) emphasized, individuals develop expectancies (a form of cognition) regarding likely outcomes of their actions, based on prior experiences, which can include receiving instructions and information from other people. The present study explores the influence of modeling and induction as parts of the social learning process.

Bandura's social learning theory also sheds light on the importance of parent-child relationship quality for modeling to take effect. Not all modeled behaviors are necessarily attended to by children, and even if they are registered, there is no guarantee that the modeled behavior will be retained (Bandura, 1977). As mentioned previously, one of the key steps in modeling is the *attentional process*, in which children attend to the modeled behavior. Models that have engaging qualities are more likely to be attended to and emulated (Bandura, 1977). Children may be more likely to *attend* to their parents' behaviors when their parents are warm. Steinberg's second parenting principle, "you cannot be too loving", suggests that in order for children to attend to the behaviors modeled by their parents, they need to feel the security of a warm, loving relationship (Steinberg, 2004).

Hoffman's (2000) theory of moral development overlaps with Bandura's social learning theory in many ways that are relevant to the topics of the present study. He too suggests that modeling and inductions are essential to the process by which parents socialize their children to behave prosocially. However, Hoffman's theory has some notable differences. While

Bandura's social learning theory addresses socialization in general, Hoffman's theory more specifically addresses prosocial moral development. His theory more extensively addresses the role of parent inductions and adolescent empathy in the prosocial moral development process. Furthermore, Hoffman suggests that parent warmth is essential for modeling and inductions to take effect. Specifically, he recommends a "blend of frequent inductions, occasional power assertions, and a lot of affection" (Hoffman, 2000, p. 23). According to Hoffman, parental warmth enhances socialization because children who perceive that their parents are warm and supportive are more likely to attend to and care about the messages that they receive from parents (Eisenberg & Valiente, 2002; Hoffman, 1970); i.e., parental warmth increases the positive emotional bond between parents and children, increasing the salience and reinforcing power of the parents.

Socialization through modeling

The three independent variables in the present study of parents doing chores with children, parent philanthropy, and parent volunteering are expected to influence adolescent prosocial behavior through modeling. As previously noted, modeling involves observing and imitating the acts of another socializing figure (Bandura, 1977). According to Bandura (1977; 1986), children exposed to models of prosocial behavior are likely to emulate those acts, especially if they see positive consequences for the models they observe. Thus, children who see their parents engage in prosocial behaviors

such as doing chores in the home, philanthropic giving, and volunteering may be more likely to engage in prosocial behaviors themselves.

Several recent studies provide evidence for the link between modeling and the intergenerational transmission of negative and positive behaviors. For example, studies have shown a positive correlation between parent modeling of negative behaviors such as drinking (Latendresse, Rose, Viken, Pulkkinen, Kaprio, & Dick, 2008; White, Johnson & Buysek, 2000) and gambling (Magoon & Ingersoll, 2006) and the incidence of those same behaviors in children. On the other hand, Caputo (2009) and Bekkers (2007) found that parent modeling of volunteer behaviors is positively correlated with volunteerism in their children. In an article about how educators can promote prosocial values in adolescent students, modeling is recommended as one of the most influential means for helping school children develop prosocial tendencies (Kidron, 2006). Several specific studies on modeling will be described in greater detail hereafter.

A study by Latendresse et al. (2008) showed the influence of parents modeling negative behavior. The researchers looked at the influence of parental substance use, as well as several other parenting behaviors, on adolescent substance use. Their data were taken from the FinnTwin 12 (FT12), a large-scale longitudinal twin study of health-related behaviors and associated risk factors. Latendresse et al. (2008) used data from 4,731 twins and their parents. Participants were mailed questionnaires when adolescent children were ages 11, 14, and 17. Parental alcohol use was measured based

on present drinking frequency, present intoxication frequency, and lifetime drinking problems. Response options to the questionnaire items were on a 9-point scale ranging from “never” to “daily”. Adolescent alcohol use was measured when the participants were ages 14 and 17, using the same 9-point scale that was administered to the parents. Six parenting practices (considered to be elements of parent socialization) were also assessed, including warmth, relational tension, shared activities, autonomy granting, discipline, and monitoring. Latendresse et al. (2008) controlled for the effects of zygosity, sex, and family structure. The results indicated that there was a significant positive correlation between parents’ drinking behavior and subsequent adolescent drinking behavior at age 14 and 17. The researchers concluded that parent socialization plays an important role in the transmission of health risk behaviors. A limitation of the study was that the children and parents took the survey in their homes, increasing the likelihood that participants’ answers might be influenced by social desirability. Overall, this study suggests that children imitate negative behavior modeled by their parents.

Results from other studies also suggest that adolescents and children observe and imitate negative behaviors that they see modeled by their parents. Magoon, and Ingersoll (2006) investigated the influence of modeling and other parent behaviors on adolescent gambling behaviors. Their sample included 116 ninth-twelfth grade students from a Midwestern urban high school. Information was gathered through an anonymous survey

questionnaire administered by teachers in the school. The survey included questions about the students' demographic information (age and gender), gambling behavior, parental modeling, parental support, parental monitoring, and peer influences. To measure gambling behavior, adolescents in this study were administered the South Oaks Gambling Screen-Revised Adolescent (SOGS-RA) scale, which includes questions regarding the age of initiation, frequency, and type of gambling behavior. The SOGS-RA also contains two items that address parent modeling of gambling behaviors ("Do either of your parents play any games of chance for money?" and "Do you think either of your parents gamble too much?"). A limitation of this study was the small sample size and the correlational design, because all parent and child behaviors were reported at the same time by the adolescents. Results indicated a significant positive correlation between parent gambling behavior and the incidence of gambling behavior in their children. This suggests that parent modeling of negative behaviors may increase the likelihood that adolescent children will engage in those same behaviors.

Parent modeling also influences the prosocial behavior of children. As previously mentioned, volunteerism is one of the most studied types of prosocial behavior. Several studies support the notion that parent modeling influences children to engage in prosocial activities such as volunteerism. For example, Bekkers (2004) looked at three aspects of parenting that he hypothesized might increase the likelihood of intergenerational transmission of volunteering. Bekkers hypothesized that parents could influence their

children to volunteer by 1) setting an example, 2) providing children with social status and skills to facilitate volunteering, and 3) helping children be connected to communities that encourage them to volunteer. To test this hypothesis Bekkers (2004) used the third edition of the Family Survey of the Dutch Population. The sample was a two-stage stratified sample. In the first stage researchers drew from a random sample of municipalities in the Netherlands. In the second stage, a sample of individuals was drawn from the population registers of the municipalities. In total, the overall response rate was about 40%, resulting in a sample size of 864 adults. Of these respondents, 723 of their partners also chose to participate. In order to gain an idea of the respondents' present volunteering behavior, the interviewer identified a list of ten different types of organizations and asked the respondent to report whether or not he or she was presently involved with that type of volunteer organization, as well as whether their participation was on a regular basis. Further, the respondents were asked about their parents' volunteering behaviors when the respondents were 15 years of age. Bekkers controlled for parents' religion and social status, as these two variables are frequently associated with higher rates of volunteering. Results indicated that adults who recalled that their parents had volunteered were more likely to volunteer themselves. Bekkers' (2004) findings provide support for the notion that volunteering behaviors are transmitted between generations.

Several limitations to Bekkers' (2004) study exist, including the social desirability factor present in many studies that ask respondents to state their

participation in behaviors that are commonly perceived as either positive or negative. Another limitation was the retrospective reporting, which may have made it difficult for participants to recall their parents' previous prosocial behaviors. The present study's longitudinal design addresses that limitation involved with reliance on retrospective reporting.

