Inductive Discipline and Children's Prosocial Behavior: the Role of Parental Emotion Regulation Strategies

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Abstract

Although parental inductive discipline has significant influence in children’s prosocial behavior, there is less understanding of how parental emotion regulation strategies influence inductive discipline. This study examined the role of two parental emotion regulation strategies (cognitive reappraisal and expressive suppression) on parental inductive discipline and children’s prosocial behavior. I tested the hypotheses that parental cognitive reappraisal positively correlates with inductive discipline and children’s prosocial behavior whereas parental expressive suppression negatively correlates with inductive discipline in a sample of 59 parents of 3-to-5 year old children. I performed correlation and regression analyses to examine these relationships. Results indicated that expressive suppression was negatively associated with children’s prosocial behavior. In addition, the relationship between inductive discipline and children’s prosocial behavior was stronger when parental warmth was high. These findings provide empirical evidence for the influence of parental emotion regulation strategies on parenting behaviors and child outcome.

*Keywords:* inductive discipline, parental warmth, emotion regulation, cognitive reappraisal, expressive suppression, prosocial behavior
INDUCTIVE DISCIPLINE AND CHILDREN’S PROSOCIAL BEHAVIOR: THE ROLE OF PARENTAL EMOTION REGULATION STRATEGIES

by

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B.M. Tianjin University of Science and Technology, 2012

Thesis
Submitted in partial fulfillment of the requirements for the degree of Master of Science in Child and Family Studies

Syracuse University
July 2016
Acknowledgements

The past year has been full of challenges and obstacles. I would, first, like to thank my advisor Dr. Bruce Carter for his wisdom, support, and expertise during this meaningful journey. I could not have accomplished this thesis without his constant mentoring and guidance. I would also like to thank my committee members Dr. Matthew Mulvaney, Dr. Rachel Razza, and my committee chair Dr. Ambika Krishnakumar, for their support and valuable contributions.

I thank my fellow graduate student friends for their help along the way with data collection, writing, and data analyses. I also want to thank the early childcare centers and schools in Syracuse University and in the city of Syracuse for helping me distributing and collecting surveys from their students. And last but not the least, a special thanks to all the parents who participated in the study.
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Introduction

The relationship between parents and children is a hierarchal relationship. Parents have almost absolute power over their children. Parents use their power, by means of disciplinary techniques, to change children’s behavior so that children will obey or or will be compelled to obey their parents (Hoffman, 1983; Slater & Power, 1987; Smetana, 1997). Much literature in parenting and socialization has focused on harsh parenting and children’s adjustment problems such as externalizing and internalizing problems in the past (Carlo, Fabes, Laible, & Kupanoff, 1999; Eggum et al., 2011). That is because harsh punishment such as hitting is extremely prevalent, especially for young children. For example, in the National Family Violence Survey conducted in 1990, it found that the peak age of hitting is twenty-five months, also known as “the terrible twos” (Straus, 2000). Almost all parents of toddlers and 94% of parents of three-to-five years olds reported hitting their child in this survey (Straus, 2000). However, there is less research on positive parenting, such as inductive reasoning, and children’s positive social emotional development, such as prosocial behavior. Inductive discipline is positively correlated with children’s prosocial behavior (Eisenberg & Murphy, 1995; Hoffman & Saltzstein, 1967; Hoffman, 1983). However, there is a lack of research on which factors contribute to the effectiveness of inductive discipline. My research examined the role of parental emotion regulation strategies on parental use of inductive discipline, and the role of parental emotion regulation strategies on children’s prosocial behavior.
Literature Review

Prosocial Behavior and Moral Development

Much research has focused on antisocial and aggressive behavior rather than on prosocial behavior (Eisenberg, Fabes, & Spinrad, 2006; Eisenberg & Mussen, 1989; Molano, Jones, Brown, & Aber, 2013; Staub, 2003). Research on prosocial behavior and moral development is particularly important for several reasons. First, prosocial behavior is one of the most important social emotional skills, also known as “soft skills,” a person needs for life success (Caprara et al., 2014). Also, early prosocial behavior is associated with children’s abilities in other areas such as perspective taking and emotional understanding (Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013). Moreover, children’s early prosocial skills positively predict their subsequent academic achievement (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000; Eisenberg & Mussen, 1989).

Prosocial behavior includes behaviors that are done for the benefit and welfare of other people according to the moral norms of a given society or a given culture (Hoffman, 1983; Padilla-Walker & Carlo, 2014). That is to say, prosocial behavior is not a single construct that can be studied, instead, it is a multidimensional construct needs to be examined carefully (Padilla-Walker & Carlo, 2014). Prosocial behaviors can be categorized into different types based on the nature of the behaviors. Some are spontaneously emitted while others are compliant (i.e., performed upon verbal and/or nonverbal request); some are public prosocial behaviors while others are private; some prosocial behaviors are costly (e.g., sharing a toy with a friend) while others are less costly (e.g., passing a piece of paper to a friend) (Eisenberg & Spinrad, 2014). Common types of prosocial behaviors are compliant prosocial behaviors,
anonymous prosocial behaviors, dire prosocial behavior, altruistic prosocial behaviors, emotional prosocial behaviors or public prosocial behaviors (Eisenberg & Spinrad, 2014). Nevertheless, these types of prosocial behaviors are more often seen in adolescent and adult prosocial research (Eisenberg & Mussen, 1989). This trend may be because adolescents and adults have a larger repertoire of all types of behaviors than young children (Eisenberg & Mussen, 1989).

Motivational differences are one of the most well studied aspects of prosocial behavior (Honig, 1982). It is important to note that prosocial behavior is not equal to altruistic behavior. Prosocial behaviors also include those done for external or internal rewards (Blakemore, Berenbaum & Liben, 2009; Eisenberg & Mussen, 1989). As Eisenberg and Spinrad’s (2014) review indicates, prosocial behaviors can be done for hedonist reasons, for social and normative reasons, for other-oriented reasons, or for one’s internalized moral values.

Different motivations are associated with different types of prosocial behavior, and not all types of prosocial behavior are related to each other (Carlo, Hausmann, Christiansen & Randall, 2003; Spinrad & Stifter, 2006). For example, Carlo and colleagues (2003) found that adolescents who exhibited prosocial behaviors in front of other people often had approval-oriented moral reasoning in the research of adolescent prosocial behaviors. These adolescents were less likely to exhibit altruistic prosocial behavior or other types of prosocial behavior especially when compared with adolescents with internalized moral reasoning (Carlo et al., 2003). Sympathy and other-oriented moral reasoning have been found to be consistently associated with costly prosocial behaviors and spontaneous prosocial behaviors than those less costly prosocial behaviors and those emitted as a response to another’s request (Eisenberg & Fabes, 1998). Internalized moral values were found to be positively related to all types of prosocial behavior other than public prosocial behavior (Carlo et al., 2003).
The development of prosocial behavior in early childhood. Children’s prosocial literature mainly focuses on specific behaviors rather than the relationships among behaviors, moral reasoning and motivations. Past research on children’s prosocial behavior has focused on the development of different types of prosocial behavior, on individual differences, and on the socialization of prosocial behavior. In contrast to adolescent and adult prosocial behavior, children’s prosocial behaviors are broadly categorized into 3 types: responsiveness to other people’s distress, helping behaviors, and working with others (Laible & Karahuta, 2014). These categories often also include empathy elicited behaviors, informing, instrumental helping, helping and housework, sharing, compliance, and cooperation (Laible & Karahuta, 2014).

Young children exhibit many spontaneous prosocial behaviors from very early age (Eisenberg & Mussen, 1989; Honig, 1982). For example, infants as young as 12 months have the capacity to understand other people’s intentions as well as distressed feelings. Similarly, 14 to 18 months-olds show comforting behaviors, for instance, hugging, toward mothers as well as strangers; 14 to 18 months-olds also show instrumental helping behaviors toward adults (Eisenberg & Spinrad, 2014; Laible & Karahuta, 2014; Tomasello & Warneken, 2009). Infants exhibit sharing behavior very early in life. However, these prosocial behaviors require a lower level of emotional understanding. Some researchers suggested that these behaviors may come from infants’ desire to affiliate with others rather than out of the concern for others (Laible & Karahuta, 2014).

Other types of prosocial behavior develop later in childhood. According to this Kohlberg (1984), children actively develop moral thinking and judgments through their increasingly complicated cognitive abilities to process information and understand the world. For example, compared to the ability to comfort and help others, young children’s ability to cooperate and
work with others develops much later (Eisenberg & Spinrad, 2014). This tendency can be observed in children’s play. Toddlers most often engage in solitary play and parallel play whereas preschoolers, especially those older than 4 years, are more likely to engage in cooperative play (Johnson, Christie, & Wardle, 2005). They are able to share a common goal with peers and solve problems together (Johnson et al., 2005). In addition to cooperation, other prosocial behaviors that require higher levels of emotional understanding also develop later in life (Eisenberg & Spinrad, 2014).

Moreover, it is worth noting that children’s prosocial behaviors are not directed at everyone (Eisenberg & Spinrad, 2014). The recipient of children’s prosocial behavior changes with age. There are two popular viewpoints regarding this issue. One is that children become more prosocial with age. The other one is children become less prosocial with age (Laible & Karahuta, 2014). This brings out the question of what we mean when we talk about children’s prosocial behavior. Is it children’s prosocial behavior toward siblings at home? Or is it their prosocial behavior toward peers at school? Clear conceptualization of what prosocial behavior means in a certain research is important.

Whether children become more, or less, prosocial with age depends on how we look at the issue. On one hand, children’s prosocial behavior increases as they mature (Eisenberg & Fabes, 1998). Adolescents exhibit much more prosocial behaviors due to changes in their sociocognitive and socioemotional skills such as perspective taking (Carlo et al., 2003). Young children, however, are more likely to exhibit prosocial behavior toward people they are familiar with than toward strangers (Laible & Karahuta, 2014). For example, toddlers between 14 and 36 months of age were found to be more prosocial to their mothers than to a stranger (Spinrad & Stifter, 2006). This holds particularly true when it comes to shy children who are hesitant and
fearful of adult strangers as well as peer strangers (Eisenberg & Spinrad, 2014). Assertive and sociable children, however, are more likely to approach as well as extend help, and show concerns to strangers (Eisenberg & Fabes, 1998; Eisenberg & Spinrad, 2014).

On the other hand, as children age, they become more selective with whom they be friends with and whom they help (Eisenberg & Spinrad, 2014). This becomes particularly obvious when gender segregation starts later in childhood where boys and girls play separately. Both boys are girls are more likely to behave prosocially toward same-sex peers (Hay, Castle, Davies, Demetriou, & Stimson, 1999; Johnson et al., 2005; Laible & Karahuta, 2014).

Moreover, gender is one of the most common correlates of prosocial behavior (Hastings, Utendale, & Sullivan, 2007). Research has demonstrated many sex differences in prosocial behaviors. Many empirical studies indicate that girls and women are more prosocial than boys and men because of their nurturing nature (Eisenberg & Fabes, 1998; Hastings et al., 2007; Rose & Rudolph, 2006; Storch, Nock, Masia-Warner, & Barlas, 2003). For example, in one study, researchers observed young children’s (18, 24, and 30 month-olds) sharing behavior and reported that older girls showed the greatest increase in prosocial behavior whereas older boys showed declined prosocial behavior (Hay et al., 1999). Further, observational research suggests that boys are more assertive, direct and physical during play whereas girls are more prosocial, polite and verbal during play, they value group harmony more than boys (Johnson et al., 2005). Even among children with disruptive behavior problems, girls show more concern for others than boys (Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000).

**The socialization of prosocial behavior in early childhood.** It is argued that human beings are biologically predisposed to act altruistically (Tomasello, 2008), and children’s cognitive abilities, as well as emotional abilities, develop naturally and enable them to behave
more prosocially (Kohlberg, 1984; Hay et al., 1999). However, it is important to keep in mind that children are exposed to the process of socialization as they age. There is much evidence that prosocial behavior is influenced and enhanced by socialization. Parents, and other socializing agents (e.g., teachers, peers, and others), cultivate and promote children’s prosocial and moral behaviors in many ways (Eisenberg & Murphy, 1995). For example, intervention studies on prosocial education show that prosocial behavior can be enhanced by preaching, verbal and physical reinforcement, modeling, induction, victim-centered reasoning, scaffolding and many other techniques by teachers and parents (Bergin & Ramaswamy, 2009; Brown, Corrigan, & Higgins-D’Alessandro, 2012; McCarfferty, 1990).

