ADULT-ADOLESCENT PARENTING INVENTORY-2

AS A PREDICTOR OF RISK FOR

CHILD MALTREATMENT

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CHAPTER I

INTRODUCTION TO THE STUDY

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2; Bavolek & Keene, 2001) as a predictor of level of risk for child maltreatment as indicated by the Department of Human Services (DHS) safety assessment. The Adult-Adolescent Parenting Inventory (AAPI; Bavolek, 1984), originally developed in 1979 and revised in 1999 (AAPI-2; Bavolek & Keene, 2001), has become a widely used and accepted tool for screening of child maltreatment. It has become a popularly used tool in the United States and is beginning to see favor in other nations around the world. Despite its well-accepted use among the social service field in addressing child maltreatment, there has been little empirical study of this assessment focused specifically on populations of maltreating parents. A few previous studies have included some maltreating parents or samples that may be high-risk for such behavior (Grella, & Greenwell, 2006; Guthrie, Gaziano, & Gaziano, 2009; Palusci, Crum, Bliss, & Bavolek, 2008), however, the focus of these studies has not been on child protective services involved individuals. The focus of the reliability, validity, and norming for the AAPI has been on adolescents (Bavolek, Kline, McLaughlin, & Publicover, 1979), substance abusing parents (Grella & Greenwell, 2006; Palusci et al., 2008), incarcerated

parents (Grella & Greenwell, 2006; Palusci et al., 2008), and high-risk community health center clients (August, Bloomquist, Lee, Realmuto, & Hektner, 2006; Guthrie et al., 2009; Palusci et al., 2008). There is a need for inquiry into the diagnostic capabilities of the AAPI-2 with maltreating parents involved with child protective services. It is now common practice to use the AAPI-2 as a screening and diagnostic tool. This could have serious impact on families' lives.

According to the U.S. Department of Health and Human Services (2009), the rate of child victimization between 2002 and 2006 has shown virtually no change. The rate changed from 12.3 victims per 1000 children in 2002 to 12.1 per 1000 in 2006, which represents only a 1.6% reduction in the number of children suffering abuse in the United States. Even more alarming is the fact that 22 states experienced an increase in child victimization during this time and 25% of abused children had experienced prior victimization. Although there has been a slight decrease in the number of children victimized, there was an increase in the number of child deaths between 2002 and 2006 with over 1500 child deaths attributed to abuse or severe neglect. These numbers show a need for a reliable and valid assessment tool to identify level of risk in parents who are involved with Child Protective Services (CPS) to guide prevention and intervention programs. The severity of the maltreatment of children with the increase of child deaths continues to be of concern and underscores the need for valid and reliable tools for identifying risk to assist in the prevention of child maltreatment.

One of the difficulties with investigating tools for identification or diagnostics for child maltreatment is the varied constructs associated with this issue. Many of the current studies found regarding the AAPI have been curriculum evaluation (Drummond,

Weir, & Kysela, 2002) or intervention effectiveness (August et al., 2006; Guthrie et al., 2009) and have not investigated the use of the AAPI in identifying risk for child maltreatment. Identifying families at-risk for child maltreatment is an essential component to providing prevention services to reduce child maltreatment rates. It is therefore a necessity to find assessment tools to accomplish this identification task effectively.

Parents involved with CPS share similar characteristics with other populations studied with the AAPI-2 (i.e. substance abuse treatment participants and incarcerated parents). Some of the similar characteristics include legal problems (Grella & Greenwell, 2006; Palusci et al., 2008), lower educational levels, lower socioeconomic status (Baumrind, 1994), limited support from family, friends, and community (Baumrind, 1994; Grella & Greenwell, 2006), and substance use (Palusci et al., 2008). Although parents involved with CPS share some of these characteristics with other at-risk populations, they are distinct in other aspects. Parents involved with CPS continue to face day-to-day issues of family management while dealing with increased stress of monitoring of their parenting ability. These parents have to manage time and financial constraints resulting from required services on a treatment plan to have the children returned to the home. These parents continue with their day-to-day lives often in the midst of untreated substance abuse, mental health, employment, and legal troubles. Parents who maltreat their children often experienced abuse or neglect by their own parents growing up (Grella & Greenwell, 2006; Huxley & Warner, 1993; Marcenko, Kemp, & Larson, 2000). This adds an element of socialization to poor parenting practices. This socialization contributes to an intergenerational pattern of child

maltreatment. Continued research that includes some of these distinct characteristics will provide professionals with the ability to develop early identification tools that target these risks. This could be beneficial to families and communities by providing important results for the development and evaluation of educational and therapeutic services for this at-risk population of families. The AAPI-2 may have potential as an early intervention tool however, research on this diagnostic tool has been limited primarily to program effectiveness and with populations different from parents involved with child protective services. Further inquiry into the AAPI-2 is needed to further understanding of this complex issue of child maltreatment and ways of measuring risk for maltreatment.

Demographics receive much research into their relationship with child maltreatment. Often this research is mixed in the findings for a given demographic. It is important to continue to study demographics in social science research until establishing a consensus on the impact of different demographics on child maltreatment. This study also investigated demographics and their ability to predict child maltreatment and predict scores on the AAPI-2. This study discusses the contribution to our current knowledge related to child maltreatment based on the findings.

Purpose of the Study

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2; Bavolek & Keene, 2001) as a predictor of risk for child maltreatment as indicated by the Department of Human Services Safety Assessment form. There have been few empirical studies to validate the use of the AAPI-2 as a diagnostic tool to predict level of risk for child maltreatment despite its wide application for such use in the social service field. The focus of past research has been on the use of the AAPI-2 as a

measure of program or treatment effectiveness and has failed to focus specifically on samples of individuals investigated by child protective services (CPS). If service organizations are to continue use of the AAPI-2 with CPS involved parents then more research is needed regarding the ability of the AAPI-2 to identify high-risk individuals and predict level of risk for child maltreatment.

Theoretical Framework

Bavolek et al. (1979) proposed the theoretical framework for this study. Bavolek and his associates offered four constructs that have the potential to identify parental attitudes of maltreatment. These four constructs are inappropriate parental expectations, parental lack of empathic awareness of children's needs, strong belief in the use and value of corporal punishment, and parent-child role reversal. The Adult-Adolescent Parenting Inventory (AAPI; Bavolek, 1984) initially investigated the parenting attitudes of adolescents. Bavolek (1984) demonstrated the construct structure of the AAPI was similar for both adults and children. Continued research on the AAPI-2 has investigated incarcerated parents (Grella & Greenwell, 2006; Palusci et al., 2008), parents involved in substance abuse rehabilitation programs (Grella & Greenwell, 2006; Palusci et al., 2008), parents referred by community health and mental health workers (Drummond et al., 2002; Huxley & Warner, 1993), and low-income, "at-risk" populations (Conners, Whiteside-Mansell, Deere, Ledet, & Edwards, 2006; Guthrie et al., 2009; Palusci et al., 2008). The AAPI received a revision in 1999 with a change in format of the assessment and the addition of a fifth construct (Bavolek and Keene, 2001). The fifth construct is oppressing children's power and independence.

Bavolek (2000) expands on the theory proposed in 1979 identifying six assumptions of parenting process, which relates to the five constructs measured in the AAPI-2. The first assumption regarding parenting process is that the family is a system. All members in the family influence change and functioning of the family. The constructs of family roles and inappropriate parental expectations are directly impacted by this first assumption. Family roles are learned within the context of the interactions of the parents and children (Ackley, 1977; Bandura, 1977; Steele, 1986). If the parent is following an inappropriate expectation that the child will be there to take care of their needs then dysfunctional family dynamics begin to emerge (Ackley, 1977; Bavolek, 2000; Steele, 1975).