Mustillo, Wilson, and Lynch (2004) also hypothesized that parental modeling would be associated with volunteerism in children. These authors investigated two factors that might be associated with volunteerism: 1) modeling and, 2) parents providing their children with socioeconomic resources needed for volunteering. Mustillo et al. (2004) used a 2-generation panel study of 1,848 women. The required age range for mature women was between 30-44 years old, and the young women were between the ages of 14-24 at the outset of the study. The authors selected the dataset based on its longitudinal nature. Unlike the Bekkers (2004) study, they avoided data that required respondents to recall whether parents volunteered when the respondents were children. The information analyzed in their study included a composite inventory of overall family socioeconomic status, the daughter's highest level of education (measured by one item asking for the highest level of grade completed in school), volunteer participation (measured by asking whether participants had done unpaid volunteer work in the past year; if the answer was "yes", they were asked how many hours per week they volunteered), race, and age. The mothers and daughters were asked about their volunteer behaviors in 1978, 1988, and 1991. Because the researchers

were able to follow the participants over a 13-year period, they were able to investigate whether mothers' volunteering was associated with their daughters' volunteering both initially and in subsequent years.

Mustillo et al. (2004) reported that volunteering runs in families. More specifically, they found that mothers' volunteering and daughters' education were associated with daughters' initial volunteering but not their future volunteering. Family socioeconomic status predicted growth in future volunteering, but not initial volunteering. These findings suggest that parent modeling may play more of a role in influencing immediate rather than long term (internalized) volunteer behavior in their children. This study did not take into account parent characteristics such as warmth as possible moderators of the modeling effect. Other research findings suggest that parental warmth is an essential component of the intergenerational transmission of prosocial behaviors (Clary & Miller, 1986). Perhaps if parental modeling of volunteer behaviors is accompanied by parental warmth, children would be more likely to internalize the prosocial behaviors they observe in their parents, and in turn engage in future prosocial behaviors. The current study has the potential to add to existing knowledge by taking mothers' warmth into account as a possible moderator variable.

A study by Stukas et al. (1999) investigated the relationship between parent modeling and future prosocial behavior in adolescent children. Stukas et al. looked at the influence of parent modeling and gender on adolescents' self-perceptions of being altruistic or not. Their sample included 86 seventh

graders at a junior high school in New York City. The students in the study participated in a mandatory service learning activity. Prior to the activity they were asked to report the degree to which their parents modeled helping behaviors. After participating in an extended service learning experience, students rated the degree to which they considered altruism a part of their identity, as well as the likelihood that they would help in the future. The study's results indicated that students who reported that their parents modeled helping behaviors were more likely to have altruistic self-images and be committed to helping people in the future, if they were girls. The study was limited by its small sample size and the fact that it only measured adolescents' perceptions of their likelihood to help in the future rather than the extent to which they actually helped other people later on. The current study extended the focus of the Stukas et al. (1999) study by measuring future adolescent helping *behaviors* (rather than just *attitudes* or intentions to help in the future) that result from parent modeling.

Overall, the aforementioned studies suggest that parent modeling is likely to influence the prosocial behavior of adolescent children. However, past studies have been limited in their methodology for a variety of reasons, including reliance on retrospective reporting, use of cross-sectional correlational designs, and failure to account for the influence of parental characteristics (e.g., warmth) that may moderate the association between parenting modeling behavior and adolescent prosocial behavior. The present study was designed to improve on some of the research methods of previous

studies by incorporating a longitudinal design and avoiding retrospective reports of one's mother's behavior, and by examining simultaneously a variety of maternal behaviors that may lead to prosocial behaviors in children, while also accounting for parental warmth as a moderator variable.

Mothers' doing chores with children may differ somewhat from the other prosocial behaviors that parents modeled in previous research. There are two main aspects of this difference. First, when parents do chores *with* children, they may increase the likelihood that the message of prosocial engagement is conveyed to children. Second, by doing chores together, parents may simultaneously foster a connection with their child, which has been shown to increase the likelihood that the child will emulate their parents' behaviors (Clary & Miller, 1986; Padilla-Walker & Christensen, 2010). In this review of the literature, no previous research was found that addressed the impact that parents (or mothers) engaging *with* children in prosocial behaviors in the home may have on the children's own behavior. The current study adds to previous research by examining the impact of mothers engaging in prosocial behaviors *with* their children. Unfortunately the present data set does not also include information regarding children's perceptions of the degree of closeness in their relationships with their mothers.

Socialization through induction

As noted earlier, the second type of socialization process examined in the present study is induction, a supportive parenting practice that uses verbal reasoning to enhance a child's ability to engage in perspective-taking

and instill prosocial values. In the present study, mothers' talking with children about donating appears to be a form of socialization through induction. There is empirical evidence that induction procedures are effective means of socializing positive behavior in children.

A study by Carlo, Knight, McGinley, and Hayes (2011) examined the impact of parental inductions (positive reasoning and explanations) on early adolescent prosocial behavior. They used a sample of 207 Mexican American children and 108 European American fourth and fifth grade elementary school students living in Phoenix and Gilbert, Arizona. They hypothesized that parental inductions would be associated with increased prosocial behaviors in children as mediated by children's sympathy and prosocial moral reasoning. They measured parent inductions through 5 items of a questionnaire that asked early adolescents to rate the degree to which statements such as "Your mother explains to you how other family members like you better when you share things with them" (Carlo et al., 2011, p. 763) describe parent-child interactions in their families. The adolescent participants then filled out a questionnaire designed to measure their own prosocial tendencies; the Prosocial Tendencies Measure –Revised (PTM-R; Carlo, Hausmann, Christiansen, & Randall, 2003). The PTS-R uses a 5-point Likert response scale to measure six types of prosocial behavior, including altruistic (measured by 3 items, including; "You feel that if you help someone, they should help you in the future," – reverse scored), public (measured by 3 items, such as "You can help others best when people are watching you"),

emotional (measured by 5 items, such as “It makes you feel good when you can comfort someone who is very upset”), dire (measured by 3 items, such as “You tend to help people who are in a real crisis or need”), anonymous (measured by 4 items, such as “You prefer to donate money without anyone knowing”), and compliant prosocial behaviors (measured by 2 items, such as “You never wait to help others when they ask for it.”). The researchers also evaluated the mediating influence of adolescent sympathy (i.e., feelings of concern for the needy) and prosocial moral reasoning (measured through presenting the early adolescent with 5 stories that presented a conflict between two people in the same story).

Results indicated that parental inductions had a significant positive impact on three of the six types of prosocial behavior and a nonsignificant impact on the other three. When early adolescent sympathy was taken into account as a mediator, they found that parent inductions were significantly positively related to five of the six types of prosocial behaviors (there was a significant negative correlation between parental inductions and altruistic prosocial behaviors). This study’s findings suggest that parent inductions are likely to be correlated with adolescent prosocial behavior, especially when younger adolescents are prone to feeling sympathy. The present study builds on this prior research by testing for evidence of causality between parental (mothers’) use of induction and children’s prosocial behavior.