The parent-child relationship is closely related to the development and enhancement of children’s prosocial behavior. It has been argued that children’s internalization of adult moral value and the society’s moral norm is central to prosocial and moral development (Berk, 2000; Eisenberg & Murphy, 1995; Hoffman, 1983). Positive parent-child relationships will foster children’s positive development. Such practices include parental warmth, affection and nurturance, firm but not forceful control, reasoning and explaining, parental modeling, natural socialization, and emotion socialization (Berk, 2000; Eisenberg & Mussen, 1989; Staub, 2003). To understand how and why these parenting practices contribute to prosocial development, it is helpful to review Social Learning Theory.

*Social Learning Theory.* Traditional social learning theory, also known as behaviorism, believes that stimulus-and-response is the sole explanation for all aspect of human psychology, from language to behavioral changes (Bandura, 1971). According to behaviorism, learning is a passive experience that happens through the process of conditioning. The roles of response
consequences are at the center of behaviorism. Reinforcements and punishments cause behavioral change and determine human behavior (Bandura, 1971).

In this sense, children behave prosocially because their prosocial behaviors are rewarded and their antisocial and/or aggressive behaviors are punished. In order to get future reward or avoid future punishment, children act more prosocially. This external reward and punishment, largely from parents and peers, later evolves into the child’s self-reward and punishment after moral values are internalized. However, behaviorism has been criticized significantly for its reductionistic and deterministic nature. The basic assumption that human beings can only learn from direct response consequences negates human’s complicated cognitive processes as well as free will (Bandura, 1971).

Contemporary social learning theory, also known as cognitive social learning theory, however, suggests that human beings have higher mental capacities than animals. Bandura (1986) proposed that human beings have these following basic capabilities: symbolizing capabilities allow people to process and transform information symbolically to guide their future behavior; forethought capabilities allow people to anticipate likely outcomes of a certain behavior and therefore guide their behavior; vicarious capabilities allow people to observe and learn from other people’s experiences without having to go through infinite trials and errors; self-regulatory capabilities allow people to regulate their behaviors according to their internal standards; self-reflective capabilities allow people to think about their own actions and thought processes.

According to cognitive social learning theory, reinforcement does cause behavior changes, but the underlying reasons go beyond its reinforcing effect. The effect of reinforcements is mediated by internal cognitive processes. Bandura (1971) argued that
awareness is considered as the prerequisite of learning, or conditioning: people need to be aware of what is being reinforced first in order for reinforcement to be most effective. By observing reinforcements, people develop thoughts and hypotheses regarding how to behave in future and what response consequences they may receive for a specific behavior.

Bandura (1986) put forth the concept of triadic reciprocal determinism (see Figure 1.) that behavioral, cognitive factors, and environmental factors determine each other. More specifically, behavioral factors include skills, practice, and self-efficacy; cognitive factors include knowledge, expectations, and attitudes; environmental factors include external spaces, social norms, and law (Bandura, 1971; Bandura, 1986)

![Triadic reciprocal determinism](image)

*Figure 1. Triadic reciprocal determinism (Bandura, 1986)*

From the perspective of behaviorism, socializing agents such as parents play multiple roles in children’s prosocial behavior and moral development. Parents can give direct response consequences (i.e., reward and punishment) to children’s behavior. They can provide information regarding their expectations from children. And they can also facilitate children’s development of self-evaluative emotions such as guilt (Bandura, 1971). Here I introduce two common types of observational learning: modeling and imitation. By observing other people’s
behaviors, children establish symbolic representations of the behaviors in their mind and act them out. Children act prosocially toward others under the influence of prosocial models around them. These models can be parents, peers, teachers or any other socializing agents.

Moreover, younger children appear more susceptible to the influence of prosocial models as well as aggressive models than do older children (Eisenberg & Mussen, 1989; Lipscomb, Larrieu, McAllister & Bregman, 1982). This is probably because as children grow older, they internalize moral values from past experience and thus models are less influential than the internalized values. As a result, children act prosocially not only toward other people but also toward the socializing parents (Padilla-Walker, Nielson, & Day, 2016).

*Baumrind’s authoritative parenting style.* Research on positive parenting has been built upon Baumrind’s (1971) parenting styles literature. Baumrind (1971) proposed that there are three general categories of the overall emotional climates of the parent-child relationship on the dimension of demandingness and warmth/nurturance: permissive, authoritarian, and authoritative parenting. Permissive parents are warm and nurturing, but they exercise low levels of control and are lack of disciplinary consistency (Baumrind, 1971). Authoritarian parents are high on coercive control and low on warmth and nurturance (Baumrind, 1971; Baumrind, 2013). Children of authoritarian parents hold fear towards the parents and they lack autonomy (Baumrind, 1971). Moreover, permissive parenting and authoritarian parenting are usually related to children’s maladjustment such as aggression and low self-esteem (Morris, Cui & Steinberg, 2013). Authoritative parenting style, on the other hand, is characterized by high warmth/nurturance as well as reasonable but confrontive control; it is “both responsive and demanding, confrontive and autonomy supportive, affectionate and power assertive.” (Baumrind, 2013, p.13). Authoritative parenting has been suggested to promote optimal developmental
outcomes in children such as prosocial behavior and school success (Baumrind, 1971; Blackwelder, 2006; Gray & Steinberg, 1999).

Warmth is one of the primary dimensions of parenting; it is a reward system that functions to produce bonding and intimacy among family members (MacDonald, 1992). Warmth includes high affection, acceptance, positive reinforcement, as well as sensitivity to the child’s needs (MacDonald, 1992). But it is important to note that warmth is a complicated construct, and is different from parental responsiveness to stress (Davidov & Grusec, 2006) and from attachment security (MacDonald, 1992). According to Baumrind (1971), when the general parent-child relationship is warm and nurturing, children are more likely to score high on emotional regulations and emotional understanding. Others suggest that parental warmth is associated with children’s prosocial behavior, school readiness and secure attachment style (Locke & Prinz, 2002; MacDonald, 1992). For example, in a longitudinal study of adolescent prosocial behavior, it was suggested that parental warmth promotes adolescents prosocial behavior toward different targets: parents, friends, as well as strangers (Padilla-Walker et al., 2016). In contrast, when parent-child relationship is cold and hostile, children are more likely to exhibit aggression and delinquency (Baumrind, 1971; MacDonald, 1992). Padilla-Walker and colleagues (2016) suggested that parental hostility was negatively correlated with children’s prosocial behaviors toward multiple targets.

However, parental warmth does not always have direct influence on children’s prosocial behavior (Moilanen, Rasmussen, & Padilla-Walker, 2015; Padilla-Walker et al., 2016). The other dimension of parenting is demandingness, or parental control (Baumrind, 1971). There are many types of parental control, such as monitoring, discipline, and psychological control (Morris et al., 2013). Parental discipline comes in many forms such as reasoning, reminding, scolding,
and material consequences (Morris et al., 2013; Power, 2002). Baumrind (1971) argued that authoritative parents exert firm control but they also consider the child’s perspective and explain the reasons of their parenting strategies (e.g., rules and disciplinary action) to children, which helps children to understand the causality of the relationships. This style of discipline is also known as inductive discipline. Martin Hoffman (1983) further developed the role of inductive discipline and its influence in children’s prosocial and moral development.

**Hoffman’s moral socialization theory.** Hoffman’s (1983) moral socialization theory is an important theory to review when studying children’s prosocial behavior because of its particular emphasis on the socialization of other-oriented prosocial behavior. The socialization of other-oriented prosocial behavior is different from other forms of prosocial behavior such as approval-oriented prosocial behavior or selfishly motivated prosocial behavior (Eisenberg & Fabes, 1998). Although parental support, in general, is more positively related to prosocial behavior than parental discipline (Bar-Tal, Blechman & Nadler, 1980), Hoffman’s (1983) moral socialization theory focuses on the effect of parental control, that is, parental discipline, on children’s development of prosocial behavior and morality. The reason Hoffman placed such emphasis on parental discipline is because parental discipline occurs consistently in children’s daily lives, especially early in child development (Hoffman, 1983). Hoffman (1983) asserts that as early as two years of age, up to two thirds of parent-child interactions were disciplinary encounters. Observational studies have reported that two and three year old children need some discipline in every six to ten minutes (Straus, 2000). Therefore, it is of particular importance to focus on parental discipline and child outcome.

Hoffman proposed that inductive disciplinary techniques, among all types of disciplinary techniques, are positively related to children’s prosocial development. Hoffman (1983) argued
that prosocial development not only includes children’s spontaneous prosocial acts towards other people (e.g., some helping and comforting acts) but also children’s prosocial acts with the consideration of the moral requirements of the situation which is opposed to children’s own desires (e.g., some sharing and cooperating tasks). As a result, one goal of prosocial socialization is that children must act in a prosocial and moral way even when their own desires are in conflict with what is right under a certain circumstance. Hoffman’s theory in parental discipline and children’s prosocial behavior is discussed below.

**Inductive Discipline and Prosocial Behavior.**

Understanding parental socialization practices is essential to tap individual differences in prosocial development (Dlugokinski & Firestone, 1974). Hoffman and Saltzstein (1967) categorized parental disciplinary techniques into power assertive techniques and non-power assertive techniques. Non-power assertive techniques were delineated further into love-withdrawal and induction. Power assertive discipline is characterized by its punitive nature. It involves forceful physical punishment or verbal commands or threats to the child, and is usually accompanied by depriving the child of his possessions or privileges (Hoffman & Saltzstein, 1967). Love-withdrawal, on the other hand, is not a power assertive technique. Love-withdrawal occurs when parents punish the child for deviant behaviors by withholding their love and expressing anger, disapproval, and rejection (Hoffman & Saltzstein, 1967). Induction, as another type of non-assertive disciplinary technique, differs from love-withdrawal in that (a) parents change the child’s behavior by reasoning with the child, (b) inductive reasoning focuses on the consequences of the child’s behavior on others, and (c) children obey and act prosocially because they feel for other people (i.e., empathetic and sympathetic feelings) not as a result of rewards, punishments or threats (Hoffman, 1983).
All three types of disciplinary techniques are assumed to cause changes in the child’s behavior as the parents intend. However, these techniques are related differently to children’s prosocial behavior and moral internalization. Power assertion is negatively correlated with children’s prosocial and moral behavior (Hoffman, 1983). When power-assertive disciplinary techniques are used, children obey and act prosocially out of the fear of future punishment. However, because their motivations are not prosocial – for the welfare and benefit of others, children do not internalize moral values. Research indicates that children are more likely to express their anger outside parental supervision and are more likely to exert their power upon people who are weaker than the children are (Hoffman, 1983).

Love withdrawal has no significant relationship with children’s prosocial behavior. When love-withdrawal techniques are used, the child acts prosocially as the parents wished in order to procure and assure parental love and approval. This again, is not a prosocial or a moral motive because the acts are not done for the welfare of other people but for the welfare of the child (Hoffman, 1983).

Inductive discipline, however, is positively correlated with children’s prosocial behavior (Eisenberg & Murphy, 1995; Hoffman & Saltzstein, 1967; Hoffman, 1983). Induction is also commonly referred to as other-oriented induction because it allows children to examine their behavior by focusing on the consequences of their behavior on other people and, at the same time, to understand the moral reasoning given by the parent (Krevans & Gibbs, 1996).

Despite the distinctive differences of disciplinary techniques, Hoffman (1983) argued that parental discipline is multidimensional and that all disciplinary techniques have some power-assertive and some love-withdrawal features. That is because all parental disciplines in nature are parents exerting control over the child, trying to change the child’s behavior while generating
negative emotions in the child (Hoffman, 1983). Moreover, all disciplines have both a verbal/physical dimension and a nonverbal/emotional dimension (Hoffman, 1983). Therefore, what makes a specific disciplinary encounter fall into one of the three categories depends on which disciplinary technique is the most pronounced (Hoffman, 1983). This is probably why firm control (e.g., occasional use of power assertive techniques) is helpful for children to understand certain moral boundaries and techniques, thus contributing to prosocial development (Hoffman, 1983). Drawing from Hoffman’s argument, I propose that the definition of inductive discipline is a disciplinary technique with pronounced inductive feature and less pronounced power-assertive and love-withdrawal feature.