The second assumption is that empathy is a highly desirable quality for nurturing parents allowing for successful use of other positive parenting attitudes. This assumption obviously directly relates to the AAPI-2 construct of empathy. Empathy is a necessary ingredient for loving and nurturing parenting. Empathy is related to the constructs of inappropriate expectations, and restricting power and independence (Bavolek, 2000). To act on appropriate expectations, the parent needs an understanding of developmental limitations of the child but also have an empathic understanding of the struggles children go through to reach developmental milestones. Parents with lower empathy show more strict parenting styles and are less willing to use negotiation and compromise with their children (Bavolek, 2000; Brems & Sohl, 1995; Massie & Szajnberg, 2006). Four out of the five constructs on the AAPI-2, inappropriate parental expectations, parental lack of empathic awareness of children's needs, strong belief in the use and value of corporal

punishment, and oppressing children's power and independence, hinge on this assumption of the necessity of empathy in nurturing parenting.

The third assumption is that parenting exists on a continuum and to some degree, all families experience healthy and unhealthy interactions. The AAPI-2 measures each scale of the assessment on a continuum then provides standardized scores categorized into low risk, moderate risk, and high risk parenting attitudes. Lower scores indicate higher risk for child maltreatment. Each scale is measured independently.

The fourth assumption is that learning is both cognitive and affective and interventions and growth must occur at both levels. This assumption indicates that after treatment or education on parenting issues, scores on the AAPI-2 will show significant increases. The current study did not address this assumption. To evaluate this assumption would require investigation of pre- and post-test outcomes and focusing on program evaluation of a treatment, which was outside the scope of the current study.

The fifth assumption is that children who have higher levels of self-worth are more likely to show empathy, be nurturing to others, and become nurturing parents. Bavolek et al. (1979) proposed that adolescents who had experienced maltreatment were lower in empathy and more favorable to corporal punishment towards children. This assumption relates to the AAPI-2 constructs of empathy and strong belief in the use and value of corporal punishment.

The sixth assumption is that no one truly desires to be in abusive family interactions as either the victim or perpetrator (Bavolek, 2000). The idea that parents can improve their parenting attitudes with treatment or education is the basis for this assumption. The current study did not directly address this assumption. The current

study was not investigating treatment gains or post treatment attitudes. Data analysis was restricted to initial scores on the AAPI-2.

These six assumptions form the basis of the structure and function of the AAPI-2 and the five constructs of parenting attitude represented in the assessment tool. Three of these assumptions: the family is a system, empathy is a highly desirable quality for nurturing parenting, and high self worth leads to nurturing parenting relate directly to the structure of the AAPI-2. Each of these three assumptions relates directly to one or more of the five AAPI-2 constructs: inappropriate parental expectations, parental lack of empathic awareness of children's needs, strong belief in the use and value of corporal punishment, reverses family roles, and oppressing children's power and independence. Three of the six assumptions healthy and unhealthy parenting exists on a continuum, learning is both cognitive and affective, and no one desires to be an abusive parent relate to the functional aspects of the assessment and norming and interpretation for the scale scores.

Research Questions

The research questions used to guide the analyses in this study are as follows:

1) Do the five domains of the AAPI-2 predict level of risk on the DHS safety assessment among CPS investigated parents? A predictive discriminate analysis was performed to answer this question. The hypothesis for this question is that the sub-scale scores on the five domains of the AAPI-2 will predict group membership for level of risk of CPS investigated parents.
2) What demographics predict the composite scores on the AAPI-2 for CPS investigated parents? This question is exploratory in nature and used a

multiple regression analysis to identify any predictor variables among the demographics for the AAPI-2 composite score. The hypothesis is that certain key demographics, specifically, experience of family violence, gender, age, education, income level, marital status, and ethnicity predict composite scores on the AAPI-2.

3) What demographics predict level of risk for child maltreatment as indicated by the DHS safety assessment? This question is exploratory in nature and used a discriminate analysis to answer the question. The hypothesis states that certain key demographics, specifically, experience of family violence, gender, age, education, income level, marital status, and ethnicity identify group membership for level of risk on the DHS safety assessment.

Design and Data Analysis

The data collected for this study consisted of archival data from parents referred to a community education program for parent education. The parents referred to this parenting program received their referral due to investigations by the Child Protective Services (CPS) division of the Department of Human Services or Indian Child Welfare (ICW) for child maltreatment in the State of Oklahoma. Only participants who had received a referral from CPS or ICW received admittance into the parenting program. The parenting program collected data on a number of participant demographic variables as well as scores for the AAPI-2 and level of risk reported on the DHS Safety Assessment form and compiled this information into a database. The database was used for program and curriculum evaluation. In this study, there was no direct contact with participants and no identifying information received in the archival data as removal of all names

occurred prior to compiling the data. The archival data consist of records from 2005 thru 2010. The demographics included in the data included: ethnicity, age at assessment, gender, employment status, income level, education level, experience of family violence, marital status, and number of children. Data used in the study included only participants that were no longer active in the program and were 18 years of age or older. Analysis includes predictive discriminate analysis and multiple regression techniques.

A frequency distribution with the demographics was completed to assess that the sample approximated the general population for this region of the State of Oklahoma. The first step was to perform a predictive discriminate analysis with the f domains of the AAPI-2 on to the DHS safety assessment ratings of level of risk of child maltreatment. The second step was to perform a multiple regression analysis with the demographic data on AAPI-2 composite scores to explore the connections of those demographics in predicting outcomes on the AAPI-2 total composite score. The third step was to perform a discriminate analysis with the study demographics on the level of child maltreatment as determined by DHS-CW safety assessments to explore the prediction of the level of risk of child maltreatment for parents involved with CPS from demographic characteristics.

Overview of the Study

Chapter I provides a background to the problem and purpose of the study with a brief overview of the design of the study and research questions and hypotheses. Chapter II provides a review of the relevant literature associated with the five domains of the AAPI-2 and populations investigated for the use of the AAPI-2. Key demographic variables are investigated. A review of literature regarding key demographics is presented. Chapter III provides the research methodology and design of the study

including a description of the instruments used and the statistical methods used to address each research question. Chapter IV presents the results of the study with the details of the ability of the AAPI-2 to classify the level of risk for child maltreatment. Chapter V presents a discussion of the implications of the results in terms of theory and practice, and includes limitations of this study concluding with recommendations for theory, practice, and further research. Relevant graphs and tables can be found throughout the text. The IRB approval can be found in the appendix.

Definition of Terms

"At-Risk" refers to families considered at risk for maladaptive behaviors due to certain demographic and behavioral health characteristics (Morrow et al., 2010).

Child maltreatment is actions by a caretaker whether physical, mental, sexual, or negligent treatment towards a child under eighteen which result in the child's health or welfare being harmed or threatened (Child Abuse Prevention and Treatment Act, 1974).

Empathy is the ability to be aware of the needs of others and to value those needs (Bavolek, 2000).

Family Roles consists of the views on who supports and cares for others in the family and who has control (Bavolek, 2000).

Expectations are the consideration of developmental knowledge to allow or direct children's behaviors (Bavolek, 2000).

Corporal punishment is the use of physical forms of punitive punishment to control another's behavior.

Family Violence is any act of aggression on a family member, whether adult of child, with the intent of harm, control, manipulation, or personal gain with disregard for the well-being of the victim and at the advantage of the aggressor.

Child Protective Services (CPS) is the division of the Department of Human Services responsible for the investigation and confirmation of child maltreatment based on observable and gathered facts.

Indian Child Welfare (ICW) is the tribal entity responsible for the investigation and confirmation of child maltreatment based on observable and gathered facts for cases occurring on tribal ground or when tribal citizens request a change of venue from the State of Oklahoma to tribal courts.

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2; Bavolek & Keene, 2001) as a predictor of level of risk for child maltreatment as indicated by the Department of Human Services (DHS) safety assessment. The AAPI-2 addresses five domains of parenting attitudes associated with parents known to have maltreated their children. The five domains include inappropriate parental expectation, parental lack of an empathic awareness of children's needs, strong belief in the use and value of corporal punishment, parental role reversal, and oppressing children's power and independence. The literature relevant to the purpose is reviewed as it relates to assessing potential of child maltreatment. Demographics that may predict scores on the AAPI-2 and may predict level of risk for child maltreatment are presented.