Shen, Carlo and Knight (2013) conducted a similar study that investigated the influence of parent socializing behaviors (induction and

punitiveness) on early adolescent prosocial moral reasoning (judgments to assist another person in need, in the absence of norms and rules about helping), as mediated by sympathy and perspective taking. Their sample included 504 early adolescents, including 106 European Americans, 202 Mexican Americans, and 196 Taiwanese, all of whom were in the fifth or sixth grade when data were collected. The dependent variable, adolescent prosocial moral reasoning, was measured using the Prosocial Moral Reasoning Objective Measure (PROM, Carlo et al., 1992). This measure contains 5 stories in which the needs of the protagonist are in conflict with the needs of another. The respondent must first decide whether or not to help. Then, they must choose between 5 possible responses that indicate the type of reasoning they used: 1) hedonistic (promotes one's own needs), 2) approval-oriented (reasoning to please others), 3) needs-oriented (reasoning aimed to fulfill the needs of others), 4) stereotypic (reasoning based on expected behaviors), and 5) internalized (reasoning in terms of personal beliefs and principles). Parent socializing behaviors (inductions and punitiveness) were each measured using a 4-point Likert scale. There were 5 items to assess inductions (e.g., "Your mother explains to you how good you should feel when you do what is right."). Punitiveness was measured with a 14-item questionnaire with items that measured the degree of harsh discipline such as corporal punishment and love withdrawal. Early adolescent perspective-taking and sympathy were measured using the perspective-

taking and sympathy subscales of the Davis Interpersonal Reactivity Index (Davis, 1983), which had 7 items for each subscale.

Overall, the results of the study indicated that parental inductions predicted prosocial moral reasoning indirectly through the mediating processes of the adolescent's increased perspective taking and sympathy. Furthermore, parental punitiveness directly and negatively predicted prosocial moral reasoning. These findings were consistent across ethnic groups. The results suggest that parental inductions are associated with prosocial moral reasoning in early adolescent children.

Parental warmth as a facilitator of socialization

Theory and research suggest that children are more likely to internalize their parents' values about prosocial behavior when parents convey warmth to them. As previously mentioned, Hoffman (2000) noted that a lot of warmth is essential in socializing the moral (prosocial) development of children. Hoffman suggested that parental warmth creates an interpersonal environment/bond between parent and child that facilitates children's attention to and regard for messages from their parents about prosocial behaviors. Steinberg (2004) also suggested that in parenting it is impossible to be too loving. Parental affection and warmth may be important in helping children to attend to, and subsequently imitate, behaviors that they see modeled by their parents (Bandura, 1977). Empirical evidence has provided support for that notion (Clary & Miller, 1986; Speicher, 1992). Furthermore, other studies have found that children are more likely to understand and internalize their parents'

prosocial values when their parents respond to their prosocial behaviors in a way that children perceive as appropriate (Hardy, Carlo & Roesch, 2010). Thus, when parents attempt to socialize their children to engage in prosocial behaviors, they are more likely to be successful if their attempts are accompanied by warmth. The current study was designed to shed light on the influence of mothers' warmth as a variable that can moderate (enhance) the relationship between positive socialization behaviors (forms of modeling and induction) and children's degree of prosocial behavior.

A study by Speicher (1992) evaluated the relationship between adolescent and parent perceptions of the quality of the parent-adolescent interactions and the stages of moral judgment that adolescents have achieved. Moral judgment is the ability to make moral deliberations based on the needs of self and others – a key process in the development of prosocial behaviors. The sample in Speicher's (1992) study included 50 mothers, 48 fathers, 48 sons, and 44 daughters. The families were all Caucasian residents of California. Parents ranged from age 45-50, and children ranged from age 10-18. Respondents participated in written surveys and/or oral interviews in 1970 and again in 1975. Adolescent moral judgment was measured using the Kohlberg Moral Judgment Interviews, consisting of three hypothetical moral dilemmas followed by questions designed to assess the level of advancement of the adolescents' moral reasoning stage. More advanced stages are more prosocial in nature.

The six moral reasoning stages outlined by Kohlberg's Theory of Moral development will now be described. The *Preconventional Level* involves two stages; *Stage 1*: rules are obeyed to avoid punishment, and *Stage 2*: rules are obeyed to obtain rewards. The *Conventional Level* also involves two stages; *Stage 3*: actions are aimed at winning approval ("Good boy" effort), and *Stage 4*: actions are aimed to maintain order, whether social or religious (i.e. actions are duty oriented). The *Postconventional Level* involves two stages; *Stage 5*: actions are based on a broader social contract that takes into account the rights of others (with emphasis on equality and cooperation), and *Stage 6*: actions are based on individual principles of conscience "with ethical principles that appeal to comprehensiveness, universality, and consistency" (Rich & Devitis, 1985, pp. 88-89). The more advanced stages of moral reasoning are more prosocial in nature because they generally involve increased thinking about the needs and welfare of others and society at large. These stages formed the dependent variable: level of advancement of adolescent moral judgment. The independent variables – adolescents' family structure and interaction – were measured through lengthy interviews administered to the parents and a subset of adolescent children. The interview included questions about the basic goals of the parents for their children, how disagreements are handled in the family, and how the parent conveys ideas about right and wrong. When the children were interviewed, they were asked questions related to some of the following topics: openness of family communication, extent to which the family talks together, and

methods of arriving at rules that include the child in the rule-making process. Speicher (1992) also assessed intelligence and socioeconomic status as control variables.

Speicher's (1992) results indicated a significant positive correlation between indicators of a high-quality parent-child relationship and advanced (prosocial) adolescent moral reasoning. Adolescents with more advanced (prosocial) moral reasoning reported more family communication and higher maternal support, warmth, and affection. These findings suggest that maternal warmth and the quality of the parent-child relationship is associated with adolescent moral reasoning.

Clary and Miller (1986) looked at the influence of parent socialization (modeling, warmth, and inductions) during adolescent years on subsequent volunteering. They hypothesized that adult children whose parents had been nurturing (warm) and modeled altruism during their childhood would be more likely to engage in sustained altruism as adults than children whose parents did not model altruism and were not warm. Their study examined a group of 55 male and 107 female volunteers at a call-in crisis counseling center in Minnesota. Participants in this study ranged in age from 17 to 49, and their level of education ranged from a high school diploma to advanced degrees. Clary and Miller predicted that volunteers whose parents were nurturing and modeled volunteer behaviors would be more likely to volunteer for a sustained period of time than volunteers whose parents did not model volunteering and were less nurturing. They also looked at the effect of the

cohesiveness of the volunteer group as a naturally occurring situational variable inherent to the study design. Group cohesiveness was measured by a 13-item scale that included questions about the level of cohesiveness and cooperation within the group, as well as the respondent's level of satisfaction with the group and motivation to remain in the group. The sample for the study was drawn from 21 volunteer training groups (each with about nine participants) between 1981 and 1982.

The volunteers in the Clary and Miller (1986) study were explicitly expected to volunteer 4 hours per week for 6 months. Participant altruism, the dependent variable, was a dichotomous measure of whether the volunteers completed the full 6 month commitment or not. They also looked at whether the volunteers continued volunteering after fulfilling the commitment. In order to measure parent socialization, the participants were given three measures of childhood experience designed to assess modeling, warmth, and inductions. The first measure contained 8 items designed to measure parent modeling (respondents rated the truthfulness of statements such as "my parents rarely donated money to charitable causes" and "my parents actively participated in volunteer organizations"). The second measure contained 7 items designed to assess the degree to which the relationship with their parents was warm and positive during high school (respondents rated the frequency of spontaneous affection, and the frequency of sharing thoughts and feelings together). The third measure contained 7 items designed to measure parent inductions about altruism (e.g. "my parents told me I should

be willing to lend a helping hand” and “my parents often urged me to donate money to charities”). There was also one item to identify instances of discrepancy when parents use inductions without modeling altruistic behavior. Clary and Miller (1986) also measured for participants’ level of empathy, reasons for volunteering, and finally the cohesiveness of the volunteer group. In the analysis, it appears that they combined the modeling and induction measure into a general grouping of parent modeling.

