MOTHERS’ AND FATHERS’ PARENTING CHARACTERISTICS IN RELATION TO FAMILY EARNER
STATUS AND SELF-PERCEIVED INTERPERSONAL COMPETENCE

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With an increasing number of married mothers who participated in paid work roles, fathers with full-time employed spouses now are expected to assume the role of caregiver and have higher frequency of engagement in parenting practices. This study of 235 university students from dual-earner and single-earner families investigated their retrospective perceptions of both mothers’ and fathers’ frequency of engagement in overall and specific parenting behaviors. These perceptions were measured by the Parent Behavior Frequency Questionnaire-Revised Scale, which includes seven parenting characteristics and related behaviors. Paired samples t-tests suggested that married mothers, whether fully employed outside the home or not, engaged more frequently, than their full-time employed spouses, in parenting characteristics related to bonding, education, general welfare and protection, responsivity, and sensitivity. However, mothers' employment status had little influence upon the frequency at which either parent engaged in any of the seven parenting characteristics and related behaviors.

University students who perceived that both parents were more frequently engaged in specific parenting behaviors related to education, responsivity and sensitivity rated themselves higher on interpersonal competence, as measured by the Interpersonal Competence Questionnaire-Revised Scale. Students who perceived that both parents were less frequently engaged in negative parenting behaviors rated themselves higher on competence in conflict management. In addition, family earner status had no significant impact on university students’
levels of interpersonal competence. Although there was no significant gender difference in the levels of total interpersonal competence, male students reported higher levels of interpersonal competence in the domains of asserting influence and conflict management than their female counterparts.

These findings revealed that like parents from single-earner families, parents from dual-earner families also demonstrated a significant discrepancy in the frequency of engagement in parenting practices. Mothers still invested considerably more time with their children than do fathers. Therefore, there may be a need to develop parent education programs for fathers so that they have opportunities to shape paternal identity and parental self-efficacy. Also, it is necessary to develop friendly family-employment policies and enhance social support networks that enable both full-time employed mothers and fathers to achieve a satisfactory balance between family and work.
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PARENTING CHARACTERISTICS AND INTERPERSONAL COMPETENCE

Introduction

Many developed countries have experienced various economic and societal changes, and one of the remarkable changes is that an increasing number of mothers come into the labor force, resulting in a great transition in family structure (U.S. Census Bureau, 2012b). The traditional family is that of an employed father and a stay-at-home mother, but today the dual-earner families in which both parents are employed outside the home have gradually replaced the traditional family structure. The proportion of married couples in the U.S. with children under the age of 18 in dual-earner families was 58.5% in 2011, as compared to 30.4% of families in which fathers, but not mothers, were employed (U.S. Bureau of Labor Statistics, 2012). The increase in maternal employment and the shift from single-earner to dual-earner families have challenged the traditional view of gender roles at home and work and reshaped the roles of being a parent (Boehnke, 2011; Kroska & Elman, 2009).

Traditionally, fathers have been expected to play the role of financial provider, whereas mothers have been expected to play the roles of caregiver and homemaker. Therefore, mothers tend to assume the primary caregiver role with a great responsibility for children’s growth and development across various domains. As a result, there has been much research, on parenting and child development, merely investigating the association between quality of children’s early experiences with mothers and children’s interpersonal competence and psychosocial adjustment (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Chan, 2011; Evans, Nelson, Porter, Nelson, & Hart, 2012; Koblinsky, Kuvalanka, & Randolph, 2006; Lucas-Thompson & Clarke-Stewart, 2007; Panfile & Laible, 2012).
Nevertheless, due to the increase in the number of employed mothers and in the time they devote to work, the traditional social role of mothers has been affected, leading to the consequences of irregular mother-child interactions and increased need for non-maternal child care (Milkie, Raley, & Bianchi, 2009; Nomaguchi & Milkie, 2006; Shpancer, Melick, Sayre, & Spivey, 2006). Based on the longitudinal survey, Nomaguchi (2006) found that maternal full-time employment during preschool years was linked to fewer positive mother-child interactions and longer hours of non-maternal child care. Full-time employed mothers, as compared with stay-at-home mothers, are more likely to invest less time interacting with their children and to confront conflict while simultaneously performing the two demanding roles of caregiver and employee (Hart & Kelly, 2006). The conflict between their roles at home and work can generate higher levels of parenting strains, especially when their children are young, spouses rarely share child-rearing duties, and there is a lack of social support networks (Claffey & Mickelson, 2009; Scott, Dex, & Joshi, 2008).

Studies have documented that parenting strains of maintaining the balance between family and work is likely to be associated with negative mother-child interactions and therefore increases the risk of the exhibition of child problem behaviors (Daniel, Grzywacz, Leerkes, Tucker, & Han, 2009; Han, Miller, & Waldfogel, 2010). In Hill, Waldfogel, Brooks-Gunn, and Han’s (2005) study, there was evidence that full-time employed mothers, in the first year after child birth, had a greater likelihood of a negative impact on their children, such as a more insecure attachment and increased misconduct problems. Full-time employed mothers, under stress, may be less likely than their non-stressed counterparts to display warmth and responsiveness and to engage in consistent and reasonable discipline while interacting with
their children. Because of this, their children are more likely to have psychosocial adjustment difficulties (Anthony, Anthony, Glanville, Naiman, Waanders, & Shaffer, 2005; Crnic, Gaze, & Hoffman, 2005; Guajardo, Snyder, & Petersen, 2009; Kim & Moon, 2005; Walker & Cheng, 2007).

As a result of gender stereotypes, most research discussing the impact of parent-child interactions on child development outcomes focus mainly on mother-child interactions but seldom on father-child interactions (Lamb, 2010; Lamb & Lewis, 2010). More recent studies have turned their attention to the role of fathers in child development, but the findings are inconsistent. Some have suggested that with very few exceptions, children are more likely to form secure attachments with mothers than with fathers and that mother-child attachments are more predictive of child outcomes than are father-child attachments (Booth-Laforce, Oh, Kim, Rubin, Rose-Krasnor, & Burgess, 2006; Williams & Kelly, 2005). Even though both mothers and fathers in dual-earner families attempt to share the duties of child-rearing, fathers’ involvement with children may be less influential than their financial support of children, due to traditional gender role attitudes (Finley, Mira, & Schwartz, 2008; Kroska, 2008). Some, however, have argued that fathers certainly play a critical role in the lives of children (Lamb, 2010; Lamb & Lewis, 2010). With an increasing number of married mothers who participate in paid work roles, fathers with full-time employed spouses now are expected to assume the role of caregiver. Based on the analyses of time diary and survey data with a sample of employed parents, Milkie, Kendig, Nomaguchi, and Denny (2010) found that parents’ sense of family-work balance was linked to spouses’ greater involvement with children and children’s positive development. Fathers’ willingness to take on the caregiver role with higher frequency of
engagement in parenting practices have been found to support mothers’ dual role between family and work, to help reduce parenting strains, and to promote children’s development (Claffey & Mickelson, 2009; Coley & Schindler, 2008; Harmon & Perry, 2011).

Although the majority of mothers continue to perform the role of caregiver, there has been a shift in the extent to which fathers actively participate in the role of caregiver and engage in parenting practices (Lamb, 2010; Lamb & Lewis, 2010). Fathers, like mothers, also play a significant role in children’s developmental outcomes, and the ways in which fathers interact with their children appear to be different from mothers. In Craig’s (2006) investigation of child-rearing practices among parents, it was suggested that mothers engage in more interactive and physical care than fathers, while fathers engage relatively more in play activities with their children than mothers. Furthermore, several researchers have conducted studies to examine the effects of increased paternal involvement on child development, and consistently claimed that paternal parenting practices are associated with children’s subsequent adjustment. These studies have demonstrated that fathers’ participation in child-rearing is positively associated with children’s psychosocial adjustment, but negatively associated with children’s aggressive behaviors (Bronte-Tinkew, Moore, & Carrano, 2006; Brown, Mangelsdorf, & Neff, 2012). In Sarkadi, Kristiansson, Oberklaid, and Bremberg’s (2008) meta-analysis study, it was found that there were positive associations of paternal involvement with children’s long-term social, behavioral, psychological, and cognitive development. Also, Williams and Kelly (2005) discovered that father-child interactions, like mother-child interactions, could predict children’s behavioral problems, even though children reported being less securely attached to their fathers and their fathers were less involved in parenting when compared with mothers.
Much related research has addressed the association between parent-child interactions and child outcomes and mentioned that attachment relationships and parenting styles between mothers and fathers have been found to uniquely contribute to child development (Allen et al., 2007; Craig, 2006; Lindsey, Cremeens, & Caldera, 2010; Simons & Conger, 2007; Williams & Kelly, 2005). However, there has been little analysis on the unique and differentiated roles of mother and father in parent-child interactions because surveys rarely collect data from both parents in relation to their individual parenting practices. Thus, there is a need to examine the differences between maternal and paternal involvement due to the potential and unique impact on children’s developmental outcomes. It is clear that more investigations are required to help develop a comprehensive understanding of the differences in parenting characteristics and related behaviors between mothers and fathers, especially when both of them are full-time employed outside the home.

**Parenting and Children’s Interpersonal Competence**

Children’s earliest social experiences, through parent-child interactions, take place mostly in the context of the family setting. Parents, therefore, are the primary agents of socialization (Grusec & Davidov, 2007). As stated by Bandura’s (1986) social learning theory, children learn socially acceptable behaviors from their parents by way of observation, modeling, and reinforcement. There is ample evidence to support the belief that the early patterns of parent-child interactions can be transferred and applied to later interpersonal interactions with others. Parenting that is high in responsiveness and sensitivity can encourage children’s prosocial behaviors with peers (Carlo, Mestre, Samper, Tur, & Armenta, 2011; Farrant, Devine, Maybery, & Fletcher, 2012; Hastings, McShane, Parker, & Ladha, 2007). Conversely, parenting
that is harsh and coercive is a risk factor for child conduct problems (Bolkan, Sano, de Costa, Acock, & Day, 2010; Low, Snyder, & Shortt, 2011). Thus, it is clear that the quality of parent-child interactions plays a significant role in children’s development of interpersonal competence.

Researchers and theorists have examined the ways in which parent-child interactions impact the development of interpersonal competence in children. They have contended that the quality of parent-child interactions and their attachment relationships can be associated with children’s interpersonal competence and be predictive of high performance scores on measures of peer acceptance and psychosocial adjustment (Diener, Isabella, Behunin, & Wong, 2007; Dykas, Ziv, & Cassidy, 2008; Hastings et al., 2007; Rah & Parke, 2008). With regard to Bowlby’s attachment theory (1973, 1982, 1988), he has asserted that early development of attachments between caregivers and children is the key predictor of the patterns in peer relationships throughout early childhood and into adulthood. Similarly, Ainsworth and colleagues have conducted the strange-situation test and concluded that caregivers, being responsive and sensitive to children’s developmental needs, are more likely to form secure attachments with their children. Caregivers of insecurely attached children, however, tend to have parenting practices related to insensitivity and neglect (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978). A number of empirical studies have documented the association between attachment relationships and child peer competence, showing that most securely attached children, with a sense of basic trust, are recognized as being better prepared to deal with unfamiliar social situations and to initiate and maintain positive social relationships with their peers (Bohlin, Hagekull, & Anderson, 2005; Booth-Laforce et al., 2006; Lucas-Thompson &
Clarke-Stewart, 2007). In contrast, insecurely attached children often have difficulties in subsequent adjustment and experience a variety of problems in peer relations (Allen et al., 2007; Raikes & Thompson, 2008).

Furthermore, Baumrind (1967, 1971, 1989, 1991a) proposed a comprehensive examination of parenting, which identified parental responsiveness and demandingness as the major determinants that distinguish parenting style. Maccoby and Martin (1983) extended the styles to include a fourth type of parenting, which now include authoritative, authoritarian, permissive, and neglecting parenting styles. A number of researchers have used the concept of parenting style as a theoretical framework to investigate the effects of parent-child interactions on children’s socially competent behaviors with peers (Baumrind, 1989, 1991a; Bolkam et al., 2010; Chan, 2011; Hastings et al., 2007). These studies suggest that authoritative parents exhibit high responsiveness, high demandingness, and proper use of supportive discipline (Baumrind, 1971, 1989). Thus, their children, instead of intentionally violating the expected standards of conduct, are more likely to model the parents’ socially competent behaviors, such as self-regulation, and to develop healthy peer relations. Authoritarian parents, however, are more restrictive and demanding, and less responsive to the needs of their children. Also, they prefer to strictly control their children’s conduct without providing any reasonable explanations (Baumrind, 1971, 1989). As a result, children of authoritarian parents are likely to show a lack of autonomy, to display aggressive behaviors when interacting with peers, to experience peer rejection, and to have adjustment difficulties.

In contrast to authoritarian parents, permissive parents are responsive and warm, but less demanding. They are passive in parenting and have relatively few expectations for their
children to conform (Baumrind, 1971, 1989). Consequently, their children are likely to have difficulties in self-regulation and in taking others’ thoughts and feelings into consideration, which in turn can interfere with the development of positive peer relationships. Neglecting parents are low on responsiveness and demandingness and less likely to devote time to parenting, less likely to be emotionally attached with their children, and less likely to take care of their children’s developmental needs (Baumrind, 1989, 1991a). These practices are often associated with poor parent-child interactions, which lead children of neglecting parents to exhibit interpersonal competence deficits, to be rejected by peers, and to develop both externalizing and internalizing behaviors, such as aggression and social withdrawal (Odom, McConnell, & Brown, 2008; Simons & Conger, 2007). Overall, within the context of a mutually responsive parent-child interaction, children are most likely to learn socially appropriate behaviors from their parents, and with behaviors such as sharing and cooperating, they can enhance interpersonal competence in peer relationships, and therefore initiate and maintain positive relationships with their peers.

*Mowder’s Parenting Characteristics*

Parenting is an activity in which an individual performs the role of a parent in raising children, forming parent-child relationships, and promoting children’s development across various domains (Mowder, 2005). Darling and Steinberg (1993) proposed a contextual model of parenting style and argued that parenting practices should be distinguished from parenting style. Parenting practices are considered as specific child-rearing behaviors which are performed by parents in an effort to socialize their children and have a direct impact on children’s developmental outcomes. Parenting style, however, is conceptualized as collective
child-rearing attitudes and overall quality of parent-child interactions, which has an indirect impact on children’s developmental outcomes. More specifically, parenting style represents the aggregated effects of a set of specific parenting behaviors on children’s development. Hence, the distinction between parenting style and parenting practices is necessary for the examination of each single parenting behavior and its relationship with child outcomes (Darling & Steinberg, 1993; Lee, Daniels, & Kissinger, 2006). In terms of the quality of parent-child interactions, Bowlby’s (1973, 1982, 1988) theory of parent-child attachment and Baumrind’s (1967, 1971, 1989, 1991a) conception of parenting style have been used as evidenced to support the association between parent-child interactions and children’s development of interpersonal competence. For the purpose of the study, however, Mowder’s parent development theory (PDT; 1993, 1995, 2005) is used as the theoretical framework in order to help distinguish parenting practices from parenting style. Also, the relationships of parenting practices to children's interpersonal competence in peer relationships are discussed in the study.

Being aligned with the cognitive developmental and social learning theories, Mowder and colleagues proposed the PDT, providing a comprehensive understanding of the development and complexity of the roles of being a parent (Mowder, Harvey, Pedro, Rossen, & Moy, 1993; Mowder, Harvey, Moy, & Pedro, 1995; Mowder, 2005). The PDT describes that, with the accumulation of life experience, individuals gradually construct and expand their parenting schemas that are the perceptions of what parenting means. As individuals take on the social role of being a parent, they tend to parent their children according to their existing parenting schemas. In addition, they are likely to modify the existing schemas in response to a
variety of factors, such as children’s characteristics, developmental needs, and family structure, in order to ensure effective parent-child interactions. On the basis of the PDT, Mowder and colleagues further conducted the Parent Role Questionnaire (PRQ) in an attempt to study individuals’ perceptions of the roles of being a parent (Mowder et al., 1993, 1995). The PRQ was a self-report measure requiring participants to delineate in free-response format how they consider the roles of being a parent. Participants were also asked to rate each of the six parenting characteristics in terms of importance. Their research findings demonstrated that most of the participants indicate six parenting characteristics, including bonding, discipline, education, general welfare and protection, responsivity, and sensitivity, as the essential components of parenting. Furthermore, Mowder and colleagues (1993, 1995) found that the importance of each of these characteristics varies with children’s developmental stages. The definitions of these characteristics are as follows (Mowder, 2005): bonding is the affection, love, and regard parents feel and display toward children; discipline is to establish rules and set boundaries and to assure that children respond and adhere to limits; education is to inform, guide, and teach children; general welfare and protection refers to keeping children from harm and providing for children’s basic needs; responsivity refers to being responsive to and acting on the demands of children; sensitivity is to match the parental responses to children’s actual needs.

