# Nonresident fathers parenting and child and adolescent development 

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## Nonresident Fathers Parenting and Child and Adolescent Development

According to the 2010 United States Census, the percentage of children living in two-parent "nuclear family" homes has been decreasing for the past 50 years. Today, $27 \%$ of US children are estimated to be living in single-parent homes. The majority of those homes (nearly $85 \%$ ) are headed and maintained by single mothers. Sixty-five percent of those mothers are employed, while $35 \%$ are either unemployed or not in the labor force.

Despite these trends regarding the family structure, fathers, whether in the home or not, play a fundamental role in their young and adolescent children's development and provide great opportunities for them as well (Roggman, Boyce, Cook, Christiansen, \& Jones, 2004; Zimmerman, Salem, \& Notaro, 2001). Their love (behaviorally defined as warm, nurturing, affectionate and comforting) and influence in their children's development are unique and distinct from that of a mother, according to recent reviews of the child development literature (Cabrera, Tamis-LeMonda, Bradley, Hofferth, \& Lamb, 2000; Pleck \& Masciadrelli, 2004; Rohner \& Veneziano, 2001). Furthermore, findings from Lamb's (2000) review, Marks and Palkovitz's (2004) analysis on fathering types, Adamsons, O'Brien, and Pasley's (2007) study utilizing data from the NICHD Study of Early Child Care along with Lamb's (1976b) work on infants and Veneziano's (2003) work on cross-cultural contexts -- all suggest that there are a myriad of paternal behaviors and characteristics such as warmth, caring, providing emotional, physical and financial support that aid in the healthy and positive outcomes of children. Eisenberg, Fabes, and Murphy (1996) and McElwain, Halberstadt and Volling (2007) examined reactivity to emotions, specifically emotion-related practices and child emotional
reactivity and recovery, respectively. Findings from these studies of children and adolescents also suggest that fathers who provide emotional support have children with better outcomes. Likewise, the lack of these supportive or involved behaviors is predictive of negative outcomes in children, especially adolescents (Baumrind, 1991). It's important to note, however, that these studies and reviews specifically examined fathers living in their children's home in two-parent, in-tact households.

Though research is mounting regarding the importance and benefits of father involvement, additional research is needed regarding fathers' impact on their children's development when they do not live in their children's home (i.e., specifically "nonresident" fathering). Especially needed is research on nonresident father behaviors and characteristics that have an impact on their children's development. Moreover, it is necessary to distinguish between the terms 'nonresident' fathers and 'absent' fathers. In this thesis, nonresident fathers are fathers who do not live with their children but remain involved in their children's lives. Absent fathers are defined as those who live in different homes than their children and are uninvolved in their child's lives. Studies involving nonresident fathers focus mainly on the issues that typically arise as a result of living away from their children (e.g., visitation, child support issues, parental conflict and lack of employment). A study of fathers and their children ages 0 to 17 years old, in which they utilized Data from the National Survey of Families and Households found positive correlations among visitation, child support, and good relations between the parents (Cooksey \& Craig,1998; Furstenberg \& Winquist Nord, 1985). It is also noted that, compared to resident fathers, fewer opportunities are available for nonresident fathers to teach, inform, make decisions (Furstenberg \& Winquist Nord, 1985), socialize
with and monitor (King, Harris, \& Heard, 2004) or provide everyday care (Cabrera et al., 2004) to their children. Paying child support correlates positively with visitation (Furstenberg, Winquist Nord, Peterson, \& Zill, 1983; Juby, Billette, Laplante, \& LeBourdais, 2007; Seltzer, 1991), but, payment of child support is not always predictive of either positive or negative behavioral outcomes; suggesting that fathers are more valuable than just the financial support they give (Hawkins, Amato, \& King, 2007), and that how nonresident fathers spend their time when with their children matters.

Researchers have typically treated having a nonresident father as being a risk factor for a variety of negative child outcomes (e.g., school dropout). In contrast, researchers have not often taken the perspective that nonresident fathers can have a positive and perhaps protective role in their children's well-being. For example, in their report on the relationships between nonresident fathers and adolescent daughters, East, Jackson, and O'Brien (2006), along with Furstenberg, Nord, Peterson, and Zill (1983) and Seltzer and Bianchi (1988) who focused on post-divorce contact and contact after separation have provided some evidence to suggest that nonresident fathers are absent, uninvolved, don't affect development or have detrimental effects on child development. However, in their study of over 500 men from The Fragile Families and Child Wellbeing Study, Fagan, Palkovitz, Roy and Farrie (2009) examined whether risk and resilience factors predicted nonresident fathers' engagement with their children. The results suggested that nonresident fathers experiencing more protective than risk factors tended to be more engaged and involved with their children. Conversely, nonresident fathers experiencing more risk factors than resilience factors tended to have difficulties in engaging their children. Furthermore, the longer the risk factors
persisted, the more pronounced the deterioration of engagement. Amato and Gilbreth's (1999) meta-analysis revealed that fathering characteristics such as closeness and authoritativeness predicted positive outcomes in the children.

Research on fathering, especially nonresident fathers, is limited in that the general aim in this area of study is to explore father involvement by counting up the number of visits, rather than examining the quality of the nonresident father-child relationship (Amato \& Gilbreth, 1999; Hawkins, Amato, \& King, 2007; Spruijt, de Goede, \& Vandervalk, 2004). Needed are more studies examining measures such as child perceived emotional closeness with their nonresident fathers, warmth, and participation in school related activities by nonresident fathers. Such data on the quality of nonresident father parenting is needed to add to the models society and researchers have about nonresident fathering.

Father Involvement: Emotional Closeness
There is a growing body of evidence that shows that nonresident fathers play significant roles and have vital impacts on their children such as Way \& Gillman's (2000) qualitative study on adolescent girls. Regrettably, as Scott, Booth, King, and Johnson, (2007) point out in their post-divorce study measuring father-adolescent emotional closeness, there are many obstacles to remaining close with nonresident children such as conflict with mothers, lack of economic resources, visitation and other human capital resources working to hinder this relationship, despite the benefits.

Emotional closeness is a dimension of father involvement deserving particular attention because of its importance to the father-child relationship (Bögels \& Phares, 2007). Feelings of closeness have often been defined by the proximal physical distance
of the father's to the child's home, rather than the psychological presence as Thomas, Krampe, and Newton (2008) define it in their study on African American fathers and their adult children. They defined "closeness" as a child's feeling of having emotional accessibility in addition to physical contact (Thomas et al., 2008). While research suggests overall better outcomes for children living with their fathers, value has been placed on how close a child feels he is to his father, regardless of father residence (Thomas et al., 2008).

How close a child feels to his father is hypothesized to be of importance. Children who maintain close and loving relationships with their fathers have better outcomes than children who either do not have close relationships or do not stay in contact with their fathers at all, as seen in Amato \& Gilbreth's (1999) survey. Amato (1994) conducted a study, using an early adulthood sample examining closeness to resident fathers and adult self-esteem, happiness, life satisfaction, and symptoms of psychological distress. The results yielded significant relations between closeness to fathers and happiness, satisfaction and psychological distress. Therefore, children who reported being close with fathers had greater happiness and satisfaction but, had low levels of psychological distress. More importantly, these relations were significant over and above closeness with mothers. The degree of closeness with fathers even has implications for career development, as shown in a study of adult children in business school (Hoffman, Hofacker, \& Goldsmith, 1992). Further research is needed on nonresident fathers, however, as some studies, like the Smith and Morgan (1994) study utilizing maternal and child reports of closeness suggest that children have closer bonds with resident fathers than nonresident fathers.

Father Involvement: Paternal Warmth
The importance of father warmth toward their children is an aspect of father involvement that needs to be developed more in fathering research. For purposes of this thesis, warmth is defined as the father's physical affection toward the child, from the father's perspective. This might be how the father physically behaves toward the child, taking certain interests, or praising the child. Warmth is distinct from closeness in that, closeness is defined as psychological presence or emotional accessibility from the mother's or preferably from the child's perspective and warmth is from the father's perspective.

Veneziano (2003) conducted a study on the importance of paternal warmth and affection using a convenience sample consisting of 186 societies. In addition to the importance of paternal warmth, Veneziano also examined paternal contact or visitation and its relation to maternal warmth and also child behavioral and conduct problems, such as interpersonal aggression and homicide. Results revealed a significant relation between paternal warmth and affection and how much contact the father had with the child. That is, fathers who had contact with their children tended to be warm and affectionate toward them as well. Additionally, there were strong, yet negative relations between father warmth and affection and homicide, theft, and aggression. Finally, paternal warmth was found to be more important in influencing aggressive behaviors than maternal warmth, further suggesting the importance of father warmth.

Kim's (2008) study demonstrated that adolescents desire warm and loving relationships with their fathers as this supports their emotional and psychological wellbeing. Additionally, children with warm and loving mothers and fathers perform better in
school (Kim, \& Rohner, 2002). Fathers low in paternal warmth and affection, on the other hand, have children who exhibit aggressive behaviors (Chen, Liu, \& Li, 2000; Veneziano, 2003) and poorer overall psychological adjustment including hostility, emotional problems, poor self-esteem and a negative outlook on life (Kim, 2008).

Further research is needed on father warmth, particularly nonresident fathers as providers of warmth. Studies that have examined nonresident fathers, have found them to not only be warm, but supportive and responsive as well (King \& Sobolewski, 2006). These paternal behaviors are associated with fewer externalizing and internalizing behaviors among their children (King \& Sobolewski, 2006). However, Kurdek and Fine (1993) conducted a study where adolescents nominated their resident fathers as providers of warmth more often than nonresident fathers. Furthermore, Bronte-Tinkew, Carrano, Horowitz, and Kinukawa's (2008) study using the Early Childhood Longitudinal Study-Birth Cohort and George, Cummings, and Davies (2010) study examining parenting warmth in a sample of kindergarten children, have all examined resident fathers as providers of warmth-underscoring the need for more research specifically examining nonresident fathers. Such research may advance our knowledge of this particular aspect of father involvement and whether characteristics of warmth differ between these two father types.

Father Involvement: School Related Activities
As it relates to academic achievement, school readiness, or academic success, research overwhelmingly focuses on the mother's influence, as shown in Arnold, Zeljo, Doctoroff, and Ortiz's (2008) study of preschoolers and Downer, Campos, McWayne, and Gartner's (2008) review of father research studies conducted over a 15-year period.

Less is known about the influence that a father's involvement in school related activities has on his child's academic success. Even less is known about whether nonresident fathers' influence has similar implications for long-term success, education attainment or conversely, problem behaviors. Regardless of residential status, one may expect or appreciate nonresident fathers having such an influence. Therefore, exploring the influence of fathers on academic achievement is particularly important given its benefits and increased opportunities (e.g., prosocial adjustment, wage earning potential, job attainment, economic well-being) for children's futures.

Though a dearth of literature exists on the dimension of father involvement that includes participation in school related activities and subsequent outcomes, it is well established in Pomerantz, Moorman, and Litwack's (2007) review that parents' involvement in children's school preparation and development is beneficial for the children and influences academic achievement as early as the preschool years (Arnold, et al.,, 2008). This notion is supported by Tan and Goldberg (2009) who conducted a study examining the association between levels of parental involvement and school adaptation in a sample of elementary aged children from Kindergarten to $5^{\text {th }}$ grade. Results indicated a significant correlation between the child's enjoyment of school and the father's direct involvement. That is, fathers contributed independently to their child's enjoyment in school, suggesting that father involvement is important to academic enjoyment independent of mother's involvement. Even fathers' expectations for their children's school success and education attainment beyond high school have been found to be predictive of higher child reading scores, according to Flowers and Flowers (2008) survey on urban African-Americans.