Inappropriate Parental Expectations

One area found to be associated with child maltreatment has been inappropriate parental expectations of children's developmental abilities by their parents (Steele and Pollock, 1968). Abusive parents misperceive the abilities and motivations of their children. Inappropriate expectations are mediated by three key constructs. One construct influencing inappropriate expectations is parental knowledge or lack of parental

knowledge. Parents may simply not know or understand the needs and abilities of their child at different developmental stages (Bavolek, 2000). This often leads to expectations that are set higher than the child's ability to perform or emotionally handle. Second, many abusive parents have negative images of their own self-worth which then affects the image they have of their children. This negative self- image may have come about from experiences in childhood. This pattern of negative self-worth and abusive parenting then continues generation after generation, each time transmitted by the parent-child dynamics that are learned behaviors. Third, abusive parents often lack empathy necessary for determining appropriate expectations at different stages (Bavolek & Keene, 2001). Inappropriate expectations stem from abusive parents' own negative self-esteem perceptions and from a lack of knowledge about the capabilities and needs of children at each developmental stage (Bavolek, 2000).

Steele and Pollock (1968) studied common characteristics of counseling patients receiving services for severe maltreatment. One of the common characteristics their research uncovered in this clinical population was overestimation of the ability of their children. Parents in their study group expected and demanded their infants and children to behave in a manner that was developmentally inappropriate for their ages (Bavolek, 2000). When the children fail to meet the inappropriate expectations, the parent becomes frustrated and reacts aggressively to the child (Steele, 1986). Inconsistency of the parent-child interactions is another example where unrealistic expectations are evident. No parent behaves consistent 100 percent of the time towards their children, however, under normal inconsistencies children can adapt and do not show the internal and external behaviors commonly associated with inconsistent parenting. The maltreating parent,

however, is extremely inconsistent in their interactions leading to disruptions in feeding, sleep, discipline, and social interaction basic to normal health and development. The needs of the child are not the focus for the maltreating parent (Steele, 1986). This inconsistency in parenting may be worse than being a bad parent since the children receiving inconsistency never know what to expect.

Azar, Robinson, Hekimian, and Twentyman (1984) conducted a study that examined unrealistic expectations and problem solving differences between maltreating mothers and control group mothers. Maltreating mothers were composed of two categories, abusive and neglectful. There were no significant differences in results for abusive and neglectful mothers so these two categories were combined into one category of maltreating mothers. Maltreating mothers and control mothers were matched on demographic characteristics. This study improved on previous research that focused on parental knowledge of developmental milestones of children, which found no differences between maltreating mothers and control mothers. Azar et al. used a measure of parental perceptions of complex interpersonal sequences since parental aggression often occurs within complex interpersonal events rather than simple acts of developmental milestones of the child. A strong difference was noted between maltreating mothers and control mothers when studying parents' perceptions of their children's abilities. Results indicated maltreating mothers had significantly higher levels of unrealistic expectations of their children when compared with control group mothers.

Inappropriate expectations relates to appropriate family roles (Steele, 1986). The inappropriate expectations of maltreating parents were oriented towards their own needs and desires. Mothers who believe their child's behavior to be serious and intentional are

more likely to react with physical punishment than a mother who interprets the child's behavior to be neutral, unintentional, and within normal development for that child (Ateah & Durrant, 2005).

Empathic Awareness

Empathy is the awareness of another's needs, feelings, and states. Parents with lower empathy tend to see their children from a negative perspective and see their child's needs and wants as nuisances or irritations. This negative perspective leads the parents to quickly become stressed and overwhelmed with their child's needs and wants. These parents see their own needs as important as or more important than the needs of their children (Bavolek & Keene, 2001). The more open individuals are to their own emotions, the more skilled they will be in reading feelings in others. This is a key component to positive parenting and meeting the needs of the child. Empathic awareness of a child's needs entails a parent's ability to understand the condition or state of mind of the child and to participate in the child's feelings and ideas (Bavolek, 2000). Abusive parents often ignore their children because they do not want to spoil them. This can result in the parent not meeting the child's basic needs (Steele, 1975). This also relates to the inappropriate expectations of the maltreating parent. There is a high value placed on the child being good and obedient. However, the abusive parent seldom clarifies or expresses to the child the expectation of what constitutes good and obedient behavior. At the extreme end of the scale, these parents are violent, cruel, and can become physically or psychologically abusive under the guise of teaching and discipline (Bavolek, 2000). The effect of inadequate empathic parenting during the early years of life is extensive (Steele, 1975). Children ignored by the parents and whose basic needs are neglected

often fail to develop a basic sense of trust (Bavolek, 2000). The effects of this early neglect can persist into adulthood (Ackley, 1977; Massie & Szajnberg, 2006). Abusive parents show an inability to be empathically aware of their children's needs and to respond to those needs appropriately (Steele, 1975).

Further supporting the importance of empathy, Massie and Szajnberg (2006) demonstrated the connection between low empathy and maltreatment in a two part longitudinal study. In the first part of the study, mothers matched on demographics were measured on a number of parenting attributes. Mothers identified as less effective with their children had lower levels of empathy used higher levels of control and appeared more disorganized. In the second part of the study, 76 of the previous participants were located and agreed to continue in the study. The adult functioning of ten of the participants was compared through use of interviews. These ten participants now reported they had suffered severe abuse as a child but had not previously reported during the first part of the study with non-abused participants. Nine out of the ten abused children from this study had mothers in the less effective group during the first part of the study. Results of the 30-year follow-up in the second part of the study confirmed that the quality of mothering, including empathy, of their children as infants had some long-term impact on the emotional development of their children even into adulthood. All ten of the maltreated children in the follow-up had fathers in the less effective group from infancy up to age seven.

Steele (1986) showed a link between poor attachment and empathy. Parents with poor attachment show low empathy and are less sensitive to the needs of their children. This lack of empathy results in misinterpreting behavioral and vocal signals and affects

the parent-child relationship negatively through inappropriate expectations and harsh punishment. At extremes, this misinterpretation results in neglect or physical abuse (Steele, 1986).

Brems and Sohl (1995) found empathy to be an important parenting characteristic. Parents with higher levels of empathy are less likely to endorse physical forms of punishment and ignoring and more likely to use positive discipline techniques such as rewarding good behavior for children with good behavior histories. Parents who were lower in empathy were more likely to choose negative parenting strategies especially when the parents perceived the child to have a negative behavior history.

Use of Corporal Punishment

The research field on parent-child relations and child maltreatment is extensive in identifying corporal forms of punishment correlated with a whole host of negative outcomes in adulthood such as emotional dysfunction, poor interpersonal skills, psychological internalized disorders, sociopathy and violence (Ateah & Durrant, 2005; Baumrind, 1994). Research has found that parents' experiences with discipline growing up influences their use of corporal punishment as parents with their own children (Palusci et al., 2008). Many professionals concerned about child abuse recommend against the use of physical punishment (Baumrind, 1994). Additional studies have also shown that intervention programs aimed at reducing maltreatment through cognitive interventions can influence cognitive and affective constructs associated with the use of corporal punishment (Ateah & Durrant, 2005; Littell & Girvin, 2005).

Ateah and Durrant (2005) found an association with education level and use of physical punishment. Mothers with less education were more likely to use physical

punishment. However, the greatest predictor of mothers using physical punishment was the mother's approving attitude towards using physical forms of punishment. This study found that the use of physical punishment was increased based on the mother's perceptions of seriousness of the offence.

Abusive parents often believe babies should not be given in to or allowed to get away with anything, and believe they must show their children who is boss (Steele, 1975). Abusive parents highly value physical punishment. They see physical punishment as a proper disciplinary measure and strongly defend their right to use physical force. Studies indicate that abusive parents use physical punishment to punish and correct specific bad conduct or perceived inadequacies. Much of what abusive parents find wrong with their children reflects the behaviors for which they received criticism and punishment as children themselves, carrying a cultural strength to this behavior. Physical abuse on children results in negative outcomes. Straus (1991) found that the use of corporal punishment led to the probability of deviance, including delinquency in adolescence and violent crime inside and outside the family in adulthood. Straus and Paschall (2009) found that spanked children showed lower levels of cognitive functioning four years later when compared with children who experienced little or no spanking.