Some researchers, accepting the PDT as a conceptual framework, have attempted to examine the six major parenting characteristics in relation to various parenting issues (Mowder, Guttman, Rubinson, & Sossin, 2006; Respler-Herman, Mowder, Yasik, & Shamah, 2012; Sperling & Mowder, 2006). Nevertheless, the relationships of these parenting characteristics to
children’s interpersonal competence in peer relationships have been implicated in limited research (Harari, 2005; Liebling, 2004). The findings of Liebling’s (2004) investigation revealed that the increase in importance ratings for responsivity was associated with the decrease in children’s problem behaviors. With regard to Harari’s (2005) work, it was shown that when compared with parents who emphasized the parenting characteristics of responsivity and sensitivity, parents who viewed discipline as a more important parenting characteristic had children with higher levels of conduct problems. In addition, Harari (2005) found that children were more likely to develop social skills when their parents put emphasis on the parenting characteristics of education and general welfare and protection. There were a few studies demonstrating gender differences in parenting characteristics (Mowder et al., 1995; Shum, 1997; Turiano, 2001). In Mowder and colleagues’ (1995) study, they claimed that mothers were likely to view each of the six parenting characteristics as more important than were fathers. When compared with fathers, Turiano (2001) reported that mothers tended to rate bonding, responsivity, and sensitivity higher in importance. Shum (1997) also found that mothers considered education, responsivity, and sensitivity to be more important than did fathers.

Overall, a parent, according to the PDT, is defined as an individual who recognizes and carries out the social role of being a parent (Mowder, 2005). The perceptions of mothers regarding the roles of being a parent appear to be somewhat different from that of fathers. Moreover, with the rise of maternal employment, among dual-earner couples, their beliefs about gender roles at work and within the family may be affected, leading their parenting characteristics to be different from their counterparts in single-earner families. Hence, within this framework, there is a growing interest in the differences between how mothers and fathers
perform their roles as parents in relation to family structure. Besides, parent-child interactions always play a significant role in child peer competence. Thus, the current study explores university students’ perceptions of both mothers’ and fathers’ parenting characteristics in terms of family earner status, and the association of perceived parents’ parenting characteristics with their self-reported interpersonal competence in peer relationships.

**Interpersonal Competence in Peer Relationships**

Children’s interpersonal competence is an essential psychological task from early childhood through adulthood and can determine children’s ability to have positive interpersonal interactions with others (Ladd, 2005). Interpersonal competence in peer relationships can be more specifically defined as children’s ability to apply appropriate behavioral strategies within an interaction to effectively achieve desired social goals while simultaneously maintaining positive social relationships with their peers (Missal & Hojnoski, 2008; Odom et al., 2008). Thus, it is a major determinant of successful peer relationships leading to children’s development into productive adults. Socially competent children have abilities to initiate social communication within a variety of social situations, to work collaboratively with others, to empathize with others, and to manage interpersonal conflicts. Because of this, such children can more easily socialize with their peer groups and rate high on measures of peer acceptance (Asher & McDonald, 2009; Ladd, 2005; Ladd & Ettekal, 2009; Odom et al., 2008; Rose-Kransnor & Denham, 2009). The majority of research has supported the idea that children who are socially competent with their peers are more likely to experience successful school outcomes and less likely to have adjustment difficulties later in life.
Conversely, a number of studies have found that children experiencing deficits in interpersonal competence commonly display a high degree of externalizing problems, such as aggression, and internalizing symptoms, such as social withdrawal (Brotman, Gouley, Chesir-Tenan, Dennis, Klein, & Shrout, 2005; Ladd & Ettekal, 2009; Ladd, Herald-Brown, & Reiser, 2008). Such conduct problems have been found to be associated with peer rejection and to be predictive of a wide range of social and life adjustment difficulties. For instance, socially aggressive children may be associated with various negative adjustment outcomes including school difficulties and poor mental health (Asher & McDonald, 2009; Ladd, 2006). Also, poor peer relations early in life often persist into adolescence and adulthood and are linked to later problematic adult interpersonal relationships (Brotman et al., 2005). Thus, it is clear that interpersonal competence is a factor which mitigates the development of early onset behavior problems and problematic peer relationships that are detrimental to children’s school and later life success.

Methods

The study was designed to examine how married couples from dual-earner families differ in the ways in which they perform their role as a parent. More specifically, the study sought to investigate the parenting characteristics among dual-earner couples as opposed to those from single-earner families, in which fathers but not mothers were employed outside the home. Furthermore, a review of the literature suggests that childhood experiences in parent-child interactions may have a lasting effect on future interpersonal competence in peer relationships. Therefore, it is important to examine university students’ self-perceived interpersonal competence and the association with both parents’ parenting characteristics.
Thus, a non-experimental, mixed-mode survey was considered an appropriate research design for the study to evaluate university students’ retrospective perceptions of both parents’ parenting characteristics and the levels of their self-reported interpersonal competence. Also, a method of descriptive statistics was used to quantitatively describe the sample data and paired samples t-test, independent samples t-test, and Pearson’s correlation were conducted in response to the research questions.

Participants

The study recruited a convenient sample of students enrolled at three different state universities; they were the University of North Texas (UNT), Southeastern Oklahoma State University (SOSU), and St. Cloud State University (SCSU). The non-random sample of participants consisted of intact groups of students enrolled in the fall of 2011 and in the spring of 2012. Because children were likely to respond to the questions in terms of parenting practices with very different perceptions than do their parents, the target population for the study was a group of university students who had grown up with both married biological parents. A total of 363 students accessed either web-based or paper-and-pencil surveys after they were introduced to the study. Of this sample, 209 were enrolled in the UNT, 119 enrolled in SOSU, and 35 enrolled in SCSU. The participants involved in the study were either undergraduate or graduate students with 10% freshman, 8% sophomore, 22% junior, 52% senior, and 8% graduate. Of this sample, 83% were females and 17% were males. The majority of participating students majored in development and family studies, early childhood and elementary education, interdisciplinary studies, psychology, and clinical mental health counseling. Moreover, 121 of the participating students indicated they were from two-parent
dual-earner families, representing 33% of the sample, and 128 of them were from two-parent single-earner families, representing 35% of the sample. The rest of participating students were categorized into other family structures, which were not the focus of the present study.

*Procedures*

In order to gather a diverse sample of participants, three state universities in Texas, Oklahoma, and Minnesota respectively were targeted for the study. Before data collection, the study was reviewed and approved by the University of North Texas Institutional Review Board (IRB) for the protection of human subjects, after which approval letters were sent to the three schools to request their permission and participation. The letter specified the purpose and importance of the study and stated that participation in the study was voluntary and confidential. Upon receipt of the approval, each professor selected in the three universities was informed of the administration of paper-and-pencil questionnaires and of the access to web-based surveys. Some of the participating students then were approached by the professors teaching in the classes and given questionnaire packets, along with informed consent forms. The participating students were asked to complete the questionnaire packets within two weeks and return them to their professors. Similarly, some of the participating students were approached by the professors via class mailing lists and a survey link to the data collection website, surveymonkey.com, was attached. Moreover, some of the participating professors were willing to give extra credit to their students for participating in the study. Students also had an alternative means of earning extra credit commensurate with the time and effort required to complete the survey. The participating students were told that there was no right or wrong answer to any question and were assured that there was adequate time for them to
complete either web-based or paper-and-pencil surveys and that their privacy and the confidentiality of their responses were secured through numeric coding.

The web-based survey was designed using Survey Monkey, a professional and secure web-based survey application that enables social science researchers to develop surveys on the Internet and conduct reliable online research through a standard web browser. There were no specific computer requirements for the participating students to access the survey. Although approval for a waiver of signed consent was granted due to the web-based survey research design, an informed consent notice pertaining to the purpose and importance of the study, the researcher’s contact information, and UNT’s IRB contact information were needed and displayed on the welcome screen. Before taking the survey, the participating students were asked to click the “Next” button at the bottom of the agreement to indicate implied consent. Then they were required to complete a three-section, self-report questionnaire. The survey link to the data collection website, surveymonkey.com, was effective through June 23, 2012.

Because most students now like to spend time surfing the Internet and checking email, web-based surveys for collecting data among students may have higher response rates than some other respondents (Shin & Fan, 2008). Nevertheless, in order to obtain higher response and better quality data, research participants were given the option to respond by either the web-based or traditional paper-and-pencil surveys. The estimated time for the participating students’ response to the survey was about 25 minutes. All surveys were completed either via the Web or paper and were assigned a number for purposes of data entry. The collected data then were entered into SPSS for later analysis.
Measures

A three-section questionnaire was developed for gathering the responses from the participating students in regard to background information, frequency of both parents’ parenting characteristics and related behaviors, and perceived ability to interact with others. It included a demographic questionnaire, the Parent Behavior Frequency Questionnaire-Revised (PBFQ-R; Mowder, 2007, 2010), and the Interpersonal Competence Questionnaire-Revised (ICQ-R; Buhrmester, 2002; Buhrmester, Furman, Wittenberg, & Reis, 1988). All the questions were close-ended, which limited missing data and measurement errors.

Demographic Questionnaire

The first section of the survey, the demographic questionnaire contained questions on participants’ gender, age, ethnicity, and number of siblings as well as their both parents’ age, ethnicity, level of education, employment status, current marital status (e.g., married, divorced), and total family income. The family structure (e.g., two-parent biological, single-parent, blended family), parents’ major role at home (e.g., economic provider, homemaker), and employment status (e.g., full-time, part-time, stay-at-home) during participants’ childhood years between the ages of 6 and 12 were also included in the demographic questionnaire.

Parent Behavior Frequency Questionnaire-Revised (PBFQ-R)

The Parent Behavior Frequency Questionnaire-Revised (PBFQ-R; Mowder, 2007, 2010), a modification of the PBFQ (Mowder, 2000; Mowder & Sanders, 2008), is a 73-item parenting characteristics checklist. Instead of assessing the importance of the parenting characteristics, the PBFQ-R, which was developed based on the Parent Behavior Importance Questionnaire-Revised (PBIQ-R; Mowder, 2007), was used to assess the frequency of parenting characteristics.
In order to enhance the reliability and validity and counterbalance the negatively skewed distribution, Mowder extended the original 38-item PBFQ to 63 positive parenting behavioral items and added a Negativity subscale with 10 negative parenting behavioral items as well. The direction of the PBFQ-R was slightly modified for the study to assess participants’ retrospective perceptions of both mothers’ and fathers’ parenting characteristics and related behaviors. That is, participants were asked to indicate how often or frequently their mothers and fathers individually perform the 73 specific parenting behaviors on a 5-point Likert-type rating scale. The Likert-type frequency scale for the PBFQ-R ranges from 0 for *never* to 4 for *always*. Each item corresponded to one of the seven parenting characteristics, including bonding (14 items; e.g., doing things with you at home), discipline (9 items; e.g., being consistent establishing and following through with rules), education (16 items; e.g., being a model for you and your behavior), general welfare and protection (13 items; e.g., being an advocate for you), responsivity (12 items; e.g., listening to you), sensitivity (9 items; e.g., being sensitive to your concerns or fears), and negativity (10 items; e.g., comparing you to other children). Of the 63 positive parenting behavioral items, ten appeared in two of the six subscales. The scores of each parenting subscale were summed to obtain a total subscale score. Higher scores on each subscale represented that participants’ parents were more frequently engaged in parenting practices in that domain and lower scores indicated less frequent engagement. It should be noted, however, that a higher score on the Negativity subscale indicated less frequently occurring negative parenting practices. The total parenting score was obtained by adding up the seven parenting subscales, ranging from 0 to 332.
The PBFQ-R has been tested to demonstrate strong internal consistency and test-retest reliability (Mowder, 2010; Mowder & Shamah, 2011a, 2011b). The overall reliability of the PBFQ-R, as measured by Cronbach’s alpha, was .91 and was psychometrically stronger than the prior version. Specifically, the alpha values for each subscale were .87 for Bonding, .68 for Discipline, .82 for Education, .70 for General Welfare and Protection, .82 for Responsivity, and .85 for Sensitivity. The test-retest reliability correlation in terms of the overall PBFQ-R was .83 and the six positive parenting subscales were also significantly correlated, with Bonding \( r = .79 \), Discipline \( r = .72 \), Education \( r = .74 \), General Welfare and Protection \( r = .66 \), Responsivity \( r = .80 \), and Sensitivity \( r = .79 \). Although the PBFQ-R has not yet received as much attention as the PBIQ-R, due to its development on the basis of the PBIQ-R, the PBFQ-R is considered to have similar strong content and construct validity. For instance, items on the PBIQ-R were generated and selected from parent focus groups, prior research, responses on parent questionnaire, and responses of subject matter experts (SMEs), which in turn supported the content validity of the PBFQ-R (Mowder, 2010; Mowder & Shamah, 2011a). Furthermore, because the alpha value for the overall measure was .91 and each parenting subscale was significantly correlated with each other (Mowder & Shamah, 2011b), the PBFQ-R demonstrated strong construct validity.

**Interpersonal Competence Questionnaire-Revised (ICQ-R)**

The Interpersonal Competence Questionnaire-Revised (ICQ-R), a 40-item scale, was used to measure participants’ self-reported interpersonal competence (Buhrmester, 2002; Buhrmester et al., 1988). Each item of the ICQ-R briefly stated a common interpersonal circumstance and required participants to rate their level of competence and comfort in
handling that situation using a 5-point Likert-type rating scale, with values ranging from 1 for *poor at this* to 5 for *extremely good at this*. The five domains (8-item subscales) of interpersonal competence identified by the ICQ-R included Initiation of Relationships (e.g., asking someone new to do things together), Emotional Support (e.g., making someone feel better when they are unhappy or sad), Asserting Influence (e.g., taking charge), Self-Disclosure (e.g., sharing personal thoughts and feelings with others), and Conflict Management (e.g., resolving disagreements in ways that make things better instead of worse). A total score was calculated by summing item scores for each subscale that represented the overall measure of participants’ interpersonal competence. Scores ranged from 40 to 200 and higher scores suggested more comfort and competence in handling various interpersonal situations.

Reliability of the ICQ-R was satisfactory with Buhrmester et al.’s (1988) four-week test-retest reliability correlations from .69 to .89 and with strong internal consistency properties (Cronbach’s α) as evidenced by a number of studies, ranging from .77 to .89 (Buhrmester, 2002). The concurrent validity of the ICQ-R was well documented by Buhrmester et al. through significant correlations between the five subscales and a range of social adjustment measures. Furthermore, items on the ICQ-R were generated and modified according to the review of previous theoretical and empirical research and existing measures, which supported the content validity of the ICQ-R. Because the five domains were significantly correlated with each other, the ICQ-R also demonstrated strong construct validity.

*Data Analysis*

*Data Screening*
Data were compiled and analyzed as a whole at the end of data collection and were assigned a number for purposes of data entry, thus confidentiality of information was protected. All analyses were performed using IBM SPSS Statistics 20.0. For the study, descriptive statistics for the whole sample were used to identify results by demographics and the whole sample was divided into two subgroups on the basis of parents’ single-earner and dual-earner status. Also, erroneous data entries and missing values in the dataset were checked.

Statistical Analysis

Descriptive statistics were applied in the study to identify the frequencies, percentages, mean scores, and standard deviations of each domain of parenting characteristics and interpersonal competence, which were the two major dependent variables of the study. Also, Cronbach’s alphas were computed to measure internal consistency reliabilities of the PBFQ-R and ICQ-R. With regard to the research questions one and two, the gender of a parent was an independent variable and the total parenting score was a dependent variable. Thus, controlling for family earner status, a paired samples t-test was conducted to explore whether there were significant differences between mothers and fathers in terms of their parenting characteristics and the frequency of related parenting behaviors measured by the PBFQ-R. For answering the research questions three and four, controlling for the gender of a parent, an independent samples t-test was used to determine whether there were significant difference among parents’ earner status in terms of their parenting characteristics and the frequency of related parenting behaviors measured by the PBFQ-R. Therefore, the comparisons of samples from single-earner and dual-earner families were presented.
Pearson’s correlation analysis was applied in response to the research question five as to whether there was a relationship between university students’ interpersonal competence in peer relationships, as measured by the ICQ-R, and the seven parenting characteristics measured by the PBFQ-R. With regard to the research question six, the family structure was an independent variable and the total interpersonal competence score was a dependent variable. Thus, an independent samples t-test was utilized to examine whether there were significant differences between single-earner and dual-earner families in terms of university students’ interpersonal competence in peer relationships measured by the ICQ-R. With research question seven, considering university students’ gender an independent variable and the total interpersonal competence score was a dependent variable, an independent samples t-test was demonstrated to study whether there were significant differences between male and female university students in terms of their interpersonal competence in peer relationships measured by the ICQ-R. As conventionally done, all analyses in the study were tested at an alpha level of .05 to indicate statistical significance (Pagano, 2013).

Results

Data Screening

Reverse Coding and Selecting Cases

Ten negatively worded statements, including Items 10, 12, 14, 17, 33, 37, 38, 69, 72, and 73 on the 73-item Parenting Behavior Frequency Questionnaire-Revised scale were reversely recoded prior to obtaining a scale score. An examination of frequencies, means, standard deviations, skewness statistics, and kurtosis statistics were conducted to detect missing values and outliers and to identify the distribution of responses. There were 363 university students
participating in the study. Of those who did respond, the majority of participants reported
growing up with both married biological parents representing an intact, two-parent family
structure ($n = 255, 70\%$). One hundred eight participants were excluded from data analysis for
the research purposes because they indicated family structures of single-parent families,
blended step families, blended adoptive families, or grandparent-only families when they were
younger than 12. Of those participants from two-parent families, their mothers’ and fathers’
major role at home and employment status were considered. Six cases were eliminated from
data analysis due to father being a homemaker and being either minimally employed or
unemployed. Of the 249 selected cases, five were incomplete on return and therefore were
removed.