Clary and Miller (1986) looked at the combined effect of retrospective reports of parent nurturance and modeling on adult children’s current altruistic behavior. As hypothesized, they found that individuals who came from nurturing homes with altruistic models were more likely to engage in sustained volunteering than those who came from homes that were less nurturing and had lower altruistic modeling. This effect was established except in the presence of a highly cohesive volunteer group, in which case the cohesive group seemed to level out differences in home environment. There were 31 volunteers who had poor relations with parents who modeled altruism, and 27 who reported good relations and low modeling. This finding suggests that the combined effect of modeling and warmth is important for the intergenerational transmission of modeling. A limitation of the study is that the research design may have inadvertently measured commitment, because participants knew they were expected to volunteer for 6 months. Thus, although the researchers intended to measure altruism, commitment may have been a confounding variable. Another limitation was the dichotomous

measurement of the dependent variable; participant altruism was simply measured in terms of whether or not they completed the 6 month commitment. Furthermore, the study relied on adults' retrospective reports of parental behavior. The present study improved on Clary and Miller's (1986) methodology by assessing and analyzing the effects of modeling and inductions separately and prospectively. The present study also included a larger sample, and it avoided the pitfall associated with measuring altruism based on participants committing to specified amounts of a volunteering behavior.

The findings from the studies reviewed in this section suggest that parent (especially maternal) warmth may be an important factor in the intergenerational transmission of prosocial behaviors. The bond that the warmth facilitates between parent and child seems to increase the salience of the modeled behavior for the child, and his or her motivation to imitate the parent's behavior. Therefore, the present study tested the degree to which mothers' warmth moderates (enhances) the association between parental modeling and induction behavior and adolescent engagement on prosocial behavior.

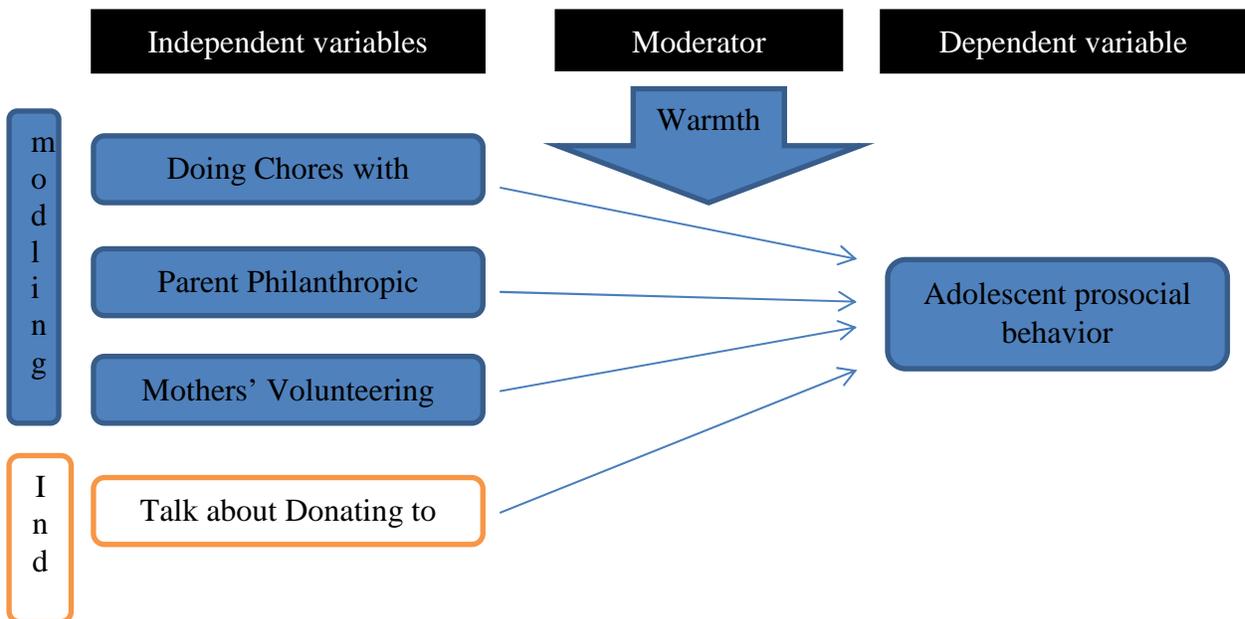
Variables

The dependent variable in the present study was children's prosocial behavior, such as being kind and helpful toward family members and friends. It was expected that children's prosocial behavior would be influenced by four independent variables of mothers' prosocial behavior, and one moderator

variable. Specifically, the present research examined the influence of the following four maternal behaviors on subsequent prosocial behavior in their children: 1) the amount of time that mothers spend doing chores with the children; 2) mothers' philanthropic behavior; 3) mothers' volunteering behavior; 4) mothers' degree of talking to children about donating. Finally, maternal warmth toward the child was hypothesized to moderate (enhance) the associations between parental prosocial behaviors and children's prosocial behavior.

Figure 1

Variables



Hypotheses

The present study was designed to test the influences of five types of maternal behavior on the degree of prosocial behavior exhibited by their children. Based on social learning theory and prior research, the following hypotheses were tested:

Hypothesis 1: The more time the mother spends doing chores with the child, the more the child will engage in prosocial behavior.

Hypothesis 2: Children with mothers who report engagement in philanthropic behavior, will engage in more prosocial behavior.

Hypothesis 3: Children with mothers who engage in volunteering behavior, will engage in more prosocial behavior.

Hypothesis 4: Children with mothers talk with them about donating money, will engage in more prosocial behavior.

Finally, maternal warmth toward the child was an independent variable that was hypothesized to moderate (enhance) the associations between parental prosocial behaviors and the child's prosocial behavior:

Hypothesis 5: The level of maternal warmth toward the child will moderate the positive association of each of the four types of positive maternal behavior and the degree to which the child engages in prosocial behavior. Specifically, when maternal warmth is higher, the association between the mother's degree of each of the four forms of positive socialization behavior and the degree of children's prosocial behavior will be stronger than when maternal warmth is lower. This hypothesis was based on prior research findings

indicating that parental warmth enhances the intergenerational transmission of values as well as the effects of modeling.

Method

Sample

The sample for this study came from a dataset known as the Panel Study of Income Dynamics (PSID, Panel Study of Income Dynamics) -- a national dataset that includes information on the socioeconomic variables and health over lifetimes and across generations. The dataset also includes numerous variables involving aspects of family dynamics. The PSID began in 1968 and is a nationally representative sample of over 18,000 individuals living in 5,000 families in the United States. From 1968 until 1997, interviews were conducted annually. From 1997 to the present date, interviews were conducted biennially. To ensure that the sample continued to be nationally representative, a sample of 511 immigrant families was added in 1997. Children selected for the present study were between the ages of 3 and 17 at the initial data collection point. These children come from a variety of ethnic backgrounds. The data analyzed for the current study were selected from participants who are members of two-parent homes in order to maintain consistency in the parent-child relationships experienced by members of the sample. It was expected that including other family structures could introduce confounding variables. Furthermore, data were analyzed for behaviors of mothers only, in part because mothers were the principal reporters in the

PSID the dataset, and because several of the past studies also looked at mothers only.

For the present study, participants were selected from those who completed the survey in 2001 and then again in 2007 for all the variables except parent volunteering and philanthropic giving. For the parent volunteering and philanthropic giving measures, data were only available in 2001. For the dependent variable (children's prosocial behaviors), data from 2001 and 2007 were also used because those are the only two years for which data were collected about children's prosocial behaviors. In addition to examining cross-sectional associations between mothers' behaviors and child prosocial behaviors at both assessment points (in 2001/2002 and in 2007), by testing the associations between mothers' responses from 2001/2002 and children's behaviors in 2007, it was possible to see whether there is a longitudinal link between mothers' behaviors and subsequent children's behaviors, providing some support for a causal link. The panel design allowed for comparison of associations between variables cross-sectionally (concurrently) as well as longitudinally.