Still, few studies exist on nonresident fathers and the implications of their involvement on their children's academic development. Even fewer studies address whether nonresident father's school involvement has an effect on child outcomes, such as low academic motivation or behavior problems over time (Flouri \& Buchanan, 2004). A notable exception is found in Menning's (2006) study who found a significant negative relation between nonresident father's involvement and an adolescent's propensity to drop out of school such that, greater involvement was related to lower school failure.

Examining nonresident father's involvement in school related activities is a needed area of research as this dimension of involvement has not been adequately explored. It is conceivable that nonresident fathers who invest in their children's academic development will have children who will have better outcomes and this association will be stable over time, whereas nonresident fathers who are not involved in school related activities will have children with poor academic or psychosocial outcomes and this too will be stable over time.

So far, a review of the literature shows the importance of father involvement and child and adolescent outcomes. In fact, Videon (2005) found that the impact that fathers have on their children is separate and distinct from mother's impact and is as strong, if not stronger than the mother's impact. Greater father involvement, measured using the level of emotional supportiveness, has been linked to fewer behavioral problems in children (Bronte-Tinkew, Moore, Capps, \& Zaff, 2006) and well-being (Harper \& Fine, 2006). In addition, findings from Aldous and Mulligan's (2002) study revealed that greater father involvement, measured using the level of father's active child care, was predictive of fewer problems as the children grew older, and prosocial
behavior as indicated in Flouri's (2007) study on adolescents. Furthermore, children feeling close to their father had greater academic success, lower internalizing and externalizing behaviors, as revealed in Amato and Gilbreth's (1999) meta-analysis, lower emotional distress, in Stewart's (2003) study examining adolescent-father interaction, and overall and better adolescent outcomes according to King's (2006) study, utilizing a sample of adolescents along with their biological and stepfathers. On the other hand, Aldous and Mulligan's (2002) study on father-child care in which the authors used a sample of preschool aged children, found that lack of father care or involvement resulted in children having problems as they transitioned to school, being characterized as having difficult dispositions, and having detrimental effects, as East, Jackson, and O'Brien (2006) summarized in their literature review regarding fathers and adolescents.

Interparental Conflict and Father Involvement
Conflict between parents appears to undermine children's sense of safety and attachment security (Davies \& Cummings, 1994). Generally, exposure to parenting conflict is quite distressing for children. Furthermore, it may contribute to child behavior problems. For example, Morawska and Thompson (2009) examined the relation between marital conflict, parenting conflict, and behavior problems in children between the ages of 2 and 16. Their findings revealed a significant relation between parenting conflict and observed child difficulty.

Conflict also is thought to have indirect effects through its relation to nonresident father contact. If mother-father relationships dissolve, it may be difficult for a child to continue to have positive relationships with both parents (Sandler, Miles, Cookston, \&

Braver, 2008). The quality of these family relationships is often challenged, as a result of interparental conflict. Mothers may act as gatekeepers to contact with nonresident fathers and as a result, conflict with mother may result in less father child contact.

Marital and relationship factors account for adjustment problems that can be seen in children as early as 2 years old (Shaw, Winslow, \& Flanagan, 1999). Higher levels of interparental conflict are negatively correlated with father warmth (Sandler, Miles, Cookston, \& Braver, 2008), which is associated with higher levels of internalizing behaviors. High warmth is found to be predictive of low externalizing behaviors but the relation does not depend on parenting conflict.

Marital and post-marital conflict creates several negative effects on the family. When high levels of conflict are present between mothers and fathers, a child's wellbeing is compromised. Though children may not be in a position to understand these issues, they are often put in the middle of the conflict. Furthermore, children may be forced into loyalty positions, forced to make judgments or decisions about each parent. Indeed a child's mental health can be compromised when forced to deal with these types of issues (Davies \& Cummings, 1994). Marital conflict or post-marital conflict may also impede the quality of parenting (Fabricius \& Luecken, 2007).

Conflict between mothers and fathers are thought to pose problems between the father and the child (Scott, Booth, King, \& Johnson, 2007). However, there is little evidence to suggest whether absence of marital or post-marital conflict acts to promote better relationships between fathers and children. Therefore, what impact might lowlevels of parental conflict have on the relationship between father involvement and child outcomes? It is conceivable that when mothers and fathers maintain harmonious
relationships, keeping conflict to a minimum, that this indirectly affects the relationship between the father and child, helping to foster healthy relationships between fathers and their children.

Father Involvement: Theoretical Frameworks
There are few overarching or leading theories specific to fathering research (evolutionary psychology and psychoanalytic theories are notable exceptions). This may be because theories on parenting and child outcomes focus on primary caregivers (e.g., attachment theory), who are more likely to be mothers than fathers. While considerable gains have been made in this area of studying paternal caregiving, major theoretical considerations mostly involve mothers and children. However, an important theoretical model that has been identified in research that links fathering characteristics and characteristics of the child is Belsky's (1984) ecological process model of the determinants of parenting. Belsky (1984) postulated a model in which parenting was both directly and indirectly influenced by a number of factors. Those factors included the parent's own personality, which was imbedded in the person's "developmental history" or previous events, child characteristics such as temperament and various social contexts, including marriage, employment and other social networks. With the foregoing at work, the model assumed that these factors influenced the psychological well-being of parents which affected them in their role of parenting, which ultimately affected their children's behavior.

Belsky also hypothesized in his model that parents functioned more effectively when subsystems that contributed to the parenting role in concert with each other were collectively positive rather than collectively negative. Specifically, this model outlined
three subsystems: personality and psychological well-being, support (emotional, instrumental and social), and child characteristics that were thought to either hinder or support the parenting role. Depending on the cumulative effects of these subsystems the parent was able to function more or less competently in their parenting role. So, when all subsystems were supportive, the parent functioned to the highest of their ability, whereas, when the subsystems were stressful, that is, child characteristics were unfavorable, there was a lack of any support and psychological well-being was compromised, the probability that the parent was competent in their role was the lowest and also explained when children were most likely to have compromises to their developmental outcomes.

The theory of "Mattering" (Rosenberg \& McCullough, 1981) may also offer links between father involvement and child outcomes and is also used to guide the current study. Theory of Mattering is a sense of feeling significant or relevant to significant others (Rosenberg \& McCullough, 1981). It suggests that individuals will feel important or feel they "matter" to significant others by the other person's actions, behavior, recognition of or investment in that individual which, in turn, influences development. The investment can be time, physical, emotional, or financial. Absent this investment, individuals feel they are not important or an essential part of the significant other's life.

For example, fathers who feel they matter to their children or even their children's mother may feel rewarded to continue maintaining a relationship with their child. This may prompt a continuing involvement that includes frequent contact, social and economic support, warmth and closeness to the child. Findings from Marshall and Lambert (2006) indicated that mattering to one's children was indeed important to
fathers and their roles. Further, they found perceived mattering appeared to encourage fathers to continue to meet the needs of their children by engaging their children in various activities. Conversely, if the father feels that he doesn't matter to the child or the mother, or if he's made to feel that his nonresident status or conflict with the mother will not allow him to have a quality father-child relationship, this may result in a father withdrawing from his child. Either of these scenarios under this framework is thought to affect outcomes in children as described next.

Just as fathers may want to feel they matter to their significant others (namely their children), their children want to matter to their fathers as well. It is conceivable that when children feel they matter to their fathers, they feel better about themselves, make good decisions, solidify their role and position within their families, or avoid making decisions that results in negative outcomes. On the other hand, when children feel they do not matter, they may not make the investments that are necessary to have favorable outcomes. Conversely, these feelings could lead to the children trying harder to "win" their fathers involvement

Schenck et al. (2009) examined the relation of mattering to nonresidential biological fathers and/or stepfathers and adolescent mental health problems, controlling for mattering to mothers. Using mother's, teacher's, adolescent's, and stepfather's report of various measures, results indicated mattering to both biological fathers and stepfathers negatively predicted adolescent internalizing and externalizing behaviors, after controlling for mattering to mothers (Schenck et al. 2009). Therefore, mattering to fathers independently influenced behavior. Marshall (2001) and Rosenberg and McCullough (1981) also found an association between mattering to fathers and
fulfillment of life and adolescent psychological well-being. Mattering theory suggests that when fathers and children feel that they matter to each other, each person's development is enhanced.

## Current Study

The objective of the study reported herein was to examine the statistical relations between nonresident father involvement and various child outcomes over time. Specifically, the present study examined specific aspects of nonresident father involvement that included (a) paternal warmth, (b) emotional closeness, and (c) involvement in school related activities. The particular child outcomes under investigation included positive behaviors including self-esteem, social competence and self-control. The problem behaviors that were examined were child externalizing behaviors (e.g., aggression, rule breaking) and internalizing behaviors (e.g., withdrawal, anxiety, depression), taken from the Behavior Problems Index (BPI) measure, which assesses the occurrence and severity of child behavioral problems. Though studies tend to discriminately focus on externalizing behaviors (e.g., Shaw, Winslow, \& Flanagan, 1999; Gorman-Smith et al., 1998), it is equally important to address internalizing behaviors, as their effects can persist and may lead to further complications. For this reason, both externalizing and internalizing child problems were examined.

The project reported herein also looked at parenting conflict as a potential moderator. Specifically, conflict was postulated to affect the relation between father involvement and child behaviors such that the relation between father involvement and child outcomes will be weaker in the context of conflict.

The current study utilized data from the Panel Study of Income Dynamics, which gathered data from nonresident fathers whenever families were willing. The study focused only on the sample where a nonresident father was available. In this regard, it was a conservative examination of whether the quality of nonresident fathering matters, rather than asking when involvement yes or no matters. From a theoretical perspective, this was a logical addition to the literature. The archival sample for this study were mostly single mothers. Consequently, it was beyond the scope of this study to examine in any detail difference when a stepfather or other father figure was also involved in addition to the nonresident biological father.

Based on the foregoing research in this area, the current study addresses the following questions in each case expecting father involvement to have a negative association with child problems and a positive association with child positive outcomes: Moreover, the study examined change in child outcomes over-time and father involvement was expected to predict change in child behavior with more involvement improving children's outcomes longitudinally. Child gender also was included as a variable in analyses as well as other potentially confounding demographic factors.

1. Does nonresident father's warmth (a) predict problem behaviors at time 1 and time 2? (b) predict change in problem behaviors from time 1 to time 2 ?
2. Does nonresident father's warmth (a) predict positive behaviors at time 1 and time 2 ? (b) predict change in positive behaviors from time 1 to time 2 ?
3. Does nonresident father's warmth predict emotional closeness with child?
4. Does father's involvement in school related activities (a) predict problem
behaviors at time 1 and time 2? (b) predict a change in problem behaviors from time 1 to time 2 ?
5. Does father's involvement in school related activities (a) predict positive behaviors at time 1 and time 2? (b) predict a change in positive behaviors from time 1 to time 2 ?
6. Will parenting conflict moderate the relationships between (a) father involvement and positive behaviors? (b) father involvement and problem behaviors?

Examining these particular aspects of nonresident fathering is important because it may provide better insight into the father-child relationship and subsequent outcomes. Further, it extends our knowledge of the importance of fathers beyond a deficit perspective and of fathers regardless of whether or not the father resides in his child's home. Lastly, a greater understanding of the father-child relationship and its outcomes has implications for programs aimed specifically at encouraging fathers to maintain, strengthen, or improve their relationships with their children.