*Deleting Cases with Outliers*

Many of the statistical tests require the assumption that the sample data under analysis
should be normally distributed. Outliers, however, can distort the mean and skew the
distribution. Therefore, an examination of box plots was conducted to determine whether or
not extreme values exist in the distribution. Six cases related to the PBFQ-R scale and three
cases related to the Interpersonal Competence Questionnaire-R (ICQ-R) scale were deleted due
to the concern of outliers. The values of skewness and kurtosis were then reexamined to ensure
that the assumption of normality was met. A value of skewness or kurtosis, ranging from -1.0 to
+1.0, is considered reasonably normal for most psychometric uses, but a value, ranging from
-3.0 to +3.0, is also acceptable when the sample size is large enough (Pagano, 2013). For the
current study, all study variables had acceptable ranges for skewness and kurtosis, indicating
that the assumption of normality was met and no transformations were needed for the data.
Descriptive Statistics

Description of the Sample

The final number of study participants was 235 university students after removing cases due to missing values, outliers, and failure to meet the research purposes. The overall sample consisted of 235 university students living with their married biological parents during their childhood years between the ages of 6 and 12. More specifically, in the sample, about 50% of participants grew up in dual-earner families \( (n = 117) \) and 50% grew up in single-earner families \( (n = 118) \). Descriptive statistics were conducted separately for participants from dual-earner families and for those from single-earner families. Table C1 presented the demographic characteristics of the two sub-samples.

Of the 117 participants from dual-earner families, 84% were females and 16% were males. In the sample, the majority of participants were Caucasian/White (70%), followed by African-American/Black (10%) and multi-ethnic (10%). Other ethnic groups included Hispanic/Latino, Asian, and Native American/American Indian and were under 10% respectively. The age range of participants was from 18 to 52. There were about 51% of the sample in the cluster between 18 and 21 years of age and 49% were age 22 and older. With regard to the number of siblings, about 39% of participants indicated at least one sibling in their families and 50% had two or more. About 9% of participants indicated that they were the only child. In terms of family’s socioeconomic status (SES), the majority of participants reported middle SES (34%). Of the remainder, about 27% of participants were from upper SES backgrounds, 24% were from middle-upper SES, 5% were from lower-middle SES, and 4% were from lower SES.
Of the 117 participants from dual-earner families, 67% of the sample reported that their parents stayed married, while 33% indicated that their parents were separated, divorced, remarried, or widowed. Furthermore, with regard to ethnicity identity, the highest number of mothers and fathers were Caucasian/White (75% for mother; 74% for father). The age range of parents was from 31 to 60 plus years. The majority of mothers and fathers fell into the age range of 41-50 years (47% for mother; 43% for father), followed by the age range 51-60 years with 35% of mothers and 39% of fathers. About 10% of mothers and 5% of fathers fell into the age range of 31-40 years and about 6% of mothers and 8% of fathers were 60 plus. In terms of educational attainment, the majority of parents had attended at least high school. About 31% of mothers and 39% of fathers in the sample indicated high school as their highest level of education, while about 9% of mothers and 6% of fathers indicated that they had not finished high school. Moreover, about 29% of mothers and 28% of fathers had earned a bachelor’s degree. Of the entire sub-sample, some parents had taken graduate courses and had completed a master’s degree (14% for mother; 13% for father) or a doctorate (3% for mother).

Of the 118 participants from single-earner families, 87% were females and 13% were males. In the sample, the majority of participants were Caucasian/White (72%), followed by multi-ethnic (14%). Other ethnic groups included African-American/Black, Hispanic/Latino, and Asian and were under 10% respectively. The age range of participants was from 18 to 45. There were about 43% of participants in the cluster between 18 and 21 years of age and 57% were age 22 and older. With regard to the number of siblings, about 36% of participants indicated at least one sibling in their families and 59% participants had two or more. About 4% of participants indicated that they were the only child. In terms of family’s SES, the largest group
of participants reported middle-upper SES (35%). Of the remainder, about 29% of participants were from middle SES backgrounds, 17% were from upper SES, 9% were from lower SES, and 6% were from lower-middle SES.

Of the 118 participants from single-earner families, 84% of the sample reported that their parents stayed married, while 16% indicated that their parents were separated, divorced, remarried, or widowed. Furthermore, with regard to ethnicity identity, the highest number of mothers and fathers were Caucasian/White (79% for mother; 76% for father). The age range of parents was from 31 to 60 plus years. The majority of mothers and fathers fell into the age range of 51-60 (43% for mother; 52% for father), followed by the age range 41-50 years with 37% of mothers and 25% of fathers. About 3% of mothers and 2% of fathers fell into the age range of 31-40 years and about 14% of mothers and 18% of fathers were 60 plus. In terms of educational attainment, the majority of parents had attended at least high school. About 42% of mothers and 35% of fathers in the sample indicated high school as their highest level of education, while about 12% of mothers and 15% of fathers indicated they had not finished high school. Moreover, about 23% of mothers and 25% of fathers had earned a bachelor’s degree. Of the entire sub-sample, some parents had taken graduate courses and had completed a master’s degree (7% for mother; 13% for father) or a doctorate (2% for father).

The summary of demographic characteristics of the two sub-samples, provided in Table C1, demonstrated that the two sub-samples were quite similar. Participants, either from dual-earner families or from single-earner families, were predominately Caucasian/White, had at least one sibling in their families. Furthermore, with regard to their parents, they were predominately Caucasian/White, better educated, and with a middle or higher level of income.
Reliability Analysis of Study Measures

Two scales were used in the study. For testing reliability and internal consistency of the items in the overall scales and sub-scales, Cronbach’s alphas were calculated and reported. Cronbach’s alpha, a numerical coefficient of reliability/consistency, normally ranges in value between 0 and 1. A reliability coefficient of .70 or higher is often considered to be acceptable in most social science research (Pagano, 2013). The alpha coefficients for the PBFQ-R and ICQ-R scales were featured in Tables C2 and C3.

Parenting characteristics were measured using the PBFQ-R scale. Participants were asked to indicate the frequency with which their mothers and fathers individually engaged in the 73 specific parenting behaviors on a 5-point Likert-type rating scale. The scale ranged from 0 for never to 4 for always. Each item corresponded to one of the seven parenting characteristics including bonding, discipline, education, general welfare and protection, responsivity, sensitivity, and negativity. The results of reliability analysis showed that the overall reliability of the PBFQ-R scale was excellent (α = .96 for mother; α = .97 for father). More specifically, the alpha coefficients for each sub-scale related to mother and father were computed and presented respectively in Table C2. These reliability scores demonstrated that the internal consistency reliabilities for the seven sub-scales of the PBFQ-R scale were at least acceptable.

Participants’ Interpersonal competence was measured using the ICQ-R scale. Participants were asked to rate the extent to which they were good or bad at handling the 40 specific interpersonal circumstances on a 5-point Likert-type rating scale, with values ranging from 1 for poor at this to 5 for extremely good at this. The scale had five domains including
initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management. As displayed in Table C3, the overall reliability of the ICQ-R scale was also excellent ($\alpha = .94$). More specifically, reliability analysis was conducted for each domain and the results indicated good internal consistency for each sub-scale of the ICQ-R scale (see Table C3).

**Description of the Set of Parenting Characteristics**

One of the dependent variables investigated in the study was “parents’ parenting characteristics,” and this was grouped into seven categories including bonding, discipline, education, general welfare and protection, responsivity, sensitivity, and negativity. Of the overall sample, 117 participants were from dual-earner families and 118 were from single-earner families. For each sub-sample, the descriptive statistics were conducted individually for their mothers and fathers and were listed in Table C4. The mean scores for the overall scale and sub-scales represented the average frequency of engaging in specific parenting behaviors. A higher mean score indicated a higher level of engagement in the parenting characteristic assessed. However, it should be noted that participants’ responses for the negativity sub-scale were reverse coded prior to data analyses. Thus, a higher mean score on this sub-scale demonstrated a lower level of engagement in negative parenting behaviors.

Among dual-earner families, the results showed that full-time employed mothers, as compared with full-time employed fathers, had a higher level of engagement across the seven parenting characteristics. Similarly, the results also demonstrated that among single-earner families, minimally employed or unemployed mothers, as compared with full-time employed fathers, had a higher level of engagement across the seven parenting characteristics (see Table C4). Furthermore, as displayed in Table C4, for the overall PBFQ-R scale, in terms of dual-earner
families, the mean scores for mothers’ and fathers’ frequency of engaging in parenting characteristics and related behaviors were 266.11 (SD = 39.53) and 252.39 (SD = 44.85) respectively. In terms of single-earner families, the mean score for mother was 267.14 (SD = 39.67) and for father was 252.24 (SD = 46.84). Based on the results, the present data was similar to prior research samples; that is, participants overall indicated their mothers, as compared with their fathers, had a higher level of engagement in parenting characteristics and related behaviors.

Description of the Set of Interpersonal Competence

Another dependent variable considered in the study was “participants’ levels of interpersonal competence,” grouped into five domains including initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management. Tables C5 and C6 displayed the descriptive data for the overall ICQ-R scale and for each sub-scale as well. The mean scores for the overall scale and sub-scales represented the levels of interpersonal competence. A higher mean score indicated a higher level of interpersonal competence in the domain assessed. As shown in Table C5, when analyzing data on the ICQ-R scale by family’s earner status, participants from dual-earner families had a higher mean score on the overall ICQ-R scale (M = 143.04, SD = 20.76) than those from single-earner families (M = 142.10, SD = 23.65). More specifically, participants from dual-earner families, as compared with those from single-earner families, had a higher level of interpersonal competence in the domains of initiation of relationships and asserting influence. However, participants from single-earner families had a higher level of interpersonal competence in the domains of emotional support, self-disclosure, and conflict management (see Table C5). When analyzing data on the ICQ-R
scale by gender, as shown in Table C6, male participants had a higher mean score on the overall ICQ-R scale \((M = 146.38, SD = 22.49)\) than their female counterparts \((M = 141.93, SD = 22.16)\). Male participants had a higher level of interpersonal competence in the domains of asserting influence, self-disclosure, and conflict management. On the contrary, female participants had a higher level of interpersonal competence in the domains of initiation of relationships and emotional support (see Table C6).

Statistical Analyses

Results for Research Question 1

Research Question 1 (see Appendix B) asked, of participants in dual-earner families, whether they gave their parents different ratings to the frequency of the same parenting characteristics and related behaviors. Data was analyzed with a paired samples \(t\)-test. The mean frequency ratings for the overall PBFQ-R scale and the seven sub-scales were compared between full-time employed mothers and full-time employed fathers. Assumption testing was completed prior to \(t\)-test analysis. Table 1 presented the \(t\) values, degrees of freedom, \(p\) values, and Cohen’s \(d\) effect sizes for the overall PBFQ-R scale and each sub-scales of the PBFQ-R scale.

The results of the \(t\)-test for paired samples demonstrated that there were statistically significant differences between dual-earner mothers and fathers in the frequency of engaging in parenting characteristics and related behaviors. As shown in Table 1, the mean score for frequency ratings on the overall PBFQ-R scale in mothers \((M = 266.11, SD = 39.53)\) was statistically significantly higher than the mean score in fathers \((M = 252.39, SD = 44.85)\), \(t(116) = 6.02, p < .001\). This difference represented a small Cohen’s \(d\) effect size of 0.32 (Pagano, 2013). More specifically, statistically significant differences between mothers and fathers in the
frequency ratings on the PBFQ-R scale were also found for bonding, discipline, education, general welfare and protection, responsivity, and sensitivity. However, there was no significant difference in the frequency ratings on negativity items between mothers and fathers, $t(116) = .07, p = .945$ (see Table 1).

Table 1

<table>
<thead>
<tr>
<th>Paired Samples</th>
<th>Parenting Characteristics</th>
<th>Correlation</th>
<th>Mean Difference</th>
<th>$t$</th>
<th>$p$</th>
<th>Cohen’s $d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total PBF</td>
<td>.837$^*$</td>
<td>13.718</td>
<td>6.023</td>
<td>.000$^*$</td>
<td>0.32</td>
</tr>
<tr>
<td>2</td>
<td>Bonding</td>
<td>.800$^*$</td>
<td>3.923</td>
<td>6.573</td>
<td>.000$^*$</td>
<td>0.39</td>
</tr>
<tr>
<td>3</td>
<td>Discipline</td>
<td>.611$^*$</td>
<td>0.726</td>
<td>1.984</td>
<td>.050$^*$</td>
<td>0.16</td>
</tr>
<tr>
<td>4</td>
<td>Education</td>
<td>.810$^*$</td>
<td>2.550</td>
<td>5.318</td>
<td>.000$^*$</td>
<td>0.31</td>
</tr>
<tr>
<td>5</td>
<td>General Welfare &amp; Protection</td>
<td>.756$^*$</td>
<td>1.880</td>
<td>4.579</td>
<td>.000$^*$</td>
<td>0.30</td>
</tr>
<tr>
<td>6</td>
<td>Responsivity</td>
<td>.812$^*$</td>
<td>2.470</td>
<td>5.564</td>
<td>.000$^*$</td>
<td>0.32</td>
</tr>
<tr>
<td>7</td>
<td>Sensitivity</td>
<td>.793$^*$</td>
<td>2.043</td>
<td>5.273</td>
<td>.000$^*$</td>
<td>0.32</td>
</tr>
<tr>
<td>8</td>
<td>Negativity</td>
<td>.788$^*$</td>
<td>0.026</td>
<td>0.069</td>
<td>.945</td>
<td></td>
</tr>
</tbody>
</table>

Note. PBF = Parenting Behavior Frequency. $n = 117$. $df = 116$. $^*$ $p < .05$, two-tailed. $d = M_1 - M_2 / S_{pool}$. For bonding, the paired samples $t$-test revealed that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 44.52$, $SD = 9.42$) and fathers ($M = 40.60$, $SD = 10.64$) was statistically significant, $t(116) = 6.57$, $p < .001$, $d = 0.39$. For discipline, results showed that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 25.26$, $SD = 4.46$) and fathers ($M = 24.53$, $SD = 4.53$) was statistically significant, $t(116) = 1.98$, $p = .050$, $d = 0.16$. For education, results indicated that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 52.96$, $SD = 8.20$) and fathers ($M = 50.31$, $SD = 9.09$) was statistically significant, $t(116) = 5.32$, $p < .001$, $d = 0.31$. For general welfare and protection, results showed that the difference in the
frequency of engaging in this parenting characteristic between mothers ($M = 46.21$, $SD = 5.54$) and fathers ($M = 44.33$, $SD = 6.76$) was statistically significant, $t(116) = 4.58$, $p < .001$, $d = 0.30$.

For responsivity, results indicated that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 39.41$, $SD = 6.93$) and fathers ($M = 36.94$, $SD = 8.23$) was statistically significant, $t(116) = 5.56$, $p < .001$, $d = 0.32$. For sensitivity, results revealed that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 28.24$, $SD = 6.03$) and fathers ($M = 26.20$, $SD = 6.80$) was statistically significant, $t(116) = 5.27$, $p < .001$, $d = 0.32$.

In sum, the findings demonstrated in dual-earner families, full-time employed mothers, to some extent, were more frequently engaged in parenting characteristics and related behaviors than were full-time employed fathers, especially in the domains of bonding, discipline, education, general welfare and protection, responsivity, and sensitivity.

Results for Research Question 2

Research Question 2 (see Appendix B) asked, in terms of single-earner families, whether participants gave their parents different ratings to the frequency of the same parenting characteristics and related behaviors. In order to answer the question, data from the 118 participants who were from single-earner families was considered, and a paired samples $t$-test was conducted. The mean frequency ratings for the overall PBFQ-R scale and the seven subscales were compared between minimally employed or unemployed mothers and full-time employed fathers. The results are displayed in Table 2.
Paired Samples t-Tests for Comparison of Mothers and Fathers in Single-Earner Families in the Frequency of Engaging in Parenting Characteristics

<table>
<thead>
<tr>
<th>Paired Samples</th>
<th>Parenting Characteristics</th>
<th>Correlation</th>
<th>Mean Difference</th>
<th>t</th>
<th>p</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total BPF</td>
<td>.792</td>
<td>14.907</td>
<td>5.641</td>
<td>&lt;.001</td>
<td>.34</td>
</tr>
<tr>
<td>2</td>
<td>Bonding</td>
<td>.751</td>
<td>4.475</td>
<td>6.443</td>
<td>&lt;.001</td>
<td>.43</td>
</tr>
<tr>
<td>3</td>
<td>Discipline</td>
<td>.814</td>
<td>0.390</td>
<td>1.359</td>
<td>.177</td>
<td>.30</td>
</tr>
<tr>
<td>4</td>
<td>Education</td>
<td>.811</td>
<td>2.924</td>
<td>5.266</td>
<td>&lt;.001</td>
<td>.31</td>
</tr>
<tr>
<td>5</td>
<td>General Welfare &amp; Protection</td>
<td>.788</td>
<td>1.966</td>
<td>4.932</td>
<td>&lt;.001</td>
<td>.37</td>
</tr>
<tr>
<td>6</td>
<td>Responsivity</td>
<td>.667</td>
<td>2.907</td>
<td>4.771</td>
<td>&lt;.001</td>
<td>.34</td>
</tr>
<tr>
<td>7</td>
<td>Sensitivity</td>
<td>.677</td>
<td>2.246</td>
<td>4.519</td>
<td>&lt;.001</td>
<td>.31</td>
</tr>
<tr>
<td>8</td>
<td>Negativity</td>
<td>.561</td>
<td>.000</td>
<td>0.000</td>
<td>1.000</td>
<td>.34</td>
</tr>
</tbody>
</table>

Note. PBF = Parenting Behavior Frequency. n = 118. df = 117. p < .05, two-tailed. \(d = \frac{M_1 - M_2}{S_{pooled}}\).