Hoffman asserted that a disciplinary technique influences the child both affectively and cognitively (Hoffman, 1983). Power-assertive disciplinary techniques, that is, disciplinary techniques with a predominance of power-assertive features, affectively arouse the child so that while the child feels angry towards the parent, the child experiences more fear of the parent’s punishment and detection. As a result, children change their behavior out of fear; their feeling of extreme fear prevents them from processing the message given by their parents. Love-withdrawal discipline, or, discipline with a salient love-withdrawal feature, elicits anxiety from children because they are anxious about losing the parents’ love. Therefore, children change their behavior out of anxiety. In contrast, inductive discipline provides optimal arousal and direct children’s attention to the victim’s feelings. As a result, the punitive element of this type of discipline is diminished (Hoffman, 1983). In other words, inductive discipline arouses children sufficiently for them to pay attention to their parents and know that it is important that they listen to the parents. At the same time, they understand that their parents are not rejecting them but only criticizing their actions (Hoffman, 1983; Smetana, 1999). Therefore, children retain the
cognitive energy to listen to parents and to process the inductive information. By listening to the inductive information, they focus on the pain and distress they brought onto other people. This generates feelings of empathy and guilt, which later are predictive of prosocial behavior (Krevans & Gibbs, 1996; Smetana, 1999; Staub, 2003). This will be further discussed below.

Cognitively, in either power-assertive or love-withdrawal techniques, children’s attention is directed toward themselves, whereas in inductive disciplinary techniques, children’s attention is directed to the consequences of their behavior on someone else rather than on themselves. It is apparent that the content of induction is important. The reasoning and explanation given by the parents can help children understand the causal connection between their actions and the consequences of their actions, thus lessening the arbitrary quality of the discipline (Hoffman, 1983). Reasoning and explanation also contribute to children’s moral internalization by providing information about the moral requirements against harming others (Hoffman, 1983; Smetana, 1999). Although children as young as two years of age have been shown to generalize in these areas, there is evidence suggesting that inductive discipline operates more effectively in older children and adolescents because they consider it more appropriate and fair (Padilla-Walker & Carlo, 2004). Further, research in age-related changes in prosocial behavior suggest that prosocial behavior increase with age, and older children are found to be more prosocial than young children (Eisenberg & Fabes, 1998; Fabes, Carlo, Kupanoff & Laible, 1999).

To summarize, inductive discipline, which is characterized by other-oriented induction, is positively associated with children’s prosocial behavior and moral development for several reasons. First, it arouses children enough to attend to the parent instead of focusing on themselves (e.g., fear of punishment, anxiety over losing parental love). Second, inductive discipline directs the child’s attention to the consequences of their actions and thus fosters their
understanding of the causal connection between his act and the consequences. Finally, inductive discipline generates empathic feelings in children by guiding them to focus on the feelings and perspectives of the victim of their acts. Nevertheless, research on parental discipline has mainly focused on the effects of harsh punishment (i.e., power assertion), it has not been explored what strengthens or weakens the effect of inductive discipline.

**Emotion Regulation Strategies and Outcomes**

Emotion regulation is also called emotional self-regulation. It refers to “the activation of a goal to modify the emotion-generative process” (Gross, 2014). Common goals of emotional regulation in daily life are hedonic, namely, to up-regulate (i.e., enhance) positive emotions and down-regulate (i.e., suppress) negative emotions. In some cases, people up-regulate negative emotions and down-regulate positive emotions to achieve instrumental goals (Gross, 2014). For example, one may up-regulate negative emotions to influence other people’s actions, or to foster a focused mindset (Gross, 2014). In contrast, one may down-regulate positive emotions to maintain a realistic mindset, to be mindful of social conventions, or to conceal one’s feelings from others (Gross, 2014).

**Five strategies of emotion regulation.** People use different emotional regulation strategies in order to achieve various emotional regulation goals. According to Gross’s Process Model of Emotional Regulation (shown in Figure 2.), there are five strategies of emotional regulation: situation selection, situation modification, attentional deployment, cognitive change and response modulation (Gross, 1998). Of the strategies, situation selection, situation modification, attentional deployment, and cognitive change are antecedent-focused emotional regulation strategies. These are strategies used before and during the emotion generative process
(Gross, 1998). In contrast, response modulation is a response focused emotional regulation strategy that is utilized after the emotion has been generated (Gross, 1998).

Situation selection is when one actively chooses whether to be involved in a potentially emotion-elicit situation in order to promote positive emotions or avoid negative emotions (Gross, 1998). For example, a person may choose not to go to study with a talkative friend. Situation modification refers to the direct modification of the situation, usually the external physical environment, in order to change its emotional impact (Gross, 1998). For example, attentional deployment refers to the redirection of one’s attention in order to change one’s emotional experience (Gross, 1998). This strategy is used when a situation cannot be modified (Gross, 1998). Cognitive change refers to modifying one’s appraisals of the situation in order to change its emotional impact (Gross, 1998). For example, when a child throws a temper tantrum, instead of feeling angry toward the child, one can change the child’s emotions by understanding that it is challenging for young children to control their emotions.

One type of cognitive change is cognitive reappraisal, a strategy that often is used to decrease negative emotions (Gross, 1998). Response modulation is a response focused strategy, it refers to direct change of an emotional response or an emotional expressive behavior both experientially and physiologically after an emotional response tendency has been initiated (Gross, 1998). This could result in a physical change as well as a psychological change. Deep-breathing relaxation techniques is one common response modulation technique that decreases negative emotions (Gross, 1998). Expressive suppression is another common form of response modulation. It refers to the inhibition of negative emotional expressive behavior (Gross, 1998).
Cognitive reappraisal and expressive suppression. As two most commonly used emotional strategies, cognitive reappraisal and expressive suppression are different in many ways (Gross, 2014). Cognitive reappraisal is a type of cognitive change in the process model of emotional regulation (see Figure 2.), it occurs early in the emotional generative process and influences whether a certain emotional response is generated (Gross, 1998). Expressive suppression, as a type of response modulation, occurs later in the emotional generative process (see Figure 2.) and influences how certain emotion response tendencies are modulated after they have been generated (Gross, 1998).

John and Gross (2004) suggested that cognitive reappraisal is a healthier emotional regulation strategy than expressive suppression. In fact, they labeled expressive suppression as unhealthy emotional regulation. John and Gross (2004) reviewed experimental and correlational research on multiple aspects of functioning and competencies regarding cognitive reappraisal and expressive suppression. They reported that suppressors (i.e., individuals who use expressive suppression frequently) are more likely to report attachment avoidance, discomfort in close relationships, and having less social support (John & Gross, 2004). Gross (1998) argued that suppressors experience the feeling of inauthenticity because they perceive themselves as deceiving other people about their true feelings out of the fear of rejection.
On the other hand, cognitive reappraisal predicts healthier outcomes in affective, cognitive and social aspects. Affectively, cognitive reappraisal is related to more experience and expression of positive emotions and less negative emotion experience whereas expressive suppression is related to an elevated level of negative experience, albeit less expression of negative emotions, and decreased level of positive emotion experience (John & Gross, 2004). Stated differently, although expressive suppression refers to the suppression or inhibition of emotional expressive behavior, expressive suppression does not alter people’s subject experience of negative emotions. Furthermore, it does not necessarily lessen their negative emotional expressive behavior given the fact that their negative emotional experiences increase (John & Gross, 2004). Cognitively, when compared to individuals who frequently use cognitive reappraisal, individuals who habitually use expressive suppression to regulate their emotions perform worse in memory test for social information such as their abilities to recall details of conversations or emotional episodes in the previous weeks (John & Gross, 2004). This is thought to occur because expressive suppression is conceptualized as an effortful form of self-regulation (Deater-Deckard, Wang, Chen, Bell, 2012; Gross, 1998). In other words, the individual must manage to suppress their emotional expressive behaviors effortfully when they are experiencing negative emotions. This process consumes their cognitive energy and resources for other tasks.

**The Current Study and Hypotheses**

As summarized above, although much parenting literature suggests that inductive discipline, compared to power-assertive and love-withdrawal discipline, is positively correlated with children’s prosocial behavior, there is a lack of research on ways in parental utilization of inductive discipline may contribute to this outcome in young children. That is, does parental
emotion regulation influence the use of inductive discipline? In addition, the current literature on emotion regulation examines affective, cognitive as well as social outcomes. However, there is a dearth of research on how emotion regulation influences one’s parental disciplinary behaviors and practices. This study attempted to extend the literature by examining the relationship between emotion regulation strategies and parental disciplinary techniques, particularly inductive discipline.

I began by proposing to extend the concepts of cognitive reappraisal and expressive suppression under emotion-eliciting circumstances such as when a child misbehaves. I propose that cognitive reappraisal refers to when a parent changes his/her way of thinking, reasons with the child to modify his/her emotional reaction to the child’s misbehavior and therefore avoids using power-assertive techniques. Expressive suppression, on the other hand, refers to the suppression or inhibition of emotion and inhibition of emotional-expressive behavior that does not contribute to the use of inductive discipline. Instead, given its inhibitory element, expressive suppression could be more positively related to the use of love-withdrawal techniques.

**Parental emotion regulation strategies and children’s prosocial behavior.** I would assert that parental cognitive reappraisal is predictive of children’s prosocial behavior. This process happens through several different pathways. First, parents who use cognitive reappraisal to regulate their emotions have better psychological resources (e.g., low stress). Second, parental emotion regulation strategies serve as models to children’s emotion regulation which in turn predicts children’s prosocial behavior. Third, cognitive reappraisal is positively related to the socialization of children’s emotions which predicts children’s prosocial behavior. These pathways are further discussed below.
First, parental healthy emotion regulation (i.e., cognitive reappraisal) results in better psychological resources. This is supported by parenting intervention studies. For example, Gavita and colleagues (Gavita, David, Bujoreanu, Tiba, & Ionutiu, 2012) studied a treatment program designed for Romanian foster care children who had externalizing behavior disorders. Foster parents were taught emotion regulation strategies to reduce experienced stress (Gavita et al., 2012). The program followed an emotion regulation paradigm. Specifically, parents were taught to identify and discuss their child-related irrational cognitions as well as their childrearing attitudes, and the roles of these cognitions played in parental stress. Parental healthy emotion regulation was correlated with children’s well-being and social emotional competence. The relationship between parental emotion regulation and parental disciplinary techniques will be further elaborated in Hypothesis 2.

Second, parental healthy emotion regulation strategies are related to parental prosocial behavior which in turn serve as models for children’s prosocial behavior. Eisenberg and Fabes (1992) argued that emotion regulation capacities, as well as emotional intensity, are related to one’s prosocial behavior. Emotion regulation influences one’s subsequent goal directed behavior – whether to improve oneself or to help others. They argued that people who can regulate their emotions optimally are able to behave prosocially because they will not dwell on negative emotions (Eisenberg & Fabes, 1992). Indeed, it was reported that only cognitive reappraisal, but not expressive suppression, moderates the association between empathy and prosocial behavior (Lockwood, Seara-Cardoso & Viding, 2014). Cognitive reappraisal is related to prosocial behavior because unlike expressive suppression, cognitive reappraisal allows people to focus on creating helpful solutions to a situation or providing helpful behaviors to other people (Lockwood et al., 2014). Lockwood and colleagues (2014) have suggested that people who have
high levels of cognitive reappraisal are more prosocial even with low levels of empathy (Lockwood et al., 2014). Therefore, parents who use cognitive reappraisals are also likely to be more prosocial.

According to cognitive social learning theory, parents who use cognitive reappraisal are more likely to model appropriate emotion regulation strategies as well as prosocial behavior for their children (Padilla-walker, 2014). Children, at the same time, are more likely to act prosocially with the presence of prosocial models. At the same time, parents who use cognitive reappraisal are more likely to reinforce prosocial behavior through emotionally appropriate ways (e.g., other-oriented induction). For example, instead of inhibiting their emotional expressive behaviors, parents high on cognitive reappraisal may reinforce children’s prosocial behavior by reasoning, rewarding children’s positive behavior, and withdrawing rewards – but not exerting punishment - when children misbehave.

Third, cognitive reappraisal is positively related to the socialization of children’s emotions which in turn influences children’s prosocial behavior through induction. Here I attempt to emphasize one particular component of other-oriented induction and extend the conceptualization of other-oriented induction to include emotion socialization. Past research on other-oriented induction has mainly focused on its difference from power-assertive and love-withdrawal disciplines that instead of focusing on the fear of parental anger or withdrawal of love, other-oriented induction allow the child to focus on the consequences of his behavior on the victim.

Research suggests that children’s anger and sadness immediately reduce when parents utilizes cognitive reappraisal to deal with a situation (Morris et al., 2013). Therefore, we should note that other-oriented induction directs the child’s attention to the emotions of others. By
using emotion language, parents help children to label and understand different kind of emotions, their own emotions as well as other people’s emotions (Padilla-Walker, 2014). Also, parents help children by clarifying ambiguous emotional situations, reinforcing positive emotions and so on. This is consistent with literature on emotion socialization that emotion socialization is one way to promote children’s prosocial behavior (Padilla-Walker, 2014). Moreover, prosocial literature suggests that the child’s moral emotion such as empathy and sympathy predict their prosocial behavior (Padilla-Walker, 2014). The inductive message helps children to gain knowledge and understanding about adult moral values and societal moral norms, thus fostering moral internalization (Eisenberg & Murphy, 1995).