## Methods

## Overview

The sample in the current study was a component of a larger, nationally representative, longitudinal study, the Panel Study of Income Dynamics (PSID). The PSID, which commenced in 1968 collected data primarily on family economics including, family earnings, household expenditures, consumption, family composition changes, marriage, wealth and much more (PSID, 2008). 5000 families entered the study in 1968 resulting in data on more than 18000 individuals tracked over time. In 1997, the PSID supplemented its data collection to include and collect more extensive data on a nationally representative sample of children and their parents from the PSID families (PSID, 2008). This data collection effort was termed the Child Development Supplement (CDS).

The purpose of the CDS, which commenced in 1997, was to collect and examine information regarding the functioning of children ages 0 to 12 -years. To be included, the CDS target child had to have a parent who had participated in the original PSID study. A maximum of two children per family were allowed to participate in the CDS. Data were collected from multiple informants including mothers (generally the primary care giver), secondary caregivers, nonresident fathers, teachers, administrators and the sample children. Data from 3,563 primary caregivers, usually the biological mother, was gathered in the first phase of the CDS. Phase II of the CDS supplement was completed 5 years later when the children were between 5 and 18 years old. 2,019 (56\%) were re-interviewed in 2002 and 2003. There were 1242 who refused to give an
interview, 238 could not be located, 59 were no longer eligible or living with the primary caregiver, and 5 were not available because they had moved out of the U.S.

Nonresident Father Participants
At baseline, there was a potential sample of 1,294 nonresident fathers and children. Of these, 431 (33\%) of the primary caregivers refused to provide information on how to contact the father. Several reasons were given for refusal of father's information. They included "he never sees his child," "doesn't know the father," or "does not want the father to know about the child." Mothers did not have a correct address for 375 (29\%) nonresident fathers and the researchers were not able to locate them. There were 68 ( $5 \%$ ) fathers incarcerated, 12 (1\%) deceased, and 50 (4\%) were misclassified as they were actually living in their child's home. Of the 358 remaining nonresident fathers contacted, $97(7 \%)$ refused to participate, $46(3 \%)$ could not be reached by telephone, and 13 mothers (1\%) refused on behalf of the father. In the end, 202 (16\%) nonresident fathers completed assessments.

The Final Sample for Analyses
For the focus of this study, only children that were age three and older at the Phase 1 data collection were eligible for participation in the study as that was the minimum child age appropriate for the child measures. The sample also was limited to children who were included in both Phase 1 and Phase 2 of the study. Moreover, for the purpose of independent subjects, only the oldest child was included in the study when data were gathered on more than one child. That left 139 nonresident fathers and their children in the subsequent analyses for this thesis. Participants in the current study consisted of 139 children between the ages of 3 and 12 at Time 1 and 139
children between ages 8 and 18 at Time 2. There were $53 \%$ boys, and $47 \%$ girls. All children were reported to be living with their biological mother at the time the study was conducted, with no father-figure living in the home. $49 \%$ of the children were AfricanAmerican, 44\% white Non-Hispanic, .7\% Hispanic, .7\% American Indian or Alaskan Native, $3.6 \%$ other and $1.4 \%$ refused to classify. The ages of the children ranged from 3 to 12 years old at Time 1 with a mean age of 7.8 years. The mean years of education for fathers was 13.54 years. Forty-seven percent of fathers had a high-school diploma, while $38.6 \%$ had at least some college. There were $87.7 \%$ of fathers working at the time of the study and $5 \%$ looking for employment. There were small percentages of fathers who were either laid off, disabled or enrolled in school. Father's income ranged from $\$ 6$ per hour to $\$ 180,000$ per year. Two fathers reported income of $\$ 106,450$ and two fathers reported income of $\$ 180,000$. When converted to dollars per hour, fathers average income was $\$ 13.14$ per hour. When the four salary outliers were removed, the average income was $\$ 12.55$ per hour.

Procedure
Data collection for phase I of the CDS commenced and ended in 1997. Data collection for phase II took place in 2002 and 2003. Interviewers completed PSID family unit assessments, at which time eligibility was established. If the family unit met eligibility requirements, interviewers contacted the family unit to explain the study, obtained permission for participation, mailed introduction letters and measures. Next, interviewers conducted face-to-face interviews with resident mothers and children. Children over the age of 3 were interviewed and given age-graded assessments. In cases where the mother had two sample children, she completed separate
questionnaires for each child. Following the interview, primary caregivers were asked for fathers contact information. Fathers living outside of the home completed a child questionnaire and a home questionnaire over the phone with an interviewer. Parents and children were given incentives for participating in the study.

## Measures

Measures and informants are summarized in Table 1 for the current study.
Behavior Problems. Behavior problems at Phase 1 and Phase 2 were measured using the Behavior Problems Index (BPI, Peterson \& Zill, 1986). The BPI was administered to the primary resident mothers to assess the type, incident and severity of child behavioral problems. Mothers responded to 30 items regarding whether certain behaviors were often true, sometimes true or never true of the child. Some of the externalizing statements included "(He/She) bullies or is cruel or mean to others," or "(He/She) is disobedient." Some of the internalizing statements included "(He/She) feels or complains that no one loves him/her," or "(He/She) is withdrawn, does not get involved with others." The BPI was divided into two subscales; externalizing or aggressive behavior and internalizing or withdrawn or sad behavior. Higher scores reflected higher behavior problems. The internal consistency for these scales in the current study were .86 and .81 respectively.

Positive Behaviors. Positive behaviors at Time 1 and Time 2 were measured using the Positive Behavior Scale (Polit, 1998). The Positive Behavior Scale assesses the positive child behaviors including self-control, self-esteem, competence, obedience and persistence. Primary caregivers were asked to rate each of 10 statements using a 5 -point scale where $1=$ "not at all like my child" to $5=$ "totally like my child." Sample
statements included "Gets along well with other children," or "Is admired and well-liked by other children." Higher scores reflected higher positive behaviors. Cronbach's alpha=. 82 for the current sample.

Nonresident Father Emotional Closeness. Fathers' closeness to their children was rated by mothers using a single item scale designed for the CDS. Mothers were asked to estimate whether their child was emotionally close to their fathers. The 4-point scale ranged from extremely close to not at all close. Because there was only one item in measuring closeness, it was not possible to establish internal consistency. However, lower scores indicated perceived closer relationship to father.

Nonresident Father Warmth. Nonresident father warmth was measured using the Fathers Who Live Outside of the Home Scale. Six items made up this 5-point scale and biological non-resident fathers were asked to rate the items. They included "Told (CHILD) that you love (him/her)," and "Joked or played with (CHILD)." Higher scores reflected higher levels of father warmth. Cronbach's alpha for the current sample was 80.

Parenting Conflict. Parenting conflict was measured using the Fathers Who Live Outside of the Home Scale. Fathers were asked to respond to 10 items on a 4-point scale where $1=$ "often" to $4=$ "never" indicating how often they have conflict with their child's mother over a variety of issues. Sample items included "Disciplining (CHILD)," and "How you spend money on (CHILD)." Lower scores reflected greater conflict. Cronbach's alpha for the current sample was .98.

Participation in School-Related Activities. Nonresident fathers' participation in school related activities were also measured using the Fathers Who Live Outside of the

Home Scale. There were 15 -items measuring this construct. Fathers were first asked to respond to four "Yes," or "No" questions. These questions included "Before the start of the school year, did you obtain information about who will be (CHILD)s' teacher?" and "Did you meet with (CHILD)'s teacher?" Then fathers were asked to respond to additional 11-items about involvement in child's education using a 3-point scale where $1=$ "Not in the current school year," to $3=$ "More than once." Higher scores indicated more involvement in school related activities. Cronbach's alpha for the current sample was .93.

Table 1
Measures and Informants

| Variable | Baseline | 5-year <br> Follow-up |
| :--- | :--- | :--- |
|  |  |  |
| Demographic Factors |  |  |
| Child Age | M | -- |
| Child Gender | M | -- |
| Child Race | M | -- |
| Mother's Education | M | M |
| Father's Education | M | M |
| Father's Year of Birth | F | M |
| Number Children in Family Unit | M | M |
| Number Biological Siblings with Child | M | M |
| Grandparents with Child | M | -- |
| Number of Other Children | F | -- |
| Father Working Status | F | -- |
| Father Salary | F |  |
| Parenting Variables |  | -- |
| Father Warmth | F | -- |
| Father Participation in School Activities | F | -- |
| Parenting Conflict | M | -- |
| Dependent Variables |  |  |
| Child Behavior Problems | M | M |
| Child Positive Behaviors | M | M |
| Child Closeness to Father | M | -- |

F = father reported
$M=$ mother reported

## Results

## Independent and Dependent Variables

Prior to analysis, child behavioral problems at time 1, child positive behaviors at time 1, closeness to nonresident father, parent conflict, nonresident father warmth, nonresident father's participation in school related activities, child behavioral problems at time 2 and child positive behaviors at time 2 were all examined to ensure accuracy of data entry and distribution, for missing data, skewness, kurtosis and potential outliers using SPSS Frequencies. In addition, demographic variables child race, age of individual, father's education, mother's education, father's salary, children and/or grandparents living in the family unit with the child were screened prior to analysis. Finally, the minimum and maximum values, along with means and standard deviations were examined.

The minimum and maximum values, means and standard deviations for all of the variables were found to be reasonable and within their expected ranges. There were, however, missing variables indentified in behavior problems, positive behaviors, conflict, nonresident father's warmth and participation in school related activities. With the exception of parenting conflict and participation in school related activities, there was less than 5\% missing data on these variables. Parenting conflict and participation in school related activities had $11 \%$ and $6 \%$ of missing data respectively.

Tabachnick and Fidell (2001) advises that there are several ways of handling missing data - from estimating the missing data through mean substitution and regression to treating missing data as data. Deleting participants with incomplete data is also an option and good alternative for data with fewer than $5 \%$ of missing values.

Because the current study is part of a larger longitudinal archival dataset, data estimating was not ideal given the lack of knowledge of the larger dataset. There were significant skewness and kurtosis on several variables. Behavioral problems at time 1 and time 2, conflict, and positive behaviors had skew values ranging from -7.16 to 5.25. Kurtosis had more suitable values ranging from .97 to 3.94 . Nonresident father warmth, participation in school related activities and closeness to father were within acceptable ranges. On the other hand, both of the variables had significant kurtosis ranging from 3.02 to 4.14. None of the other variables were substantially severely skewed or kurtotic. In order to reduce the skewness and kurtosis, data transformations were performed. When data are moderately skewed or kurtotic, it is suggested that the Square Root approach is taken. Therefore, the positive behavior variables for time 1 and time 2, behavioral problem variables for time 1 and time 2, father's warmth and conflict were transformed using the Square Root approach which did correct for problems.

## Demographic Variables

The minimum and maximum values along with means and standard deviations for the demographic variables were sufficient and within range. There were single missing values on other children with child's mom, number of fathers' other children, working status, salary, rate of salary and hours worked per week. None of these missing values presented any problems and neither data estimating nor deletion would add to the analysis of the data. Skewness on the demographic variables ranged from 4.99 to 46.61 . Likewise, kurtosis ranged from 3.27 to 254.36 . Some of these values were outside of normal range but because of variables constituting demographic data,
there were no concerns regarding the ranges. Means and standard deviations are provided in Tables 2 and 3.