In addition, children who see and experience recurrent episodes of serious violence in their own families learn and believe violence is a useful way to solve problems. On becoming parents, these children tend to punish their own children more severely (Bavolek, 2000; Straus, 1991). Straus (2001) reports use of spanking leads to greater rates of adolescent aggression, delinquency, and depression. Children

experiencing a high level of spanking also show a high relationship with spousal abuse as adults. This points to a possible relationship between intimate partner domestic violence and child maltreatment.

Parental Role Reversal

Often, as a result of their own neediness and immaturity, maltreating parents are in competition with their children for care and attention (Baumrind, 1994). Studies have found infants and toddlers who raised by caregivers who orient the care toward their own needs while at the same time disregard the needs of the infant learn from experience that their own inner feelings and desires are relatively unimportant. This builds a perception of learned helplessness and lowers the child's self-esteem, which persists into adulthood (Steele, 1986).

As adults, these individuals often feel like children masquerading in an adult body, because, they have never been allowed or encouraged to grow up themselves. They learned from their parents not to pay attention to their own feelings and thoughts but only to the needs and feelings of the caregiver. Ultimately, this hinders appropriate psychosocial development and increases the risk for neglectful parenting. As adults, these parents find it difficult to find pleasure in life in any of their social interactions including with themselves. These parents perceive their lives as unrewarding, empty, and unhappy and struggle with normal day-to-day functioning and this results in the role reversal situation where the parent's expectation for the child is to meet the emotional needs of the parent (Steele, 1986).

Steele (1975) describes this role reversal as the parent behaving as a helpless, needy child who looks to his or her own children as though they were adults who could

provide parental care and comfort. Ackley (1977) states that potential abusers have push-pull type intimate relationships. They attempt to regain what is missing in their relationship with their parents and define a close relationship as one in which they receive emotional support and warmth without giving much in return. Alternately, they may push away from intimacy because they perceive their earliest childhood attempts at intimacy with their parents as failures. The early experiences of these primary relationship failures or having intimacy and trust may suggest to them that close relationships are dangerous because people cannot be trusted. The outcome of this complex set of feelings is that potential abusers marry individuals who are not capable of providing their needed emotional support and then expect their children to fill the gap and give them the love they have been missing all their lives. When they experience that parenting involves more giving than receiving, they become disappointed and frustrated. These parents then see their children as inadequate. In their frustration with this inadequacy of not getting their needs met, the parent resorts to child maltreatment such as to beat, chastise, belittle, or ignore the children (Ackley, 1977).

There is a relationship of role reversal and inability to be empathically aware of children's needs. However, despite this association the two behaviors are markedly different. When abusive parents fail to show empathic awareness of their children's needs, the children are often left to care for themselves. In the extreme, this leads to emotional or physical neglect or abuse. In a role-reversal situation, children are a primary part of the family functions, often becoming a source of authority, control, and decision-making and become the parentified child.

The effect of role reversal on abused children is destructive. Children who assume the role of responsible parent fail to negotiate the age-specific developmental tasks such as forming close relationships, developing a sense of trust, and developing a separate sense of self that are important for normal development. A child's failure to perform these developmental tasks restricts development and reinforces feelings of inadequacy. Children in a role-reversal situation exhibit little sense of self and perceive themselves as existing only to meet the needs of their parents (Bavolek, 2000).

Oppressing Power and Independence

Parents who use high control and strict parenting behaviors oppress their children's ability to practice positive personal power and independence necessary for positive development (Bavolek, 2000). Abusive parents tend to have less access to family support and community resources than non-abusive parents. They experience less pleasure and display more negative affect toward their child, perceiving their child as displaying more problem behavior. Compared with non-abusive parents, abusive parents use discipline that exhibits a high level of control, rated as more authoritarian, and do not encourage their child's autonomy. The parent does not want to have their authority or control questioned. Use of power-control types of discipline negatively affects children. High stress in the parents may lead to a need to feel empowered in the home when social networks outside the home fail to help them achieve social status. This impression of inadequacy perceived by the parent of no control or limited control in their environment, leads to their over controlling parental behaviors at home with their children, the one situation they feel they can have some control (Baumrind, 1994). When the child's

autonomy is restricted this impinges on the ability of the child to practice normal developmental tasks on their own which may lead to delayed developmental gains.

Assessing Potential for Child Maltreatment

Parent educators accept that parenting patterns are learned in childhood through interactions with one's own parents and carried in to adulthood with one's own children (Bavolek, 2000). Research has shown associations between parents with unrealistic expectations for their children and child maltreatment (Steele & Pollock, 1968) and child internalizing disorders, (Martin, 1976). Parental lack of empathic awareness of children's needs is related in that abusive parents tend to display lower levels of empathic awareness of their children's needs and then respond inappropriately to those needs (Steele, 1986) and have a greater risk of aggression in discipline (McElroy & Rodriguez, 2008). Abusive parents commonly have a strong belief in punitive physical punishment. Punitive physical punishment correlates to increases in delinquency and violent crimes (Straus, Sugarman, & Giles-Sims, 1997). In cases of parental role reversal, children fail to negotiate their own age-specific development tasks. The parentified child is negatively impacted in their development. This interaction further reinforces feelings of inadequacy. Research has found that excessive use of power-assertive discipline methods has a negative impact on children and may be an expression of parental-stress and a need by the parent to feel empowered (Baumrind, 1994).

Based on social learning theory (Bandura, 1977), observed patterns of parental behavior are learned and utilized by abused children in other social interactions (Salzinger, Feldman, Hammer, & Rosario 1993). Parenting is a learned behavior influenced by the experiences and parenting received growing up and has a significant

impact on the attitudes, skills, and childrearing practices they will use with their own children (Bavolek, 2000; Steele, 1986). The abused child develops a model of parenting that best fits the experiences from childhood and the parenting they received growing up. This model is developed even at a young age and is resistant to alternative experiences when the child grows older (Baumrind, 1994).

The AAPI-2 claims to identify high-risk child rearing and parenting attitudes that could lead to physical or emotional abuse, or neglect of children. Research findings with the AAPI indicate abusive parents express significantly more abusive attitudes than non-abusive parents in all five of the parenting constructs measured in the assessment. Males express significantly more abusive attitudes than females. An intergenerational connection has been found with abused adolescents expressing significantly more abusive attitudes in all five constructs of the AAPI than non-abused adolescents (Bavolek, Comstock, & McLaughlin, 1996). The intended use of the AAPI was to measure treatment effectiveness, assess the parenting and child rearing attitudes of parents and adolescents prior to parenthood and design specific parenting education programs (Palusci et al., 2008).

The primary group of adolescents assessed in the initial development of the AAPI (Bavolek et al., 1979) were labeled non-identified abused and did not report if they had experienced abuse or not. There was no measure in this case to determine if the adolescents from experiencing abuse just that absence of reporting. Without controlling for abuse this could have resulted in a possible confound with the test group. The test group included a sample of 91 adolescents with known histories of abuse who were in an institution in Idaho. A control sample of adolescents' scores was randomly chosen from

the non-identified abused population. Bavolek et al. found a significant overall mean difference ($p<.001$) across the four constructs between abused and non-identified abused adolescents. The mean construct scores were higher indicating less abusive attitudes than those for the abused. There was a significant difference ($p< .001$) between the males and females in the groups with the AAPI.

A stepwise discriminant analysis showed that any construct could be used effectively to predict membership in either of the two groups abused or not abused. The F ratio was highest for construct two, empathy. From their findings, Bavolek et al. (1979) concluded that construct items associated with the construct of empathy, would be sufficient to discriminate between the target groups of abused and non-identified abused adolescents.