Measures

This section describes how the dependent variable of children's prosocial behavior and each of the independent variables regarding forms of maternal behavior were operationalized for the present study.

Children's prosocial behavior was operationalized in the PSID through questions asked in the 2001 and 2007 versions. The children themselves

were asked questions regarding their own prosocial behaviors. The self-report scale for children was a six-item scale with the following questions:

- 1) "In the last 6 months, how often have you helped friends with things they had to get done, such as homework or chores?"
- 2) "In the last 6 months, how often have you provided emotional support to your friends, such as giving them advice on a problem or making them feel better when they were sad?"
- 3) "In the last six months, how often did you help your parents with things they had to get done, such as chores or running errands?"
- 4) "In the last six months, how often have you provided emotional support to your parents, such as making them feel better when they were sad?"
- 5) "In the last six months, how often did you help your brothers or sisters with things they had to get done, such as homework or chores?"
- 6) "In the last six months, how often have you provided emotional support to your brothers or sisters, such as giving them advice on a problem or making them feel better when they were sad?"

The response scale included seven options ranging from "almost never" to "everyday". An eighth option "not applicable" was also available. The analysis of 2007 data only used five items from the children's self-report of prosocial behaviors; item 3 was omitted.

The data for the independent variables were gathered from mothers in 2001 and 2007, except for the variable about mothers' volunteering behavior (data for this variable were gathered in 2001). Regarding *doing chores with children*, mothers were asked how many times in the past month they did a variety of chores with their children, including yard work, dishes, cleaning the house, and preparing food. The questions designed to measure mothers' doing chores with children included the following 6 items in both 2002 and 2007:

- 1) In the past month, how often did you and [CHILD] wash or fold clothes?
- 2) In the past month, how often did you and [CHILD] do dishes together?
- 3) In the past month, how often did you go to the store with [CHILD]?
- 4) In the past month, how often did you and [CHILD] do yard work or gardening?
- 5) In the past month, how often did you and [CHILD] prepare food together?
- 6) In the past month, how often did you and [CHILD] clean the house together?

To each of these questions there were five possible responses including, "not in the past month", "1 or 2 times in the past month", "about once a week", "several times a day", "every day". For *parent philanthropic behavior*, parents were asked whether they gave \$25 or more to a charitable

cause sometime in the past year, and the possible responses were “yes” and “no”. *Mothers’ volunteering* behavior was operationalized through one item that asked mothers to report in 2001 whether they volunteered 10 hours or more in the previous year, and the response options were “yes” or “no”. Mothers’ messages to the child regarding making donations was operationalized by asking mothers to report whether they talked with children about donating to a charitable cause, even if “only a few pennies,” and the response options were “yes” and “no”. Finally, *maternal warmth* was operationalized by using the 7-item parent warmth scale which parents filled out in both 2002 and 2007. The index of maternal warmth for the present study was measured by the mean of the parent’s responses to the 7 items. A few of the warmth items included questions about how frequently parents showed physical affection, said “I love you,” or joked or played with the child. Possible mean scores ranged from 1 to 5, or although a 9 indicated that a parent warmth score was not ascertained. In the data analysis, scores of 9 were dropped. Again, only data on mothers were used for the present study because they were the principal respondents.

Procedure

The procedure for the present study involved accessing and analyzing preexisting data from the Panel Study of Income Dynamics (PSID). As stated, the present study used the PSID dataset, a nationally representative sample of individuals and families. Researchers first began collecting the data in 1968 and have continued collecting data until the present time. Access to the data

is free. The website for the PSID contains an extensive question and answer section for users that provides information about how to search and utilize the data. After looking through a catalog of the available data, the researcher submits a request to download only the desired variables. The requested data come with a codebook.

For the present study, once the data were obtained, statistical analyses were conducted with SPSS software to test the hypotheses regarding associations of parents' behaviors and the prosocial behaviors of their children.

Results

Demographic Characteristics of the Children in the Sample

The sample for this study was selected as families in which there were two biological parents and for whom the mother had responded to the survey questions. Table 1 presents the children's ages as of the 2002 assessment point and indicates a relatively even distribution across ages except for the youngest (age 3) and oldest (age 17). The mean age was 10.02, the median was 10, and the mode was 8, with a total number of 2,571 participants. Thus, the associations between mothers' behaviors and offspring prosocial behavior were examined within a sample that included both children and adolescents.

Table 1

Distribution of Children's Ages in 2002

Age	Frequency
3	3
4	161
5	201
6	219
7	185
8	232
9	206
10	199
11	190
12	190
13	184
14	216
15	189
16	160
17	36
Total	2571

As shown in Table 2, the sample used for the present study was also racially diverse. Though many participants did not report their race, those who did were from a variety of racial backgrounds. Among those who reported their race, the most common race reported was Caucasian (410, 45.2%), and the second most common race reported was African American (409, 45.2%).

It appears that Hispanics (51, 5.6%) and Asian/Pacific Islanders (7, 0.8%) may have been underrepresented. Overall, this study utilized a diverse sample in terms of age and race.

Table 2

Distribution of Children's Race as Reported in 2002

Race	Frequency
Inappropriate if not eligible for section J	768
African American	409
White	410
Hispanic	51
Asian/Pacific Islander	7
American Indian or Alaskan Native	3
Multi-racial	24
Don't know	145
Refused	101
Total	1918
Missing from system	653
Total	2571

Preliminary Analyses

The Cronbach alpha for the six PSID items assessing child prosocial behaviors was .78 in 2002, which shows an acceptable level of internal consistency reliability. Similarly, the Cronbach alpha for the five child prosocial behavior items was .75 in 2007, indicating a similar level of internal consistency as a scale.

The Cronbach alpha for the six items about mothers' doing chores with their children was .73 in 2002 and .75 in 2007, which shows that this measure had acceptable internal consistency for both years.

The correlation between degree of child prosocial behaviors in 2002 and 2007 was .361, ($p < .001$), indicating statistical significance and a modest effect size between prosocial behaviors enacted by the same individuals in 2002 and 2007. The correlation between degree of mothers' doing chores with children in 2002 and 2007 was .500 ($p < .001$), indicating statistical significance and a larger effect size.

Overview of Analyses Testing the Hypotheses

The hypotheses were tested using stepwise multiple regression analyses. In each analysis maternal behaviors were used as predictors of child prosocial behavior. The following hypotheses were tested:

Hypothesis 1: The more time the mother spends doing chores with the child, the more the child will engage in prosocial behavior.

Hypothesis 2: Children with mothers who report engagement in philanthropic behavior, will engage in more prosocial behavior.

Hypothesis 3: Children with mothers who engage in volunteering behavior, will engage in more prosocial behavior.

Hypothesis 4: Children with mothers talk with them about donating money, will engage in more prosocial behavior.

Finally, maternal warmth toward the child is an independent variable that was hypothesized to moderate (enhance) the associations between maternal prosocial behaviors and child prosocial behavior:

Hypothesis 5: The level of maternal warmth toward the child will moderate the positive association of each of the four types of positive maternal behavior and the degree to which the child engages in prosocial behavior. Specifically, when maternal warmth is higher, the association between the mother's degree of each of the four forms of positive socialization behavior and the degree of child prosocial behavior will be stronger than when maternal warmth is lower. This hypothesis is based on prior research that indicates that maternal warmth enhances the intergenerational transmission of values as well as the effects of modeling.

In the first analysis, maternal behaviors in 2001 and 2002 were used to predict child prosocial behavior in 2002. In the second analysis mothers' behaviors in 2007 were used to predict child prosocial behaviors in 2007. Both of these analyses were cross-sectional, providing a picture of how maternal and child behaviors are associated at the same point in time. A third, longitudinal, analysis was also conducted, in which maternal behaviors in

2001 and 2002 were used to predict child prosocial behaviors in 2007. This longitudinal analysis provides some information about the influence of mothers' behaviors on subsequent child behavior. The temporal nature of the association does not prove causal direction but is more suggestive of causation than cross-sectional associations.