## Table 2

Means and Standard Deviations of Behavior Problems, Positive Behaviors,
Father Warmth, Parenting Conflict, Participation in School Related Activities

|  |  | Wave 1 |  | Wave 2 |  |
| :--- | :---: | ---: | ---: | ---: | :--- |
| Scales | N |  | N |  |  |
| Behavior Problems | 133 | $41.19(7.24)$ | 137 | $43.54(9.51)$ |  |
| Positive Behaviors | 136 | $41.98(5.39)$ | 138 | $41.05(6.02)$ |  |
| Parenting Conflict | 125 | $29.62(11.52)$ |  |  |  |
| Father Warmth | 138 | $13.75(9.70)$ |  |  |  |
| Participation in School | 131 | $17.53(14.10)$ |  |  |  |
| Closeness to Father | 138 | $2.39(1.05)$ |  |  |  |
|  |  |  |  |  |  |

Table 3
Sample Demographics at Time 1

| Child Age |  |  |
| :---: | :---: | :---: |
| Mean | 7.78 |  |
| SD | 2.95 |  |
| Range | 3-12 |  |
| Child Gender | n |  |
| Male | 73 |  |
| Female | 66 |  |
| Race | n | \% |
| White Non-Hispanic | 61 | 43.90\% |
| Black Non-Hispanic | 69 | 49.60\% |
| Hispanic | 1 | 0.70\% |
| American Indian or | 1 | 0.70\% |
| Alaskan Native |  |  |
| Other | 5 | 3.60\% |
| Refused | 2 | 1.40\% |
| Mother's Education |  |  |
| M | 2.82 |  |
| SD | 1.27 |  |
| Range | 1-6 |  |
| Father's Education |  |  |
| M | 13.54 |  |
| SD | 7.89 |  |
| Range | 4-24 |  |
| Father's Year of Birth |  |  |
| M | 1959 |  |
| SD | 8.26 |  |
| Range | 1930-1977 |  |
| \# Children in the |  |  |
| Home |  |  |
| M | 2.17 |  |
| SD | 1.13 |  |
| Range | 1-8 |  |


| \#Bio Siblings with child |  |
| :---: | :---: |
| M | 1.22 |
| SD | 1.16 |
| Range | 1-7 |
| Grandparents with |  |
| Child |  |
| No Information | 49 |
| Grandparent in |  |
| family unit | 2 |
| Grandparent not in family unit | 88 |
| \# other children of nonresident father |  |
| M | 0.99 |
| SD | 1.63 |
| Range | 0-8 |
| Working Status - Dad |  |
| Working | 121 |
| Laid off | 2 |
| Looking for Work | 7 |
| Disabled | 1 |
| Student | 3 |
| Don't Know | 4 |
| Nonresident Father |  |
| wages \$ per hour |  |
| M | \$13.44 |
| Range | \$0-\$ 86.54 |

## Descriptive Results

Correlations were computed to examine the relation between the predictor variables of non-resident father's warmth and father's participation in school-related activities. Correlations between father's participation in school-related activities and warmth were negatively statistically significant (see Table 4). Interestingly, this suggests that fathers who reported high warmth did not participate in school-related activities. Additionally, correlations were conducted to examine the relations between demographic variables and the dependent variables. There were significant positive correlations found between father's year of birth and problem behaviors. Therefore, older fathers had more children with more behavior problems. Correlations between number of children living in the family unit, number of biological siblings living with the child and problem behaviors were also statistically significant (see Table 5). That is, the more children living in the same home, the fewer problem behaviors were reported. Finally, number of children living in the family unit, number of biological siblings living with the child and positive behavior were statistically significant (Table 5). In cases where demographic variables significantly correlated with the dependent variable, that particular demographic variable was controlled in subsequent analyses predicting that dependent variable.

| Table 4 |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
| Correlations Between Predictor Variables |  |  |  |  |  |  |  |
| Variables |  | 1 | 2 |  |  |  |  |
| 1 | Father's Warmth |  | 0 |  |  |  |  |
| 2 | School Participation |  | $-.470^{* *}$ |  |  |  |  |
| Note. ${ }^{*} p<.05,{ }^{* *} p<.01$ | 0 |  |  |  |  |  |  |

Table 5
Correlations among Sample Demographics and Dependent Variables

| Var | bles | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Child Age | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Child Race | -0.10 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Child's Gender | .18* | -0.15 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Mother's Education Level | 0.08 | -0.04 | .26* | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | Father's Education Level | 0.04 | -0.23 | .26* | .50** | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 | Father's Year of Birth | -0.49** | -0.04 | -0.08 | -0.03 | 0.03 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 | Father's Residence | -.19* | -0.03 | -0.10 | -0.13 | -0.16 | -0.03 | 0 |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Number Children in FU | 0.11 | .20* | 0.11 | 0.07 | 0.13 | -0.13 | -0.08 | 0 |  |  |  |  |  |  |  |  |  |  |
| 9 | \#Bio Siblings Live w/Child | 0.13 | .22* | 0.15 | 0.01 | 0.10 | -0.16 | -0.06 | .95** | 0 |  |  |  |  |  |  |  |  |  |
| 10 | Bio Grandparents w/Child | -0.11 | -.18* | 0.11 | -0.11 | -0.07 | -0.09 | -0.01 | -0.17 | -0.16 | 0 |  |  |  |  |  |  |  |  |
| 11 | \# of Other Children - Father | 0.31** | -0.01 | 0.11 | -0.08 | -0.11 | -.49** | 0.04 | 0.08 | 0.13 | 0.09 | 0 |  |  |  |  |  |  |  |
| 12 | Working Status | 0.00 | -0.05 | 0.08 | -0.21 | -0.15 | 0.07 | 0.08 | 0.04 | 0.02 | -0.06 | 0.04 | 0 |  |  |  |  |  |  |
| 13 | Behavior Problems (Time 1) | -0.01 | -0.03 | -0.09 | 0.05 | 0.06 | .18* | -0.02 | -0.04 | -0.06 | 0.03 | -0.06 | -0.05 | 0 |  |  |  |  |  |
| 14 | Behavior Problems (Time 2) | -0.12 | 0.06 | -0.07 | -0.05 | -0.06 | .25** | 0.09 | -.19* | -.19* | 0.07 | -0.03 | -0.04 | .59** | 0 |  |  |  |  |
| 15 | Positive Behaviors (Time 1) | -0.06 | 0.04 | -0.16 | 0.09 | 0.02 | 0.11 | -0.09 | -.24** | -.26** | 0.10 | -0.13 | -0.14 | .52** | .30** | 0 |  |  |  |
| 16 | Positive Behaviors (Time 2) | -0.09 | -0.05 | -0.10 | -0.06 | -0.17 | 0.09 | 0.02 | -.21* | -.21* | 0.07 | 0.01 | -0.09 | .39** | .68** | .42** | 0 |  |  |
| 17 | Closeness to Father | 0.04 | -0.01 | -0.06 | -0.24 | -0.09 | -0.10 | 0.03 | -0.05 | -0.06 | 0.04 | 0.00 | 0.05 | -0.01 | 0.04 | 0.11 | 0.07 | 0 |  |
| 18 | Salary | 0.12 | -0.11 | -0.05 | 0.05 | 0.12 | -0.14 | -.18* | -0.10 | -0.13 | 0.15 | -0.16 | -.29** | 0.13 | .21* | 0.15 | 0.18 | 0.16 | 0 |
|  | ${ }^{*} p<.05,{ }^{* *} p<.01$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Regression Analyses
Behavior Problems and Non-resident Father's Warmth
Regression analyses were conducted predicting the relations between father's warmth and behavior problems at time 1. In addition, regression analyses were utilized to examine whether child's gender, and father's age were predictive of problem behaviors. As presented in table 6, after controlling for child's gender and father's age in step 1, results revealed that father's age was predictive of problem behaviors, $p=.05$. Next, after controlling for child's gender and father's age in step 2, results indicated that the addition of father's warmth did not contribute significantly to the prediction of behavior problems (See table 6). Further, with the addition of father's warmth in step 2, father's age no longer predicted behavior problems. The overall model was not significant, $F(3, .579)=1.975, p>.05, R^{2}=.04$.

Regression analyses were conducted examining the relations between father's warmth and behavior problems at time 2. In addition, regression analyses were utilized to examine whether child's gender, father's age, father's salary, number of children in the family unit, and number of biological siblings living with the child was predictive of problem behaviors. As presented in table 7, after controlling for child's gender, father's age, father's salary, number of children in the family unit, and number of biological siblings living with the child in step 1, results revealed that father's age and salary was predictive of problem behaviors, $p=.00$ and .01 respectively. Next, after controlling for these variables in step 2, results indicated that the addition of father's warmth did not contribute significantly to the prediction of problem behaviors (See table 7). Child's
gender, the number of children living in the family unit and number of biological siblings living with the child was not predictive of problem behaviors. The overall model was significant, $F(6,2.074)=4.195, p=.00, R^{2}=.18$.

Finally, regression analyses were conducted to examine whether father's warmth predicted a change in problem behaviors from time 1 to time 2. As presented in table 8, after controlling for problem behaviors at time 1, child's gender, father's age, father's salary, number of children in the family unit and number of biological siblings living with the child in step 1, results revealed that behavior problems at time 1 was predictive of behavior problems at time 2, $\mathrm{p}=.00$. Further, father's age father's salary and the number of children living in the family unit were all predictive of problem behaviors (See table 8). Next, after controlling for these variables in step 2, results indicated that the addition of father's warmth did not contribute significantly to the prediction of problem behaviors. Child's gender and the number of biological siblings living with the child was not predictive of problem behaviors. The overall model was significant, $F(7,4.358)=$ 13.851, $p=.00, R^{2}=.47$.

## Positive Behaviors and Non-resident Father's Warmth

Regression analyses were conducted examining the relations between father's warmth and positive behaviors at time 1. Regression analyses were also utilized to examine whether child's gender, number of children in the family unit and number of biological siblings living with the child was predictive of positive behaviors. After controlling for these variables in step 1, results revealed that neither the child's gender, number of children in the family unit nor number of biological siblings living with the child was predictive of positive behaviors (See table 9). Further, the addition of father's
warmth in step 2 yielded non-significant results as, father's warmth was not predictive of positive behaviors. The overall model was not significant, $F(4,1.688)=2.077, p>.05$, $R^{2}=.06$.

Regression analyses were conducted examining the relations between father's warmth and positive behaviors at time 2. In addition, regression analyses were utilized to examine whether number of children in the family unit, number of biological siblings living with the child and child's gender was predictive of positive behaviors. As presented in table 10, after controlling for number of children in the family unit, number of biological siblings living with the child and child's gender in step 1, results revealed that none of these factors were predictive of positive behaviors, p>.05. Next, after controlling for number of children in the family unit, number of biological siblings living with the child and child's gender in step 2, results indicated that the addition of father's warmth did not contribute significantly to the prediction of positive behaviors (See table 10). The overall model was not significant, $F(4,1.723)=1.920, p>.05, R^{2}=.05$.

Lastly, regression analyses were conducted to examine whether father's warmth predicted a change in positive behaviors from time 1 to time 2 . As shown in table 11, after controlling for positive behaviors at time 1, child's gender, number of children living in the family unit, and number of biological siblings living with the child in step 1 , results revealed that only positive behaviors at time 1 was predictive of positive behaviors at time 2 (See table 11). After controlling for these variables in step 2, results indicated that the addition of father's warmth did not contribute significantly to the prediction of positive behaviors. The overall model was significant, $F(5,4.882)=6.324, p=.00, R^{2}=$ . 20.

## Closeness to Father and Non-resident Father's Warmth

Regression analyses were conducted to examine the relations between father's warmth and closeness to father. In addition, regression analyses were utilized to examine whether child's gender was predictive of closeness to father. As presented in table 12, after controlling for child's gender in step 1, results revealed that child's gender was not predictive of closeness to father. Next, after controlling for child's gender in step 2 , results indicated that the addition of father's warmth contributed significantly to the prediction of closeness to father, accounting for $33 \%$ of the variance (See table 12). The overall model was significant, $F(2,8.350)=8.575, p=.00, R^{2}=.11$.