The results of the t-test for paired samples showed that among single-earner families, there were statistically significant differences between mothers and fathers in the frequency of engaging in parenting characteristics and related behaviors. As shown in Table 2, the mean score for frequency ratings on the overall PBFQ-R scale for mothers (\(M = 267.14, SD = 39.67\)) was statistically significantly higher than the mean score for fathers (\(M = 252.24, SD = 46.84\)), \(t(117) = 5.64, p < .001\). This difference represented a small Cohen’s \(d\) effect size of 0.34. More specifically, statistically significant differences between mothers and fathers in the frequency ratings on the PBFQ-R scale were also found for bonding, education, general welfare and protection, responsivity, and sensitivity. However, there was no significant difference in the frequency ratings on discipline items between mothers and fathers, \(t(117) = 1.36, p = .177\). Similarly, no significant difference was found for negativity items between mothers and fathers, \(t(117) = 0.00, p = 1.000\) (see Table 2).
For bonding, the paired samples $t$-test revealed a statistically significant difference between mothers ($M = 45.13$, $SD = 9.37$) and fathers ($M = 40.65$, $SD = 11.35$) in the frequency of engaging in this parenting characteristic and related behaviors, $t(117) = 6.44$, $p < .001$, $d = 0.43$.

For education, results indicated that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 52.84$, $SD = 9.09$) and fathers ($M = 49.92$, $SD = 10.23$) was statistically significant, $t(117) = 5.27$, $p < .001$, $d = 0.30$. For general welfare and protection, results showed that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 45.82$, $SD = 5.51$) and fathers ($M = 43.86$, $SD = 7.04$) was statistically significant, $t(117) = 4.93$, $p < .001$, $d = 0.31$. For responsivity, results indicated that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 39.85$, $SD = 7.09$) and fathers ($M = 36.94$, $SD = 8.72$) was statistically significant, $t(117) = 4.77$, $p < .001$, $d = 0.37$. For sensitivity, results revealed that the difference in the frequency of engaging in this parenting characteristic between mothers ($M = 28.41$, $SD = 6.21$) and fathers ($M = 26.16$, $SD = 7.08$) was statistically significant, $t(117) = 4.52$, $p < .001$, $d = 0.34$.

In sum, the findings demonstrated that in terms of single-earner families, minimally employed or unemployed mothers, to some extent, were more frequently engaged in parenting characteristics and related behaviors than were full-time employed fathers, especially in the domains of bonding, education, general welfare and protection, responsivity, and sensitivity.

Results for Research Question 3

Research Question 3 (see Appendix B) asked if there were significant differences between mothers in dual-earner families and those in single-earner families in the frequency of
engaging in parenting characteristics and related behaviors. With the overall sample of 235 participants, an independent samples t-test was conducted. The mean frequency ratings for the overall PBFQ-R scale and the seven sub-scales were compared between full-time employed mothers and minimally employed or unemployed mothers. As shown in Table 3, the Levene’s test was not significant for the overall parenting characteristics and the seven clusters of parenting characteristics. Thus, the assumption of homogeneity of variances was met. Results of an independent samples t-test revealed that there were no statistically significant differences between mothers in dual-earner families and those in single-earner families in the frequency of engaging in parenting characteristics and related behaviors (see Table 3).

Table 3

Independent Samples t-Tests on the Frequency of Engaging in Parenting Characteristics by Mother’s Employment Status

<table>
<thead>
<tr>
<th>Parenting Characteristics</th>
<th>Levene’s Test</th>
<th>Mean Difference</th>
<th>t-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>p</td>
<td>df</td>
</tr>
<tr>
<td>Total PBF</td>
<td>0.032</td>
<td>.858</td>
<td>-1.033</td>
</tr>
<tr>
<td>Bonding</td>
<td>0.023</td>
<td>.881</td>
<td>-0.606</td>
</tr>
<tr>
<td>Discipline</td>
<td>0.534</td>
<td>.466</td>
<td>0.129</td>
</tr>
<tr>
<td>Education</td>
<td>0.363</td>
<td>.547</td>
<td>0.118</td>
</tr>
<tr>
<td>General Welfare &amp; Protection</td>
<td>0.131</td>
<td>.718</td>
<td>0.392</td>
</tr>
<tr>
<td>Responsivity</td>
<td>0.198</td>
<td>.657</td>
<td>-0.437</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.501</td>
<td>.480</td>
<td>-0.167</td>
</tr>
<tr>
<td>Negativity</td>
<td>1.313</td>
<td>.253</td>
<td>-0.462</td>
</tr>
</tbody>
</table>

Note. PBF = Parenting Behavior Frequency. Full-Time Employed Mothers = 117. Minimally Employed or Unemployed Mothers = 118.

Results for Research Question 4

Research Question 4 (see Appendix B) asked if there were significant differences between fathers in dual-earner families and those in single-earner families in the frequency of
engaging in parenting characteristics and related behaviors. Similarly, with the overall sample of 235 participants, an independent samples t-test was used to answer the question. The mean frequency ratings for the overall PBFQ-R scale and the seven subscales were compared between dual-earner fathers and single-earner fathers. As shown in Table 4, the Levene’s test was not significant for the overall parenting characteristics and the seven clusters of parenting characteristics. Thus, the assumption of homogeneity of variances was met. Results indicated no significant differences between dual-earner and single-earner fathers in the frequency of engaging in parenting characteristics and related behaviors (see Table 4).

Table 4

**Independent Samples t-Test on the Frequency of Engaging in Parenting Characteristics by Fathers’ Earner Status**

<table>
<thead>
<tr>
<th>Parenting Characteristics</th>
<th>Levene’s Test</th>
<th>t-Test</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean Difference</td>
<td>t</td>
</tr>
<tr>
<td>Total PBF</td>
<td>0.001  .974</td>
<td>0.156</td>
<td>0.026</td>
<td>233</td>
</tr>
<tr>
<td>Bonding</td>
<td>0.348  .556</td>
<td>-0.054</td>
<td>-0.038</td>
<td>233</td>
</tr>
<tr>
<td>Discipline</td>
<td>1.261  .263</td>
<td>-0.207</td>
<td>-0.326</td>
<td>233</td>
</tr>
<tr>
<td>Education</td>
<td>0.051  .822</td>
<td>0.392</td>
<td>0.311</td>
<td>233</td>
</tr>
<tr>
<td>General Welfare &amp; Protection</td>
<td>0.168  .682</td>
<td>0.477</td>
<td>0.530</td>
<td>233</td>
</tr>
<tr>
<td>Responsivity</td>
<td>0.368  .545</td>
<td>-0.001</td>
<td>0.000</td>
<td>233</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.518  .472</td>
<td>0.036</td>
<td>0.390</td>
<td>233</td>
</tr>
<tr>
<td>Negativity</td>
<td>1.259  .263</td>
<td>-0.487</td>
<td>-0.643</td>
<td>233</td>
</tr>
</tbody>
</table>


**Results for Research Question 5**

Research Question 5 (see Appendix B) examined whether or not the frequency ratings on the PBFQ-R in mothers and in fathers individually were associated with the levels of interpersonal competence in peer relationships as measured by the ICQ-R scale. In response to the question, data from the 235 participants were used and Pearson product-moment
correlation coefficients were computed to investigate the relationships between these variables. In general, the Pearson correlation coefficient \((r)\), ranging from \(\pm 0.5\) to \(\pm 1.0\), indicate a strong relationship between variables. Besides, an \(r\) value of \(\pm 0.3\) to \(\pm 0.5\) is identified as moderate and an \(r\) value of \(\pm 0.1\) to \(\pm 0.3\) is identified as weak (Pagano, 2013). Tables 5 and 6 presented a correlation matrix describing the interrelationships among participants’ retrospective perceived parenting characteristics and self-reported interpersonal competence. Results indicated that participants’ levels of overall interpersonal competence were significantly correlated with their mothers’ total parenting characteristics, \(r = 0.32\), \(p < 0.01\) (see Table 5), and with their fathers’ total parenting characteristics, \(r = 0.29\), \(p < 0.01\) (see Table 6).

As show in Table 5, mothers’ parenting characteristics, in terms of education, general welfare and protection, responsivity, and sensitivity, were found to be significantly and positively correlated with university students’ overall interpersonal competence and interpersonal competence in five domains. The Pearson correlation coefficients, ranging from \(0.14\) to \(0.33\), demonstrated a slightly weak relationship among these variables. In addition, mothers’ parenting characteristics related to bonding and discipline were found to be significantly and positively correlated with overall interpersonal competence and interpersonal competence in four of the five domains, except for competence in conflict management. The coefficients, ranging from \(0.13\) to \(0.25\), represented a weak relationship. Mothers’ parenting characteristic in relation to negativity items was found to be significantly correlated with overall interpersonal competence and interpersonal competence in four of the five domains, except for the competence in self-disclosure. The coefficients, ranging from \(0.15\) to \(0.24\), indicated a weak relationship between the parenting characteristic and interpersonal competence.
With regard to the relationships between fathers’ parenting characteristics and university students’ interpersonal competence, as shown in Table 6, fathers’ parenting characteristics in relation to education, responsivity, and sensitivity were found to be significantly and positively correlated with overall interpersonal competence and interpersonal competence in five domains. The Pearson correlation coefficients, ranging from .14 to .31, indicated that the relationship among these variables was slightly weak. In addition, fathers’ parenting characteristic related to bonding was found to be significantly and positively correlated with overall interpersonal competence and interpersonal competence in four of the five domains, except for competence in conflict management. The coefficients, ranging from .18 to .27, demonstrated a weak relationship. Fathers’ parenting characteristic related to general welfare and protection was found to be significantly and positively correlated with overall interpersonal competence and interpersonal competence in four of the five domains,
except for competence in asserting influence. The coefficients, ranging from .14 to .24, represented a weak relationship. Fathers’ parenting characteristic associated with discipline, however, was found to be only significantly correlated with overall interpersonal competence and competence in initiation of relationships. Also, fathers’ parenting characteristic, in terms of negativity items, was found to be only significantly correlated with overall interpersonal competence and competence in conflict management. The coefficients, ranging from .14 to .18, demonstrated a weak relationship between these parenting characteristics and interpersonal competence.

Table 6

Correlation Matrix for Interpersonal Competence by Father’s Parenting Characteristics

<table>
<thead>
<tr>
<th></th>
<th>Initiation of Relationships</th>
<th>Emotional Support</th>
<th>Asserting Influence</th>
<th>Self-Disclosure</th>
<th>Conflict Management</th>
<th>Total IC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonding</td>
<td>.250**</td>
<td>.177**</td>
<td>.226**</td>
<td>.232**</td>
<td>.114</td>
<td>.274**</td>
</tr>
<tr>
<td>Discipline</td>
<td>.159*</td>
<td>.016</td>
<td>.113</td>
<td>.105</td>
<td>.089</td>
<td>.137</td>
</tr>
<tr>
<td>Education</td>
<td>.288**</td>
<td>.218**</td>
<td>.220**</td>
<td>.220**</td>
<td>.198**</td>
<td>.310**</td>
</tr>
<tr>
<td>General Welfare &amp; Protection</td>
<td>.236**</td>
<td>.153*</td>
<td>.128</td>
<td>.152*</td>
<td>.139*</td>
<td>.221**</td>
</tr>
<tr>
<td>Responsivity</td>
<td>.220**</td>
<td>.157*</td>
<td>.180**</td>
<td>.210**</td>
<td>.208**</td>
<td>.265**</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>.225**</td>
<td>.156*</td>
<td>.151</td>
<td>.227**</td>
<td>.202**</td>
<td>.263**</td>
</tr>
<tr>
<td>Negativity</td>
<td>.064</td>
<td>.108</td>
<td>.078</td>
<td>.108</td>
<td>.184**</td>
<td>.142*</td>
</tr>
<tr>
<td>Total PBF</td>
<td>.256**</td>
<td>.180**</td>
<td>.198**</td>
<td>.223**</td>
<td>.192**</td>
<td>.286**</td>
</tr>
</tbody>
</table>

Note. PBF = Parenting Behavior Frequency. IC = Interpersonal Competence. N = 235. *p < .05, two-tailed. **p < .01, two-tailed.

Overall, the findings of Pearson correlation analysis indicated significant but slightly weak associations between retrospectively perceived mothers’ and fathers’ overall parenting characteristics and the seven parenting characteristics and university students’ self-reported interpersonal competence in peer relationships. In particular, mothers’ and fathers’ parenting
characteristics associated with education, responsivity and sensitivity were more significantly correlated with university students’ self-reported interpersonal competence across the five domains, which were initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management.

Results for Research Question 6

Research Question 6 (see Appendix B) asked if there were significant differences in the levels of interpersonal competence between participants in dual-earner families and those in single-earner families. A t-test for independent samples was used to compare the mean scores for the overall ICQ-R scale and for each sub-domain of the ICQ-R scale. The Levene’s test for the overall interpersonal competence and for each sub-domain was not statistically significant, indicating that the assumption of homogeneity of variances was met. As shown in Table 7, results revealed no statistically significant differences in the levels of overall interpersonal competence between participants in dual-earner families and those in single-earner families. Furthermore, no significant differences were found for the five domains of interpersonal competence either.

Table 7

Independent Samples t-Tests on the Level of Interpersonal Competence by Family Earner Status

<table>
<thead>
<tr>
<th>Interpersonal Competence</th>
<th>Levene’s Test</th>
<th>Mean Difference</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>p</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total IC</td>
<td>2.005</td>
<td>.158</td>
<td>0.941</td>
<td>0.324</td>
<td>233</td>
</tr>
<tr>
<td>Initiation of Relationships</td>
<td>1.104</td>
<td>.315</td>
<td>1.206</td>
<td>1.287</td>
<td>233</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>0.698</td>
<td>.404</td>
<td>-0.029</td>
<td>-0.049</td>
<td>233</td>
</tr>
<tr>
<td>Asserting Influence</td>
<td>0.393</td>
<td>.532</td>
<td>-0.583</td>
<td>-0.658</td>
<td>233</td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>0.185</td>
<td>.667</td>
<td>-0.108</td>
<td>-0.148</td>
<td>233</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>3.019</td>
<td>.084</td>
<td>-0.210</td>
<td>-0.281</td>
<td>233</td>
</tr>
</tbody>
</table>

Results for Research Question 7

Research Question 7 (see Appendix B) asked if there were gender differences in the levels of interpersonal competence. To answer the question, a t-test for independent samples was used and the mean responses to the overall ICQ-R scale and to each sub-domain of the ICQ-R scale were compared between male and female participants. The Levene’s test was not significant for the overall interpersonal competence and for the domains of initiation of relationships, emotional support, asserting influence, and conflict management. Thus, the assumption of homogeneity of variances for these variables was met, except for the self-disclosure variable. Furthermore, as shown in Table 8, results indicated no statistically significant gender difference in the levels of total interpersonal competence. However, a statistically significant difference was found in the sub-domain of asserting influence. Male participants indicated a higher level of interpersonal competence in the domain of asserting influence ($M = 30.38, SD = 5.12$) than their female counterparts ($M = 28.24, SD = 5.62$), $t(233) = 2.08, p = .038, d = 0.40$. In addition, a statistically significant difference was found in the domain of conflict management. Male participants indicated a higher level of interpersonal competence in the domain of conflict management ($M = 30.71, SD = 4.65$) than their female counterparts ($M = 27.92, SD = 5.61$), $t(233) = 2.74, p = .007, d = 0.54$. No statistically significant differences were found for the other three sub-domains of interpersonal competence (see Table 8).
Table 8

Independent Samples t-Tests on the Level of Interpersonal Competence by Gender

<table>
<thead>
<tr>
<th>Interpersonal Competence</th>
<th>Levene’s Test</th>
<th>t-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>p</td>
</tr>
<tr>
<td>Initiation of Relationships</td>
<td>0.285</td>
<td>.594</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>2.613</td>
<td>.107</td>
</tr>
<tr>
<td>Asserting Influence</td>
<td>1.055</td>
<td>.306</td>
</tr>
<tr>
<td>Self-Disclosure</td>
<td>5.298</td>
<td>.022</td>
</tr>
<tr>
<td>Conflict Management</td>
<td>2.061</td>
<td>.152</td>
</tr>
<tr>
<td>Total IC</td>
<td>0.011</td>
<td>.915</td>
</tr>
</tbody>
</table>

Note. IC = Interpersonal Competence. Males = 34. Females = 201. *p < .05, two-tailed.