AAPI-2 Development:

The AAPI-2 is the revised and re normed version of the original AAPI. Bavolek and Keene (2001) report validity and reliability of the AAPI-2 support its use as a diagnostic tool. The AAPI-2 adds a fifth construct, oppressing children's power and independence, and provides norm tables for adult parents and non-parents as well as adolescents. In constructing the AAPI-2 an additional 120 statements were generated for review by professionals. Ninety-two of those statements were included in initial field-testing and construct analysis reduced the items to 84. The norming study was performed across 23 states. Changes from AAPI to AAPI-2 included Forms A and B of the AAPI-2 were parallel with both containing positive and negative statements (Bavolek and Keene, 2001). Previous research by Bavolek (1984) had shown the construct structure of the AAPI to be similar for both adolescents and adults.

Data for the construct analysis on the AAPI-2 came from 1,427 cases. The analyses of internal reliabilities yielded Cronbach's Alphas ranging from .80 to .92 (Bavolek & Keene, 2001). The two forms of the AAPI showed correlations ranging from .80 to .92 indicating that forms A and B were reasonably compatible. Bavolek and Keene noted, however, evidence of weak discriminate validity between the two forms. Bavolek & Keene reported a sample size of only 87 for known abusive or neglectful parents in AAPI-2 validity and reliability study.

There was a significant difference in the group means of maltreating versus non-maltreating parents and significant difference between male and female scores on the AAPI. Stepwise discriminate analysis was reported for the original four constructs of the AAPI but not for the newest construct on the AAPI-2. The stepwise discriminate analysis found significance for the original four constructs to predict group membership. In assessing the diagnostic capabilities of the AAPI, Bavolek and Keene (2001) reported a sample size of only 24 known abusive and neglectful parents. Bavolek and Keene reported that 70% of abusive parents had similar attitudes and 66% of non-abusive parents had similar attitudes. There was a reported 8% to 21% of the attitudes expressed by the abusive parents that appeared more similar to non-abusive parents. Bavolek and Keene present this as evidence of the diagnostic capabilities of the AAPI as scores for abusive and non-abusive attitudes fell on a continuum. An ANOVA was used to analyze the data, and researchers found significant differences in group means between abusive and neglectful parents and non-abusive parents. Bavolek and Keene present this as evidence of the discriminating ability of the AAPI.

Conners, Whiteside-Mansell, Deere, Ledet, and Edwards (2006) evaluated the psychometric properties of the AAPI-2. Conners et al. performed a confirmatory factor analysis (CFA) on the five scales of the AAPI-2 and an exploratory factor analysis where the results of the CFA did not meet unidimensionality of the scales. Of the five scales in the AAPI-2 only one scale, Oppressing Children's Power and Independence, fit with a one-factor model. To explore the structure of the AAPI-2 further, a principal components analysis (PCA) using Varimax rotation was performed and resulted in 10 factors explaining 56.2% of the total variance. Little support was found for the factor structure presented by the developers for the AAPI-2. The alpha reliabilities found by Conners et al. ranged from .50 for Oppressing Children's Power and Independence to .79 for Lack of Empathy and Value Corporal Punishment. The sample included low-income mothers with children in Head Start programs.

Palusci et al. (2008) conducted a program evaluation study on inmates for substance abuse, batter's intervention group, residential treatment center for substance abuse, at-risk parenting group and a general parenting group. Participants were administered the AAPI-2 pre and post treatment. Palusci et al. excluded individuals with open child protective services from their study. This study did not find difference between pre-test scores between groups but post-test scores were influenced by group differences. All groups made gains in two or more domains, however, the domains showing gains varied depending on the group. Little or no change was noted in the oppressing children's power and independence scale. This indicates there may be different norms for specific populations being assessed and points to the need for further

inquiry into the validity and predictability with specific populations not yet studied such as those who are involved with CPS.

Guthrie et al. (2009) used the AAPI in a study measuring treatment outcomes with a high-risk population of mothers. The mothers were considered high risk due lower income and being on some form of governmental health insurance. The study found connections with certain demographics related to scores on the AAPI. Education, household size, and employment showed significant relationships to AAPI scores with small effect sizes. Guthrie et al. (2009) found an overall Cronbach's alpha of .89 showing acceptable reliability among the scales; however, inappropriate expectations had a low reliability of .37.

Grella and Greenwell (2006) used the AAPI-2 to examine correlations between loss of parental rights and parenting attitudes among substance abusing women offenders who were incarcerated. This study found no statistical differences among the female offenders based on whether they had lost rights to their children or not, but did find that there was an increased risk for abusive attitudes for the group of inmates overall especially in the AAPI-2 construct of role reversal. Also identified in the Grella and Greenwell study were constructs of social functioning associated with scores on the AAPI-2. Demographics in this study associated with scores on the AAPI-2 were ethnicity with African American women showing lower scores on all subscales of the AAPI-2 compared with white women and Hispanic women showing lower scores compared to white women on 2 sub scales of the AAPI-2, parental role reversal and oppresses power and independence. Lower education was correlated with lower AAPI-2 scores.

Demographics of Child Maltreatment

Impact of Family Violence and Child Maltreatment

Studies have found that in homes where spousal abuse is present there is a 40 percent or greater co-occurrence of physical child abuse (Appel & Holden, 1998). Appel and Holden reviewed 31 empirical studies and found that the high percentage of overlap held true for groups of battered women and child abuse reports from hospitals but was considerably lower for general community populations. This points to distinct differences in these specific populations that require direct inquiry focused specifically on their characteristics.

For young children, families are primary socialization agents, and patterns of behavior learned within an abusive family context contribute to children's dysfunctional development (Patterson, 2002). Continued abuse reinforces antisocial behavior in adolescence and coercive social patterns later in life as adults (Salzinger, Rosario, & Feldman, 2007). Persistent maltreatment in childhood and adolescence shows stronger negative consequences in adolescence than does maltreatment occurring only in childhood (Thornberry, Ireland, & Smith, 2001) giving evidence that increased negative parent-child interactions develops intergenerational use of child maltreatment.

Abuse itself is a violent interpersonal act that provides both a stressful experience and when it occurs between parents and young children is a learning experience for later social interactions. Burgess and Conger (1978) demonstrated support for the reinforcement contingencies that operate to produce coercive behavior between parents and children as characteristic of abusive families. When these abusive behavior patterns persist within the family, it is likely adolescents will incorporate it into their behavior

patterns. If abused children are able to separate from antisocial familial influences and form more normative peer relationships or have supportive patterns of attachment are present, it may serve to protect against later violent behavior.

Child abuse and domestic violence often co-occur (Appel & Holden, 1998). Patterns of behavior modeled by parents and witnessed by abused children at home are then practiced with others within the wider peer network. Formation of hostile attributions develops within the context of a continuous negative transactional process of interactions with family and friends (Dodge & Somberg, 1987). In general, personal relationships are affected by abuse and influence subsequent behavioral outcome (Salzinger et al., 2007).

Personal relationships play a significant and complex role in explaining the effect of early abuse on later violent delinquency. Attachment to parents and abusive relationships with parents in adolescence each mediates between child abuse and later violent delinquent behavior. Abusive patterns of parental behavior that continue into adolescence are clearly associated with violent delinquent outcomes (Salzinger et al., 2007). An association has been found between child abuse and other forms of household violence such as intimate partner domestic violence. Male batters have been shown to be seven times more likely to abuse their children then samples from an inmate population (Palusci et al., 2008). Other models have also found an association between witnessing violent behavior and victimization to subsequent aggressive behavior (Salzinger et al., 2002). Massie and Szajnberg (2006) found mistreated children fared significantly worse than non-maltreated children on every one of their study variables leading to the conclusion that children experiencing severe maltreatment grow into adults with lower

overall functioning, poorer psychosocial development, and a higher rate of psychiatric diagnoses than adults with more positive backgrounds.