**Parental emotion regulation strategies and inductive discipline.** I would assert that cognitive reappraisal is predictive of parental inductive discipline while parental expressive suppression is not. Here are the reasons for this assertion. First, healthy emotion regulation (e.g., cognitive reappraisal) is central to positive parenting. Parenting is an emotional experience, particularly for those parents with young children. Young children require constant discipline from parents to correct and redirect their behavior (Deater-Deckard et al., 2012). Because of children’s underdeveloped self-regulatory skills, they can be infuriating (Straus, 2000). Consequently, parents face challenges to deal with these emotional parent-child episodes especially when they themselves are charged with negative emotions. For example, it is particularly challenging for parents to choose inductions over power-assertion and love-withdrawal during parent-child conflicts when parents are the victims of the child’s misbehavior (Patrick & Gibbs, 2012). Trickett and Kuczynski (1986) reported that parents are least likely to use inductions in parent-child conflictual interactions such as when the child backtalks because parents themselves are experiencing highly emotional moments.
Several theorists (e.g., Belsky, 1984; Dix, 1991; Grusec, Rudy & Martini, 1997) emphasized the importance of parental emotion in the parenting process. Belsky (1984) theorized the determinants of individual differences in parenting. He suggested that there are three major determinants of parenting behavior: parental psychological resources, child characteristics and contextual environmental factors. He argued that although all three factors contribute to parenting practices, parental psychological resources, which refer to internal resources that can promote or undermine one’s parenting abilities, is the primary determinant. Such resources include parents’ personality and psychological well-being (Belsky, 1984). Some researchers further conceptualized parental psychological resources to include emotional intelligence, emotion regulation, and other aspects of parents’ self-regulation (Aminabadi, Babapour, Oskouei & Pourkazemi, 2012; Crespo, 2015; Deater-Deckard et al., 2012). In fact, high level of negative affect such as anger has been found to be associated with harsh parenting (Deater-Deckard et al., 2012; Lorber, 2012).

Emotion regulation is important to parental competence (Dix, 1991). The way parents understand and modulate their own emotions determine their appraisals of the situation (e.g., the child’s misconduct) and the impact of emotions on parenting behavior. Stated differently, when child behavior is challenging and requires discipline, parents must regulate their own emotions so that they do not react to the child’s misconduct with disciplinary techniques that are merely power-assertive (Deater-Deckard et al., 2012).

Second, cognitive reappraisal is related to other-oriented induction because parents who habitually utilize cognitive reappraisal are more capable of thinking about a situation from different perspectives. Other-oriented induction, different from other types of induction, is characterized by its focus on the consequences of the child’s behavior on other people - the
victim. To give other-oriented inductive messages require parents to have the tendency to view a situation from other people’s perspective. It is not to say that some parents do not have the ability to understand the perspective of another, but that people habitually do things differently – some tend to cognitively reappraise a situation more than others. More specifically, before an emotional response is generated, reappraisers would cognitively evaluate the situation in a different way and therefore change his/her subjective experience. In this sense, when a child is misbehaving or disobeying the parent, instead of getting angry with the child or inhibiting one’s anger, parents who habitually utilize cognitive reappraisal would reassess the situation cognitively first, and then react to the child, perhaps with induction.

Moreover, it is not unreasonable to argue that the effect of inductive discipline is influenced by the inductive message given by parents, it must be within the child’s cognitive abilities; it will also change with the development of the child’s cognitive abilities (Patrick & Gibbs, 2012). When the child is young, induction could be straightforward and direct. For example “Gentle hands. If you keep hitting him, he’ll be hurt.” As the child’s cognitive ability develops, induction could involve more information to help the child understand the situation better. For example, the parent may help the child to understand the victim’s intentions. “If you keep yelling at her, she will be sad; she was only trying to give you a hand.” Later, the information contained in the induction could be elaborated even further. “I understand you’d like to play now, but he has been waiting for a turn, and now it is his turn, that’s why he is sad when you cut in line.”
**Parental warmth and inductive discipline.** The overall emotional climate between parent and child is known as parenting style (Baumrind, 1971). Parental warmth is considered an emotion-related parenting practice, which is associated with positive child outcomes such as socioemotional competence and prosocial behavior (Locke & Prinz, 2002; Morris et al., 2013). High warmth is also one element of authoritative parenting which is considered the optimal parenting style across cultures (Baumrind, 1971). As discussed before, Hoffman (1983) pointed out that inductive discipline is the most effective disciplinary strategy in promoting children’s prosocial behavior because inductive discipline has both optimal affective influence and cognitive influence on the child. In terms of affective influence, the child is neither fearful of parental punishment nor fearful of parental withdrawal of love, instead, the child is aroused enough to pay attention to the parent but also feel secure of parental love.

Although inductive parents are usually considered authoritative parents, only the child’s affective experiences were discussed in Hoffman’s account. It was not unlikely that parents who are low on warmth would utilize inductive discipline with the child. Therefore, it would be interesting to examine the role of parental warmth and how it influences inductive discipline and children’s prosocial behavior. I hypothesized that the link between inductive discipline and children’s prosocial behavior would be stronger when parental warmth is high, and this link would be weaker when parental warmth is low.

To summarize, although there is ample literature on inductive discipline and its influence on children’s prosocial behavior (Hoffman, 1983), less is known about how parental emotion regulation strategies influence parental inductive discipline and how parental emotion regulation strategies influence children’s prosocial behavior. Literature suggests that cognitive reappraisal is positively correlated with several aspects of life whereas expressive suppression does not.
Therefore, current study explored the relationships among cognitive reappraisal, expressive suppression and inductive discipline. On the other hand, there are two major dimensions of parenting. Parental warmth is an important dimension of parenting, it indicates one aspect of positive parent-child development (Baumrind, 1971). Warmth contributes to children’s optimal development, but not always directly (MacDonald, 1992). The other dimension of parenting is parental discipline, literature suggests that inductive discipline is predictive of children’s prosocial behavior (Eisenberg & Mussen, 1989). There is less evidence of the role of both warmth and inductive discipline on children’s prosocial behavior. The current study explored the relationships of warmth and inductive discipline on children’s prosocial behavior.

Hypotheses of the study are listed below.

**Hypothesis 1.** Parental cognitive reappraisal is positively associated with children’s prosocial behavior; parental expressive suppression is negatively associated with children’s prosocial behavior.

**Hypothesis 2.** Parental cognitive reappraisal is positively associated with parent’s inductive discipline; parental expressive suppression is negatively associated with parent’s inductive discipline.

**Hypothesis 3.** Parental inductive discipline mediates the relationship between parental cognitive reappraisal and children’s prosocial behavior.

**Hypothesis 4.** Parental warmth moderates the relationship between parental inductive discipline and children’s prosocial behavior.
Methods

Participants

The target population for this study was parents who have one or more than one child of 3, 4 or 5 years old. For parents who had more than one child, they were asked to participate only once and were told that the answers to the questions should be specific discipline practices with one child whose age they answered in the survey.

Participants were recruited in two ways: most participants (87.5%) were recruited from six preschools or childcare centers in a moderate-sized city in upstate New York during January, February and March in 2016. A total of 400 surveys were sent out to parents in these preschools and daycare centers. A snowball sampling technique was also used to recruit participants, friends and acquaintances were approached to publicize the research. 8 participants were recruited this way. The response rate is 14% (n=56). All participants could speak English.

Table A1. [see Appendix A] shows the background information of the sample. Approval for the study was obtained from the Syracuse University Institutional Review Board (IRB) before data collection [see Appendix B]. Each participating preschool and childcare center provided a letter of cooperation for the research.

Procedures

Each preschool or childcare center was given three weeks to collect surveys. During the middle of these three weeks, a reminder message was send to all parents by the director of the program. Later in the process of data collection, I approached my friends and colleagues to spread the word and help recruit participants. One of the participants is from a different state and finished the survey online by highlighting the choices, this survey was returned via email.
Each parent received two copies of consent forms [see Appendix C]: one to return and one to keep, the questionnaire, the drawing entry slip, and a flyer [see Appendix D] in their children’s mailboxes or cubbies at school. Parents were informed the nature of the survey as well as the voluntary and anonymous nature of their participation. Parents were instructed to return the survey and a copy of signed consent form in the sealed enveloped provided. Parents had the opportunity to participate in a random drawing of an Amazon Fire Tablet regardless of their participation of the survey. For those interested in the drawing, they were asked to provide their name and contact information on a slip separate from their response envelope.

Measures

The questionnaire contained 5 scales and a total of 118 items. The scales included a set of demographic questions (18 items), the Parenting Dimension Inventory - Short Version (53 items), the Emotion Regulation Questionnaire (10 items), a parental knowledge scale created for this study (12 items), and the Social Competency Inventory (25 items). These scales are described in detail below. A complete questionnaire may be found in the Appendices.

Background characteristics. The questionnaire included 18 demographic questions about the parent, the child, and the household [see Appendix E]. These questions assessed parent age, parent gender, race and ethnicity, religious affiliation, level of education, occupation, marriage status, current household income, number of children, the participating child’s age, birth date of the child, whether the child receives IEP, whether the parent has taken child development related classes and workshops, whether they read child development related books, and the time the child has been at preschool and center-based care. Some of the variables were dropped from data analyses because they were not theoretically relevant.
**Parental inductive discipline and warmth.** I used The Parenting Dimensions Inventory - Short Version (PDI-S) (Power, Kobayashi-Winata, & Kelley, 1992) to assess parental disciplinary style. The Parenting Dimensions Inventory- Short Version (PDI-S) is a short version of the Parenting Dimensions Inventory (PDI) which was designed by Slater and Power in 1987. PDI-S consists of 53 items. It can be used with children who are 3 to 12 years old. The PDI-S is a self-report questionnaire completed by a parent that measures eight dimensions of parenting on eleven scales [see Appendix F].

The scale includes measures of warmth, consistency (related to discipline), organization, permissiveness, and type of control used. Consistency, organization and permissiveness subscales were not included in the analysis because they were not theoretically relevant. Parental warmth subscale consists of item 1, 4, 7, 9, 10, 12 in the first part of the survey. Example item include “I find it interesting and educational to be with my child for long periods.” Cronbach alpha for parental warmth was .792.

Type of control was assessed with five hypothetical situations, participants were asked to rate the likelihood of their responding in each of the following manner: physical punishment, material/social consequences, reasoning, scolding, and reminding (Power, 2002). The reasoning response was “Talk to the child (e.g., discuss alternatives, discuss your reasons for wanting the child to do or not to do something.”; the reminding response was “Remind your child of the rule or repeat the direction.” Although there is no inductive discipline subscale in PDI-S, Kerr and colleagues (Kerr, Lopez, Olson, & Sameroff, 2004) had suggested that the Reasoning and Reminding subscales may assess dimensions of inductive discipline. Therefore, the Inductive Discipline variable was created by combining the Reasoning and Reminding subscales in a manner consistent with the scoring instructions (Power, 2002).
According to the research manual, PDI-S is made up of those scales that have shown highest validity and reliability in the original PDI (Power, 2002). It was reported that each item loads exclusively on a certain scale. The scales are suggested to be reliable in several studies including one three-year longitudinal study (Taratuski, 2010). In the current sample, Cronbach’s alpha for inductive discipline style (i.e., the combination of Reasoning and Reminding subscales) was .801. As for validity, PDI and PDI-S has been shown to predict maternal behavior and child social competence across studies, from American Middle Class samples to African American low-income samples; from America to Japan, to China; from intact families to single parent families (see Power, 2002).

Parental emotion regulation strategies. The Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) was used to assess parents’ emotion regulation strategies [see Appendix G]. ERQ is a 10-item self-report scale designed to assess respondent’s habitual use of two common types of emotion regulation strategies: cognitive reappraisal (e.g., “I control my emotions by changing the way I think about the situation I’m in.”; 6 items) and expressive suppression (“I control my emotions by not expressing them.”; 4 items). Item 1, 3, 5, 7, 8, 10 consist of the cognitive reappraisal subscale; Item 2, 4, 6, 9 consist of the expressive suppression subscale. It has been used in various student samples and community samples. Spaapen, Waters, Brummer, Stopa and Bucks (2014) and Lorber (2012) have reported that Alpha reliabilities averaged .79 for cognitive reappraisal and .73 for expressive suppression. In current study, Cronbach’s alpha for the cognitive reappraisal subscale was .869, and the alpha for the expressive suppression subscale was .796.