Discussion

Few studies of parenting have individually assessed and compared mothers’ and fathers’ parenting characteristics and related behaviors in relation to family earner status. Hence, using the existing Parent Behavior Frequency Questionnaire-R scale (PBFQ-R; Mowder, 2007, 2010), the major purpose of this study was to help develop an understanding of children’s perceptions of both mothers’ and fathers’ parenting characteristics (i.e., bonding, discipline, education, general welfare and protection, responsivity, sensitivity, and negativity) in relation to different family earner status. Furthermore, this study, using the existing Interpersonal Competence Questionnaire-R scale (ICQ-R; Buhrmester, 2002; Buhrmester et al., 1988), investigated the association of mothers’ and fathers’ parenting characteristics with university students’ self-reported interpersonal competence in five domains (i.e., initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management). University students’
levels of interpersonal competence in peer relationships, in terms of family earner status and
gender, were also examined in this study.

*Parenting Characteristics by Family Earner Status*

The first two research questions addressed whether participating students from dual-
earner families and those from single-earner families retrospectively perceived that their
married biological parents differ in the frequency of engagement in overall and specific
parenting behaviors associated with the seven parenting characteristics. Expected findings
obtained for these two questions reveal that university students, whether from dual-earner
families or from single-earner families, reported that their mothers were more frequently
engaged in overall and specific parenting behaviors than were their fathers. More specifically,
significant differences were found between mothers and fathers in the frequency of
engagement in parenting behaviors associated with bonding, education, general welfare and
protection, responsivity, and sensitivity. In other words, mothers, whether or not working full-
time outside the home, more often than fathers, demonstrated behaviors to show love toward
their child, to guide and teach their child, to provide for their child’s basic needs, to be
responsive to the demands of their child, and to match the responses to their child’s actual
needs.

These findings are generally in line with other research, which suggest that like parents
from single-earner families, parents from dual-earner families also demonstrate a significant
discrepancy in the frequency of engagement in parenting practices. Most studies of parenting
practices have evidenced that a majority of mothers report investing considerably more time
with their children than do fathers (Buckley & Schoppe-Sullivan, 2010; Craig, 2006; Jacobs &
Kelley, 2006; Offer & Schneider, 2011; Raley, Bianchi, & Wang, 2012). Finley et al.’s (2008) mean difference analyses for mothering and fathering also found that fathers were significantly less engaged than mothers in a number of domains of parenting practices, with the exception of contributing family income. Their study has suggested that mothers’ parenting practices are related to care-giving, while fathers’ parenting practices are related to providing income. It appears that the culturally and socially constructed norms to which the mother’s role is associated, that of primary caregiver, and the father’s role, that of economic provider, have deeply affected the division of child-rearing activities. Although previous survey data demonstrated that from 1977 there was a decline in the endorsement of traditional gender roles by dual-earner couples by 2008, there were still 37% of dual-earner fathers adhering to traditional views about gender roles that men should provide income and women should take care of the home and children (Galinsky, Aumann, & Bond, 2011).

With regard to mothers’ and fathers’ frequency of engagement in specific parenting behaviors related to discipline, it is noted that a significant difference was found in dual-earner families but not in single-earner families. In the PBFQ-R scale, the Discipline subscale comprises two disciplinary components which are behavioral guidance (e.g., being consistent establishing and following through with rules) and punishment related to non-compliance (e.g., taking games, privileges, and/or toys away) (Mowder, 2007; Mowder, Rubinson, & Yasik, 2009). According to Olmstead, Futris, and Pasley’s (2009) qualitative study on men’s perceptions of their father role identity, one of the recognized father role identities was being a disciplinarian and fathers tended to become more attentive to its importance while their children were older. Traditional fathers are likely to perform the role of disciplinarian, guiding their children’s
behavior and disciplining their children’s inappropriate behavior. Some recent researchers, however, have argued that with the increase in maternal employment and the advocacy of egalitarian gender role attitudes, fathers now become more involved in child-rearing activities compared with fathers in earlier decades, who were often expected to be financial providers and disciplinarians (Glauber & Gozjolko, 2011; Sayer, 2005). This may explain the result that fathers in single-earner families did not differ from mothers in establishing rules and setting boundaries for their child, while fathers in dual-earner families were less frequently than mothers engaged in parenting behaviors related to discipline.

**Parenting Characteristics by Mother’s Employment Status**

The third research question investigated whether participating students, with full-time employed mothers, perceived differently from those with minimally employed or unemployed mothers in the frequency with which their mothers engaged in overall and specific parenting behaviors associated with the seven parenting characteristics. When comparing mothers’ parenting characteristics in terms of their employment status, no significant differences were found in this study. Full-time employed mothers did not differ from minimally employed or unemployed mothers in the frequency of engagement in the seven parenting characteristics and related behaviors. Moreover, the fourth research question asked whether participating students with fathers in dual-earner families perceived differently from those with fathers in single-earner families in the frequency with which their fathers engaged in overall and specific parenting behaviors associated with the seven parenting characteristics. When comparing fathers’ parenting characteristics in terms of mothers’ employment status, no significant differences were found in this study. Dual-earner fathers did not differ from single-earner
fathers in the frequency of engagement in the seven parenting characteristics and related behaviors.

Recent research has argued that there are no robust differences in parenting practices between full-time employed mothers and stay-at-home mothers (Sayer, Bianchi, & Robinson, 2004). A mother, who has a higher level of educational attainment, who is in a higher SES background, and who marries with a spouse earning higher income and possessing a more egalitarian gender role attitude, is allowed to make options between staying at home or engaging in paid work outside the home (Boehnke, 2011; Cotter, Hermsen, & Vanneman, 2011; Stone, 2007). Based on the respondent-reported time diary data, Sayer et al. (2004) suggested that employed mothers today may spend more time with their children than employed mothers in the past few decades, because more recently married parents are likely to be more educated, have children relatively late, and have higher financial resources.

A mother in lower-income families, however, is more likely to be forced to work full-time or at nonstandard schedules (working evenings, nights, weekends, or an irregular shift) in order to maintain a basic household income (Presser, 2005). Han, Miller, and Waldfogel (2010), according to a large contemporary data set, indicated that mothers who work at nonstandard schedules invest significantly less time with their child and have low quality family environments. Moreover, when studying working schedules and parental involvement, Rapoport and Bourdais (2008) found that nonstandard work schedules were likely to result in a decrease in leisure and social activities with children. Considering mothers’ work hours and nonstandard work schedules, there is evidence that the more hours mothers work outside the home, the higher father involvement in child-rearing activities (Jacobs & Kelley, 2006). Apparently, it is not only
that maternal employment may have influence on the levels of maternal and paternal involvement with children, but also that educational attainment and SES backgrounds can determine the levels of maternal and paternal involvement with children. This may account for the non-significant results found in this study.

Additionally, it may be that these differences do not exist consistently in families in which both parents in dual-earner families hold traditional views about gender roles. Early literature on parental involvement with children has demonstrated the fact that the levels of maternal and paternal involvement within a family are greatly determined by gender role attitudes and parenting self-efficacy (Askari, Liss, Erchull, Staebell, & Axelson, 2010; Gilmore & Cuskelley, 2009; McBride, Brown, Bost, Shin, Vaughn, & Korth, 2005; Meteyer & Perry-Jenkins, 2010; Sultana & Noor, 2011). Mothers’ attitudes toward the role and competence of fathers are associated with fathers’ paternal identity and self-efficacy (Maurer & Pleck, 2006; Tremblay & Pierce, 2011). There is evidence that married mothers with more egalitarian beliefs about gender roles at home and work are more willing to equally share with their spouses in child-rearing duties. As a result, their spouses are likely to be encouraged to engage in child-rearing activities. Married fathers with less traditional gender role attitudes and higher levels of parenting self-efficacy have been found to be more willing to spend time with their children and engage in all types of father involvement (Jacobs & Kelley, 2006; Sayer et al., 2004).

According to the findings presented in this study that mothers, whether in full-time employment or not, were more frequently than their spouses engaged in overall and specific parenting behaviors, it can be inferred that mothers and fathers in the sample may still hold traditional gender roles attitudes. As noted by previous researchers, highly educated, working
women generally tend to hold more egalitarian views about gender roles, however, having a child often results in a traditionalizing effect on their gender role attitudes (Boehnke, 2011; Katz-Wise, Priess, & Hyde, 2010). Therefore, full-time employed mothers with stronger traditional attitudes about gender roles at home and at work are likely to maintain their commitments to family and children (Gilmore & Cuskelly, 2009; Sultana & Noor, 2011). Clearly, these findings indicate a need for future research to assess parents’ gender role attitudes, parenting self-efficacy, and work flexibility in relation to parental involvement with children. These determinants might be considered significant moderating or mediating effects when examining mothers’ and fathers’ frequency of engagement in overall parenting behaviors and the seven parenting characteristics in terms of mothers’ employment status.

*Interpersonal Competence and Parenting Characteristics*

This study examined the associations of participating students’ retrospective perceptions of mothers’ and fathers’ parenting characteristics with their self-reported interpersonal competence. For the overall sample in this study, results confirm that university students’ levels of overall interpersonal competence were significantly and positively correlated with their mothers’ and fathers’ overall parenting behaviors and the six positive parenting characteristics, and were significantly and negatively correlated with their mothers’ and fathers’ negative parenting behaviors. More specifically, it was found that mothers’ and fathers’ parenting characteristics associated with education, responsivity, and sensitivity had significant higher correlations with university students’ self-reported interpersonal competence across the five domains, which were initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management.
One pattern noted is that parenting characteristics related to responsivity and sensitivity, which require the parent to interact with the child, are also highly emphasized in Baumrind’s typology of parenting style (Baumrind, 1967, 1971). These findings are in line with other research indicating a clear relationship between parents’ levels of responsiveness and sensitivity toward their children’s developmental needs, and children’s levels of interpersonal competence in peer relationships. Parenting that is high in responsiveness and sensitivity can facilitate children being better prepared to deal with unfamiliar social situations and to initiate and maintain positive social relationships with peers (Carlo et al., 2011; Farrant et al., 2012; Hastings et al., 2007). Furthermore, as primary agents of socialization, children learn socially acceptable behaviors from their parents by way of observation, modeling, and reinforcement (Lindsey et al., 2010). Thus, parents who are more frequently engaged in parenting behaviors associated with education, such as being a model for children and children’s behavior, may help their children to develop higher levels of interpersonal competence in peer relationships.

In addition, this study supports the fact that both mothers’ and fathers’ infrequent engagement in negative parenting behaviors, such as paying no attention to children, are more significantly correlated with university students’ competence in the domain of conflict management. Consistent with previous research, parenting that was harsh and cohesive was the risk factor for child conduct problems. This may result in children tending to choose more aggressive rather than assertive strategies to solve interpersonal conflicts (Bolkan et al., 2010; Low et al., 2011). However, it should be noted that although significant relationships between mothers’ and fathers’ parenting characteristics and their children’s levels of interpersonal competence were found in this study, these relationships were slightly weak. One possible
explanation for the findings may be that the use of retrospective methods in this study and that
some potential variables, such as personal characteristics, family environment, and the quality
of child care settings, may have moderating or mediating effects on the relationships.

Interpersonal Competence by Family Earner Status

The comparison of mean levels of self-reported interpersonal competence between
participating students from dual-earner families and those from single-earner families
demonstrates that there were no significant differences found in overall interpersonal
competence and the five domains of interpersonal competence. Depending on the results
obtained in this study, that whether mothers’ or fathers’ frequency of engagement in overall
parenting behaviors and the seven parenting characteristics did not differ by family earner
status, our sample of university students from dual-earner families and those from single-
earer families, to a certain extent, were likely to perceive the same degree of maternal and
paternal involvement. Because of this, family earner status may have a limited impact on
university students’ self-reported interpersonal competence in this study.

Another potential explanation for the non-significant results may be that the quality,
not quantity, of parental care-giving is strongly associated with children’s higher levels of
interpersonal competence in peer relationships. Recent researchers have argued that although
parents are considered as the primary agents contributing to the socialization of their children,
and intensive parent-child interactions may lead to the development of child peer competence;
children can benefit from maternal employment and a high-quality child care center
(Nomaguchi, 2006). Findings on maternal employment are puzzling, as some studies have found
its detrimental effects on child development, while some have suggested that maternal
employment contributes positive influence to child development. On the one hand, employed mothers are likely to change their allocation of time from working in the home to working in the labor force, facing the difficult issue of simultaneously performing the roles of caregiver and breadwinner in a satisfactory manner (Hart & Kelly, 2006). The conflict between their roles at home and work often leads to higher levels of parenting strains, especially when their children are young, their spouses rarely share parenting duties, and there is a lack of social support networks (Claffey & Mickelson, 2009; Scott et al., 2008). Parenting stress may impair the quality of parent-child interactions and increase the risk of the exhibition of child conduct problems (Guajardo et al., 2009; Walker & Cheng, 2007).

On the other hand, maternal employment usually leads to an increase in family income and a need for child care support. A high-quality child care setting can have a significant impact on child development, because it provides children with a variety of opportunities to interact with a diverse group of adults and children. Thus, children from a high-quality child care center may develop social competence with peers (Ishimine, Wilson, & Evans, 2010). Daily child care support for full-time employed mothers is beneficial to mediate the detrimental impact of mothers’ employment on child development and enhance the quality of parent-child interactions, resulting in children’s higher levels of interpersonal competence in peer relationships (Nomaguchi, 2006).

**Interpersonal Competence by Gender**

The comparison of mean levels of self-reported interpersonal competence between male and female participating students reveals that there were no significant gender differences found in overall interpersonal competence and in the domains of initiation of
relationships, emotional support, and self-disclosure. Results of this study, however, demonstrate that male university students in the sample reported higher levels of interpersonal competence in the domains of asserting influence and conflict management than did their female counterparts. A number of questions, such as “how good are you at getting people to go along with what you want” and “how good are you at sticking up for yourself,” were asked to assess participants’ competence in asserting influence. In terms of conflict management, such questions that “how good are you at resolving disagreements in ways that make things better instead of worse” and “how good are you at dealing with disagreements in ways that don’t lead to big arguments” were asked to assess participants’ competence. One pattern noted is that to a certain extent these two domains of interpersonal competence appear to be associated with more masculine attributes rather than feminine ones, such as to be assertive, decisive, and competitive, which may account for the results found in this study.

Assertive behaviors, similar to the processes by which aggressive behaviors may lead to social dominance, are considered as a non-aggressive and more effective approach to achieve social dominance within peer groups (Ostrov, Pilat, & Crick, 2006). Previous findings have shown that in patterns of conflict management, boys tended to use assertive strategies while girls tended to use cooperative strategies when managing interpersonal conflict with a same-sex friend (Keener, Strough, & DiDonato, 2012). Ostrov et al. (2006), in their short-term longitudinal study, discovered that girls used more assertive behaviors to female target children, while boys have more assertive behaviors to male target children. Also, when managing conflict with a romantic partner, women were more likely than men to be assertive, while men were likely to avoid or withdraw from the conflict (Keener et al., 2012).
The levels of university students’ self-reported interpersonal competence, to a certain extent, may depend on the sex of the interaction partner. For instance, women, in general, seem to be more likely to make others feel secure and willing to disclose personal information. As a result, both men and women may report higher levels of self-disclosure competence when interacting with female partners. There is a need for further research to consider the sex of the interaction partner when examining gender differences in levels of interpersonal competence.

Recommendation and Conclusion

This study provides a consistent view on mothers’ and fathers’ engagement in child-rearing activities and confirms the link between perceived parenting characteristics and levels of interpersonal competence. An examination of university students’ perceptions of parents’ parenting characteristics demonstrates that mothers’ employment status has limited impact on mothers’ and fathers’ frequency of engagement in overall and specific parenting behaviors associated with the seven parenting characteristics. Mothers, whether in full-time employment or not, are more likely than fathers to express love toward their child, guide their child, provide their child with basic needs, respond to the demands of their child, and match the responses to their child’s actual needs. With regard to parenting characteristic related to discipline, fathers in single-earner families do not differ from their spouses in establishing rules and setting boundaries for their child, while fathers in dual-earner families are less frequently than their spouses to be engaged in parenting behaviors related to discipline. Results of this study also suggest there is a significant positive relationship between the perceptions of both mothers’ and fathers’ parenting characteristics during childhood years and the levels of interpersonal competence in peer relationships for these university students. More specifically, these findings
suggest further that the perceptions of parenting characteristics related to education, responsivity, and sensitivity during childhood years may have the strongest relationships with the development of interpersonal competence in peer relationships in their young adult years.