Chung et al. (2009) found that mothers who had experienced childhood violence were more likely to condone corporal punishment and more likely to use infant spanking. There was indication of an intergenerational transmission of harsh discipline as they used techniques similar to what they had experienced as a child. Mothers abused as children were 1.5 times more likely to use spanking with their infants.

Gender

It has long been accepted that men and women are different in their parenting styles. Women are typically accepted as being more nurturing and empathetic than men. Palusci et al. (2008) found that males had lower scores than females on AAPI-2 scores on both pre-test and post-test but showed higher gains in AAPI-2 scores from pre-test to post-test when compared with women. Bavolek (1984) found significant difference in men and women scores on the AAPI with men scoring significantly lower than women on the AAPI scales indicating men had a higher risk for child maltreatment.

Age

Numerous studies have found that compared with younger mothers, older mothers are less likely to spank (Giles-Sims et al., 1995; Combs-Orme & Cain, 2008). Other studies, such as Palusci et al. (2008), did not find any significance for age or ethnicity. Grella and Greenwell (2006) found that incarcerated women who had lost their parental rights were younger than incarcerated women who retained their parental rights. Connelly and Straus (1992) investigated mother's age as a factor of risk for physical abuse. They found a significant relationship between mother's age at the time of the birth

of a child for increased rate of child abuse but no significant relationship between mother's age at the time of abuse. Sidebotham et al. (1992) found a trend towards younger mothers with an increase in child maltreatment.

Education level

One common risk factor identified in a number of studies is being less educated (Bavolek, 2000; Drummond et al., 2002; Guthrie et al., 2008). Education has also shown a correlation with young age and low income (Sidebotham, Golding, & the ALSPAC Study Team, 2001). Moreover, the lower the education level of the mother the more likely she is to use physical forms of punishment (Appel & Holden, 1998). Steele (1986) reports children who have learning problems are often those who later drop out of school. Parents with lower educational levels due to drop out have limited skills leading to poor job history and low incomes, which have been shown to be associated with increased risk of abuse and neglect. Grella and Greenwell (2006) found connections with education level and scores on the AAPI-2 where lower education correlated with lower scores on the AAPI-2 indicating high risk for child maltreatment.

Chung et al. (2009) however, did not find any differences in education in their study of at-risk mother's perceptions of infant spanking. The mother's were mostly black, low-income women. Combs-Orme & Cain (2008) did not find any differences in their study of mothers who spank related to education. Connelly and Straus did not find statistical significance for low education, single mothers, and low-income mothers for abuse of their children. The research on this potential related demographic still has mixed outcomes in the research literature and needs continued research to identify possible relations of education and child maltreatment.

Income level

Socio-economic status has long been identified as a possible correlate with child maltreatment. Baumrind (1994) found associations regarding inappropriate expectations and the impact on parenting. Families of lower income tend to attribute children's misbehavior to stubbornness and are more likely to use harsh discipline**.** Abusive parents rate their children as more aggressive and hyperactive than non-abusive parents even when observers cannot identify the differences. Families of low socioeconomic status (SES) tend to be overrepresented in CPS caseloads (Appel & Holden, 1998). Socioeconomic stressors are often associated with potential for abuse, insecure attachments, and other adverse outcomes. Giles-Sims, Straus, and Sugarman (1995) found a significant negative correlation between SES and the frequency and severity of spanking. Salzinger et al. (2002) found significantly more mothers of abused children were receiving welfare than women of non-abused children.

Marital Status

Giles-Sims et al. (1995) unmarried mothers and married mother did not significantly differ in how many spank but unmarried mothers did spank more often than married mothers. Salzinger et al. (2002) found that abused children were more likely to live with a single mother than non-abused children. An interesting finding related to marital status comes from Sidebotham et al. (2001). Sidebotham et al. found that mothers whose parents were divorced and not the mothers themselves had an increased chance of having an abused child. This demographic continues to show mixed findings in research. Continued research on this demographic is needed until a consistent finding is reached or findings or mediating and moderating variables are discovered.

Ethnicity

Giles-Sims et al. (1995) found that African American mothers spank more than other ethnic groups but it was not significant. Out of all demographic study variables in Chung et al. (2009), mother age, income, ethnicity, marital status, and education level with mothers who value corporal punishment, only ethnicity was significant. Chung et al. found that African American women were the only ethnicity with a higher percentage of mothers who value corporal punishment versus mothers who did not value corporal punishment. Baumrind (1994) reports that child maltreatment is more likely to be reported for low-income families that are not Caucasian and the perpetrator is not the mother. Connelly and Straus (1992) found that African American and Hispanic mothers had an increased probability for child abuse compared with Caucasian mothers.

Summary

It is apparent that the issue of child maltreatment is a very complex issue with a number of constructs that while distinct, also interact to some degree with other constructs. In order to identify risk or assess for maltreatment a diagnostic and screening tool that takes into consideration these multiple constructs is necessary. Building from the work of Steele and Pollock (1968), Bavolek has identified five constructs associated with child maltreatment. These five constructs: inappropriate expectations, lack of empathy, value of corporal punishment, parent-child role reversal, and restricts power and independence are key constructs used in the AAPI and later the AAPI-2 to identify high risk parenting attitudes.

In identifying inappropriate expectations as a key construct in child maltreatment, Steele and Pollock (1968) found that a clinical population overestimated the ability of

their children leading to frustration and aggression towards their children. Baumrind (1994) reported a correlation between parent income level and inappropriate expectations where families of lower income were more likely to attribute children's misbehavior to stubbornness and to use harsh discipline**.** Empathy having some association to inappropriate expectations but being qualitatively different influences families for risk of maltreatment. Parents with lower empathy see their children from a negative perspective and see their child's needs and wants as nuisances or irritations. This demand for the child's needs stresses and overwhelms the parent. These parents see their own needs as more important than the needs of their children (Bavolek & Keene, 2001). This attitude of low empathy towards the child may then facilitate constructs such as inappropriate expectations, role reversals, and use of corporal punishment (Bavolek, 2000; Brems & Sohl, 1995). Inadequate empathic parenting also has developmental impacts resulting in lack of development of basic trust (Bavolek, 2000) and emotional development (Massie & Szajnberg, 2006). Massie and Szajnberg found deficits in emotional development that lasted well into adulthood 30 years later. Some associations with certain demographics and corporal punishment were shown. Ateah and Durrant (2005) found that as education increased the use of corporal punishments decreased. Other researchers found that use of corporal punishment led to increases in externalizing behaviors such as delinquency and violence in children that continued into adulthood. Steele (1986) found associations with internalizing behaviors and corporal punishment such as attitudes of learned helplessness and lower self-esteem that also persisted into adulthood. Ackley (1977) points to social-emotional development problems in regards to role reversals with parents and children and that this pattern tends to be reinforcing resulting in an intergenerational transmission

of parent-child role reversal patterns within families. Finally, Bavolek and Keene (2001) found that parents who restrict their children's power and independence show lower self-esteem and increased rates of child maltreatment. This restricts development in that parents do not allow their children to do developmental task that they could do on their own or with only supervisory assistance.

The AAPI, originally developed as a prevention tool used with adolescents experiencing maltreatment as children, was later re-normed and revised into the AAPI-2 to include adults and to show effectiveness of parent education programs and identify high-risk parents. It has become a popular assessment tool and has been researched with populations ranging from incarcerated parents, substance abuse treatment participants, foster parents, and community mental-health/at-risk parents. Within some of these high-risk populations, some parents have likely been involved with child protective services; however, the focus of the previous research has not looked directly at the validity of the assessment for this distinct population. Research findings with the AAPI indicate abusive parents express significantly more abusive attitudes than non-abusive parents in all five of the parenting constructs measured in the assessment (Bavolek & Keene, 2001). Males express significantly more abusive attitudes than females (Bavolek, 1984). Further investigation with populations identified as abusive and neglectful will assist researchers and professionals in determining the diagnostic capabilities with this population and determine effectiveness of programs to bring about change for positive and healthy families.