Construct validity is supported by psychometric work as well as experimental studies that examined the effect of cognitive reappraisal and expressive suppression on three components of
emotions: expressive, experiential and physiological (Gross & John, 2003; Lorber, 2012). These researchers found that although cognitive reappraisal reduced the expressive and experiential component of negative emotions, it did not reduce the physiological component of negative emotions. In contrast, expressive suppression only reduced the expressive component of negative emotions but did not reduce the experiential and physiological components of negative emotions (Gross, 1998). Moreover, expressive suppression increased the physiological components of negative emotions.

*Children’s prosocial behavior.* Parents completed the Social Competence Inventory (Rydell, Hagekull & Bohlin, 1997). The SCI [see Appendix I] is a rating measure developed with parents and teachers of children’s social competence including social skills and behaviors. It assesses several aspects of social competence such as cooperation, empathy, altruism, helpfulness, generosity, social participation, initiative taking, and conflict handling. The Prosocial Orientation scale consists of 17 items, and the Social Initiative scale has 8 items. Reliability of the scales were reported to be .94 and .91 for Prosocial Orientation and Social Initiative respectively (Rydell et al., 1997). Both scales are related to but also discriminated peer behaviors, $r = .29, p < .01$ for test of validity (Rydell et al., 1997). Specifically, Prosocial Orientation scale predicts prosocial behavior of positive affective and prosocial behavior, whereas Social Initiative scale predicts initiative behavior of positive contacts, evidence of leadership, and solitary play (Rydell et al., 1997). Current study only utilized the Prosocial Orientation subscale, Cronbach’s alpha was .428.
Results

All data was entered manually to SPSS software. Before conducting my preliminary analysis, I first cleaned the data by running descriptive analyses to identify missing data. There was 1.7% missing value for household income, 1.7% of missing value for the number of children. The highest percentage of missing values is 3.4% (for education level) which was under 5%. Therefore, all missing values for categorical variables were replaced by the modal value, and all missing values for continuous variables were replaced by the mean.

Two questions were asked about the child’s preschool or center-based care experience: “How long has your child been at preschool?” and “How long has your child been at center-based care?” The questions were meant to assess the possible different influences of preschool and center-based experience. I originally hypothesized that 1) the longer the child has been in preschool the more prosocial the child would be and 2) preschool education has greater influences on children’s prosocial behavior than childcare centers. My rationale was that children who attended preschools or daycare centers had more opportunity to interact with peers, teachers and other people, as well as more limited resources compare to home environment. Under such circumstances, children inevitably would face conflicts and challenges to share toys, to wait for their turns, or to listen to the perspective of another. In addition, children also would have more opportunities to learn by observing; they may have learned what was appropriate and what inappropriate by watching their peers. Further, I thought that preschools were different from center-based care because preschools are more structured and formal than center-based care. However, because the distinctions between preschools and center-based cares were not clearly stated in the questions, these two questions were poorly understood by the parents. As a result, I dropped these questions from analysis.
Next, I computed scores for the ERQ, PDI-S and SCI scales following the scoring instructions (Gross & John, 2003; Power, 2002; Rydell et al., 1997). For ERQ, cognitive reappraisal and expressive suppression subscales were kept separate, each subscale was computed by adding all variables of each subscale, and the scale was kept continuous. For PDI-S, parental warmth was computed by adding up the variables of warmth subscale; inductive discipline was computed by dividing the mean for reasoning and reminding subscale by the overall mean across all situations which results in a ratio score. For SCI, prosocial orientation subscale was computed by adding all variables of the subscale, the scale was kept continuous.

**Preliminary Analysis**

Table 2 presents the means, standard deviations and the sample range of the main variables: Cognitive Reappraisal, Expressive Suppression, Prosocial Orientation, Inductive Discipline, and Warmth. I performed Pearson correlation to examine the relationships between all variables, significant results are presented in Table 3.

To examine the relationships between variables, I used correlation/regression analysis (Pallant, 2013). There are several assumptions of regression analysis: sample size, linear relationship between independent and dependent variables, multicollinearity, normal distribution, outliers, reliability, and homoscedasticity (Osborne & Waters, 2002; Pallant, 2013). According to Pallant (2013) sample N should be more than \( 50 + 8m \) (where \( m \) is the number of independent variables). In the current study, the sample size was 59. Thus, there should have been no more than one independent variable in each analysis so that the results did not lose generalizability (Pallant, 2013).
Table 2. Mean, Standard Deviation, and Range of main variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Range</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Reappraisal</td>
<td>5.00</td>
<td>1.25</td>
<td>1.83-7.00</td>
<td>59</td>
</tr>
<tr>
<td>Expressive Suppression</td>
<td>2.91</td>
<td>1.44</td>
<td>1.00-6.25</td>
<td>59</td>
</tr>
<tr>
<td>Prosocial Orientation</td>
<td>3.40</td>
<td>.33</td>
<td>2.54-4.06</td>
<td>59</td>
</tr>
<tr>
<td>Inductive Discipline</td>
<td>2.07</td>
<td>.49</td>
<td>1.24-3.24</td>
<td>59</td>
</tr>
<tr>
<td>Warmth</td>
<td>32.22</td>
<td>3.05</td>
<td>23.00-36.00</td>
<td>59</td>
</tr>
</tbody>
</table>

To test non-linearity, Osborne and Waters (2002) proposed that it is best to examine standardized residual plots. To test multicollinearity, Pallant (2013) proposed that the correlation between any two independent variables should be lower than .7, that the Tolerance value should be above .1, and that the VIF value should be lower than 10 (Pallant, 2013). These assumptions were examined in each analysis.

P-P plots were used to test for normal distribution, skewness, and kurtosis. According to Pallant (2013), skewness and kurtosis values between +/- 2 are considered normal and skewness and kurtosis values above 2 or under -2 are considered non-normal. I conducted normality tests for the dependent variable (i.e., Prosocial Orientation), independent variables (i.e., Cognitive Reappraisal, Expressive Suppression, Inductive Discipline, and Warmth). As a result, all variables exhibited normal distributions by Pallant’s (2013) criteria.

Reliability is another important assumption of correlation and regression analysis because unreliable measures could increase the risk of Type II error which is the failure to reject a false null hypothesis (Osborne & Waters, 2002). That is to say, with unreliable measures, there is an increased risk of failing to detect an effect that is present. Many argue that a Cronbach alpha coefficient above .70 is considered preferable (Osborne & Waters, 2002). Cronbach alpha coefficients above below .70 but above .50 are not preferable but acceptable (Pallant, 2013). In the current study, reliability tests were performed. The Cronbach’s alpha for Cognitive
reappraisal was .869, the alpha for Expressive Suppression was .796; the alpha for Inductive Discipline (i.e., the combination of Reasoning and Reminding subscales) was .801; the alpha for Warmth was .792.

Table 3 presents Pearson correlation among main variables to examine the relationships between pairs of continuous variables and to determine whether they were significantly correlated. One of the statistical assumptions of regression analysis is multicollinearity, that is to say, bivariate correlation between two independent variables should not be higher than .7 (Pallant, 2013). It is also suggested that the correlation between an independent variable and dependent variable should, preferably, be above .3 (Pallant, 2013). As can be seen in Table 3, I did not find a significant relationship between inductive discipline and children’s prosocial behavior ($r = -.24, p > .05$).

Table 3. Correlations among main variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 ProsocialOrientation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Warmth</td>
<td>.504**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 CognitiveReappraisal</td>
<td>0.084</td>
<td>.274*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4 Expressive Suppression</td>
<td>-.330*</td>
<td>-.187</td>
<td>-.249</td>
<td>1</td>
</tr>
<tr>
<td>5 InductiveDiscipline</td>
<td>-.241</td>
<td>-.087</td>
<td>-.057</td>
<td>-.045</td>
</tr>
</tbody>
</table>

* $p < .05$.
** $p < .01$

Main Analysis

Hypothesis 1. Parental cognitive reappraisal is positively associated with children’s prosocial behavior; parental expressive suppression is negatively associated with children’s prosocial behavior.
I performed multiple regression analysis to determine the association between Cognitive Reappraisal and Prosocial Orientation, and between Expressive Suppression and Prosocial Orientation. Prosocial Orientation was entered as dependent variable, Cognitive Reappraisal and Expressive Suppression were entered as independent variables.

The analysis indicated that the tolerance values were all above .90 and VIF values are all under 1.10 which meant there were no multicollinearity problems. As can be seen in the Normal Probability Plot (P-P) of the Regression Standardized Residuals, the plot is roughly a straight line, this suggests that there may be no major deviations from normality (Pallant, 2013). The Scatter Plot of the standardized residuals was roughly a centralized rectangle and did not violate the assumptions. Moreover, there were no cases that more than 3.3 or less than -3.3 in the plot, which suggests that there were no outliers (Pallant, 2013).

The results are presented in Table 4. According to Pallant (2013), in case of small sample size, it is better to refer to the value of adjusted R Square. Therefore, the overall model was statistically significant, it explained 7.7 % of variance for Prosocial Orientation, $R^2 = .109$, $F(2, 56) = 3.43, p < .05$. However, the relationship between Cognitive Reappraisal and Prosocial Orientation was not significant; the relationship between Expressive Suppression was statistically significant. Cognitive Reappraisal only accounted for .2 % of Prosocial Orientation. But Expressive Suppression accounted for 33% of Prosocial Orientation. That is to say, children for parents who use less expressive suppression to regulation their emotions, their children are significantly more prosocial than children whose parents use more expressive suppression. Therefore, the hypothesis that cognitive reappraisal is positively associated with children’s prosocial behavior was not supported; the hypothesis that expressive suppression is negatively associated with children’s prosocial behavior was supported.
Table 4. *Multiple Regression Analysis Predicting Prosocial Orientation from Cognitive Reappraisal and Expressive Suppression*.

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>B</th>
<th>SE (B)</th>
<th>$\beta$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Reappraisal</td>
<td>.109</td>
<td>.077</td>
<td>.001</td>
<td>.034</td>
<td>.002</td>
<td>.018</td>
</tr>
<tr>
<td>Expressive Suppression</td>
<td></td>
<td></td>
<td>-.075</td>
<td>.030</td>
<td>-.330</td>
<td>-2.53</td>
</tr>
</tbody>
</table>

Note. $N = 59$; *$p$<.05, **$p$<.01

**Hypothesis 2.** Parental cognitive reappraisal is positively associated with parent’s inductive discipline; parental expressive suppression is negatively associate with parent’s inductive discipline.

I performed multiple regression analysis to determine the association between Cognitive Reappraisal and Inductive Discipline, and between Expressive Suppression and Inductive Discipline. Inductive Discipline was entered as dependent variable, Cognitive Reappraisal and Expressive Suppression were entered as independent variables.

The analysis indicated that the tolerance values were all above .90 and VIF values are all under 1.10 which meant there were no multicollinearity problems. As can be seen in the Normal Probability Plot (P-P) of the Regression Standardized Residuals, the plot is roughly a straight line, this suggests that there may be no major deviations from normality (Pallant, 2013). The Scatter Plot of the standardized residuals was roughly a centralized rectangle and did not violate the assumptions. Moreover, there were no cases that more than 3.3 or less than -3.3 in the plot, which suggests that there were no outliers (Pallant, 2013).

The results are presented in Table 5. According to Pallant (2013), in case of small sample size, it is better to refer to the value of adjusted R Square. Therefore, the overall model was not statistically significant, it explained 2.8 % of variance for Inductive Discipline, $R^2 =$
The relationship between Cognitive Reappraisal and Inductive Discipline was not significant; the relationship between Expressive Suppression was not statistically significant either. Cognitive Reappraisal only accounted for 7.3% of Inductive Discipline; Expressive Suppression accounted for 6.3% of Inductive Discipline. However, despite statistical significance, Expressive Suppression was negatively associated with Inductive Discipline whereas Cognitive Reappraisal was not positively, but negatively, associated with Inductive Discipline. To conclude, the hypothesis that cognitive reappraisal is positively associated with children’s prosocial behavior was not supported; the hypothesis that expressive suppression is negatively associated with children’s prosocial behavior was not supported.

Table 5. *Multiple Regression Analysis Predicting Inductive Discipline from Cognitive Reappraisal and Expressive Suppression.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>B</th>
<th>SE (B)</th>
<th>$\beta$</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Reappraisal</td>
<td>.007</td>
<td>-.028</td>
<td>-.029</td>
<td>.054</td>
<td>-.073</td>
<td>-.532</td>
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<tr>
<td>Expressive Suppression</td>
<td></td>
<td></td>
<td>-.021</td>
<td>.047</td>
<td>-.063</td>
<td>-.457</td>
</tr>
</tbody>
</table>

Note. $N = 59$; *$p<.05$, **$p<.01$*

**Hypothesis 3.** Parental inductive discipline mediates the relationship between parental cognitive reappraisal and children’s prosocial behavior.