## Behavior Problems and Father's Participation in School-related Activities

Regression analyses were conducted examining the relations between father's involvement in school-related activities and behavior problems at time 1. In addition, regression analyses were utilized to examine whether child's gender and father's age was predictive of behavior problems. As presented in table 13, after controlling for child's gender and father's age in step 1, results revealed that neither father's age nor child's gender was predictive of behavior problems, p>.05. Next, after controlling for child's gender and father's age in step 2, results indicated that the addition of father's participation in school-related activities did not contribute significantly to the prediction of behavior problems (See table 13). The overall model was not significant, $F(3, .379)$ $=1.366, p>.05, R^{2}=.03$.

Regression analyses were conducted examining the relations between father's involvement in school-related activities and behavior problems at time 2. Regression analyses were also conducted to examine whether child's gender, father's age, father's
salary, number of children living in the family unit and number of biological siblings living with the child was predictive of behavior problems. As presented in table 14, after controlling for these variables in step 1, results indicated that father's age was predictive of behavior problems, $p=.00$. Next, after controlling for child's gender, father's age, father's salary, number of children living in the family unit and number of biological siblings living with the child in step 2, results indicated that the addition of father's involvement in school-related activities did not contribute significantly to the prediction of behavior problems (See table 14). Further, child's gender, father's salary, number of children living in the family unit and number of biological siblings living with the child was not predictive of behavior problems. The overall model was significant, $F(6,1.877)$ $=3.822, p=.00, R^{2}=.17$.

Regression analyses were conducted to examine whether father's participation in school-related activities predicted a change in behavior problems from time 1 to behavior problems at time 2. After controlling for behavior problems at time 1, child's gender, father's salary and the number of children living in the family unit in step 1 , results revealed that problem behaviors at time 1, father's age and salary, and the number of children living in the family unit all predicted problem behaviors (See table 15). When controlling for these variables in step 2 , results indicated that the addition of father's participation in school-related activities did not contribute significantly to the prediction of problem behaviors. Child's gender and the number of biological siblings living with the child was not predictive of behavior problems. The overall model was significant, $F(7,3.955)=12.621, p=.00, R^{2}=.47$.

Regression analyses were conducted examining the relations between father's participation in school-related activities and positive behaviors at time 1. In addition, regression analyses were utilized to examine whether child's gender, number of children living in the family unit and number of biological siblings living with child was predictive of positive behaviors. Results revealed a non-significant relationship, after controlling for these variables. Child's gender, number of children living in the family unit and number of biological siblings living with the child were not predictive of positive behaviors (See table 16). Further, after controlling for these variables in step 2, results revealed that the addition of father's participation in school-related activities did not significantly contribute to the prediction of positive behaviors. The overall model was significant, $F(4,2.249)=2.751, p=.03, R^{2}=.08$.

Regression analyses were conducted examining the relation between father's participation in school-related activities and positive behaviors at time 2. In addition, regression analyses were utilized to examine whether child's gender, number of children in the family unit and number of biological siblings living with the child predicted positive behaviors. After controlling for these variables in step 1, results indicated that child's gender did not predict positive behaviors. Further, the number of children living in the family unit and number of biological siblings living with the child did not predict positive behaviors (See table 17). After controlling for child's gender, number of children living in the family unit and number of biological siblings living with the child in step 2, results revealed that the addition of father's participation in school-related activities did not contribute significantly to the prediction of positive behaviors,
accounting for $4 \%$ of the variance (See table 17). The overall model was not significant, $F(4,1.756)=1.984, p>.05, R^{2}=.06$.

Finally, regression analyses were conducted to examine whether father's participation in school-related activities predicted a change in positive behaviors from time 1 to positive behaviors in time 2. After controlling for positive behaviors at time 1, child's gender, the number of children living in the family unit and the number of biological siblings living with the child in step 1, results indicated that positive behaviors at time 1 was predictive of positive behaviors at time $2, \mathrm{p}=.00$. When controlling for these variables in step 2, results revealed that the addition of father's participation in school-related activities did not contribute significantly to positive behaviors. Child's gender, the number of children living in the family unit, and the number of biological siblings living with the child did not predict positive behaviors (See table 18). The over model was significant, $F(5,4.294)=5.511, p=.00, R^{2}=.19$.

## Parenting Conflict and Behavior Problems

Regression analyses were conducted to examine the relations between father's warmth, parenting conflict and behavior problems at time 1. In addition, regression analyses were utilized to examine the potential moderating effect of parenting conflict on father's warmth and behavior problems. After controlling for child's gender and father's age in step 1, results revealed that father's age was predictive of behavior problems, p<. 05 (See table 19). Next, after controlling for child's gender and father's age in step 2, results revealed that the addition of parenting conflict contributed significantly to the prediction of behavior problems, accounting for $20 \%$ of the variance (See table 19). Finally, when predicting behavior problems from the interaction term of
father's warmth and parenting conflict, results revealed a non-significant interaction term, indicating that conflict did not moderate the relation between father warmth and child behavior problems at time 1. The overall model was significant, $F(5, .647)=$ 2.406, $p<.05, R^{2}=.10$.

Regression analyses were conducted to examine the relations between father's warmth, parenting conflict and behavior problems at time 2. In addition, regression analyses were utilized to examine the potential moderating effect of parenting conflict on father's warmth and behavior problems. After controlling for child's gender and father's age in step 1, results revealed that father's age was predictive of behavior problems at time 2, p<. 05 (See table 20). Next, after controlling for child's gender and father's age in step 2, results revealed that the addition of parenting conflict did not contribute significantly to the prediction of behavior problems at time 2. Finally, when predicting behavior problems from the interaction term of father's warmth and parenting conflict, results revealed a non-significant interaction term, indicating that conflict did not moderate the relation between father warmth and child behavior problems at time 2. The overall model was significant, $F(5,1.463)=2.724, p<.05, R^{2}=.10$.

## Parenting Conflict and Positive Behaviors

Regression analyses were conducted to examine the relations between father's warmth, parenting conflict and positive behaviors at time 1. In addition, regression analyses were utilized to examine the potential moderating effect of parenting conflict on father's warmth and positive behaviors. After controlling for child's gender and father's age in step 1, results revealed that father's age was not predictive of positive behaviors, p>. 05 (See table 21). Next, after controlling for child's gender and father's
age in step 2, results revealed that the addition of parenting conflict did not contribute significantly to the prediction of positive behaviors. Finally, when predicting positive behaviors from the interaction term of father's warmth and parenting conflict, results revealed a non-significant interaction term, indicating that conflict did not moderate the relation between father warmth and child positive behavior at time 1. The overall model was not significant, $F(5,1.228)=1.366, p>.05, R^{2}=.05$.

Regression analyses were conducted to examine the relations between father's warmth, parenting conflict and positive behaviors at time 2. In addition, regression analyses were utilized to examine the potential moderating effect of parenting conflict on father's warmth and positive behaviors. After controlling for child's gender and father's age in step 1, results revealed that father's age was not predictive of positive behaviors, p>. 05 (See table 22). Next, after controlling for child's gender and father's age in step 2, results revealed that the addition of parenting conflict did not contribute significantly to the prediction of positive behaviors, accounting for $12 \%$ of the variance. Finally, when predicting positive behaviors from the interaction term of father's warmth and parenting conflict, results revealed a non-significant interaction term, indicating that conflict did not moderate the relation between father warmth and child positive behavior at time 2. The overall model was not significant, $F(5, .992)=1.153, p>.05, R^{2}=.04$.

Table 6
Summary of Regression Analyses for Variables Predicting Behavior Problems at Time 1 $N=131$

| Variable | $B$ | $S E B$ | $\beta$ |
| :---: | :---: | :---: | :---: |

Model 1

| Child's Gender | -0.093 | 0.095 | -0.085 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.011 | 0.006 | $\mathbf{0 . 1 6 7}$ |
| Model 2 |  |  |  |
| Child's Gender | -0.088 | 0.095 | -0.081 |
| Father's Age | 0.011 | 0.006 | 0.161 |
| Father's Warmth | 0.036 | 0.038 | 0.083 |

[^0]
## Table 7

Summary of Regression Analyses for Variables Predicting Behavior Problems at Time 2 $N=122$
Variable $B \quad$ SE B $\quad \beta$

Model 1

| Child's Gender | -0.148 | 0.130 | -0.098 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.025 | 0.008 | $\mathbf{0 . 2 7 3 ^ { * * * }}$ |
| Father's Salary | 0.013 | 0.005 | $\mathbf{0 . 2 3 2}$ *** |
| Children in FU | -0.306 | 0.187 | -0.422 |
| Sibs Live w/Child | 0.182 | 0.183 | 0.260 |
| Model 2 | -0.136 | 0.131 | -0.090 |
| Child's Gender | 0.024 | 0.008 | $\mathbf{0 . 2 6 7 * * *}$ |
| Father's Age | 0.014 | 0.005 | $\mathbf{0 . 2 3 8 * * *}$ |
| Father's Salary | -0.311 | 0.187 | -0.429 |
| Children in FU | 0.178 | 0.183 | 0.255 |
| Sibs Live w/Child | 0.042 | 0.052 | 0.070 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

## Table 8

| Summary of Regression Analyses for Variables Predicting Change <br> In Behavior Problems From Time 1 to Time 2 |
| :--- |
| $N=116$ |
| Variable |

Model 1

| Behavior Problems Time 1 | 0.765 | 0.098 | $\mathbf{0 . 5 6 5}$ *** |
| :--- | :---: | :---: | :--- |
| Child's Gender | -0.118 | 0.107 | -0.079 |
| Father's Age | 0.015 | 0.007 | $\mathbf{0 . 1 6 7 * *}$ |
| Father's Salary | 0.008 | 0.004 | $\mathbf{0 . 1 4 3}$ |
| Children in FU | -0.311 | 0.149 | $\mathbf{- 0 . 4 3 5}$ |
| Sibs Live w/Child | 0.216 | 0.146 | 0.313 |
| Model 2 |  |  |  |
| Behavior Problems Time 1 | 0.761 | 0.099 | $\mathbf{0 . 5 6 3 * * *}$ |
| Child's Gender | -0.114 | 0.108 | -0.076 |
| Father's Age | 0.015 | 0.007 | $\mathbf{0 . 1 6 5 * *}$ |
| Father's Salary | 0.008 | 0.004 | $\mathbf{0 . 1 4 6 *}$ |
| Children in FU | -0.313 | 0.150 | $\mathbf{- 0 . 4 3 7 * *}$ |
| Sibs Live w/Child | 0.215 | 0.146 | 0.311 |
| Father's Warmth | 0.014 | 0.042 | $\mathbf{0 . 0 2 4}$ |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

## Table 9

Summary of Regression Analyses for Variables Predicting Positive Behaviors at Time 1 $N=135$

| Variable | $B$ | SE B | $\beta$ |
| :--- | :---: | :---: | :---: |
| Model 1 |  |  |  |
| Child's Gender | -0.203 | 0.159 | -0.111 |
| Children in FU | 0.090 | 0.238 | 0.101 |
| Sibs Live w/Child | -0.251 | 0.231 | -0.288 |
| Model 2 |  |  |  |
| Child's Gender | -0.198 | 0.160 | -0.108 |
| Children in FU | -0.090 | 0.238 | 0.100 |
| Sibs Live w/Child | 0.030 | 0.064 | 0.040 |

Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 10
Summary of Regression Analyses for Variables Predicting Positive Behaviors at Time 2 $N=137$

| Variable | $B$ | SE B | $\beta$ |
| :--- | :---: | :---: | :---: |
| Model 1 |  |  |  |
| Child's Gender | -0.144 | 0.165 | -0.075 |
| Children in FU | -0.137 | 0.243 | -0.145 |
| Sibs Live w/Child | -0.051 | 0.236 | -0.056 |
| Model 2 | -0.133 | 0.165 | -0.069 |
| Child's Gender | -0.139 | 0.243 | -0.148 |
| Children in FU | -0.060 | 0.236 | -0.066 |
| Sibs Live w/Child | 0.065 | 0.066 | 0.084 |

Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

## Table 11

Summary of Regression Analyses for Variables Predicting
Change in Positive Behaviors from Time 1 to Time 2
$N=134$
Variable $B \quad$ SE B $\quad \beta$

Model 1

| Positive Behavior Time 1 | 0.410 | 0.086 | $\mathbf{0 . 3 8 8 * *}$ |
| :--- | :---: | :---: | :---: |
| Child's Gender | -0.056 | 0.157 | -0.029 |
| Children in FU | -0.256 | 0.232 | -0.272 |
| Sibs Live w/Child | 0.124 | 0.227 | 0.136 |

Model 2

| Positive Behavior Time 1 | 0.407 | 0.086 | $\mathbf{0 . 3 8 5}$ *** |
| :--- | :---: | :---: | :---: |
| Child's Gender | -0.049 | 0.157 | -0.025 |
| Children in FU | -0.256 | 0.233 | -0.272 |
| Sibs Live w/Child | 0.115 | 0.227 | 0.126 |
| Father's Warmth | 0.049 | 0.062 | 0.063 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 12
Summary of Regression Analyses for Variables Predicting Closeness to Father $N=138$

| Variable | $B$ | $S E B$ | $\beta$ |
| :---: | :---: | :---: | :---: |

Model 1
$\begin{array}{llll}\text { Child's Gender } & -0.117 & 0.178 & -0.056\end{array}$
Model 2
$\begin{array}{llll}\text { Child's Gender } & -0.081 & 0.169 & -0.039\end{array}$

Father's Warmth $0.2790 .068 \quad \mathbf{0 . 3 3 1}{ }^{* * *}$

Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 13
Summary of Regression Analyses for Variables Predicting Behavior Problems at Time 1 $N=124$

| Variable | $B$ | $S E B$ | $\beta$ |
| :---: | :---: | :---: | :---: |

Model 1
$\begin{array}{llll}\text { Child's Gender } & -0.035 & 0.095 & -0.034\end{array}$
Father's Age $\quad 0.011 \quad 0.006 \quad \mathbf{0 . 1 7 2}$ *

Model 2

| Child's Gender | -0.031 | 0.096 | -0.030 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.010 | 0.006 | 0.165 |
| School Involvement | -0.001 | 0.004 | -0.031 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 14
Summary of Regression Analyses for Variables Predicting Behavior Problems at Time 2 $N=115$ Variable $B \quad S E B \quad \beta$

Model 1

| Child's Gender | -0.099 | 0.135 | -0.066 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.025 | 0.008 | $\mathbf{0 . 2 8 1}$ |
| Father's Salary | 0.010 | 0.007 | 0.127 |
| Children in FU | -0.312 | 0.187 | -0.490 |
| Sibs Live w/Child | 0.162 | 0.185 | 0.263 |
| Model 2 | -0.068 | 0.136 | -0.046 |
| Child's Gender | 0.023 | 0.008 | $0.255^{* * *}$ |
| Father's Age | 0.012 | 0.007 | 0.151 |
| Father's Salary | -0.312 | 0.187 | -0.490 |
| Children in FU | 0.154 | 0.185 | 0.249 |
| Sibs Live w/Child | -0.008 | 0.006 | -0.125 |

Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 15
Summary of Regression Analyses for Variables Predicting Change in
Behavior Problems from Time 1 to Time 2
N=109

| Variable | $B$ | $S E B$ | $\beta$ |
| :---: | :---: | :---: | :---: |

Model 1

| Problem Behaviors Time 1 | 0.784 | 0.104 | $\mathbf{0 . 5 6 4 * *}$ |
| :--- | :---: | :---: | :---: |
| Sibs Live w/Child | 0.244 | 0.148 | 0.403 |
| Father's Age | 0.017 | 0.007 | $\mathbf{0 . 1 9 7 * *}$ |
| Child's Gender | -0.117 | 0.111 | -0.079 |
| Father's Salary | 0.012 | 0.006 | $\mathbf{0 . 1 6 0 * *}$ |
| Children in FU | -0.352 | 0.150 | $\mathbf{- 0 . 5 6 6}$ |
| Model 2 |  |  |  |
| Problem Behaviors Time 1 | 0.782 | 0.104 | $\mathbf{0 . 5 6 2}$ |
| Sibs Live w/Child | 0.238 | 0.148 | 0.393 |
| Father's Age | 0.016 | 0.007 | $\mathbf{0 . 1 8 0 * *}$ |
| Child's Gender | -0.093 | 0.112 | -0.063 |
| Father's Salary | 0.014 | 0.006 | $\mathbf{0 . 1 7 9 * *}$ |
| Children in FU | -0.353 | 0.149 | $\mathbf{- 0 . 5 6 7 * *}$ |
| School Involvement | -0.005 | 0.005 | -0.091 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 16
Summary of Regression Analyses for Variables Predicting Positive Behaviors at Time 1 $N=128$

| Variable | $B$ | SE B | $\beta$ |
| :--- | :---: | :---: | :---: |
| Model 1 |  |  |  |
| Child's Gender | -0.167 | 0.164 | -0.090 |
| Children in FU | 0.065 | 0.236 | 0.080 |
| Sibs Live w/Child | -0.259 | 0.232 | -0.328 |
| Model 2 | -0.161 | 0.168 | -0.087 |
| Child's Gender | 0.068 | 0.238 | 0.083 |
| Children in FU | -0.262 | 0.234 | -0.332 |
| Sibs Live w/Child | -0.001 | 0.006 | -0.016 |

Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

## Table 17

Summary of Regression Analyses for Variables Predicting Positive Behaviors at Time 2 $N=130$

| Variable | $B$ | $S E B$ | $\beta$ |
| :--- | :---: | :---: | :---: |
| Model 1 |  |  |  |
| Child's Gender | -0.073 | 0.169 | -0.038 |
| Children in FU | -0.144 | 0.239 | -0.172 |
| Sibs Live w/Child | -0.050 | 0.234 | -0.061 |
| Model 2 | -0.059 | 0.171 | -0.031 |
| Child's Gender | 0.139 | 0.240 | -0.167 |
| Children in FU | -0.056 | 0.235 | -0.070 |
| Sibs Live w/Child | -0.003 | 0.007 | -0.045 |

Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

Table 18
Summary of Regression Analyses for Variables Predicting Change in
Positive Behaviors from Time 1 to Time 2
$N=127$
Variable $\quad B \quad$ SE B $\beta$

Model 1

| Positive Behavior Time 1 | 0.378 | 0.089 | $\mathbf{0 . 3 6 4}{ }^{\star * *}$ |
| :--- | :---: | :---: | :---: |
| Child's Gender | -0.005 | 0.162 | -0.003 |
| Children in FU | -0.245 | 0.231 | -0.294 |
| Sibs Live w/Child | 0.115 | 0.228 | 0.142 |

Model 2

| Positive Behavior Time 1 | 0.377 | 0.089 | $\mathbf{0 . 3 6 3}$ |
| :--- | :---: | :---: | :---: |
|  |  |  |  |
| *** |  |  |  |
| Child's Gender | 0.007 | 0.165 | 0.003 |
| Children in FU | -0.240 | 0.232 | -0.288 |
| Sibs Live w/Child | 0.108 | 0.229 | 0.134 |
| School Involvement | -0.003 | 0.006 | -0.034 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

## Table 19

Summary of Regression Analyses for Variables Predicting Behavior Problems at Time 1 $N=119$

| Variable | $B$ | $S E B$ | $\beta$ |
| :--- | :---: | :---: | :---: |
| Model 1 |  |  |  |
| Child's Gender | -0.094 | 0.097 | -0.088 |
| Father's Age | 0.012 | 0.006 | $\mathbf{0 . 1 9 2}$ |
| Model 2 | -0.048 | 0.097 | -0.045 |
| Child's Gender | 0.011 | 0.006 | $\mathbf{0 . 1 7 5}$ |
| Father's Age | 0.025 | 0.040 | 0.057 |
| Father's Warmth | 0.069 | 0.031 | $\mathbf{0 . 2 0 7 * *}$ |
| Parent Conflict | -0.048 | 0.098 | -0.046 |
| Model 3 | 0.011 | 0.006 | $\mathbf{0 . 1 7 5 *}$ |
| Child's Gender | 0.028 | 0.085 | 0.064 |
| Father's Age | 0.073 | 0.121 | 0.220 |
| Father's Warmth | -0.001 | 0.026 | -0.016 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$
FIW $\times$ Conflict $=$ Interaction

Table 20
Summary of Regression Analyses for Variables Predicting Behavior Problems at Time 2 $N=121$
Variable $B \quad S E B \quad \beta$

Model 1

| Child's Gender | -0.160 | 0.134 | -0.106 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.023 | 0.008 | $\mathbf{0 . 2 5 3}$ |

Model 2

| Child's Gender | -0.133 | 0.136 | -0.088 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.022 | 0.008 | $\mathbf{0 . 2 4 6}$ *** |
| Father's Warmth | 0.066 | 0.056 | 0.106 |
| Parent Conflict | 0.047 | 0.043 | 0.099 |
| Model 3 | -0.135 | 0.136 | -0.089 |
| Child's Gender | 0.022 | 0.008 | $\mathbf{0 . 2 4 7 * * *}$ |
| Father's Age | 0.112 | 0.119 | 0.179 |
| Father's Warmth | 0.118 | 0.170 | 0.250 |
| Parent Conflict | -0.016 | 0.036 | -0.185 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$
FIW $\times$ Conflict $=$ Interaction

## Table 21

Summary of Regression Analyses for Variables Predicting Positive Behaviors at Time 1 $N=120$

Model 1

| Child's Gender | -0.312 | 0.173 | -0.164 |
| :--- | :--- | :--- | :--- |
| Father's Age | 0.013 | 0.010 | 0.111 |

Model 2

| Child's Gender | -0.289 | 0.176 | -0.152 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.012 | 0.010 | 0.105 |
| Father's Warmth | 0.030 | 0.074 | 0.037 |
| Parent Conflict | 0.047 | 0.056 | 0.078 |
| Model 3 | -0.280 | 0.176 | -0.147 |
| Child's Gender | 0.012 | 0.010 | 0.103 |
| Father's Age | -0.096 | 0.159 | -0.120 |
| Father's Warmth | -0.146 | 0.224 | -0.244 |
| Parent Conflict | 0.043 | 0.048 | 0.395 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$
FIW $\times$ Conflict $=$ Interaction

Table 22
Summary of Regression Analyses for Variables Predicting Positive Behaviors at Time 2 $N=122$
Variable $B \quad$ SE B $\beta$

Model 1

| Child's Gender | -0.209 | 0.170 | -0.112 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.005 | 0.010 | 0.045 |
| Model 2 |  |  |  |
| Child's Gender | -0.168 | 0.172 | -0.090 |
| Father's Age | 0.004 | 0.010 | 0.036 |
| Father's Warmth | 0.056 | 0.071 | 0.073 |
| Parent Conflict | 0.071 | 0.055 | 0.122 |

Model 3

| Child's Gender | -0.174 | 0.172 | -0.094 |
| :--- | :---: | :---: | :---: |
| Father's Age | 0.004 | 0.010 | 0.039 |
| Father's Warmth | 0.192 | 0.151 | 0.249 |
| Parent Conflict | 0.283 | 0.215 | 0.488 |
| FIW x Conflict | -0.047 | 0.046 | -0.448 |

Note. $\quad{ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$
FIW $\times$ Conflict $=$ Interaction

## Discussion

The aim of the current study was to examine aspects of the quality of the relationships between nonresident fathers and their children. Specifically, the study examined whether the characteristics of father involvement, which include father warmth and participation in school-related activities were associated with child behavior problems or positive behaviors. Lastly, the current study examined whether these relations would be stable over time. Few studies have examined nonresident father's warmth or school participation and its relation to child outcomes. Further, a majority of father studies examine relations from a deficit perspective, examining the negative effects that nonresident fathers have on their children. Issues of child support, fatherchild contact, and post-marital conflict are just a few examples of the types of father studies that are typically conducted when it comes to nonresident fathers (Sandler, Miles, Cookston, \& Braver, 2008). However, the study reported herein examined how the quality of the nonresident father parenting behavior was associated with problem and positive behavior among children and adolescents.