In each multiple regression analysis a stepwise procedure was used. In the first step, the set of mothers' prosocial behaviors were used as predictors. In the second step, maternal warmth was entered as a predictor, to control for its main effect relationship with child prosocial behavior before testing for its role as a moderator variable in the third step. Although no hypothesis had been offered regarding the association between maternal warmth and child prosocial behavior, the second step examined that association. In the third step, interaction terms for maternal warmth and positive maternal behaviors were entered. Interaction terms were computed by multiplying mothers' warmth scores by their scores on each type of their prosocial behavior. The results of the three multiple regression analyses are presented in Table 3 (mothers' behaviors in 2001/2002 that were related to child behaviors in 2002), Table 4 (mothers' behaviors in 2007 that were related to child behaviors in 2007), and Table 5 (mothers' behaviors in 2001/2002 that predicted child behaviors in 2007).

Table 3

Multiple Regression Analysis for Child Behaviors in 2002 as a Function of Maternal Behaviors in 2001/2002

Model	R	R Square	R Square Change	F Change	Sig. of F Change	N
1	.208	.043	.043	10.978	<.001	973
2	.227	.051	.008	8.126	.004	973
3	.234	.055	.004	0.912	.456	973

Note. Model 1 predictors = maternal prosocial behaviors of doing chores with children, philanthropic giving, volunteering and talking with children about donating; Model 2 = maternal prosocial behaviors and maternal warmth; Model 3 = maternal prosocial behaviors, maternal warmth, and interactions of maternal warmth and maternal prosocial behaviors.

Table 4

Multiple Regression Analysis for Child Behaviors in 2007 as a Function of Maternal Behaviors in 2007

Model	R	R Square	R Square change	F Change	Sig. of F Change	N
1	.237	.056	.054	24.283	<.001	1232
2	.237	.056	<.001	0.022	.882	1232
3	.248	.061	.005	2.320	.074	1232

Note. Model 1 predictors = maternal prosocial behaviors of doing chores with children, philanthropic giving, volunteering and talking with children about donating; Model 2 = maternal prosocial behaviors and maternal warmth; Model 3 = maternal prosocial behaviors, maternal warmth, and interactions of maternal warmth and maternal prosocial behaviors.

Table 5

Multiple Regression Analysis for Child Behaviors in 2007 as a Function of Maternal Behaviors in 2001/2002

Model	<i>R</i>	<i>R</i> Square	<i>R</i> Square Change	<i>F</i> Change	Sig. of <i>F</i> Change	<i>N</i>
1	.195	.038	.038	8.290	<.001	846
2	.196	.038	.001	0.458	.499	846
3	.197	.039	.001	0.115	.977	846

Note. Model 1 predictors = maternal prosocial behaviors of doing chores with children, philanthropic giving, volunteering and talking with children about donating; Model 2 = maternal prosocial behaviors and maternal warmth; Model 3 = maternal prosocial behaviors, maternal warmth, and interactions of maternal warmth and maternal prosocial behaviors.

Tests of Hypotheses 1-4

Only the first step of each of the three stepwise multiple regression analyses addressed the first four hypotheses, which involved types of maternal prosocial behaviors as predictors of child prosocial behavior. It is important to note that the three dichotomous measures of mothers' behaviors (volunteering, philanthropic giving, and talking with children about donating) were coded in the PSID database as Yes = 1 and No = 5. For the purpose of the present data analyses, these numbers were recoded such that No = 0 and Yes = 1.

In the first multiple regression analysis (2001/2002 maternal behaviors that relate to 2002 child behaviors), the four maternal behaviors were entered in the first step. For step 1, the multiple correlation *R* was .208, and the *R*²

was .043, and the R^2 change was .043. The F for this step was 10.978, which was significant ($p < .001$).

Of the four maternal behaviors entered in step 1 of analysis 1, only one (doing chores with the child) was a significant predictor ($\beta = .173$, $t = 5.429$, $p < .001$). This association of greater engagement in chores with the child being associated with more child prosocial behavior supported Hypothesis 1.

Another maternal behavior (talking with children about donating) approached significance ($\beta = .061$, $t = 1.904$, $p = .057$). This trend suggests a positive link between mothers talking with children about donating and children's prosocial behaviors, which was consistent with Hypothesis 4.

The four maternal behaviors also were entered as the first step of the second analysis (2007 maternal behaviors that relate to 2007 child behaviors). For step 1 of analysis 2, the R was .237, the R^2 was .056, and the R^2 change was .056. The F for the change in R^2 was 24.283, which was significant ($p < .001$).

Of the four maternal behaviors in step 1 of analysis 2, two predictors were significant: doing chores with the child ($\beta = .164$, $t = 5.796$, $p < .001$), and mothers' philanthropic giving ($\beta = -.147$, $t = -5.173$, $p < .001$). These results indicate a significant positive association between mothers' doing chores with children and children's prosocial behavior, which was consistent with Hypothesis 1. However, the significant negative association between mothers' philanthropic giving and children's prosocial behavior was inconsistent with Hypothesis 2.

In the third multiple regression analysis that was longitudinal (2001/2002 maternal behaviors that relate to 2007 child behaviors), the four maternal behaviors were entered in the first step. For step 1, the R was .195, and R^2 was .038. The F change was 8.290, which was significant ($p < .001$).

Of the four maternal behaviors in step 1 of analysis 3, two predictors were significant: doing chores with the child ($\beta = .110$, $t = 3.187$, $p = .001$), and maternal philanthropic giving ($\beta = -.130$, $t = -3.467$, $p = .001$). Similar to the results of analysis 2, these results suggest a significant positive association between mothers' doing chores with children and children's prosocial behavior, which was consistent with Hypothesis 1. There was a surprising negative and significant association between mothers' philanthropic giving and children's prosocial behavior, which was inconsistent with Hypothesis 2.

Tests of Hypothesis 5. Hypothesis 5 states that maternal warmth will have a moderating (enhancing) effect on the relationship between the aforementioned maternal behaviors and adolescent prosocial behaviors. The interaction effect between maternal warmth and the other maternal behaviors was analyzed in step 3 of each of the three multiple regression analyses. The results of step 3 were as follows:

In step 3 of analysis 1, the maternal warmth interaction effect had a p value of .456, which is not significant. None of the individual maternal behaviors were significant predictors of child prosocial behavior.

In step 3 of analysis 2, the maternal warmth interaction effect had a p value of .074, which can be considered a trend. In that analysis, there was a significant interaction effect for one of the maternal behaviors as they related to child behaviors. The interaction of maternal warmth and doing chores with the child in 2007 was significant ($\beta = .473$, $t = 2.297$; $p = .022$). In order to examine the direction of that interaction effect, the distribution of parental warmth scores was examined, the median value was found, and a median split was made at that point that was closest to the 50% point. The parental warmth scores were then re-coded such that scores up to the median were coded as 1 ("lower warmth") and those above the median were coded as 2 ("higher warmth"). Then, the correlation between the parent doing chores with the child and the child's prosocial behavior was calculated separately for cases with higher and for lower parental warmth.

The Pearson correlation for the higher parental warmth cases was .254 ($p < .001$), whereas the correlation for the lower parental warmth cases was .094 ($p = .020$). This pattern was consistent with Hypothesis 5 that greater parental warmth would be associated with a stronger relationship between parental prosocial behavior and child prosocial behavior.

In step 3 of analysis 3, the maternal warmth interaction effect had a p value of .977, which was not significant. None of the individual maternal behavior predictor variables were significant in this analysis.