There has been mixed results in past research regarding various demographic variables and their relationship to child maltreatment. There is still a need for research to continue looking at these issues and seek to find some uniformity in findings.

CHAPTER III

METHOD

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2) as a predictor of level of risk for child maltreatment as determined by the Department of Human Services (DHS) safety assessment. In this chapter the participants, instruments, procedures and data analysis are described.

Research Conceptual Framework

Quantitative research allows us to learn how many people in a population share particular characteristics or like a particular idea. Quantitative research is designed to produce and evaluate accurate and reliable measurements that permit statistical analysis. Quantitative research is appropriate for measuring both attitudes and behavior. Quantitative research allows for describing and defining a group of people based on shared characteristics or demographics and create models to predict behavior or views based on observable characteristics using advanced statistical techniques such as correlation, regression, or construct analysis.

The current study sought to identify specific variables that predict child maltreatment and predict level of risk for child maltreatment by using two statistical analysis methods, multiple regression analysis and predictive discriminate analysis. A

multiple regression technique was used where the dependent variable was interval level data. Discriminate analyses were used where the data included a combination of interval and categorical level data on the independent variables and in which the dependent variable was categorical. Multiple regression techniques are used to predict a criterion variable from several predictor variables and are appropriate when the predictor variables are mixed categorical and continuous.

Predictive discriminate analysis (PDA) is a technique similar to regression analysis except is used when the criterion variable is categorical or normally scaled. This technique is used in predicting group membership and provides information on the accuracy of classifying observations or responses in to pre-identified or pre-existing groups.

Research Design

Participants

This study utilized archival data from an existing database. The archived data included data collected about participants in a community parent education program between 2005 and 2010. The program provided services to parents referred by the Oklahoma Department of Human Services, Child Protective Service due to child maltreatment in the home. Upon admittance to the parenting program, demographic information for the participants was collected and compiled into a database used by the parenting program for program and curriculum evaluation purposes. Additional data compiled in the database includes pre and post treatment scores on the AAPI-2, level of risk for child maltreatment provided by the CPS worker on investigation of complaints.

The DHS safety assessment form reports risk for child maltreatment with options of no risk, low risk, moderate risk, high risk, and child death.

For the data available there were no records indicating *no risk* or *child death*. Respondents were primarily rural families living in and around north central Oklahoma and south central Kansas. All parents participating in the parenting program were involved with the Department of Human Services for the State of Oklahoma, Child Welfare division, Indian Child Welfare divisions of a number of tribes in and out of Oklahoma, or family court were the safety of the children were of concern.

Archival Database

Data excluded from the study were for respondents under the age of 18 or respondents enrolled in the program at the time the archival data was provided. Only a random identification number was provided with the records. No names were provided in the data therefore if any record contained missing data there was no way to follow up with that individual to gain further information. This provided additional protection of confidentiality due to the sensitive nature of the study.

Data obtained from the database included age, gender, ethnicity, education level, income, past experience with family violence, employment status, marital status, and number of children AAPI-2 scores pre and post both raw and standardized scores, and DHS safety assessment indicators. Past experience with family violence did not specify if the violence was experienced as a child or adult, if the family violence was current, or if the family violence was witnessed or experienced directly. Past experience with family violence also did not specify if the respondent was a victim or perpetrator or both if they reported experiences of family violence. The demographic category of number of

children did not specify if all children were in the home or out of the home or if parental rights had been terminated on previous children.

Instruments

The revised Adult-Adolescent Parenting Inventory (AAPI-2) is a 40 item norm-referenced, standardized inventory designed to assess parenting skills and attitudes measuring five constructs known to contribute to future child abuse and neglect with a potential total score of 200 (Bavolek & Keene, 2001). The AAPI-2 provides standardized scores for the five constructs. The AAPI-2 can be used to assess the parenting attitudes and child rearing practices of adolescents and adults by determining the degree to which respondents agree or disagree with parenting behaviors and attitudes known to contribute to future child abuse and neglect when compared to the norm group to determine risk level (Palusci et al., 2008). Information from the AAPI-2 has been used to provide pre-test and post-test data to measure treatment effectiveness, assess the parenting and child rearing attitudes of parents and adolescents prior to parenthood and design specific parenting education programs. The self-report measure uses a five point Likert scale ranging from strongly agree, agree, uncertain, disagree, to strongly disagree. The inventory items are written on a fifth grade reading level. The five constructs of the AAPI-2 have been reported to significantly discriminate between abusive and non-abuse parents with reported coefficient alphas ranging from .86 to .96 (Bavolek and Keene, 2001). Research findings with the AAPI indicate that abusive parents express significantly more abusive attitudes than non-abusive parents in all five of the parenting constructs (Bavolek et al., 1996). Low scores on the AAPI-2 correlate with higher potential for child abuse (Guthrie et al., 2008).

The first version of the AAPI was validated on the responses of approximately 3,000 adolescents. The adolescents were primarily Caucasian and living in urban and rural communities influenced by the doctrines of the Church of Jesus Christ of the Latter-Day Saints (LDS). The author of the AAPI reports item-construct correlations from .53 to .75 showing moderate to high degrees of relationship between item scores and total construct scores. The internal consistency reported for the items indicated reasonable levels of reliability for each construct (Construct A, Inappropriate Expectations: .70; Construct B, Lack of Empathic Awareness: .75; Construct C, Value of Corporal Punishment: .81; Construct D, Family Role Reversal: .82). The test-retest reliability coefficient of the items showed an adequate level of stability over a one-week period (.76).

The DHS Safety Assessment is a form used by child protective services (CPS) workers to identify specific risk of child maltreatment in the home and to issue a level of risk for child maltreatment by the parents. Risk can be assigned none, low, moderate, high, or child death. The DHS safety assessment measures risk to the child in a number of areas to achieve the final determination. The primary risk areas assessed are child factors, person responsible for the child factors, severity or chronicity factors, and environmental or family factors. Within each of these primary risk areas, a series of checkboxes identifying risk situations can be marked. The CPS worker evaluates both quantitative and qualitative aspects of risk to arrive at the final level of risk. Over the reporting time of 2005 to 2010, the DHS safety assessment form received a number of revisions. The overall structure remained and the primary risk areas remained the same. The format of the form and number of pre-defined checkboxes versus open answer space

changed during revisions. The CPS worker basis their rating on established criteria for child maltreatment as determined by federal and state guidelines. The CPS workers receive extensive training on rating the risk to ensure consistency in rating across workers. The rating is reviewed by a supervisor and discussed in case staffing.

Procedure and Data Analysis

The research questions for this study were addressed using predictive discriminate analysis and multiple regression analysis statistical techniques. The first research question, "Do the 5 domains of the AAPI-2 predict level of risk on the DHS safety assessment among CPS investigated parents," was addressed first by performing a predictive discriminate analysis with level of risk for maltreatment being the criterion variable and the five constructs of the AAPI-2 the predictor variables. The remaining two research questions are exploratory and will look at the demographics of the participant reports and their influence on AAPI-2 composite scores and risk for maltreatment as indicated by the DHS safety assessment. The second research question, "What demographics predict the composite scores on the AAPI-2 for CPS investigated parents," was addressed by performing a multiple regression analysis of the demographics of respondents to composite scores on the AAPI-2. The demographics assessed were exposure to family violence, ethnicity, gender, age, education level, income level, and number of children. The third research question, "What demographics predict level of risk for child maltreatment as indicated by the DHS safety assessment," was addressed by performing a discriminate analysis of the demographics, specifically, family violence, ethnicity, gender, age, education level, income level, and number of children, with level of risk of CPS investigated parents.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2; Bavolek & Keene, 2001) as a predictor of level of risk for child maltreatment as determined by the Department of Human Services (DHS) safety assessment for child protective services (CPS) involved parents. The findings to the research questions are presented here. The research questions are "Do the 5 domains of the AAPI-2 predict level of risk on the DHS safety assessment among CPS investigated parents?" "What demographics predict the composite scores on the AAPI-2 for CPS investigated parents?" "What demographics predict level of risk for child maltreatment as indicated by the DHS safety assessment?"