In sum, these findings have the potential to make substantial contributions to the early childhood and family policy literature. This study emphasize the importance of distinguishing mothers’ engagement in parenting practices from fathers’ engagement in parenting practices due to the increase in the labor force participation of mothers. It gives important insights into how children perceive their mothers’ and fathers’ parenting characteristics and related behaviors in terms of different family earner status and provides a more comprehensive view of parenting characteristics and the development of child peer competence. Today, many mothers are likely to perform dual roles as an income contributor and primary caregiver in the family; and therefore, fathers are expected to take on more housework and child-rearing duties. Based on prior work on parental involvement with children, it has been argued that mothers’ and fathers’ views about gender roles may have a great impact on the persistent gender gap in the division of child-rearing activities. Because of the changes in gender role attitudes and the confrontation of work-family conflict, many parents undergo different types of stress.

Clearly, this study has implications for professionals in early childhood and family studies working with both parents and children and may provide ideas for intervention development. Parents from dual-earner families still demonstrate a significant discrepancy in the frequency of engagement in parenting practices. Mothers continue invest considerably more time with their children than do fathers, and there are still some barriers to fathers becoming more involved and sharing equally in child-rearing activities. In order to improve
fathers’ opportunities to be involved in parenting, there may be a need to develop parent education programs for fathers so that they have opportunities to shape paternal identity and parental self-efficacy. Because of this, their spouses may consider them to be competent and encourage their involvement with children. Furthermore, this study has implications for social policy which supports friendly family-employment policies and enhances social support networks that enable both employed mothers and employed fathers to achieve a satisfactory balance between family and work, such as flexible work schedules, paid extended and short-term parental leave, and high-quality child care settings.

References


APPENDIX A

EXTENDED LITERATURE REVIEW
Parenting in Dual-Earner Families

Over the course of the 20th century, such factors as economic necessity, educational attainment, technological improvements, and workforce diversity, have resulted in changes in the demographic composition of the paid labor force (Scott, Dex, & Joshi, 2008). During the Great Depression and the Second World War, because large numbers of men either suffered job losses or went off to war, there was an urgent need for women to work outside the home and shoulder the role of breadwinner, taking the responsibility in meeting financial needs. Another reason for the trend towards the increase in women's employment is that women began obtaining greater access to education and having higher levels of educational achievement. Since the mid-1980s, a larger proportion of women have attended college and nearly matched men in gaining the bachelor’s and advanced degrees. In the data for the 2012 census of educational attainment, it indicated that in 1970, there were about 8% of women graduated from college. By 2010, however, there were 30% of women graduated from college (U.S. Census Bureau, 2012a). Also, due to technological improvements, the need for manual labor was decreased, and the demand of employers for diverse and professional employees was increased. For these reasons, more job opportunities became available to women and a growing number of women began entering the paid labor force.

Because of these economic and societal forces, married couples nowadays have been encouraged to challenge traditional gender roles at home and work (Brooks & Bolzendahl, 2004). These changes also have contributed to the increasing entrance of married mothers into the paid labor force and resulted in a great transition in family structure from single-earner to dual-earner families. The U.S. Census found that the proportion of married couples with
children under the age of 18 in single-earner families was 31% in 1990, but it reduced to 29% in 2010. By contrast, the percentage of married couples with children under 18 in dual-earner families increased from 64% to 66% between the period of 1990 and 2010 (U.S. Census Bureau, 2012b). This increasingly dominant family structure may have important implications for both parents and children.

*Changes in Gender Role Attitudes*

A role, according to the social role theory, is a set of culturally expected behaviors which an individual occupying a particular social position ought to perform (Hindin, 2007). In traditional society, the social role of a father has been expected to be the main financial provider for the family, who should take the responsibility in working outside the home and is allowed to shift the burdens of child-rearing and housework to his stay-at-home spouse. Conversely, the traditional role of a mother has been expected to be the homemaker and the primary caregiver for the children, who should stay at home and devote a significant amount of time to nurture their children and do housework (Lindsey, 2010). It appears that the division of child-rearing duties and household chores are distributed unevenly between mothers and fathers. In the last few decades, however, due to the social support for gender equality, this traditional view of gender roles at home and work was called in question (Brooks & Bolzendahl, 2004). The increasing employment opportunities for women have led the workforce to become more gender diverse. In addition, women today are likely to acquire greater access to education, and therefore to be qualified for a wider range of jobs and to have a strong desire to pursue careers outside the home (Scott et al., 2008). These trends have empowered women’s advocacy for gender equality in the family and in society as well. Since the 1960s, more and
more feminists have claimed that all the inequalities between women and men in the sharing of family and work responsibilities are emanated from social traditions. Thus, they have urged that it is necessary to construct a new model of socialization for women and men in which gender equality between women and men within the family and workplace is strongly emphasized (Bolzendahl & Myers, 2004).

These noticeable transformations in social norms, including a more egalitarian social structure and a more liberal attitude about maternal employment, have encouraged married mothers to participate in all levels of the labor force just as their spouses do and expected married fathers to equally share every domain of parenting duties and housework with their spouses. Consequently, a growing number of mothers today are willing to share the roles of caregiver and breadwinner with their spouses in response to family needs. This shift in the family structure, from single-earner to dual-earner families, has greatly affected the traditional social roles of mothers and fathers. Mothers begin believing that their place is no longer only in the home. Married mothers in dual-earner families, in general, are more likely to have less traditional beliefs about gender roles at home and work than their counterparts in single-earner families, and therefore are more willing to equally share with their spouses in child-rearing duties and household chores (Boehnke, 2011; Kroska & Elman, 2009). There was a survey research showing that the percentage of women believing that “the man earns the money and the woman takes care of the home and children” decreased from 52% in 1977 to 39% in 2008, while among men, the percentage fell from 74% in 1977 to 42% in 2008 (Galinsky, Aumann, & Bond, 2011). Similarly, following the feminist movement and social expectations regarding equally shared parenting, a new trend emerged in the latter part of the 20th century.
Fathers’ attitudes about gender roles at home and at work, therefore, have been affected. Galinsky et al.’s (2011) survey results demonstrated that in 1977, 70% of men in dual-earner couples reported that it is men’s duties to work outside the home and that it is required for their spouses to stay at home caring for children. By 2008, there were 37% of men in dual-earner couples adhering to this traditional view. Besides, Galinsky et al.’s survey data showed that the percentage of employed women reporting that they take most responsibility for child-rearing practices and housework dropped from 73% in 1992 to 67% in 2008. Alternatively, the percentage of employed women indicating that their spouses share the responsibilities of child-rearing and housework increased from 21% to 31% in the period from 1992 to 2008. Recent research data have consistently revealed that among dual-earner families, more and more fathers begin performing the role as a caregiver, becoming more involved in child-rearing practices and housework, and providing much needed support for their employed spouses (Bianchi, Robinson, & Milkie, 2006; Raley, Bianchi, & Wang, 2012; Sayer, 2005).

Nevertheless, research of the changing gender roles at home and work has argued that this non-traditional view is continuing but may be more influential in changing the socialization of men than of women (Boehnke, 2011; Cotter, Hermsen, & Vanneman, 2011). Despite the increasing rate of maternal employment in the last few decades and the fact that most families have dual-earner couples, fathers are still considered as the major financial providers for the family and continue performing the role as a breadwinner and mothers are still considered as the second breadwinners for the family. There is evidence that even though fathers in dual-earner families have spent more time engaging in child-rearing practices and housework, their spouses still assume the brunt of child-rearing and household responsibilities (Craig, 2006;
Sayer, 2005). For instance, in Offer and Schneider’s (2011) study, they found that employed mothers, as compared with their spouses, spend 10 more hours a week on child-rearing activities and housework. Historically, because women have been financially and emotionally dependent, they have fewer opportunities to develop and insist on egalitarian views. In addition, due to different social role expectations of being a parent, employed mothers who perform dual roles of caregiver and breadwinner may gain little support from their spouses and the society, and therefore they may have fewer inducements to accept non-traditional gender role attitudes. For these reasons, it is clear that mothers in single-earner families are likely to report more traditional gender role beliefs and typically allow their spouses to be less involved in child-rearing duties and household chores. Furthermore, it appears that some employed mothers with stronger traditional attitudes about gender roles at home and work are likely to maintain their commitments to family and children (Boehnke, 2011; Cotter et al., 2011; Kroska & Elman, 2009). Thus, in spite of family earner status, care of children has remained as employed mothers’ greatest responsibility, and therefore mother-child interactions may result in more significant impact on child outcomes in comparison with father-child interactions.

*Increased Maternal Employment*

Before 1960s, women were expected not to work outside the home but only to perform the role of caregiver. According to the U.S. Census data report, it found that in the early 20th century, about 80% of the U.S. labor force were made up of men and a very few portions were women (U.S. Census Bureau, 2012b). However, the numbers of women employed outside the home were on the rise. The proportion of women in the labor force has increased about 16% since 1970 (Solis & Hall, 2011). Because of the powerful voices in the feminist movement which
urge women to turn down the occupation as a homemaker and encourage women to pursue careers outside the home, women’s participation rate in the labor force has steadily increased every year, reaching a peak of 60% in 1999 (Solis & Hall, 2011). Due to the ideology of gender equality, women today are equal with men in their desire to be employed outside the home and likely to participate in the labor force to the same extent as men (U.S. Bureau of Labor Statistics, 2011). The census data indicated that in 1970, the labor force participation rate for married mothers with children under age 6 was 30% and of those with children ages 6 to 17 was 49% (U.S. Census Bureau, 2012b). However, in 2010, the employment rate of married mothers with children under age 6 was 63% and of those with children ages 6 to 17 was 76% (U.S. Bureau of Labor Statistics, 2011). In recent years, because of parents’ desire to meet their children’s basic needs and to support family economic well-being and their high expectations for children as well, the costs of raising children have increased. It has found that due to economy pressures many married mothers are likely to seek employment and most families today rely on the incomes of both mothers and fathers (Giele, 2008). Apparently, families in which both parents are employed gain higher incomes than those in which only fathers work outside the home. The survey data found that mothers in dual-earner couples may contribute more to annual family income. In 2008, they contributed an average of 44% of annual family income, which demonstrated a significant increase from an average of 39% in 1997 (Galinsky et al., 2011). Thus, maternal employment has become more common, and there have been numerous studies done on the effects of maternal employment on children and the family.

With the growth in maternal employment and the increase in the time employed mothers devote to work, the traditional stay-at-home caregiver role has been affected
Most mothers now simultaneously perform the roles of caregiver and breadwinner, and therefore feel the necessity of seeking a balance between family and work. An individual’s engagement in multiple roles can be complicated, especially when those roles are incompatible. The social expectations for enacting the maternal role are often in conflict with those for the work role; that is, if employed mothers allocate more time and energy to the work, they should contribute relatively less to child-rearing. Recent research has pointed out that there is a great likelihood that employed mothers in dual-earner families who take on both the maternal role and the work role encounter the difficult in performing both roles in a satisfactory manner (Sultana & Noor, 2011). Employed mothers who change their allocation of time from working in the home to working in the labor force often face the issues that their employment status may impact child development outcomes.

A great deal of research has demonstrated that the quality of mother-child interactions is significantly associated with children’s subsequent adjustment. Although women are full-time employed outside the home, the roles of being a mother in the home have not become any less demanding. Thus, full-time employed mothers are more likely than stay-at-home mothers to confront conflict while performing two demanding roles simultaneously and to encounter challenges to find time being involved with their children and interacting with them (Milkie, Raley, & Bianchi, 2009; Offer & Schneider, 2011). The conflict between their roles at home and work may result in higher levels of parenting strains, especially when their children are young, their spouses rarely share parenting duties, and there is a lack of social support networks (Claffey & Mickelson, 2009; Scott et al., 2008), and therefore increases the risk of the exhibition of child problem behaviors (Anthony, Anthony, Glanville, Naiman, Waanders, & Shaffer, 2005;
Guajardo, Snyder, & Petersen, 2009; Hart & Kelley, 2006; Kim & Moon, 2005; Walker & Cheng, 2007). Mothers under stress are less likely than their non-stressed counterparts to display warmth and responsiveness and to engage in consistent and reasonable discipline while interacting with their children. There is evidence suggesting that children with full-time employed mothers are more likely to have psychosocial adjustment difficulties than their counterparts with stay-at-home mothers (Crnic, Gaze, & Hoffman, 2005). Being a parent is the most important role that individuals play in their entire lives and parenting can be the most difficult and challenging task. More and more employed mothers demand that their spouses should also contribute their time and energy to perform the role of being a parent and engage in child-rearing activities. Therefore, there is research arguing that not only maternal employment may be predictive of mother-child interactions or of child outcomes, but also the levels of paternal involvement can have an influence on the quality of mother-child interactions and children’s subsequent adjustment (Lamb, 2010; Lamb & Lewis, 2010).

**Determinants of Paternal Involvement**

The role of fathers in the family is essential but often overlooked when studying parenting and child outcomes. There has been much research investigating the roles of being a mother and the impact of maternal parenting behaviors and mother-child relationship quality on child development outcomes (Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Chan, 2011; Evans, Nelson, Porter, Nelson, & Hart, 2012; Koblinsky, Kuvalanka, & Randolph, 2006; Lucas-Thompson & Clarke-Stewart, 2007; Panfile & Laible, 2012). To this day, however, there are few explicitly targeted investigations pertaining to the roles of being a father (Lamb, 2010). In traditional families, fathers most often work in the public spheres while mothers play the
lead role in the domestic spheres. Thus, men’s success in performing the role as a father is largely determined by their breadwinning activities, and some studies have reported that the fathers’ financial support for children is more influential than their direct involvement with children (Finley, Mira, & Schwartz, 2008; Kroska, 2008). As a result of the emergence of two working parent families, although employed mothers still need to fill the maternal role, they are not the only ones responsible for parenting duties. Many dual-earner fathers’ attitudes toward the roles of being a parent have been shifted, and there is a changing pattern of paternal parenting practices among them (Jacobs & Kelley, 2006; Lamb & Lewis, 2010; McBride, Brown, Bost, Shin, Vaughn, & Korth, 2005; Sayer, 2005). Recent survey results demonstrated that the amount of time employed fathers spend with their children under 13 increased from an average of 2 to 3 hours per weekday since 1977, while the amount of time employed mothers spend with their children has remained at an average of 3.8 hours. Moreover, according to the survey data, in 2008 about 49% of employed men reported that they take most or equal share of child-rearing duties, which was up from 41% in 1992 (Galinsky et al., 2011).

Paternal involvement can be assessed based on a variety of models, and the most often used model is Lamb and colleagues’ model (Lamb, Pleck, Charnov, & Levine, 1985, 1987). They have established a model describing three specific types of paternal involvement with children, which include responsibility (responding to children’s developmental needs), engagement (directly interacting with children), and accessibility (being available but indirectly interacting with children). In more recent decades, some researchers have used this model as their framework when doing research on paternal parenting, and consistently they have argued that
the parental roles which fathers perform relative to mothers may be qualitatively independent and the ways in which fathers interact with their children appear to be different from mothers (Jacobs & Kelley, 2006; Lamb, 2010; Nangle, Kelley, Fals-Stewart, & Levant, 2003). In Craig’s (2006) investigation of child-rearing practices among parents, it was found that mothers engage more in interactive and physical care than fathers, while fathers engage relatively more in play activities with their children than mothers. Although employed fathers have gradually increased their involvement in child-rearing practices, the proportion of their engagement in child-rearing, even in dual-earner families, is still less than that of their spouses (Buckley & Schoppe-Sullivan, 2010; Craig, 2006; Jacobs & Kelley, 2006; Offer & Schneider, 2011; Raley et al., 2012). There is a need for greater paternal involvement due to its potential and unique impact on children’s developmental outcomes (Lindsey, Cremeens, & Caldera, 2010).

There are some important determinants predicting the levels of paternal involvement with children (Holmes & Huston, 2010; Jacobs & Kelley, 2006; Tremblay & Pierce, 2011). Recent findings on paternal involvement have demonstrated that the more hours mothers work outside the home, the greater fathers’ involvement is with their children, even though many dual-earner fathers still do not spend as much time with their children as do their counterparts in dual-earner families (Gottfried & Gottfried, 2006; Jacobs & Kelley, 2006; McBride et al., 2005; Pleck, 2010; Robinson & Milkie, 2006). Fathers are now expected to bear more of the parenting responsibilities, and the role of fathers in the family has become more distinguished and tends to have a significant and unique influence in the lives of children. McBride and colleagues reported that when controlling the hours of maternal employment, there was a positive relationship between mothers’ work hours and paternal involvement (McBride et al., 2005).
Although mothers, in spite of their employment status, still spend significantly more time caring for their children than fathers, greater paternal involvement has been found to influence the family in a positive way. When the levels of paternal involvement increase, it tends to reduce the amount of housework and child-rearing duties that employed mothers have to complete, to improve the quality of mother-child interactions, which in turn promote the positive adjustment of children.