Other Findings

The relationship between maternal warmth and child prosocial behaviors was analyzed in step 2 of each of the three multiple regression analyses. The results were as follows:

In step 2 of analysis 1, greater maternal warmth was significantly associated with greater child prosocial behavior ($\beta = .098$; F change = 8.126; $p = .004$).

In step 2 of analysis 2, maternal warmth was not significantly related to child prosocial behavior ($p = .882$).

In step 2 of analysis 3, maternal warmth also was not significantly related to child prosocial behavior ($p = .499$). Thus, maternal warmth was associated with greater child prosocial behavior only concurrently when the children in the sample were younger.

Discussion

The purpose of this study was to investigate mothers' behaviors as they relate to prosocial behaviors in their children. Maternal warmth was evaluated as a moderating variable. It was expected that higher levels of mothers' prosocial behaviors (doing chores with children, volunteering, making charitable donations, and talking with children about donating) would be positively associated with the degree of prosocial behaviors enacted by their children. It was also expected that maternal warmth would moderate (enhance) the relationship between maternal behaviors and children's prosocial behaviors.

Summary of Overall Findings

Hypotheses 1-4 findings

Hypotheses 1-4 were measured in the first step of each of the three analyses. In each analysis, the only maternal behavior that was significantly, positively associated with children's prosocial behavior was mothers' doing chores with their child. This finding supported Hypothesis 1, which stated that the more time mothers spent doing chores with the child, the more the child will engage in prosocial behavior. Because the third of the three analyses was longitudinal, these findings suggest causation in the link between mothers' doing chores with their children and subsequent prosocial behavior 5 years later. However, the effect size was rather small, so the influence does not appear to be strong, but given the limitations of the study's measures of the variables (discussed in the Limitations section), it still is notable that a significant maternal influence was found.

In step 1 of each of the second and third analyses, there was one other significant finding, which was unexpected. Maternal philanthropic giving was *negatively* and significantly associated with children's prosocial behavior. This finding ran counter to Hypothesis 2, which stated that children with mothers who engage in philanthropic giving will be more likely to engage in prosocial behavior. There were no other significant findings that related to hypotheses 3 and 4 concerning effects of parent prosocial behaviors.

Overall, the results indicated that mothers' doing chores with children is in fact associated with children's prosocial behavior, both concurrently and

longitudinally, although the effect size is small. Furthermore, the results indicated that mothers' engaging in philanthropic giving tended to be negatively associated with children's prosocial behaviors. Based on the results of this study, the other maternal behaviors (volunteering, and talking with children about donating) do not appear to be associated with children's prosocial behaviors.

Hypotheses 1-4 Findings in Relation to the Literature

Hypothesis 1. The literature supports the notion that mothers' doing chores *with* children is a significant predictor of children's prosocial behaviors. Both theory and past research provide support for this predictor being stronger than the other independent variables in this study. Social learning theory posits that the first steps in the modeling process involve children observing and attending to the behaviors modeled by their parents (Bandura, 1977). When mothers do chores with their children, they ensure that the child sees their prosocial behaviors. Perhaps this is also the reason that mothers' volunteering was not significantly correlated with children's prosocial behavior; there was no way to actually be certain that children were aware that their mother engaged in volunteering.

In addition to theoretical support, past empirical research supports the notion that parents doing chores with children would be a strong predictor of children's prosocial behavior. As noted in the literature review, past research has demonstrated the importance of being involved with children in the

intergenerational transmission of prosocial values (Padilla-Walker & Christensen, 2010).

Furthermore, the chores variable shares something fundamentally in common with the measure of the children's prosocial behaviors that the other maternal behaviors lack; both the chores variable and the index of children's prosocial behaviors measure prosocial behaviors performed directed toward the family. Four of the six items measuring children's prosocial behavior involve actions directed toward one's family. Similarly, the chores variable directly benefits the family. Perhaps families in which mothers model prosocial behaviors that benefit the family are more likely to have children whose prosocial behaviors are directed toward the family as well.

Hypothesis 2. Although modeled parent behaviors such as philanthropic giving are less likely to be observed by the child, it is nevertheless surprising that mothers' philanthropic giving was negatively correlated with children's prosocial behaviors. Nothing in the literature reviewed for this study sheds light on why this association was negative. Throughout the literature, no previous studies suggested that parents' philanthropic giving might have any kind of negatively association with prosocial behaviors in children.

Hypothesis 3. Unlike doing chores with children, when parents engage in volunteering, there is no guarantee that the child will see their parents' prosocial behaviors. As mentioned previously, one of the key steps in modeling is the *attentional process*, in which children attend to the modeled

behavior (Bandura, 1977). Perhaps this helps explain why mothers' volunteering was not significantly correlated with children's prosocial behavior. Maternal volunteering behavior easily could be too removed from the child to have any impact.

Hypothesis 4. Although Hoffman (2000) and Bandura (1977) both mentioned that inductions play a role in socializing children, Bandura (1977, 1986) emphasized the importance of modeling over inductions. That Steinberg's first parenting principle states "what you do matters" (Steinberg, 2004), may add support to the notion that modeling is one of the key means for socializing children. Perhaps then it is not surprising that there were no significant findings about mothers talking with children about donating and an associated increase in children's prosocial behaviors, given that theory seems to suggest that modeling is more influential in socializing children. If the effect size for modeling was small in the present study, it follows to reason that there may be no significant effect size for inductions that appeared less important in the literature. Another possible explanation for the lack of significant findings related to hypothesis 4 is related to limitations in the measure of inductions used for this study, which is described in greater detail in the Limitations section.

Hypothesis 5 findings

There were no significant results ($p < .05$) for step 3 (the interaction between the maternal behaviors and maternal warmth) for any of the three analyses. However, analysis 2 had results that approached significance ($p =$

.074) for that interaction effect. Within that step of analysis 2, there was one individual variable for which the interaction effect was significant. For 2007 there was a significant interaction effect between maternal warmth and mothers' doing chores with children in predicting scores for children's prosocial behavior, consistent with Hypothesis 5. The association between doing chores with the child and the child enacting more prosocial behavior was stronger among families with higher maternal warmth than among those with lower maternal warmth. Thus, the findings suggest that warmth had some moderating effect in enhancing the association between parent behaviors and children's prosocial behaviors in 2007.

Based on the results from step 2 of the three analyses it also appears that there is some direct effect of maternal warmth on children's prosocial behaviors, but only in the 2001/2002 analysis.

Hypothesis 5 Findings in Relation to the Literature

While warmth did not have quite the moderating effect that was expected, it did have a moderating effect in which higher warmth enhanced the association between doing chores with children and children's prosocial behaviors in the 2007 cross-sectional analysis. This may be because the chores variable requires interaction with the child. Perhaps warmth enhances the experience children have doing chores with their mothers and makes them more likely to behave prosocially. The literature supports the notion that observational learning from nurturant models is more likely to have an impact on children (Clary & Miller, 1986). Hoffman (2000) also theorized that warmth

would be a moderating factor in the socialization process of children when he recommended a “blend of frequent inductions, occasional power assertions, and a lot of affection” (Hoffman, 2000, p. 23). Based on the results of this study, it may not be as much of a moderating factor as Hoffman suggested, or at least the effects of warmth may require that the mother’s prosocial behavior be linked more closely to direct interactions with the child. Other empirical studies have suggested that warmth is important in the intergenerational transmission of prosocial values (Speicher, 1992), but the modeling of behaviors such as volunteering may be too removed from direct parent-child interactions to have much effect.