The first hypothesis that nonresident father's warmth would be associated with problem behaviors at Time 1 and Time 2 was not supported. While findings suggested that father's age accounted for some variability in problem behaviors at Time 1, there was no evidence that suggested that nonresident fathers reported warmth had an effect on child behavioral problems. Time 2 data suggested that, after controlling for gender, father's age, father's salary, number of children living in the family unit, and the number of biological siblings living with the child, father's age continued to account for differences in problem behaviors. In addition, father's salary accounted for some
variability in problem behaviors as well. However, father self-reported warmth was not significantly associated with mother report of child behavior problems.

Nonresident father's warmth also did not contribute significantly to the change in problem behaviors from time 1 to time 2. Warm fathers were not associated with change in problem behaviors from time 1 to time 2. However, findings suggested that behavior problems at time 1 were relatively stable. Further, the father's age, his salary and also the number of children living in the family unit accounted for variability in problem behaviors. That is, multiple children living in the home, fathers with lower wage earnings and older fathers predicted some of the behavior problems being seen in children.

Next, the question whether nonresident father's warmth predicted positive behaviors at Time 1 and Time 2 also was not supported by the data. Findings suggested that gender, the number of children living in the family unit and biological siblings living with the child at Time 1 did not account for any significant variability in positive behaviors, even though these variables were significantly correlated with positive behaviors. Further, findings suggested that nonresident father's warmth did not have an effect on children's positive behaviors. Time 2 data suggested that nonresident father's warmth continued to not be associated with child positive behaviors. Though prior correlation analyses revealed a significant relationship between child gender, number of children in the family unit, number of biological siblings living with the child and positive behaviors, findings from the regression analysis suggests that these variables did not account for significant variability.

The question whether nonresident father's warmth predicted change in positive behaviors from time 1 to time 2 was not supported by the data. Again, warm fathers had no effect on children's positive behaviors. Further, they did not effect any change in behaviors across either time points. On the other hand, positive behaviors at time 1 accounted for some variability in positive behaviors at time 2, indicating relative stability in child positive behaviors across the 5-year study.

The question whether nonresident father's warmth predicted perceived closeness with the child was supported by the data. Father's warmth had a significant effect on perceived closeness. In addition, there was an overall significant model fit. Findings indicated that children whose nonresident fathers reported warm behaviors toward them were perceived by mothers as having a closeness to their father. This finding is similar to the Veneziano (2003) study who found a significant relation between paternal warmth and affection and how emotionally close the father was to the child. These findings are important because it underscores the importance of the father's role and the need to understand and explore the father's relationship with his children. The positive association between these variables provided from different sources helps to support the validity of the two measures.

The current study also asked whether father's involvement in school-related activities predicted problem behaviors at Time 1 and Time 2. Findings from multivariate analyses indicated that neither child's gender nor father's age at Time 1 accounted for significant unique variance in child problem behaviors. Further, father's participation in school-related activities also was not significantly associated with child behavior problems. Time 2 data also suggested that fathers report of participating in their child's
education, also did not contribute significantly to the prediction of child behavior problems. However, being an older father was associated with child's mother reporting more child problem behaviors.

The answer to the question of whether father's involvement in school-related activities predicted a change in child problem behaviors from time 1 to time 2 was ' $n o$ ' according to the data. Father's involvement appeared to have no identifiable influence on child behavior at time 1 or time 2. However, father's age and salary, along with the number of children living in the family unit did appear to contribute to child problem behaviors. There was no effect of child's gender or the number of biological siblings living with the child on problem behaviors. Mothers' reports of children's problem behaviors had a small degree of stability across the 5 year period of the study.

The question, does father's involvement in school-related activities predict positive behaviors at Time 1 and Time 2 was answered in the negative according to the data. Fathers' participation in their children's education did not have a significant association with positive behaviors. This was the case for both Time 1 and Time 2 data. Though earlier correlation analyses indicated a significant relation between child's gender, number of children living in the family unit, number of biological siblings living with the child and positive behaviors, after controlling for these variables in regression analyses, results revealed that these variables did not account for unique variance in positive behaviors.

The question whether father's involvement in school-related activities predicted a change in positive behaviors from time 1 to time 2 was not supported by the data.

Again, father's involvement had no influence on positive behaviors. Positive behaviors at time 1, however, influenced positive behaviors at time 2.

The question would parent conflict moderate the relation between father involvement and child problem behaviors was also answered in the negative according to the data examined. Findings indicated that parenting conflict at Time 1 was associated significantly with child behavior problems, accounting for significant unique variance. However, there were no significant moderation effects and parenting conflict.

Lastly, the question of whether parenting conflict would moderate the relation between father involvement and positive behaviors was not supported. Neither father warmth nor parenting conflict had a significant effect on positive behaviors at either time points, and there were no significant moderation effects.

Though nonresident father involvement did not predict child outcomes as expected, there are several possible alternative explanations or factors which may explain the lack of findings that, therefore, warrant further discussion. The finding that nonresident fathers' warmth did not have an effect on behavior problems is intriguing and is not consistent with the literature. Although few studies examine nonresident fathers for their positive qualities, Sandler, Miles, Cookston and Braver (2008) conducted a study in which they examined both maternal warmth and paternal warmth behaviors and their relations to externalizing and internalizing behaviors. The authors measured warmth by taking the child's report using the Acceptance and Rejection subscales from the Children's Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965). They measured externalizing and internalizing behaviors using the Child Behavior Checklist (CBCL; Achenbach, 1991) in which a composite score of the
mother's report, father's report and the child's report was used. Sandler, et al. (2008) found that noncustodial father warmth was significantly negatively related to child externalizing behaviors such that, when these fathers exhibited warm behaviors toward their children, it reduced the likelihood that children would exhibit behavior problems. In the current study, it is possible that other factors influenced or masked the results and are now discussed.

First, there may be other relationships at work, such as one that may exist between a child and a stepparent that may be masking the importance of the nonresident biological father. The relationship between a stepfather and his stepchild is different from a biological father and his child but, in many instances, has similar benefits/characteristics of the biological relationship. Indeed, stepfather involvement may be as beneficial to child outcomes as father involvement (Bzostek, 2008; Mason, Harrison-Jay, Svare, \& Wolfinger, 2002). For instance, stepfathers have often found themselves sharing many of the parental activities and responsibilities with their spouses (Mason, Harrison-Jay, Svare, \& Wolfinger, 2002). Furthermore, stepfather involvement is predictive of fewer behavioral problems and overall health (Bzostek, 2008) and serves as a buffer from the negative effects that may be present as a result of nonresident fathers (Oshman, \& Manosevitz, 1976). Stepfathers are also found to be supportive and have well-adjusted stepchildren (Crosbie-Burnett, \& Giles-Sims, 1994).

On the other hand, there are opposing views regarding stepfathers. Evidence suggests that stepfathers may actually have a detrimental effect on children's outcomes. They are viewed negatively by their stepchildren, considered to be less
warm than biological fathers and less successful in the parenting role than their nonresident biological father (Claxton-Oldfield, Garber \& Gillcrist, 2006).

Based on the current research findings, future research should focus on recruiting larger samples that include greater numbers of families with and without stepfathers to further examine the potential role stepfather may have on nonresident father involvement and influences. If data were available on stepfathers' parenting and influence, then such findings would shed light on the lack of statistically significant findings found in the current study.

Another possible explanation regarding the lack of findings has to do with the idea that there may have been a hidden issue of maternal gate-keeping that either prevented fathers from being more involved with their children, made fathers disinterested in being involved more frequently, or kept them out of the study all together. Mothers who kept some of the fathers out of the study likely contributed to restricting the range of father involvement toward the high end. As it relates to participating in school-related activities, mothers may not have disseminated pertinent information to the fathers regarding school activities and meetings, making father involvement less likely. Because information is usually funneled through a primary or custodial parent, mothers frequently make the decision as to whether or not they share important information about school meetings, conferences, activities, etc., with fathers. This may affect the data if the fathers who reported not being involved in school related activities, were not involved because of interferences from the mother.

Interestingly, research on maternal gate-keeping indicates that the perception that fathers are not involved is attributed more to mother's characteristics than to
father's characteristics. For instance, Fagan and Barnett (2003) found that mothers decided how much time fathers spent with their children and that this decision was based on the mother's perception of the father's competence. So, if mothers felt fathers were competent in their parenting, the father had more access to the child. Conversely, less competence resulted in restricted access to the children. Mothers then, shouldered more of the responsibility. Restricting the role and access of the father resulted in the father being less involved with his children. This was especially true for nonresident fathers (Fagan \& Barnett, 2003).

Future research should incorporate measures that examine gate-keeping behavior and its relation to nonresident fathers' behavior toward their children. In their study, Schoppe-Sullivan, Cannon, Brown, Mangelsdorf and Sokolowski (2008) examined maternal gate-keeping, as reported by both the mother and father, and its relations to certain father behaviors. Utilizing gate-keeping measures, relationship quality measures and various father involvement measures (Schoppe-Sullivan, et.al) found that when mothers were generally encouraging and not critical toward the fathers, the fathers were more involved in their children's lives. It is important to note, however, that the sample utilized married couples of young children. It is recommended that future research examines the gate-keeping behaviors of mothers who were never married to the father or currently in a romantic relationship with the father. Further, future study should examine gate-keeping over several time points to examine whether gate keeping behaviors are stable over time and if it influences fathering behaviors with children of different age groups. It is possible that persistent gate-keeping may have
long-lasting and damaging effects on the relationship between fathers and children and deserves attention.

Future research should utilize multiple informants on child and parent functioning. For instance, it would be best if all variables were examined from the perspectives of the father, mother, and child. For the current study, mothers reported on child behavior, which may have reflected how the child behaved in the presence of the mother. Father influences might show up in relationship with the father or in other settings such as school. A weakness of the current study was the sole reliance on maternal reports of child behavior.

In sum, the results of the current study did not support the premise that differences in the quality of nonresident fathering would be associated with children's behavioral functioning. The same was true of nonresident father's participation in school-related activities. Fathers who reported being involved in school-related activities did not have children whose mothers rated them better in socioemotional functioning. Older fathers tended to have children who exhibited greater behavior problems than children with younger fathers. This was an interesting finding given studies that have indicated that younger fathers exhibit harsher parenting styles (generally lower in warmth), which in turn results in externalizing behaviors in children (Scaramella, Neppl, Ontai \& Conger, 2008). On the other hand, Prinzie, Stams, Dekovic, Reijntjes \& Belsky (2009) found in their analytic review that older parents and children tended to have less strong relations between agreeableness and warmth than younger parents and children. In addition to father's age, there was one model where father's salary emerged as a covariate. Fathers with higher salaries had children with
more behavioral problems. This unexpected finding warrants attention and is an area for further research, as studies have typically found correlations between low-income fathers' involvement and subsequent child outcomes (Harris \& Marmer, 1996; Nelson, 2004).