The premise of mediation analysis is that a third variable explains the relationships between the predictor variable and the outcome variable (Pallant, 2013). If the hypotheses that cognitive reappraisal predicts children’s prosocial behavior and that cognitive reappraisal predicts parental inductive discipline were supported, I intended to perform multiple regression analysis to test the mediating role of Inductive Discipline in explaining the relationship between
Cognitive Reappraisal and Prosocial Orientation. Prosocial Orientation would be entered as the dependent variable. Inductive Discipline and Cognitive Reappraisal would both be entered into the independent variable box.

However, as the results of Hypothesis 1 and 2 indicated, the relationships between parental cognitive reappraisal and children’s prosocial behavior was not significant. In addition, as Table 3 shows that inductive discipline and children’s prosocial behavior are not significantly correlated. Thus, the relationship between parental cognitive reappraisal and parental inductive discipline was not significant. Given that there are no significant relationships between predictor variable and outcome variable, it is theoretically unreasonable to perform mediation analysis.

**Hypothesis 4.** Parental warmth moderates the relationship between parental inductive discipline and children’s prosocial behavior. That is to say, the relationship between parental inductive discipline and children’s prosocial behavior is stronger when parental warmth higher, the relationship is weaker when parental warmth is lower.

I performed a hierarchical multiple regression analysis to test the interaction effect of Inductive Discipline and Warmth on Prosocial Orientation. The two independent variables: Inductive Discipline and Warmth first were standardized. A new variable “ID_Warmth” was created by multiplying the standardized variables of Inductive Discipline and Warmth. I created three levels of Warmth by sorting cases on the variable Warmth in SPSS. The values of “Group” are irrelevant. They are Warmth_high, Warmth_moderate, and Warmth_low. There were 19 cases for Warmth_high, 20 cases for Warmth_moderate, and 20 cases for Warmth_low. Prosocial Orientation was entered as the dependent variable. In step 1, standardized Inductive Discipline and Warmth were added as independent variables. In step 2, the interaction term ID_Warmth was entered as independent variable.
The results of this analysis are presented in Table 6. The total variance explained by all three models was 26%, $F (3, 55) = 7.62, p < .01$. The first step of standardized Inductive Discipline and Warmth explained 27% of Prosocial Orientation variance. The interaction term Cognitive Reappraisal x Warmth in the second step, an additional 1% variance of Prosocial Orientation could be explained. That is to say, the interaction effect of Cognitive Reappraisal and Warmth was not significant.

Table 6. *Hierarchical Regression Results for the Prediction of Prosocial Orientation*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1: Main Effect</th>
<th>Step 2: Two Way</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta F (df)$</td>
<td>(2, 56) = 11.63**</td>
<td>(3,55) = 7.62**</td>
</tr>
<tr>
<td>$\Delta Adj R^2$</td>
<td>.27</td>
<td>.26</td>
</tr>
<tr>
<td></td>
<td>$\beta$</td>
<td>$\beta$</td>
</tr>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inductive Discipline</td>
<td>-.20</td>
<td>-.20</td>
</tr>
<tr>
<td>Warmth</td>
<td>.49**</td>
<td>.49**</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID x Warmth</td>
<td></td>
<td>.01</td>
</tr>
</tbody>
</table>

*Note. N = 59; *p<.05, **p<.01

A simple scatter plot was generated with Prosocial Orientation on the Y Axis, Inductive Discipline on the X Axis, and Group will be entered into the box Set Makers By. After producing the scatter plot, in the output window, I created three fit lines for three levels of Cognitive Reappraisal to interpret the results. Figure 4 presents the fitted lines of the Scatter Plot depicting the interaction effect of Inductive Discipline and Warmth on Prosocial Orientation.
As it is shown in the Figure 4, Prosocial Orientation is high when Warmth is high, and low when Warmth is low. Consistent with the hypothesis, the relationship between Warmth and Inductive Discipline is stronger in the cases of high levels of Warmth and the relationship is weaker in cases of low levels of Warmth. However, when Warmth is high, the lower parental Inductive Discipline is, the higher children’s Prosocial Orientation is.

**Discussion**

The overall purpose of the current study was to examine the relationships between two common types of parental emotion regulation strategies (cognitive reappraisal and expressive...
suppression) and children’s prosocial behavior. I hypothesized that parental cognitive reappraisal would predict inductive discipline. In addition, I hypothesized that inductive discipline would serve as a mediator between parental cognitive reappraisal and children’s prosocial behavior. Also, I hypothesized that parental expressive suppression would correlate with inductive discipline and children’s prosocial behavior negatively. I also examined the relationship between inductive discipline, warmth and children’s prosocial behavior. I hypothesized that warmth would moderate the relationship between inductive discipline and children’s prosocial behavior. The aim of this section is to discuss the study’s findings, summarize the strengths and limitations of the study and draw appropriate implications and conclusions. The findings of the study will be discussed in the order of the hypotheses.

**The Relationship Between Inductive Discipline and Children’s Prosocial Behavior.**

Past literature in prosocial behavior has suggested that inductive discipline is an effective disciplinary style that predicts and promotes children’s prosocial behavior (Hoffman, 1983). However, inconsistent with previous studies, there was not a significant correlation between inductive discipline and prosocial behavior. In addition, inductive discipline did not predict prosocial behavior in the current study. This could be due to several reasons.

First, the reliability of prosocial orientation was low in this sample was low. The Cronbach alpha was .428, which is lower than .70, the suggested appropriate alpha level of reliability (Pallant, 2013). Low reliability increases the risk of Type II error of failing to detect an effect that is present (Pallant, 2013). Second, although I had hoped to have a sample size of 100, the actual sample size was 64, and it was reduced to 59 after deleting the five cases with IEP. This smaller sample decreased the statistical power of the research and increased the likelihood of failing to reject the null hypothesis (Pallant, 2013). Third, the response rate in this
study was 14% which was lower than 50%, the preferable rate of response. It was also lower than 30%, the typical response rate of survey research. The problem of low response rate is that the sample may be biased because people who participated can be very different from those who did not (Brown, Cozby, Kee & Worden, 1999). For these three reasons, the possibility of detecting a relationship between inductive discipline and prosocial behavior may have been decreased in this sample of participants.

The Relationship Between Parental Emotion Regulation Strategies and Children’s Prosocial Behavior.

The hypothesis that parental cognitive reappraisal would be positively correlated with children’s prosocial behavior was not support. Previous research has not studied the relationship between parental emotion regulation strategies and children’s prosocial behavior. It is possible that contrary to the hypothesis, parental use of cognitive reappraisal does not predict children’s prosocial behavior directly. Given that there is a strong correlation between cognitive appraisal and warmth and a strong correlation between warmth and prosocial behavior, it is possible that cognitive reappraisal contributes to children’s prosocial behavior by influencing warmth. However, there is not sufficient evidence to draw this conclusion because of the study’s small sample size and low response rate. Thus, the results could be highly distorted and less generalizable due to these factors. In additon, the reliance on parental self-report is problematic because children’s prosocial behavior was not observed by an objective research. Therefore, whether parental report of children’s prosocial behavior really reflects children’s prosocial behavior remains open to question. It could only be said that parental cognitive reappraisal does not predict parental reports of children’s prosocial behavior.
The hypothesis that parental expressive suppression would be negatively correlated with children’s prosocial behavior was supported. Despite the problems of the research design, it is possible that parental expressive suppression is negatively associated with children’s prosocial behavior. On the one hand, this is consistent with emotion regulation literature that expressive suppression is an unhealthy regulation strategy in many domains such as social, affective and cognitive (John & Gross, 2004). On the other hand, the result implicates that parental expressive suppression influences one’s parenting strategies as well as parenting outcomes.

The Relationship Between Parental Emotion Regulation Strategies and Inductive Discipline.

The hypothesis that parental cognitive reappraisal would be positively correlated with parental inductive discipline was rejected. It is possible that parental cognitive reappraisal does not predict parental inductive discipline. Perhaps, there is not a predictive relationship between these two constructs. However, it is theoretically reasonable to hypothesize that they way parents regulate their emotions would influence their disciplinary styles. Therefore, I believe the rejection of this hypothesis is the result of problems in the research design.

The hypothesis that parental expressive suppression would be negatively associated with parental inductive discipline was not supported. Although the results were not statistically significant, it can be seen from Table 5 that the overall direction of expressive suppression on inductive discipline was negative. There are two possible explanations, one is expressive suppression does correlate with inductive discipline negatively but the relationship did not show up in the current study due to the research design problems discussed before. Future study could benefit from having a bigger and more generalizable sample. The other possible explanation is that parental expressive suppression does not have significant influence on parenting practices
which would be consistent with the rationale that the behavior of inhibiting negative emotion behaviors is different from understanding different perspectives and directing the child’s attention to other people’s feelings.

**The Mediating Role of Inductive Discipline.**

The hypothesis that inductive discipline mediated the casual relationship between parental cognitive reappraisal and children’s prosocial behavior was not examined because the statistical premise that there is a relationship between the predictor variable and the outcome variable was not met. More specifically, if the model was supported, cognitive reappraisal would predict inductive discipline, which then would predict children’s prosocial behavior. As discussed earlier, due to the small sample size, low response rate and low reliability of inductive discipline, it is likely that the relationships between cognitive reappraisal, inductive discipline and prosocial behavior were not detected.

**The Role of Parental Warmth on Inductive Discipline and Children’s Prosocial Behavior.**

Consistent with the hypothesis, the relationship between parental warmth and inductive discipline is stronger in the cases of high levels of warmth and the relationship is weaker in cases of low levels of warmth. However, under the circumstances of high parental warmth, low inductive discipline was correlated with high prosocial behavior, and high inductive discipline was correlated with low prosocial behavior. This is perhaps because when warmth is high, it compensates for inductive discipline.

**Limitations**

The current study built upon the literature in parenting and socialization of children’s prosocial behavior by examining the role of parental emotion regulation strategies. It is one of the first studies that explored the role of parental emotion regulation on parenting strategies as
well as children’s prosocial behavior. However, there were several limitations of the study: small sample size, low response rate, non-probability sampling techniques, cross-sectional design, reliance on self-report, and neglect of the role of child characteristics.

First, the study has a small sample size, which means it had low statistical power and it is more likely to fail to reject the null hypothesis (Pallant, 2013). According to Pallant’s (2013) sample size formula, the sample size of 59 can only be good for one independent variable in regression analysis. Nevertheless, more than two independent variables were included in data analysis, which inevitably decreased the statistical power as well as its generalizability. In addition, participants of the study were homogenous. The majority (79.7%) of the participants were Caucasian American and 91.5% of the participants had a college degree or above. These factors made it very difficult to generalize the results of the study to the population.

The small sample size problem could be due to the method of survey research. The return rate of survey research is typically quite low, many people are simply not motivated enough to sit by themselves and complete the survey (Brown et al., 1999). Paper-pencil survey may has even lower return rate than online survey because it may be more convenient for parents, in this case, to complete the survey via cell phone or computer. To motivate parents to participate, a drawing for an Amazon tablet was set, that is, whoever participates may have a chance to win the tablet. However, this incentive is not certain, the probability to win the tablet is very small given the amount of surveys handed out (i.e., more than 400).

Moreover, low response rate, in this case 14%, is problematic because it indicates more bias in the final sample of participants (Brown et al., 1999). That is to say, people who participated might have been very different from people who did not participate in many ways such as socioeconomic status, marital status and so forth. It is also important to note that the
lower the response rate, the more likely the bias will contort the findings and make the results less generalizable. According to Babbie (2014), a response rate of 50% is considered adequate for survey research.

The study utilized two kinds of non-probability sampling techniques, convenience sample (also known as haphazard sampling) and snowball sampling (Babbie, 2014; Brown et al., 1999). One major weakness of non-probability sampling techniques is that may lack reliability. The participants were recruited because it was convenient to do so, therefore, the results may not be generalizable to a random population. That is, it is not representative of the actual population and cannot be generalized to a broader population (Babbie, 2014). Future research would benefit from probability sampling technique to generalize research findings to the population.

The cross-sectional design of the study is another limitation. All of the hypotheses were aimed to examine possible predictor’s of children’s prosocial behavior. However, the directionality of relationship cannot be validly examined by cross-sectional design given that all of the data were collected at the same time (Brown et al., 1999). Experimental designs are necessary to make stronger predictive inferences in future studies.