Limitations

Several limitations in the present study were a result of limitations in the data gathered from respondents for the PSID survey. These limitations are as follows:

Dichotomous measures were used to inquire about mothers’ modeling of volunteering, mothers’ philanthropy and talking with children about chores; such dichotomous measures limit the information gathered. For example, the item measuring philanthropic giving merely asked whether parents gave \$25 or more in the past year. Possible responses were “yes” and “no”. It would have been helpful to know more information, such as the actual amount given, and frequency of the donations. Ascertaining the percentage of the total household income donated would have also been useful. Simply asking parents whether they donated \$25 at one time during a calendar year does

not suggest an established pattern of philanthropy. Participants who may have responded in the affirmative to that question do not necessarily engage in habitual donating. Similarly, for the variable measuring mothers' volunteering, more information about the type of volunteering and frequency would have been helpful.

Another potentially major weakness of the measures of parents' philanthropic giving and their volunteering is that the wording of the PSID items left it unclear whether children actually witnessed their mothers engaging in and modeling these behaviors. While some children may have been likely to be aware of these maternal behaviors, it is possible that others had no knowledge of their mothers' prosocial behaviors. Furthermore, these variables were only measured with one item each. Future research could include more items for each variable, as well as questions directed to the child about whether or not they actually saw their mothers engaging in the prosocial behaviors. Relying on mothers' self-reports of their prosocial behaviors appears to have limited the validity of the tests of hypotheses regarding those forms of maternal behavior.

The measure of inductions had several weaknesses as well. The study may be limited by the fact that the measure of maternal inductions was not only dichotomous (yes/no), but the one question does not inherently ensure that mothers talked with their child about donating in an inductive manner (describing consequences in a supportive manner). Instead, the item measuring inductions merely asked whether mothers talked with children

about donating. Future research might include questions about whether mothers discussed with children the effects of their prosocial behavior. For example, possible questions might ask mothers about the nature and content of their conversations regarding donating. Specifically, a question could ascertain whether the conversation was a discussion by asking if there was back-and-forth dialogue. Another item could evaluate whether the content of the conversation was inductive by asking mothers if they discussed with children the potential impact of the donation in the lives of those who may benefit from it. To ensure that children are aware of their mothers' habitual donating, it may be beneficial to ask children to report their perception of their mothers' philanthropic behavior.

Ideally, inductions would be measured through observation. Trained researchers could observe the conversations that mothers have with their children in order to notice whether the mother uses an inductive communication style with her child.

Another limitation that may have influenced the validity of the assessments of all of the maternal behaviors is social desirability. Philanthropic giving, volunteering, warmth, and involvement with children (chores) are typically all seen as socially desirable behaviors. Perhaps mothers' reports of their own behavior were influenced (in the direction of over-reporting) by their knowledge that these behaviors are seen as positive by others. Gathering information through observation of the mothers by

trained researchers could also help address limitations associated with social desirability.

Another drawback to the data available in the PSID is that data on parent volunteering and philanthropic giving were not collected in 2007, so those could not be included in the cross-sectional analysis of 2007 mothers' behaviors and 2007 child prosocial behaviors. Only the 2001 dataset included all of the maternal behaviors being measured in this study.

The PSID sample used for this study may have also presented a limitation. Polling only mothers in two-parent homes limits generalizability of the findings significantly. Families are highly diverse in terms of structure, so only looking at families with two parents significantly narrows the participant pool, and consequently the relevance of the findings.

Another limitation may be that the mothers' prosocial behaviors and children's prosocial behaviors that were studied are somewhat different in nature; many of the maternal behaviors were directed outward toward society, whereas the measures of children's prosocial behaviors focus on actions toward family and friends. Perhaps, measuring more societally oriented child prosocial behaviors would be an interesting avenue to explore further in future research.

Finally, that the present study did not take into account age and gender may present some limitations. Some of the children studied were as young as 3 years old at the initial data collection point. Children at such a young age may not even understand the concept and possible consequences of their

mothers' philanthropy, if they are even aware that their mothers' engaged in philanthropic behavior. Similarly, young children are not likely to recognize their mother's volunteering behaviors. They may even be too young to engage in chores with their mothers. In the future, very young children should be omitted from the study. An age range from 8-17 at the initial data collection point seems to be more appropriate. Even then, it would be desirable to analyze the results for children (8-12) separate from those of adolescents (13-17) in order to understand differences between children in these two developmental stages.

It may have been beneficial to analyze the results of the present study separately based on the gender of the child as well, especially because the parents used in this study were mothers only. Past research has found that fathers do not have the same modeling effect on children as mothers (Mustillo et al., 2004). These differences in the parent's gender should continue to be explored in future research. Furthermore, if the parents' gender influences the intergenerational transmission of prosocial behaviors, perhaps there are differences related to the children's gender as well. Thus, future research should also explore gender differences among the children who are receiving messages from their parents about prosocial behaviors.

Implications for Future Research

As previously mentioned, Future research might include more items to assess each variable. Modeling might be more effectively measured by including questions to the child about whether or not they actually saw their

mothers engaging in prosocial behaviors. Furthermore, inductions might be more effectively measured by including questions about whether mothers discussed with children the effects of their prosocial behavior. Assessing the nature and content of conversations about philanthropy might be beneficial. Finally, assessing parent behaviors relevant to socializing children using observation might help create a clearer picture of how parents interact with their child and might reduce limitations associated with social desirability.

As mentioned, the present research, as well as much of past research, either used only mothers in their study, or found that fathers did not have the same modeling effect as mothers (Mustillo et al., 2004). As mentioned, there appear to be differences in parental influence based on gender. Future research might evaluate parent and child gender differences in the intergenerational transmission of prosocial values and behaviors.

In order to address limitations of this study that were based on failing to take age of the child into account, future studies may improve on the present study by omitting very young children from the sample. Tests of the hypotheses could be conducted separately for the developmental stages of childhood (8-12) and adolescence (13-17).

Because of the mixed findings for warmth in the present study, it would be beneficial to continue to include warmth in future studies about the intergenerational transmission of prosocial values and behaviors. It may also be beneficial to distinguish between general warmth and level of warmth conveyed during specific child socialization activities.

Implications for Clinical Practice

As noted in the literature review, child and adolescent prosocial behavior has been linked with short-term and long-term mental and physical health benefits (Caprara & Barbaranelli, 2000; Schwartz et al., 2003). Parents who know the benefits of prosocial behaviors in children may be motivated to help their child develop prosocial behaviors by making an effort to do more chores together with their children. In most cases, it is quicker for parents to either ask the child to do chores or do the chores themselves. However, based on the results of this study, it may be a worthwhile investment to take time to do chores together with children. Clinicians who know the results of this study may also choose to teach parents about the value of doing chores together with their children. The significance of these findings is bolstered by the longitudinal nature of analysis 3 (parent behaviors in 2001/2002 and child behaviors in 2007).

Furthermore, the present study has some findings that support the notion that warmth is important in parenting. Particularly because socializing children frequently involves discipline, it may be difficult at times for parents to be warm with children while socializing them. However, the results of this study suggest that warmth may be an important part of the socialization process. As mentioned in the literature review, children are more likely to respond to “nurturant models” (Clary & Miller, 1986). Helping parents to engage with children in a warm manner may increase the likelihood that children will attend to their parents’ modeling behaviors and respond to their

socialization efforts in general. Clinicians can help parents understand that warmth is an important part of the socializing process.

Conclusion

The present study evaluated the relationship between maternal behaviors and their children's prosocial behaviors, as moderated by maternal warmth. Overall, results indicated that there is a cross-sectional and longitudinal relationship between mothers doing chores with children and children's prosocial behaviors. These findings may be significant for families because parents may want to spend more time doing chores with their children. The findings may be significant for clinicians who may wish to teach parents about the value of doing chores with their children. The other findings (or lack thereof) may suggest a need for future research.

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