The lack of findings regarding father's participation in school-related activities and positive behaviors come as a surprise. However, the question whether father's participation in school-related activities predicted positive behaviors remains important because, it is conceivable that father's interest and/or involvement in school-related activities promotes better father-child relationships, thereby influencing healthy and favorable outcomes. Regrettably though, there are only a few studies which examine father's interest in child's schooling and academic success (see Kim \& Rohner, 2002; Lee, Kushner \& Cho, 2007 for examples) and even fewer studies that examine the effects of nonresident father's participation in school activities on positive behaviors. One possible explanation for the lack of findings may be the type of school involvement that was measured in the current study. Studies have shown that school involvement can be operationalized into two types of involvement; school-based involvement and home-based involvement (McBride, Dyer, Liu, Brown \& Hong, 2009). The type of involvement measured in the current study is consistent with the study conducted by Mantzicopoulos (2003), which is a school-based involvement. This type of involvement is described as volunteering in the school, attending conferences and PTA meetings; attending plays, meeting teachers and principals. Home-based involvement includes helping children with homework assignments, knowing when projects are due or communicating the importance of education to children (McBride, et al., 2009). Perhaps
if father's participation in school-related activities measured both home- and schoolbased activities, the findings would have yielded different results. Further exploration is needed in this area.

## Limitations

Two key limitations came to mind in the current study. First, nonresident fathers were not intended for the original study. The study's purpose was to examine families and their economic resources. It wasn't until 1997, that the Child Development Supplement was developed and fathers were added, though in limited duration. The study set out to examine children and families and how children develop. When nonresident fathers were introduced to the study in 1997, they were only considered during the first wave of data collection. This afforded them just one opportunity to participate, making it difficult to examine nonresident father involvement and child outcomes over several developmental periods. Assessing nonresident fathers at just one time point severely limited the study's ability to examine them and children over time. Further, given that nonresident fathers were only followed at one time point, it limited the research questions that could be asked. It also limited the time that could have been devoted to gathering more father data.

Second, the efforts taken to include nonresident fathers in this study - although more vigorous than most studies -- did not match the efforts made to include mothers. For instance, mothers were contacted several times for participation in the study. When mothers were unable to be reached, numerous efforts were made to contact the mother. The nonresident fathers, on the other hand, were only contacted once. If they were not available, they were no longer considered for the study. Some of the reasons for not
making the effort to include the fathers were lack of resources, the belief that nonresident fathers would be difficult to reach and the belief that nonresident fathers would not participate in the study. Of the 1294 nonresident fathers identified, a small portion (16\%) of fathers participated in the study.

There is an expectation regarding research participation that mothers will be available, however, there is too often less of an expectation for fathers (Bernard, 1981). As a result, mothers will report not only on her parenting, but that of the father as well. Because mothers have often been considered the primary caregiver, there may be an assumption that they should be the only parent of interest. It is also assumed that because mothers volunteer to participate in research more often, they are more willing to participate than fathers. However, Woolett, White and Lyon (1982) found that fathers were no more difficult to recruit than mothers and that if researchers asked fathers to participate they would (Churven, 1978). The study reported herein would have benefited immensely by having had nonresident fathers also report on their children's behavior.

Future research should therefore recognize the importance of father research and make concerted efforts to include them in research studies. Researchers should take caution to include fathers every time research is conducted, during each phase of the research process. Rather than going through mothers for fathers contact information, researchers could recruit fathers directly, the reverse of typical recruiting or sampling methods.

Improvement in the area of father research is still greatly needed. While efforts have already begun to take shape, a stronger focus on fatherhood will reveal a look into
the father-child dynamic that social science has never seen before. However, the way fatherhood is defined now, how father involvement is measured, how fathers are recruited for research leaves much to be desired. There were no significant findings in the current study to speak of, however, further researched is needed on nonresident fathers.

Appendix A
Problem Behavior Index Items

## OFTEN SOMETIMES NOT TRUE <br> TRUE TRUE

a. (He/She) has sudden changes in mood or feeling.
b. (He/She) feels or complains that no one loves
him/her. 1
c. (He/She) is rather high strung, tense and nervous. 1
d. (He/She) cheats or tells lies.
e. (He/She) is too fearful or anxious.
f. (He/She) argues too much.
g. (He/She) has difficulty concentrating, cannot pay attention for long. (Is this often true, sometimes true, or not true of (CHILD)?)
h. (He/She) is easily confused, seems to be in a fog.
i. (He/She) bullies or is cruel or mean to others.
j. (He/She) is disobedient.
k. (He/She) does not seem to feel sorry after (he/she)
misbehaves.
I. (He/She) has trouble getting along with other children.
m . (He/She) is impulsive, or acts without thinking.
n. (He/She) feels worthless or inferior.
o. (He/She) is not liked by other children. (Is this often

1

1
1
1

1

1

1

1

1

1

1
1

2
3
3
3
3
3
2

2

2

2

2

2

2

2
true, sometimes true, or not true of (CHILD)?) ..... 1
p. (He/She) has a lot of difficulty getting (his/her) mind
off certain thoughts. (IF NEC: has obsessions) ..... 1
q. (He/She) is restless or overly active, cannot sit still. ..... 1
r. (He/She) is stubborn, sullen, or irritable. ..... 1
s. (He/She) has a very strong temper and loses it easily. ..... 1
t. (He/She) is unhappy, sad or depressed. ..... 1
u. (He/She) is withdrawn, does not get involved with
others.v. (He/She) breaks things on purpose or deliberatelydestroys (his/her) own or another's things. 1
w. (He/She) clings to adults.
x. (He/She) cries too much. (Is this often true,
sometimes true, or not true of (CHILD)?) ..... 1
y. (He/She) demands a lot of attention.1
z. (He/She) is too dependent on others. ..... 1
aa. (He/She) feels others are out to get (him/her). ..... 1
bb. (He/She) hangs around with kids who get intotrouble.
(himself/herself). ..... 11
cc. (He/She) is secretive, keeps things to
dd. (He/She) worries too much. ..... 122

## Appendix B

Positive Behavior Scale Items
G24. Thinking about (CHILD), please tell me how much each statement applies to (CHILD) on a scale from 1-5, where 1 means "not at all like your child," and 5 means "totally like your child," and 2, 3 and 4 are somewhere in between.

NOT AT
ALL LIKE CHILD

TOTALLY
LIKE CHILD
a. Is cheerful, happy.
b. Waits (his/her) turn in games and other
activities.
c. Does neat, careful work.
d. Is curious and exploring, likes new experiences.
e. Thinks before (he/she) acts, is not impulsive.
f. Gets along well with other children.
g. Usually does what you tell (him/her) to do.
h. Can get over being upset quickly.
i. Is admired and well-liked by other children.
j. Tries to do things for (himself/herself), is selfreliant
$\begin{array}{lllll}1 & 2 & 3 & 4 & 5\end{array}$

12345
12345
12345
12345
12345
12345
12345
12345
12345

Appendix C
Non-resident Father Warmth Scale Items

| NOT IN | 1 OR 2 | ABOUT | SEVERAL | EVERY |
| :--- | :--- | :--- | :--- | :--- |
| THE PAST | TIMES | ONCE A | TIMES | DAY |
| MONTH | IN THE | WEEK | A WEEK |  |
|  |  | PAST MONTH |  |  |

a. Hugged or shown physical affection to your child? Would you say not in the past month, one or two times in the past month, about once a week, several times a week, or every
day?
1
2
3
4
5
b. Told (CHILD) that you love (him/her)?
1
2
3
4
4
5
one of (his/her) favorite activities?
1
2
3
3
4
e. Talked with (CHILD) about
things (he/she) is especially interested in?
f. Told (CHILD) you appreciated something (he/she) did?
1
2
3
4
5

## Appendix D

Participation in Child's Education/Engagement Scale Items The next set of questions is also about (CHILD)'s schooling and some activities that you may have participated in.


#### Abstract

YESNOa. Before the start of the school year, did you obtain information about who will be (CHILD)s' teacher? ..... 1 ..... 5 b. Did you meet with (CHILD)'s teacher? ..... 1 ..... 5 c. Is there more than one teacher that (CHILD) could havebeen assigned to for (his/her) current grade or age level? 115 d. Did you request a particular teacher for (CHILD)? ..... 15During the current school year, how often have you participated in any of the followingactivities at (CHILD)'s school? Would it be not in the current school year, once, or morethan once?


| NOT IN THE |  | MORE |
| :--- | :--- | :--- |
| CURRENT |  | THAN |
| SCHOOL | ONCE | ONCE |
| YEAR |  |  |

a. Volunteered in the classroom, school office, or
library?
b. Had a conference with (CHILD)'s teacher?
c. Had a conference with (CHILD)'s school principal?
d. Had an informal conversation with (CHILD)'s teacher?
e. Had an informal conversation with (his/her) principal?
f. Made a presentation to (CHILD)'s class? (Not in the current school year, once, or more than
once?)

2g. Observed (his/her) classroom?h. Attended a school event in which (CHILD)
participated such as a play, sporting event orconcert? 11 2i. Attended a school event in which (CHILD) did
not participate?
organization? ..... 1k. Met with a school counselor?123
j. Attended a meeting of the PTA or other such

2
2

3
3

## Appendix E

Conflict with Absent Father Scale Items How often do you and (CHILD's) father have conflict over each of the following issues? Please tell me if you have conflict often, sometimes, hardly ever, or never over:

## OFTEN SOMETIMES HARDLY NEVER EVER

a. Where (CHILD) lives. 1
b. How (he/she) is raised. 1
c. Disciplining (CHILD).

12
2
2
2
3
f. The amount of time he spends with
(CHILD).
1
2
3
4
g. His visits with (CHILD). 1 2

3
h. His contribution to (CHILD'S) support. 1

2
3
4
j. His (CHILD's father's) use of alcohol or drugs.

1
2
3
4
k. The friends he (CHILD's father) spends time
with.
1
2
3
4

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# ABSTRACT <br> NONRESIDENT FATHERS PARENTING AND CHILD AND ADOLESCENT DEVELOPMENT 

by

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Major: Psychology
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This study investigated the statistical relations between nonresident father involvement and various child outcomes over time. Specifically, the present study examined specific aspects of nonresident father involvement that included (a) paternal warmth, (b) emotional closeness, and (c) involvement in school related activities. The particular child outcomes under investigation included positive behaviors including selfesteem, social competence and self-control. The problem behaviors that were examined were child externalizing behaviors (e.g., aggression, rule breaking) and internalizing behaviors (e.g., withdrawal, anxiety, depression), taken from the Behavior Problems Index (BPI) measure, which assesses the occurrence and severity of child behavioral problems. Using data from the Child Development Supplement of the Panel Study of Income Dynamics Study, 139 children and their nonresident fathers were included in the study. Interviewers contacted families to explain the study, obtained permission for participation, mailed instruction letters and measures. Face-to-face interviews were conducted with mothers and children. Telephone interviews were
conducted with nonresident fathers. Regression analyses were conducted to predict the relations between father involvement and child behaviors at Time 1 and Time 2. Results revealed that neither nonresident father's warmth nor participation in school related activities contributed significantly to problem behaviors or positive behaviors at either time points. Recommendations for more concerted efforts to include fathers in research studies are discussed.

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3. Parenting practices/characteristics and child outcomes
4. The relationship between maternal psychopathology and child psychopathology
5. Family dynamics and child development
6. Balancing work and family issues to promote healthy living

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3. Child Development
4. Introduction Psychology
5. Measurement

[^0]:    Note. ${ }^{*} p=.05 \quad{ }^{* *} p<.05 \quad{ }^{* * *} p<.01$