Parenting and Children’s Interpersonal Competence

In the early childhood years, children always seek to form significant relationships with their parents within a family context (Bowlby, 1982). Parents perform an essential role in the aspects of responding to children’s developmental needs, establishing developmentally appropriate expectations and rules, providing social and emotional support, and assisting children developing into socially competent adults. Parents, therefore, are expected to be the primary agents contributing to the socialization of their children. Through the socialization process children learn and internalize such as norms, values, and attitudes of a given social setting so that they are able to implement proper social behavioral strategies in response to various social situations and to effectively function in society (Grusec & Davidov, 2007). Drawing on the attachment theory and parenting typology that are widely used as frameworks of parent-child interactions, researchers have recognized the fact that early experiences with parents give children a fundamental model of self in relation to others and are associated with child peer competence, which lead children to develop satisfying peer relationships and subsequent interpersonal relationships (Sroufe, Egeland, Carlson, & Collins, 2005).
Attachment Relationships

Bowlby (1973, 1982, 1988) has asserted that the early relationships between caregivers and infants have a great influence on development and behavior later in childhood and throughout the life. This strong emotional bond is formed when caregivers consistently and continuously provide sensitive and responsive caregiving to their infants. On the basis of Bowlby’s attachment theory, Ainsworth and colleagues empirically carried out a strange-situation study to investigate individual differences in attachment relationships (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978). In their study, participating young children’s reactions to the absence of mothers, to the presence of a stranger, and to the reunion with mothers, were observed. The results demonstrated that there are three distinct attachment relationships, including secure attachment, insecure-resistant attachment, and insecure-avoidant attachment. Main and Solomon (1990) further identified the fourth attachment relationship, insecure-disorganized attachment.

Securely attached children, as observed in Ainsworth’s strange-situation experiment, most often showed distressed in the absence of caregivers in which they were left with strangers, but felt secure and pleased about caregivers’ return (Ainsworth et al., 1970, 1978). It has been reported that secure attachment relationships are formed when caregivers tend to be sensitive and responsive to their children’s developmental needs. In the meanwhile, children consider their caregivers as a secure base from which they are allowed to freely explore and able to gain protection and comfort. Such early secure attachment relationships can facilitate children to develop a positive sense of self and others (Bowlby, 1988). When their needs are met and they are securely attached, they are more likely to have available resources to care for
others’ emotional needs. Thus, securely attached children are more likely to have competences to behave in socially acceptable ways, to recognize emotions in themselves and others, and to empathize with others (Sroufe et al., 2005). There has been evidence that secure attachment relationships in childhood are associated with long-term positive outcomes and that early attachments have implications for children’s later peer relationships and interpersonal relationships (Diener, Isabella, Behunin, & Wong, 2007; Keskin & Çam, 2010; Sroufe et al., 2005). For instance, adolescents who reported greater attachments to mothers and fathers were more likely to behave prosocially and to display a fewer interpersonal problems such as victimized by peers (Dykas, Ziv, & Cassidy, 2008). In Benson, McWey, and Ross’s (2006) meta-analysis of studies on parent-child attachments and peer relations, they also found that there was a positive correlation between attachment security and adolescents’ social competence and peer relationship quality. Furthermore, parent-child attachment security has been found to be associated with relatively lower levels of externalizing and internalizing problems and higher teacher and parent ratings of peer acceptance (Booth-LaForce, Oh, Kim, Rubin, Rose-Krasnor, & Burgess, 2006; Laible, 2007).

Conversely, insecurely attached children most often fail to form a strong emotional bond with their caregivers and doubt that their caregivers could serve as a secure base from which to freely explore and be available when they need assistance or comfort. There are three types of insecure attachments (Ainsworth et al., 1970, 1978; Main & Solomon, 1990). Based on previous research findings, insecure-resistant children have been found to be overdependent, showing anxious about separation and fear of strangers. They feel extremely upset when separated from their caregivers and continue to be inconsolable when their caregivers return.
They respond to the reunion ambivalently by angrily resisting their caregivers’ attempt for comfort while simultaneously seeking attention from them (Ainsworth et al., 1970, 1978). It has been revealed that caregivers of insecure-resistant children are likely to be engaged in inconsistent caregiving, and therefore their children’s needs sometimes are met and sometime are overlooked (Cassidy & Shaver, 2010). As a result, such children have a tendency to develop a negative sense of self and are fearful of being rejected or ignored. Children who develop insecure-avoidant attachment, however, have been found to be under-dependent and tend to avoid their mothers. They are disturbed neither by the absence of caregivers nor the presence of strangers and display no interest in the reunion with their caregivers (Ainsworth et al., 1970, 1978). Furthermore, because caregivers of insecure-avoidant children are likely to disregard their children’s needs, their children eventually realize that there is no use to communicate their needs to their caregivers. Thus, such children are apt to develop a negative sense of others and have difficulty in establishing close relationships (Cassidy & Shaver, 2010).

There is another form of insecure attachment called insecure-disorganized attachment. Children with this attachment often show disorganized responses to their caregivers’ absence and return, appearing to be disturbed, confused, and apprehensive when reunited with caregivers. Caregivers’ unreliability and inconsistent responses to their children’s needs, sometimes using threat and sometimes using comfort, are likely to contribute to an insecure-disorganized attachment style (Solomon & George, 2011). A number of empirical studies have consistently reported that children who are insecurely attached are more likely to have externalizing and internalizing problems such as aggression, depression, social anxiety, and social withdrawal. Such behavioral and emotional difficulties are most likely to link with poor
peer-related social competence, leading to a higher incidence of peer rejection (Keller, Spieker, & Gilchrist, 2005; Moss, Cyr, & Dubois-Comtois, 2004).

Parenting Styles

Parenting style is considered as “a constellation of attitudes toward the child that are communicated to the child and create an emotional climate in which the parent’s behaviors are expressed” (Darling & Steinberg, 1993, p. 493). In Baumrind’s (1967) early work, three distinct parenting styles of authoritative, authoritarian, and permissive were characterized by the levels of parental control. Later, Baumrind’s (1971, 1989, 1991) typology suggested that parenting style was distinguished in terms of two dimensions of parenting, demandingness and responsiveness. Parental demandingness is referred to “the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts, and willingness to confront the child who disobeys” (Baumrind, 1991b, pp. 61-62). Parental responsiveness is considered as “the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children’s special needs and demands” (Baumrind, 1991b, p. 62). Maccoby and Martin (1983) further extended the styles to add a fourth type of parenting, which now included authoritative, authoritarian, permissive, and neglecting parenting styles. The parenting style typology has been regarded as a critical theoretical framework for a wide variety of studies examining the influence of parenting on child outcomes. These studies have demonstrated that each of the parenting styles has its significant impact on child outcomes and that children of authoritative parents are likely to be associated with the best developmental outcomes as opposed to children of other parenting styles (Baumrind, Larzelere, & Owens, 2010; Bolkan, Sano, de Costa,
Parents with an authoritative parenting style are both high on demandingness and responsiveness. They are assertive but not autocratic and tend to establish consistent and reasonable expectations and restrictions for their children’s conduct. Also, they are warm and responsive to their children’s developmental needs, likely to engage in discussions with their children about rules, and willing to listen to their voices and to facilitate their independence. Authoritative parents prefer to commend their children for complying with rules and to reinforce their positive behaviors (Baumrind, 1971, 1989). Parents who are more authoritative in their parenting style are likely to provide a positive relationship context in which their children are able to model the parents’ socially competent behaviors and internalize their prosocial values. Thus, in this style of parenting, children, instead of intentionally violating the expected standards of conduct, are more likely to model the parents’ socially competent behaviors, such as self-regulation, and in turn, to develop healthy peer relations and to have better adjustments. In Kawabata et al.’s (2011) meta-analyses, it was revealed that positive parenting was associated with children’s lower levels of aggression. Furthermore, Rinaldi and Howe (2012) claimed that authoritative parenting styles were more effective than others in promoting child adaptive behaviors and deterring problem behaviors. Authoritative style of parenting was associated with children who developed higher levels of self-esteem and autonomy. In addition, children of authoritative parents were more socially competent with peers as compared with children of other parenting styles (Baumrind et al, 2010).
Authoritarian parenting style is characterized by high demandingness and low responsiveness. Parents with this style are likely to restrictively control the behavior of their children and to set consistent but high expectations for their children without providing any reasonable explanations. Also, they have a lack of warmth and responsiveness to their children’s developmental needs. They rarely engage in discussions with their children about rules and insist that their children should be obedient and conform to the expectations that they establish. Parents with an authoritarian parenting style attempt to punish their children for their failure to follow the rules and negative behaviors but seldom to reinforce their positive behaviors (Baumrind, 1971, 1989; Leman, 2005). As a result, children of authoritarian parents are likely to have a lack of autonomy, to display aggressive behaviors as interacting with their peers, and in turn, to experience peer rejection and poor adjustments (Bolkan et al., 2010; Milevsky et al., 2007; Rinaldi & Howe, 2012; Schaffer et al., 2009).

Permissive parenting style is characterized by low levels of demandingness and high levels of responsiveness. Permissive parents are responsive, warm, and communicative. Also, they have very few expectations and restrictions for their children to conform and allow them to voice their viewpoints and make decisions. Parents with this style are passive in parenting so that they prefer not to exert great control over their children’s conduct and to punish them while they violet expected standards of conduct or display inappropriate behaviors (Baumrind, 1971, 1989). Consequently, their children may have difficulty with self-regulation and in taking others’ thoughts and feelings into consideration, which in turn can interfere with the development of positive peer relationships (Milevsky et al., 2007; Rinaldi & Howe, 2012; Schaffer et al., 2009). Neglecting parents are both low on demandingness and responsiveness.
They are less likely to devote time to parenting, to be emotionally attached with their children, and to take care of their needs. Parents with a neglecting parenting style often fail to be warm and communicative and to monitor or guide their children’s conduct (Leman, 2005). These practices are often associated with poor parent-child interactions, which lead children of neglecting parents to exhibit interpersonal competence deficits, to be rejected by their peers, and to develop both externalizing and internalizing behaviors, such as aggression and social withdrawal (Bolkan et al., 2010; Kawabata et al., 2011; Simons & Conger, 2007).

A number of researchers have indicated that although children of authoritarian parents exhibit high levels of obedience, there are several negative developmental outcomes associated with this style of parenting. Moreover, although permissive parents most often meet their children’s needs for autonomy, they rarely engage in independence training of their children but allow them to behave without any rules. Parents preferring the permissive approach may have a lack of social responsibility, and therefore are unlikely to be active agents of socialization responsible for monitoring and shaping their children’s ongoing and future behavior (Baumrind, 1989, 1991a). In Rinaldi and Howe’s (2012) study, they individually assessed mothers’ and fathers’ parenting styles and revealed that mothers’ permissive parenting style and fathers’ authoritarian parenting style were uniquely and significantly related to children’s externalizing behaviors. Children with authoritarian parents were more likely to have difficulties in self-regulation and to have higher levels of anxiety and depression. Furthermore, the findings of Schaffer et al.’s (2009) study reported that children of permissive parents were associated with various negative developmental outcomes. They were likely to exhibit high levels of self-confidence but low levels of self-regulation and empathy, and to have feelings of depression.
and emotional distress. In Kawabata et al.’s (2011) meta-analytic review, it was suggested that parents with harsh or uninvolved parenting had children with higher levels of aggression as opposed to children of authoritative parents. Overall, parents’ approaches to positive parenting are associated with children’s interpersonal competence in peer relationships and contribute to the promotion of children’s levels of adjustment over time.

*Mowder’s Parenting Characteristics*

Darling and Steinberg (1993), drawing on previous research, claimed that parenting practices have a direct impact on child developmental outcomes and that it should be distinguished from parenting style. They further asserted that the quality of parent-child relationships is considered as a contextual variable which may moderate the association between parenting practices and child outcomes. That is, parenting style is operationally defined as “a constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent’s behaviors are expressed” and has an indirect impact on child developmental outcomes (Darling & Steinberg, 1993, p. 488). Thus, the distinction between parenting style and parenting practices is necessary for the examination of each single parenting behavior and its relationship with child outcomes (Darling & Steinberg, 1993). For the study, Mowder’s parent development theory (PDT; 1993, 1995, 2005) was used as the theoretical framework in order to help distinguish parenting practices from parenting style. Also, the relationships of parenting practices to children’s social competence with peers were discussed in the study.

On the basis of social learning and cognitive developmental theories, Mowder and colleges proposed the PDT in order to conceptualize the development and complexity of the
roles of being a parent (Mowder, Harvey, Pedro, Rossen, & Moy, 1993; Mowder, Harvey, Moy, & Pedro, 1995; Mowder, 2005). The PDT argues that, with the accumulation of life experience, individuals gradually construct and expand their parenting schemas that are the perceptions of what it means to be a parent. As individuals take on the social role of being a parent, they tend to parent their children according to their existing parenting schemas. In addition, they are likely to modify the existing schemas in response to a variety of factors, such as children’s characteristics, developmental needs, and current family structure, in order to ensure effective parent-child interactions. Mowder’s PDT, which is socially and culturally sensitive, tends to identify parent role characteristics and how these characteristics are performed in response to children’s developmental stages. These characteristics, including bonding, discipline, education, protection and general welfare, responsivity, and sensitivity, have been recognized in numerous studies (Mowder et al., 1993). Bonding is the affection, love, and regard parents feel and display toward children; discipline is to establish rules and set boundaries, and to assure that children respond and adhere to limits; education is to inform, guide, and teach children; general welfare and protection refers to keeping children from harm and providing for children’s basic needs; responsivity refers to being responsive to and acting on the demands of children; sensitivity is to match the parental responses to children’s actual needs. Furthermore, the PDT proposed that parents tend to place different levels of importance on each of the six parent role characteristics in response to children’s various developmental stages, from infancy to adulthood. For instance, the parenting characteristic of bonding is highly weighted by parents when their children are infants/toddlers. Also, the way parents respond to adolescents in terms of discipline differs from the way they respond to infants/toddlers.
According to the PDT, Mowder and colleagues conducted the Parent Role Questionnaire (PRQ) in an attempt to assess individuals’ perceptions of the roles of being a parent (Mowder et al., 1993; Mowder et al., 1995). It was a self-report measure requiring participants to delineate in free-response format how they consider the roles of being a parent. Participants were also asked to rate each of the six parent role characteristics in terms of importance and frequency in order to determine their prioritizations as their children are in different developmental stages. The findings demonstrated that the six major parent role characteristics were recognized by most of the participants as essential components of parenting, which significantly supported the PDT. Some researchers, accepting the PDT as a conceptual framework, have attempted to examine the six parent role characteristics in relation to various parenting issues (Mowder, Guttman, Rubinson, & Sossin, 2006; Respler-Herman, Mowder, Yasik, & Shamah, 2012; Sperling & Mowder, 2006). For instance, in the study involving preschoolers’ special needs status, Sperling and Mowder revealed that the relative weighting in terms of importance on each of the six parent role characteristics was associated with children’s developmental needs. The results suggested that preschoolers with special needs were likely to have parents who placed emphasis on the parenting characteristics in terms of general welfare and protection and sensitivity. Typically developing preschoolers, however, were likely to have parents who consider education as the most important parenting characteristic.

Furthermore, the findings of Liebling’s (2004) investigation revealed that the increase in importance ratings for responsivity was associated with the decrease in children’s problem behaviors. With regard to Harari’s (2005) work, it was shown that when compared with parents who emphasized the parenting characteristics of responsivity and sensitivity, parents who
viewed discipline as a more important parenting characteristic had children with higher levels of conduct problems. In addition, it was found that children were more likely to develop social skills when their parents put emphasis on the parenting characteristics of education and general welfare and protection. Gender differences pertaining to parenting characteristics also have been exhibited in a few studies (Mowder et al., 1995; Shum, 1997; Turiano, 2001). For instance, Mowder et al. (1995) claimed that mothers were likely to view each of the six parenting characteristics as more important than fathers do. When compared with fathers, Turiano (2001) reported that mothers tended to rate bonding, responsivity, and sensitivity higher in importance. Shum (1997) also found that mothers considered education, responsivity, and sensitivity to be more important than fathers do.

Overall, within the context of a mutually responsive parent-child interaction, children are most likely to learn socially appropriate behaviors from their parents and with these behaviors such as sharing and cooperating, they can enhance peer-related social competence, and therefore initiate and maintain positive relationships with their peers. A great deal of research has devoted to helping parents establish positive interactions with their children. Nevertheless, the impact of parent-child interactions may vary in terms of a number of contextual variables such as family structure.

Interpersonal Competence in Peer Relationships

There is no doubt that interpersonal competence in peer relationships is such a critical developmental task in the childhood years due to its long-term impact on school achievement, psychosocial adjustment, and interpersonal relationships during adolescence and adulthood.
(Ladd, 2005; Ladd & Ettekal, 2009; Ladd, Herald, & Kochel, 2006). Social competence is operationally defined as a multidimensional construct that consists of many foundational cognitive, social, and emotional capabilities needed for effective functioning in society (Odom, McConnell, & Brown, 2008). These skills may include social information processing, social problem solving, cooperative prosocial behavior, self-regulation, and empathy (Rose-Krasnor & Denham, 2009). In a review of social competence research, interpersonal competence in peer relationships can be more specifically described as children’s abilities to get along with their peers. Child peer competence is often displayed when an individual child has social interactions with peers. Within such interactions, the child tends to select and implement effective and appropriate social behavioral strategies in order to successfully perform the necessary tasks, which lead to his/her realization of social goals in a given social situation (Missall & Hojnoski, 2008; Odom et al., 2008).