Another limitation of the study is the reliance on self-report. The assessment of children’s prosocial behavior, parental discipline and parental emotion regulation strategies were all completed by parents’ self-report. According to the principle of social desirability (Brown et al., 1999), it is possible that parents report both of their emotion regulation style and disciplinary practices according to what’s positively valued based on their culture norms. That is, parents report what their culture considers more preferable for parents to do. Future research can benefit from using mixed methods. This could be achieved by observing children’s behavior, using teacher reports and so on.
Moreover, whether mothers’ report of children’s prosocial behavior really captures children’s prosocial behavior remains a question. These reports could be influenced by mothers’ biased opinion or their perceptions of children’s prosocial behavior. This is a common methodological problem in the study of prosocial behavior because many studies measure children’s prosocial behavior by surveying teachers, parents or peers (Grusec et al., 1996; Leaper, 1991). For example, research on sex differences conducted with questionnaires has generated different findings from research done with observations. Girls are often reported to be more prosocial than boys in survey studies whereas observational studies suggest girls and boys are likely to be prosocial in different ways (Hastings et al., 2007). This line of research in the future can benefit from a longitudinal design to directly examine children’s prosocial behavior both at home and in school by observations.

Additionally, many prosocial behaviors observed in young children, such as helping and cooperating, happens in school and peer context. Parental report of children’s prosocial behavior, however, are more likely to be those behaviors observed at home in a parent-child or sibling relationship. For instance, older siblings maybe more likely to help with housework and initiate kind gestures and helping behaviors toward younger sibling (Grusec et al., 1996). Moreover, some studies examining the children’s perception of parental discipline practices and reported that children’s perceptions of inductive discipline were positively related to prosocial behavior and values such as kindness and other-centered values (Dlugokinski & Firestone, 1974; Patrick & Gibbs, 2012).

The current research focused on the effect of parental variables on children’s prosocial behavior. However, parent-child relationship is bidirectional, children do not come in the world as empty entities to be influenced and socialized (Thompson & Goodvin, 2005). Past research
on parenting has explored the determinants of parenting behaviors, Belsky’s (1984) parenting process model, for example, argues that child characteristics is one of the three most important components that contribute to parenting behaviors. Children differ in their temperament, emotions, and personalities which influence others around them and how others treat them (Thompson & Goodvin, 2005). Due to certain genetic make-up, some individuals are categorized as temperamentally difficult because of their general negative emotions and poor adaptability (Thompson & Goodvin, 2005). They are considered to be more difficult to handle than those who are cheerful and easy. However, more recently, research suggests that individuals who are temperamentally difficult are differentially susceptible to both positive and negative environment (Van Zeijl et al., 2007). For instance, Van Zeijl et al., (2007) reported that child temperament moderated the relationship between maternal discipline and children’s externalizing problems.

In addition to the limitations mentioned above, the study originally included the measurement and hypothesis of parental knowledge in child development which was later deleted from the study because of its low reliability. Literature pointed out that parents use specific discipline techniques because of their childhood experience as well as their knowledge on childrearing, which mostly come from family members (Straus, 2000). She argued that the pro-spanking advice also, implicitly, comes from experts in child development when it is stated that spanking can be used only when necessary. Similarly, Grusec et al., (1997) suggested that parental cognitions are as important as parental emotions in determining parental disciplinary and other socialization strategies. They argued that parental cognitions could be automatic or conscious. Automatic cognition refers to those learned from one’s childhood experiences,
conscious cognition refers to the education one received, particularly in the field of child development.

Grusec and colleagues (1997) further argued that it is the attributions parents make about the child’s behavior that determine parenting style. For example, authoritative parents, who are more likely to use inductive discipline than power assertion discipline, are more likely to make situational and positive attributions about the child. That is to say, these parents are more likely to appraise the misdeed of the child not as the child’s dispositions but as the child’s lack of moral knowledge. Therefore, they are more likely to provide the child with the moral knowledge he needs. In other words, parents who have irrational cognitions about children are more likely to discipline children in developmental inappropriate ways (e.g., harsh discipline). This is perhaps why many parenting intervention programs provide parents psychoeducation on child development (Gavita et al., 2012).

Therefore, based on the prior review of literature, it seems clear that parental cognitive reappraisal, as a healthy strategy of regulating one’s emotions, influences one’s parenting strategies and predicts positive parenting techniques such as inductive discipline. Inductive discipline, on the other hand, predicts children’s prosocial behavior (Eisenberg & Murphy, 1995). I hypothesized that parental knowledge in child development would moderate the relationship between parental cognitive reappraisal and inductive discipline.

Three items were created to in the attempt to assess parental knowledge in child development by learning about the educational activities of the parent (e.g., “How often do you read books on child development?” and “Have you attended child development related workshops?”). In addition, a 12 item scale was created to assess parental knowledge in child development milestones [see Appendix H]. These items were selected from Centers for Disease
Control and Prevention (CDC) website – the Developmental Milestones page. The CDC website contains the checklists of the developmental milestones at 2 months, 4 months, 6 months, 9 months, 1 year, 18 months, 2 years, 3 years, 4 years and 5 years in these four domains: social and emotional, language/communication, cognitive (learning, thinking, problem solving), and movement/physical development. Based on the scope of current study, only items for 3, 4 and 5 year olds were selected. Two items on social and emotional development of each age (e.g., “Shows affection for friends without prompting.”) and 2 items on cognitive abilities of each age (e.g., “Count 10 or more things.”) were selected to comprise the scale. A reliability test was conducted to examine the internal consistency of the scale, the Cronbach alpha coefficient was .563.

However, the scale was deleted from the study because of low reliability and validity. The reliability of parental knowledge in child development (CDK) was low (Cronbach alpha = .577). Pallant (2013) recommends that in cases of low reliability, factor analysis should be performed to reduce the items in a scale or a subscale to form a more coherent scale. However, any sample size smaller than 150 is not recommended for factor analysis (Pallant, 2013). Further, a tentative factor analysis of Child Development Knowledge (CDK) scale was performed and it showed a low Kaiser-Meyer-Olkin Measure of Sampling Adequacy value of .553, which is under the suggested value of .60 (Pallant, 2013). CDK was computed by adding all variables, and the scale was kept continuous.

Several reasons could have caused the low reliability. CDK scale consists of 12 items, however, the original checklist included 204 items at ten different points of age (i.e.g, 2 months, 4 months, 6 months, 9 months, 1 year, 18 months, 2 years, 3 years, 4 years and 5 years) in four domains (i.e., social and emotional, language/communication, cognitive, and movement/physical
development). Given that other established measures on parent/teacher knowledge on child
development contain large number of questions (e.g., The Knowledge of Infant Development
Inventory (KIDI, MacPhee, 1981) has 75 items; ), it is likely that the 12 selected items did not
measure parents’ knowledge in child development adequately.

Moreover, there is the problem of lack of validity due to unclear instructions.
Participants were asked to write down when their children or most children begin to do certain
things (see Appendix H). This is reflected on several respondents’ notes on the margins of the
survey paper. One parent wrote that “He can do all of this at 2.5 years.” Another parent wrote
that “My child still cannot do any of this.” I assumed this child was receiving IEP (individualized
education plan) and experiencing some delay in certain areas, or all areas, of development
because this child was unable to perform developmentally appropriate behaviors.

Conclusions and Implications

Research on prosocial behavior and moral development is important. Early prosocial
behavior is associated with children’s abilities in other areas such as perspective taking,
emotional understanding as well as their subsequent academic achievement (Brownell et al.,
2013; Caprara et al., 2000). However, much literature in parenting and socialization has focused
on harsh parenting and children’s adjustment problems (Carlo et al., 1999; Eggum et al., 2011).
That is because harsh punishment such as hitting is extremely prevalent, especially for young
children. Hoffman’s (1983) moral socialization theory suggest that inductive discipline,
compared to harsh discipline and love withdrawal, is most effective in predicting children’s
prosocial behavior (Eisenberg & Murphy, 1995). However, most research in this area has
focused on the underlying reason of why inductive discipline predicts children’s prosocial
behavior. Few have studied the factors contributing to such parenting technique as inductive discipline.

My study extended the past literature on the determinants of parental inductive discipline by examining the roles of two types of emotion regulation strategies: cognitive reappraisal and expressive suppression. The study shed some light on how parental emotion regulation strategies influence parenting behaviors and children’s prosocial behavior. Results indicated that expressive suppression was negatively associated with children’s prosocial behavior. Also, the relationship between inductive discipline and children’s prosocial behavior is stronger when parental warmth is high, the relationship is weaker when parental warmth is low. However, due to the small sample size and sample biases, the hypothesis that parental cognitive reappraisal predicted children’s prosocial behavior through inductive discipline was not supported. This result indicated a need to further examine the relationships between parental emotion regulation strategies and its influence on both parenting behavior and child outcomes.
Appendix A – Background Information of the Sample
<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
<th>N (Total)</th>
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<tbody>
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</tr>
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</tr>
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<td>60+</td>
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Appendix B: SU IRB Approval Letter
TO: D. Bruce Carter  
DATE: January 6, 2016  
SUBJECT: Submitted for Expedited Review-Determination of Exemption from Regulations  
IRB #: 15-357  
TITLE: Inductive Discipline and Children’s Prosocial Behavior: The Role of Parental Emotional Regulation

The above referenced application, submitted for expedited review has been determined by the Institutional Review Board (IRB) to be exempt from federal regulations as defined in 45 C.F.R. 46, and has been evaluated for the following:

1. determination that it falls within the one or more of the five exempt categories allowed by the organization;
2. determination that the research meets the organization’s ethical standards.

This protocol has been assigned to exempt category 2 and is authorized to remain active for a period of five years from January 4, 2016 until January 3, 2021.

CHANGES TO PROTOCOL: Proposed changes to this protocol during the period for which IRB authorization has already been given, cannot be initiated without additional IRB review. If there is a change in your research, you should notify the IRB immediately to determine whether your research protocol continues to qualify for exemption or if submission of an expedited or full board IRB protocol is required. Information about the University’s human participants protection program can be found at: http://orip.syr.edu/human-research/human-research-irb.html. Protocol changes are requested on an amendment application available on the IRB web site; please reference your IRB number and attach any documents that are being amended.
**STUDY COMPLETION**: Study completion is when all research activities are complete or when a study is closed to enrollment and only data analysis remains on data that have been de-identified. A Study Closure Form should be completed and submitted to the IRB for review ([Study Closure Form]).

Thank you for your cooperation in our shared efforts to assure that the rights and welfare of people participating in research are protected.

Tracy Cromp,
M.S.W. Director

**DEPT**: FALK Child & Family Studies, 144I White Hall
Xinyue Xiao

**STUDENT**: Sonya

Office of Research Integrity and Protections
121 Bowne Hall  Syracuse, New York 13244-1200
(Phone) 315.443.3013  (Fax) 315.443.9889 orip@syr.edu
◆ www.orip.syr.edu
Appendix C: Consent Form

Department of Child & Family Studies
Syracuse University
144 White Hall
Syracuse, NY 13244
315-443-2757

My name is Sonya Xiao. I am a graduate student in the Department of Child and Family Studies Department at Syracuse University working on my M.S. thesis under the direction of Dr. Bruce Carter. I am inviting you to participate in a research study on the relationship between parenting practices, emotion regulation, and children’s positive social behavior. You may participate in the study if you have one or more than one child between the ages of 3 to 5 years. Participation in the study is voluntary, so you may choose to participate or not without prejudice. If you decide to take part and later decide that you no longer wish to participate or complete the survey, you can withdraw from the survey at any time.

You will be asked to complete the survey that has 118 questions. Completing the survey should take approximately 30-40 minutes. Your answers on the survey are confidential and all responses will be kept anonymous. Of course, you are not required to answer any question that you do not want to answer and you may stop any time without penalty. If you have any questions, I will be happy to explain anything in detail if you wish. You may contact me via telephone (315-708-4673) or email (xxiao11@syr.edu) or you may contact my advisor (315-443-4827 or dbcarter@syr.edu).

Although I do not anticipate that you will derive any direct benefit from participating in this study, you may find that you may gain insight into your own parenting practices. We also do not believe that you will be exposed to more than minimal risk by completing the questionnaire. At most you may find completing some questions boring. However, you will be helping us to understand how parenting practices and emotion regulation influence children’s social emotional development.

You will not be compensated for participating. However, we will hold a raffle for an Amazon Fire Tablet. If you choose to participate in the drawing for the tablet, you can fill in your contact information on the sheet provided and return it to me. The survey should be returned in the sealed envelope provided while the drawing information should be returned separately. If you choose not to participate in the raffle, you may simply return only the finished copy of your survey in the sealed envelope. Completing all or part of the survey is not required in order to participate in the raffle. It is our way of thanking you for considering participating in this research.