With increasing age, children are required to enter formal schooling and supposed to comply with new academic and social expectations different from those faced in preschool or at home (Ladd et al., 2006). In a survey study, several kindergarten teachers were asked to identify important skills that children should have as they enter school and most of them believed that social competence with peers is necessary for successful school transition. With less adult monitoring, many school-age children are expected to possess self-regulation skills and to engage in cooperative prosocial behaviors so that they are likely to listen and follow directions in the classroom and to get along with their teachers and peers (Ladd et al., 2006). Thus, children’s development of interpersonal competence in peer relationships has been considered as a supportive mechanism for smoothing their transition to school. It has been
suggested that children’s interpersonal competence is not only associated with the quality of peer relationships but also recognized as a protective factor against the occurrence of adjustment difficulties such as poor academic performance, aggression and related behavior problems, depression, and social withdrawal (Brotman, Gouley, Chesir-Teran, Dennis, Klein, & Shrout, 2005; Ladd & Ettekal, 2009; Ladd, Herald-Brown, & Reiser, 2008). Consequently, children’s social competence with peers should be developed at an early age in order to grow into productive adults with advanced interpersonal competence and healthy interpersonal relationships.

Childhood peer relations, including peer acceptance and peer rejection, commonly serve as the major index of children’s peer-related social competence (Ladd, 2005; Odom et al., 2008). Highly socially competent children most often direct positive social behaviors toward their peers, such as toy trading rather than toy grabbing, to achieve their desired results. As shown in many studies, such children are more likely to possess the competences to effectively initiate social interactions in unfamiliar social settings, to cooperate with others, to empathize with others, to properly express feelings and thoughts, and to deal with interpersonal conflicts. As a result, they can easily socialize with their peers and be well accepted by their peers (Asher & McDonald, 2009; Ladd, 2005; Ladd & Ettekal, 2009; Odom et al., 2008; Rose-Kransnor & Denham, 2009). Conversely, socially incompetent children most often direct socially inappropriate behaviors toward their peers, such as pushing and biting, to achieve their desired goals. In many of the studies regarding child peer competence, it has been found that children who lack well-developed interpersonal competence are more likely to engage in aggressive and disruptive behaviors or to display socially withdrawn and isolated behavior patterns, and are
less likely to employ cooperative prosocial behavioral strategies in group entry and conflict management (Ladd & Ettekal, 2009; Odom et al., 2008; Rose-Kransnor & Denham, 2009). For instance, through teacher ratings and sociometric interviews, Walker’s (2004) investigation on the relation between social status and social behavior revealed that rejected children were rated as being less likely to exhibit prosocial cooperative behavior. Such socially incompetent behaviors easily put them at risk of being rejected or ignored by their peers (Asher & McDonald, 2009; Ladd, 2006).

A great deal of longitudinal empirical research has been conducted with school-age children and discovered that peer acceptance during childhood has implications for children's later academic and social adjustment (Brotman et al., 2005; Silver, Measelle, Armstrong, & Essex, 2005). Peer rejection, however, has been linked to a variety of negative consequences including poor academic performance, school dropout, juvenile delinquency, substance abuse, low self-esteem, depression, feelings of loneliness, and social anxiety (Garandeau, Ahn, & Rodkin, 2011; Ladd, 2006; Ladd et al., 2008; Odom et al., 2008). Research on school-age children has reported that successful social interactions with peers allow children to develop social cognition and to master interpersonal skills (Palmen, Vermande, Deković, & van Aken, 2011). Through experiencing ongoing positive peer interactions, children are likely to learn more socially skilled behaviors and to become proficient at understanding what other people think and feel. Because of this, they tend to develop into socially competent adults and are able to confront more diverse peer relations during adolescence and adulthood. Conversely, persistent peer rejection in early and middle childhood is likely to hinder children from reinforcing social competence needed to initiate and maintain interpersonal relationships and
to tackle interpersonal conflicts. Most rejected children, therefore, tend to continuously exercise inappropriately aggressive strategies in response to social rejection. This may account for children’s increased risk for externalizing and internalizing problems, leading children to be at risk for ongoing problematic peer relationships and subsequent adjustment problems (Ladd, 2006; Ladd et al., 2008; Palmen et al., 2011). Taken together, these research findings have pointed out that children’s early success with peer relationships can be perceived as an important implication for the enhancement of interpersonal competence in later life, which make a substantial contribution to more positive interpersonal relationships in different contexts of everyday life.

Findings from many studies have indicated that the development of interpersonal competence in peer relationships may be very different for girls and boys. Gender differences have been found in the ways in which children interact with peers and deal with peer conflicts. It has been found that girls are more likely to show empathy and engage in prosocial behavior as compared than are boys. Girls, as compared with boys, are more competent in understanding what others think and feel and in conducting effective social problem-solving strategies (Odom et al., 2008; Walker, 2005; Walker, Irving, & Berthelsen, 2002). In Walker’s (2004) study, preschool-age boys were rated by teachers as more aggressive than girls and likely to exercise aggressive or disruptive behavioral strategies either when initiating social interactions with peers or when managing peer conflicts. Furthermore, in a sample of college students, Buhrmester, Furman, Wittenberg, and Reis (1988) discovered that there were gender differences in the five major domains of interpersonal competence in peer relationships. Female college students tended to score higher in the domain of emotional support and conflict
management, while their male counterparts tended to score higher in the domain of initiation of relationships.

There is a general consensus among researchers to the fact that peer-related social competence is such an important contributor to succeed in school, to be accepted in peer group, and therefore to grow into productive adults with advanced interpersonal competence and healthy interpersonal relationships (Ladd, 2005; Silver et al., 2005). It has been suggested that peer-related social competence is a significant task in early development and may become more stable over developmental time. Thus, with regard to the study conducted here, Buhrmester et al.’s (2002,1988) Interpersonal Competence Questionnaire-Revised (ICQ-R) was used to evaluate university students’ current levels of interpersonal competence in the domains of initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management.
APPENDIX B

DETAILED METHODOLOGY
Purpose of the Study

To summarize, the major purposes of the study are to examine that, with regard to family earner status, how mothers and fathers differ in the ways in which they perform their roles as a parent, and that the respective contributions of mothers’ and fathers’ parenting characteristics to the prediction of university students’ interpersonal competence in peer relationships. The Parent Behavior Frequency Questionnaire-Revised (PBFQ-R; Mowder, 2007, 2010), derived from the parent development theory (PDT), is used in the study to evaluate participants’ perceptions of their mothers’ and fathers’ parenting characteristics. More specifically, in order to explore the long-term impact of parent-child interactions on child outcomes, the study is designed with the intention of assessing participants’ recollected experiences of parent-child interactions in terms of the seven parenting characteristics, which include bonding, discipline, education, general welfare and protection, responsivity, sensitivity, and negativity. In addition, for the purpose of investigating the associations between the seven parenting characteristics and related behaviors and university students’ peer-related social competence, the Interpersonal Competence Questionnaire-Revised (ICQ-R; Buhrmester, 2002; Buhrmester, Furman, Wittenberg, & Reis, 1988) is administered to a set of undergraduate and graduate students. Their interpersonal competence in peer relationships is assessed in terms of the domains of initiation of relationships, emotional support, asserting influence, self-disclosure, and conflict management. Although much previous research has demonstrated the correlations between parent-child interactions and child outcomes, more empirical and explicit information is required. Given the changes in family structure and that more married mothers now participate in the paid labor force, it appears that more fathers are expected to be involved in
parenting duties. Consequently, it is necessary to look at how married couples in dual-earner families play the roles of being a parent and their respective contributions to the development of social competence with peer as well, as compared with those in single-earner families.

**Definition of Terms**

The following terms are defined in order to provide a comprehensive understanding of the issues and discussions addressed in the study.

*Full-time Employment*

The term refers to an employee works more than 40 hours in a week.

*Single-earner family*

The term refers to a family structure in which the married father is employed outside the home and the married mother is minimally employed or unemployed and stays at home caring for children.

*Dual-earner family*

The term refers to a family structure in which both the married mother and the married father are employed outside the home.

*Single-earner father*

The term refers to a married, full-time employed father whose spouse is minimally employed or unemployed and stays at home caring for children.

*Dual-earner father*

The term refers to a married, full-time employed father whose spouse is also full-time employed outside the home.

**Research Questions**
The following research questions were developed in response to the research purposes of the study:

**Question 1**

In terms of dual-earner families, to what extent, if any, are there differences between full-time employed mothers and full-time employed fathers in the frequency of engaging in the seven parenting characteristics and related behaviors measured by the PBFQ-R?

**Question 2**

In terms of single-earner families, to what extent, if any, are there differences between minimally employed or unemployed mothers and full-time employed fathers in the frequency of engaging in the seven parenting characteristics and related behaviors measured by the PBFQ-R?

**Question 3**

To what extent, if any, are there differences between mothers in dual-earner families and those in single-earner families in the frequency of engaging in the seven parenting characteristics and related behaviors measured by the PBFQ-R?

**Question 4**

To what extent, if any, are there differences between fathers in dual-earner families and those in single-earner families in the frequency of engaging in the seven parenting characteristics and related behaviors measured by the PBFQ-R?

**Question 5**
To what extent, if any, is there a relationship between university students' interpersonal competence in peer relationships, as measured by the ICQ-R, and the seven parenting characteristics measured by the PBFQ-R?

*Question 6*

To what extent, if any, are there differences between university students in dual-earner families and those in single-earner families in the levels of interpersonal competence in peer relationships measured by the ICQ-R?

*Question 7*

To what extent, if any, are there differences between male and female university students in the levels of interpersonal competence in peer relationships measured by the ICQ-R?
APPENDIX C

COMPLETE/UNABRIDGED RESULTS
Table C 1

Summary of Demographic Variables for Participants in Dual-Earner and Single-Earner Families

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dual-Earner&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Single-Earner&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
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<tr>
<td>Female</td>
<td>98</td>
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<td>Ethnic identity</td>
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<td>African-American/Black</td>
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<td>6.8</td>
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<td>Native American/American Indian</td>
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</tr>
<tr>
<td>Multi-Ethnic</td>
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<td>10.3</td>
</tr>
<tr>
<td>Age</td>
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<td></td>
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<tr>
<td>18 to 21</td>
<td>60</td>
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</tr>
<tr>
<td>22 and over</td>
<td>57</td>
<td>48.7</td>
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<tr>
<td>Number of siblings</td>
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<tr>
<td>0</td>
<td>11</td>
<td>9.4</td>
</tr>
<tr>
<td>1</td>
<td>46</td>
<td>39.3</td>
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<tr>
<td>2 and more</td>
<td>58</td>
<td>49.6</td>
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<tr>
<td>Missing</td>
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<td>1.7</td>
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<td>Family’s socioeconomic status (SES)</td>
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<td></td>
</tr>
<tr>
<td>Lower</td>
<td>5</td>
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<tr>
<td>Lower-Middle</td>
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<td>Upper</td>
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<tr>
<td>Missing</td>
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<td>6.0</td>
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<td>Parents’ current marital status</td>
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<tr>
<td>Unmarried</td>
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<td>33.3</td>
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<tr>
<td>Mother’s ethnic identity</td>
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<td>Caucasian/White</td>
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Table C 2

*Cronbach’s Coefficient Alpha for PBFQ-R Scale*

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*Note. N = 235.*
Table C 3

*Cronbach's Coefficient Alpha for ICQ-R Scale*

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*Note. N = 235.*
Table C4

*Means and Standard Deviations for PBFQ-R Scale by Family Earner Status*

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*Note.* PBF = Parenting Behavior Frequency.
Table C 5

Means and Standard Deviations for ICQ-R Scale by Family Earner Status

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*Note.* IC = Interpersonal Competence.
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*Note.* IC = Interpersonal Competence.
APPENDIX D

OTHER ADDITIONAL MATERIALS
Dr. George Morrison  
Department of Teacher Education and Administration  
University of North Texas  
RE: Human Subjects Application No. 11-460

Dear Dr. Morrison:

In accordance with 45 CFR Part 46 Section 46.101, your study titled “Perceived Parenting Characteristics and Its Association with Interpersonal Competence: A Comparison between Single-Earner and Dual-Earner Families” has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed is the consent document with stamped IRB approval. Please copy and use this form only for your study subjects.

Please provide a copy of this letter to St. Cloud State University per their request to conduct your research on their campus.

No changes may be made to your study’s procedures or forms without prior written approval from the UNT IRB. Please contact Jordan Harmon, Research Compliance Analyst, ext. 3940, if you wish to make any such changes. Any changes to your procedures or forms after 3 years will require completion of a new IRB application.

We wish you success with your study.

Sincerely,

Patricia L. Kaminski, Ph.D.  
Associate Professor  
Chair, Institutional Review Board

PK.jh
May 8, 2012

Dr. George Morrison
Department of Teacher Education and Administration
University of North Texas

Institutional Review Board for the Protection of Human Subjects in Research (IRB)
RE: Human Subject Application #11-460

Dear Dr. Morrison:

The UNT IRB has received your request to modify your study titled “Perceived Parenting Characteristics and Association with Interpersonal Competence: A Comparison between Single-Earner and Dual-Earner Families.” As required by federal law and regulations governing the use of human subjects in research projects, the UNT IRB has examined the request to modify your informed consent form. The modification to this study is hereby approved for use with human subjects.

Please contact Jordan Harmon, Research Compliance Analyst, at (940) 565-3940, or Boyd Hornsby, Director of Research Compliance, at (940) 565-3941, if you wish to make changes or need additional information.

Sincerely,

[Signature]

Patricia L. Kaminski, Ph.D.
Associate Professor
Chair
Institutional Review Board

PK/jh
Informed Consent Notice

Dear student,

The study is designed to gain insights about your parents' parenting characteristics and related behaviors during your years of growing up at home and its association with your self-perceived, interpersonal competences. There are three sections in the survey, and it may take about twenty-five minutes to complete.

Although the study is not expected to be of any direct benefit to you, the investigator hopes to learn more about the long-term impact of parenting on child development outcomes. Answering the questions in the survey involves no foreseeable risks. Participation is voluntary and you may stop at any time without penalty. There is no right or wrong answer to any question. You receive extra credit when you participate; if you wish to not participate but to receive extra credit, your instructor will provide an alternative means of earning extra credit commensurate with the time and effort required to complete the survey. By completing the survey you are giving consent to participate.

Your answers will be kept confidential and secured. The investigator will use the provided information only for research use. Coded survey results will be maintained in a locked filing cabinet in the principal investigator's office at UNT. If you have any questions regarding the study, please contact Wen-Chuan (Rita) Chang at ritachang@unt.edu, Early Childhood Education, and George S. Morrison, Teacher Education & Administration, (940)565-4476.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940)565-3940 with any questions regarding the rights of research subjects. You may print this Notice for your records.
University of North Texas Institutional Review Board  
c/o Office of Research and Economic Development  
Hurley Administration Building, Room175  
1155 Union Circle Denton, TX 76203

Please note that Ms. Wen-Chuan (Rita) Chang, UNT graduate student, has my permission to conduct research in my classes for her doctoral dissertation, “Perceived Parenting Characteristics and Its Association with Interpersonal Competence: A Comparison between Single-Earner and Dual-Earner Families.”

Ms. Chang will contact me to recruit the undergraduate students in several of my courses including Human Sexuality and Psychology of Religion, sending a packet of questionnaires which will be returned to her by postal service (via a self-addressed, stamped envelope). Alternatively, Ms. Chang will email me a survey link to the data collection website, surveymonkey.com which could be accessed by student participants.

Ms. Chang has agreed to provide to my school a copy of the University of North Texas IRB-approved, stamped consent document before she recruits student participants in my classes.

If there are any questions, please contact me.

Signed,

Jon K. Reid
Professor, Psychology and Counseling
School of Education and Behavioral Sciences
Southeastern Oklahoma State University
1405 N. 4th Ave., PMB 4021. Durant, OK 74701-0609

e-mail: jreid@se.edu
Phone: (580) 745-2390
9/30/11

University of North Texas Institutional Review Board  
c/o Office of Research and Economic Development  
Hurley Administration Building, Room 175  
1155 Union Circle Denton, TX 76203

Please note that Ms. Wen-Chuan (Rita) Chang, UNT graduate student, has my permission to conduct research in my classes for her doctoral dissertation, “Perceived Parenting Characteristics and Its Association with Interpersonal Competence: A Comparison between Single-Earner and Dual-Earner Families.”

Ms. Chang will contact me to recruit the undergraduate students in my ED 407 “Instructional Mathematics” courses, sending a packet of questionnaires which will be returned to her by postal service (via a self-addressed, stamped envelope). Alternatively, Ms. Chang will email me a survey link to the data collection website, surveymonkey.com which could be accessed by student participants.

Ms. Chang has agreed to provide to my school a copy of the University of North Texas IRB-approved, stamped consent document before she recruits student participants in my classes.

If there are any questions, please contact me.

Dr. Hsueh-I (Martin) Lo  
Assistant Professor, Mathematics Education  
Department of Teacher Development  
St. Cloud State University  
720 4th Avenue South  
St. Cloud, MN 563

e-mail: hlo@stcloudstate.edu  
Phone: (320) 308-2406


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