If you have any questions, concerns, and/or complaints about the research, contact me or Dr. Carter. If you have any questions, concerns or complaints about your rights as a research participant that you wish to address to someone other than the research, you can contact the Syracuse University Institutional Review Board at 315-443-3013.

Thank you,
Sonya Xinyue Xiao
Graduate Student
Dear Parents,

I am a master’s student in Child and Family Studies at Syracuse University. You are invited to participate in my master’s thesis research if you have a child who is 3 to 5 years old.

The purpose of the research is to examine the relationship between parenting techniques, parent characteristics, and your child’s social behavior. You will be asked to complete a survey about your disciplinary techniques and your child’s behavior. It will take you about 30 minutes to finish the survey.

Although I do not anticipate that you will benefit directly from participating, you may find that you may gain insight into your own experiences. We also do not believe that you will be exposed to more than minimal risk by completing the questionnaire. You will be helping us to understand how parenting practices and emotional regulation influence children’s social emotional development.

"It is easier to build strong children than to repair broken men."

---Frederick Douglass.

Your participation is voluntary and anonymous. Your answer will not be matched to your contact information. You will not be compensated for participation. But you will have a chance to win an Amazon Fire Tablet. If you choose so, you will be asked to write your name and contact information on a separate entry form that will not be connected to your answers.

Please feel free to ask questions about the research if you have any. I will be happy to explain anything in detail if you wish.
Please return the finished survey before Jan. 22th in the sealed envelope provided to your child’s teacher or the office.
Appendix E: Demographic Questionnaire

The first questions are about you and your family's demographics. The information from this set of questions will help us understand more about you and your family.

1. What is your age?
   a. 20-29   b. 30-39   c. 40-49   d. 50-59   e. 60+
2. What is your gender?
   a. Male   b. Female
3. What is your race or ethnicity?
   d. Native American   e. Middle Eastern   f. Other ______
4. What is your religious affiliation?
5. What is your highest level of education?
   a. High School   b. Vocational/Technical   c. College Graduate (4 years)
   d. Some College   e. Masters Degree   f. Doctoral Degree   g. Other______
6. What is your occupation?
   a. Professional   b. Technician   c. Homemaker   d. Clerical/Retail Sales
   e. Service worker   f. Student   g. Other______
7. What is your marriage status?
8. What is your current household income in U.S. dollars?
   a. 10,000-20,000   b. 20,000-40,000   c. 40,000-60,000
   d. 60,000-80,000   e. 80,000-100,000   f. Over 100,000

Now I would like you to think about your child or one of your children who is 3, 4, or 5 years old. In this study, you will answer some questions about this child.

9. How many children do you have?   __________
10. What is the age of the child participating in this study?
    a. 3   b. 4   c. 5
11. What is the date of birth of this child?   mm / dd / yy
12. What is the gender of the child participating in this study?
    a. Male   b. Female
13. Does your child receive special education services such as Individualized Education Programs (IEPs)?
    a. Yes   b. No
14. Have you taken child development related classes?
    a. Yes   b. No
15. Have you attended child development related workshops?
    a. Yes   b. No
16. How long has your child been at preschool?   _______ Months
17. How long has your child been at center-based care?   ____________ Months
Appendix F: The Parenting Dimension Inventory- Short Version (PDI-S)

For the questions that follow, you will be asked about your attitudes and behavior toward the child you chose to answer for in the first section. Please answer all questions in regard to this child.

1. The following statements represent matters of interest and concern to some parents. Not all parents feel the same way about them. Write down the number which most closely applies to you and your child.

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<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Not at all like me</td>
<td>Not much like me</td>
<td>Somewhat like me</td>
<td>Pretty much like me</td>
<td>Very much like me</td>
<td>Exactly like me</td>
</tr>
</tbody>
</table>

1. ___I encourage my child to talk about his or her troubles
2. ___I always follow through on discipline for my child, no matter how long it takes
3. ___Sometimes it is so long between my child’s misbehavior and when I can deal with it, that I just let it go.
4. ___My child and I have warm intimate moments together.
5. ___There are times I just don’t have the energy to make my child behave as he or she should.
6. ___Once I decide how to deal with a misbehavior of my child, I follow through on it.
7. ___I encourage my child to be curious, to explore, and to question things.
8. ___My child can often talk me into letting him or her off easier than I had planned.
9. ___I find it interesting and educational to be with my child for long periods.
10. ___I make sure my child knows that I appreciate what he or she tries to accomplish.

11. ___I believe that once a family rule has been made, it should be strictly enforced without exception.
12. ___I respect my child’s opinion and encourage him/her to express it.
13. ___My child convinces me to change my mind after I have refused a request.

2. Listed below are pairs of statements concerning parents’ attitudes toward childrearing. For each pair, read both statements. Then determine which statement you agree with most, and circle the letter in front of that statement. Circle ONLY ONE letter per item.

1. A. Nowadays parents place too much emphasis on obedience in their children.
   B. Nowadays parents are too concerned about letting children do what they want.

2. A. Children need more freedom to make up their own minds about things than they seem to get today.
B. Children need more guidance from their parents than they seem to get today.

3. A. I care more than most parents I know about having my child obey me.
B. I care less than most parents I know about having my child obey me.

4. A. I try to prevent my child from making mistakes by setting rules for his/her own good.
B. I try to provide freedom for my child to make mistakes and to learn from them.

5. A. If children are given too many rules, they will grow up to be unhappy adults.
B. It is important to set and enforce rules for children to grow up to be happy adults.

3. Listed below are several situations, which frequently occur in childhood. You may or may not have had these experiences with your child. Imagine that each has just occurred and rate how likely it is that you would do EACH of the responses listed below the situation. Write down the number which most closely applies to you and your child.

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<tr>
<td>Very like to do</td>
<td></td>
<td></td>
<td>Very unlikely to do</td>
</tr>
</tbody>
</table>

1. ____ How often do you read books on child development?

2. After arguing over toys, your child hits a playmate. (Choose a number for EACH response.)
   a. ____Let situation go
   b. ____Take something away (e.g., no dessert, no TV) or add an additional chore (e.g., clean up toys)
   c. ____Send to room or isolate by sitting in a chair
   d. ____Spanking or hitting
   e. ____Talk to the child (e.g., discuss alternatives, discuss your reasons for wanting the child to do or not to do something)
   f. ____Scold the child
   g. ____Remind your child of the rule or repeat the direction

3. Your child becomes sassy while you discipline him or her. (Choose a number for EACH response.)
   a. ____Let situation go
   b. ____Take something away (e.g., no dessert, no TV) or add an additional chore (e.g., clean up toys)
   c. ____Send to room or isolate by sitting in a chair
   d. ____Spanking or hitting
   e. ____Talk to the child (e.g., discuss alternatives, discuss your reasons for wanting the child to do or not to do something)
   f. ____Scold the child
   g. ____Remind your child of the rule or repeat the direction
4. You receive a note from your child’s teacher that your child has been disruptive at school. (Choose a number for EACH response.)

   a. ___Let situation go
   b. ___Take something away (e.g., no dessert, no TV) or add an additional chore (e.g., clean up toys)
   c. ___Send to room or isolate by sitting in a chair
   d. ___Spanking or hitting
   e. ___Talk to the child (e.g., discuss alternatives, discuss your reasons for wanting the child to do or not to do something)
   f. ___Scold the child
   g. ___Remind your child of the rule or repeat the direction

5. You catch your child lying about something he or she has done that you would not approve of. (Choose a number for EACH response.)

   a. ___Let situation go
   b. ___Take something away (e.g., no dessert, no TV) or add an additional chore (e.g., clean up toys)
   c. ___Send to room or isolate by sitting in a chair
   d. ___Spanking or hitting
   e. ___Talk to the child (e.g., discuss alternatives, discuss your reasons for wanting the child to do or not to do something)
   f. ___Scold the child
   g. ___Remind your child of the rule or repeat the direction

6. You see your child playing at a busy street that you have forbidden him or her to go near for safety reasons. (Choose a number for EACH response.)

   a. ___Let situation go
   b. ___Take something away (e.g., no dessert, no TV) or add an additional chore (e.g., clean up toys)
   c. ___Send to room or isolate by sitting in a chair
   d. ___Spanking or hitting
   e. ___Talk to the child (e.g., discuss alternatives, discuss your reasons for wanting the child to do or not to do something)
   f. ___Scold the child
   g. ___Remind your child of the rule or repeat the direction
Appendix G: Emotion Regulation Questionnaire (ERQ)

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

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<th>4</th>
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<td>Strongly disagree</td>
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<td></td>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td>Strongly agree</td>
</tr>
</tbody>
</table>

1. ____ When I want to feel more positive emotion (such as joy or amusement), I change what I’m thinking about.
2. ____ I keep my emotions to myself.
3. ____ When I want to feel less negative emotion (such as sadness or anger), I change what I’m thinking about.
4. ____ When I am feeling positive emotions, I am careful not to express them.

5. ____ When I’m faced with a stressful situation, I make myself think about it in a way that helps me stay calm.
6. ____ I control my emotions by not expressing them.
7. ____ When I want to feel more positive emotion, I change the way I’m thinking about the situation.
8. ____ I control my emotions by changing the way I think about the situation I’m in.
9. ____ When I am feeling negative emotions, I make sure not to express them.
10. ____ When I want to feel less negative emotion, I change the way I’m thinking about the situation.
This section of the survey is about the development of your child and your general knowledge in child development. Below are some statements, please write down when your child, or most children begin to do these things, 3, 4 or 5 years old?

1. _____ Shows affection for friends without prompting
2. _____ Cooperates with other children
3. _____ Wants to please friends
4. _____ Shows concern for a crying friend
5. _____ Wants to behave like friends
6. _____ Would rather play with other children than by himself
7. _____ Does puzzle with 3 or 4 pieces
8. _____ Count 10 or more things
9. _____ Understand the idea of counting
10. _____ Understand what “two” means
11. _____ Tells you what he thinks is going to happen next in a book
12. _____ Can draw a person with at least 6 body parts
Appendix I: Social Competence Inventory (SCI)

This is the last section of this survey. We would like to ask you some questions about your child. Listed below are some descriptions of social behaviors. Please choose the one that best describes your child using the following scale:

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<td>Doesn’t apply at all</td>
<td></td>
<td></td>
<td></td>
<td>Applies very well to the child</td>
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1. ____ Has capacity for generosity to peers
2. ____ Has capacity to be helping/altruistic
3. ____ Has capacity to sympathize with peers
4. ____ Criticizes peers
5. ____ Helpful with adults
6. ____ Helps peer tidy up/search for lost items
7. ____ Shares his/her belongings
8. ____ Good at preventing conflicts
9. ____ Comforts peer who is upset/sick
10. ____ Includes shy children in play
11. ____ Has ability to decode peers’ feelings
12. ____ Tries to intervene in peer conflicts
13. ____ Gives compliments to peers
14. ____ Finds solution when in conflict
15. ____ Has the capacity to play/work well with peers
16. ____ Can give and take in interactions
17. ____ Shares peers’ joy
18. ____ Leads play activities
19. ____ Socially withdrawn with peers
20. ____ Makes contact easily with unfamiliar children
21. ____ Hesitant with peers
22. ____ Spectator while others play
23. ____ Shy/hesitant with unfamiliar adults
24. ____ Suggests activities to peers
25. ____ Dominated by peers
References


http://dx.doi.org/10.1111/j.1467-8624.2006.00855.x


doi: 10.1111/j.1467-8624.1996.tb01913.x


Taratuski, K. J. (2010). *A Comparison of the parenting dimensions that lead to positive social problem solving in the children from traditional versus children from same-sex parent families.* Retrieved from Digital Commons.


VITA

Xinyue Xiao
xxiao11@syr.edu

Education

Syracuse University, Syracuse, New York
Master of Science in Child and Family Studies, 2016

Tianjin University of Science and Technology, Tianjin, China
Bachelor of Management in Financial Management, 2012,

Honors and Awards

- Teaching assistantship, Syracuse University, 2014-2015
- Travel Scholarship, the University of Missouri, 2015
- Graduate Tuition Scholarship, 6 credits, Fall 2015 and Spring 2016
- Teaching assistantship, Syracuse University, 2016 spring

Conference Presentations


Academic Experiences

Teaching Assistant
Syracuse University
- CFS 331 Play, Childhood Development, and Early Education
- Bernice M. Wright Child Development Laboratory School

Professional Service

- Member of Student Council on Family Relations (SCFR), Syracuse University, 2014-2016
- Volunteer for March for Babies, Onondaga Community College 2014
- Volunteer for Falk Information Session Fall 2014 and Spring 2015