Demographic Descriptions

A total of 341 records of adults participating in a parent education program for prevention of child maltreatment were used in this study. All 341 records were of initial assessment prior to treatment. The frequencies for the demographics can be seen in Table 1. The ethnic composition of the sample was 77.4% white, 16.4% American Indian, 3.2% Hispanic, and 2.9% African American. From this sample, based on 2000 U.S. census data (U.S. Census Bureau, 2000), all ethnicities approximated population

ratios for this region with the exception of American Indians which were over-represented in this sample. The average age of respondents was about 29 years and ranged from 18 years old to 56 years old. From this sample, 42.8% of participants were male and 57.2% were female. Thirty-nine percent of respondents were single and 60% were married or unmarried partners in the same home. The remainder of respondents did not respond to this demographic question.

Table 1

Demographics for Respondents in Archival Database by Percentage

Demographic Category	Percentage	Census Data
Ethnicity		
White	77.4	84.2
American Indian	16.4	7.5
Hispanic	3.2	4.3
Black	2.9	1.8
Gender		
Male	42.8	48.4
Female	57.2	51.6
Experience of Family Violence[a]		
Yes in Lifetime	52.6	--
No in Lifetime	47.4	--
Education Level		
8th grade or lower	8.8	4.9
9th to 12th grade, no diploma	41.6	14.1
Completed High School	30.2	33.2
Some College but not completed	15.5	22.2
Completed Bachelor's degree	3.5	13.1
Employment Status[b,c]		
Full-time	44.3	--
Part-time	10.9	55.2
Unemployed	36.1	4.6
Unemployed due to Disability	8.8	44.7

Income[d]		
Under $15000	51.6	21.9
$15001 to $25000	12.9	18.9
$25001 to $40000	4.4	15
$40001 or higher	1.5	44.1
Did not respond	29.6	--
Marital Status[e]		
Single	39.3	--
Married	32.6	60
Cohabitating Couple	27.3	--
Median Age at Initial Testing	28	38.1

Note. Census data from U.S. Census Bureau Census 2000.
[a]Census data did not contain reports of family violence.
[b]Census data did not report separately for part-time and full-time employment. Census number represents total percentage employed.
[c]Census data reports percent employed with disability. Reported number was obtained from subtracting reported number from 100. This number represents population 21 to 64 year old.
[d]Census data structure reported income $15000 to $24999, $25000 to $34999 and $35000 and higher was compiled together for numbers reported in table.
[e]Census data did not contain data regarding single or cohabitating couples status.

Those reporting experiences of some level of family violence in their lifetimes was 52.6%. The remainder reported no past experiences of family violence. The reports of family violence did not take into account frequency, intensity, age, or type, only if family violence had ever been present. Nearly 9% of respondents had an 8th grade education or lower and 32% had a 10th grade education or lower. Only 30% of respondents had completed high school, 19% had some level of college education with 3.5% completing college with a bachelor's degree. For employment, 44% of respondents reported full-time employment, nearly 11% reported part-time employment, and nearly 45 percent reported being unemployed with 9% of those unemployed reporting they were on disability. Nearly 52% of respondents reported yearly income levels under $15000, nearly 13% reported yearly income between $15001 and $25000, 4.5% reported income between $25001 and $40000 per year, and 1.5% reported over $40000 a year income.

The remaining respondents did not report income. It is interesting to note that over 50% of the sample was below the poverty level however, 44% were working full-time jobs. This would indicate that those who were working, were employed at minimum wage or low paying jobs and spending more time working to make a small income. Such financial pressures could increase stress within the household.

Statistical Analyses

All statistical analyses were performed using PASW statistics 18 by SPSS, Inc. In answering the first research question, "Do the 5 domains of the AAPI-2 predict level of risk for child maltreatment on the DHS safety assessment among CPS investigated parents?" a predictive discriminate analysis was performed with all constructs entered. Of the 341 records from the database, 282 valid records entered into the analysis with 59 cases containing at least one missing code and therefore were excluded from the analysis. The first step in the predictive discriminate analysis was a dimension reduction analysis. Two discriminate functions were interpreted. Tests of dimensionality for the discriminate analysis indicate one significant discriminate function, which allows the rejection of the null hypothesis statistically. Reject, H_0, χ^2 (10) = 22.99, $p < .05$. See Table 2. Although statistically significant, $\Lambda = .92$ indicating that only 8% of the variance was accounted for by this discriminate function. Observing the eigenvalue of .07 for the first discriminate function as seen in Table 2 would indicate poor discriminating ability. The second discriminate function was not significant, χ^2 (4) = 5.36, $p > .05$.

Table 2

Summary Table for Discriminate Functions of AAPI-2 Constructs on Level of Child Maltreatment

Function(s)	Eigenvalue	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.066	.920	22.989	10	*.011
2	.020	.981	5.364	4	.252

Note. $p < .05$

To identify specific findings for the first significant function, the structure coefficients were observed for significant findings. The structure matrix indicates that the first discriminate function is primarily defined by construct E representing the AAPI-2 domain of power and independence (r = -.42), construct D representing family role reversal (r = .50), and construct B representing empathy (r = .34).

Table 3 shows the classification table for the discriminate analysis. The table shows that only 39% of the cases were correctly classified with 53.4% of low risk cases correctly classified, 50.6% of moderate risk correctly classified, and only 26.9% of high-risk cases correctly classified. The classification results indicate only an 18% improvement over chance (I = .18) in correct classification of risk level for parents involved with CPS when using the scales of the AAPI-2.

Table 3

Classification Table for Predicted Level of Risk by AAPI-2 Scales

		Predicted Group Membership			
	Level of Risk	Low Risk	Moderate Risk	High Risk	Total
%	Low Risk	**53.8**	19.2	26.9	100.0
	Moderate Risk	32.9	**50.6**	16.5	100.0
	High Risk	37.9	35.2	**26.9**	100.0
	Ungrouped Cases	40.7	39.0	20.3	100.0

Note. 39.0% of original grouped cases correctly classified.

The second research question was exploratory in nature to measure the influence of certain demographics on the composite raw score of the AAPI-2. A multiple regression analysis using enter method was performed. Table 4 shows the results of the analysis. The overall model for prediction of AAPI-2 composite scores from demographics was statistically significant $F(6, 233) = 2.78$, $p = .013$. The standard error of estimate was 17.57 indicating increased chance of prediction error. $R^2 = .07$ indicating only 7% of the variance was explained by this model. A rather low $R^2_{adj} = .04$ indicating poor model fit. Observance of the individual coefficients determined one demographic significant for the model of prediction of AAPI-2 composite scores, gender, $p < .001$ as can be seen in Table 4. No other variables examined approached significance.

Table 4

Regression Analysis Coefficients of Demographics Predicting AAPI-2 Total Composite Score

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	127.031	10.489		12.111	.000
	Ethnicity	-1.100	1.794	-.039	-.613	.540
	Experienced Violence	2.922	2.397	.081	1.219	.224
	Age at Initial Testing	-.025	.174	-.010	-.144	.885
	Education in Years	.271	.628	.029	.431	.667
	Income Level	1.069	1.594	.046	.671	.503
	Gender	9.393	2.563	.255	3.664	.000
	R^2	.109				
	R^2_{adj}	.082				
	F	4.07 **				

Note. $N = 241$. Dependent Variable: Total Score. $^{**}p < .01$

The third research question in this study was to explore the influence of certain demographics on the level of risk for child maltreatment as determined by the DHS safety assessment. A predictive discriminate analysis was performed with all variables entered. The demographic constructs used in this analysis were experience of family violence, gender, age of parent at testing, education level, income level, number of children, and ethnicity with 192 valid records entered into the analysis. The first step in the predictive discriminate analysis was a dimension reduction analysis. Two discriminate functions were analyzed. Tests of dimensionality for the discriminate analysis found neither discriminate function reached significance. For discriminate function 1, the function was not significant, χ^2 (14) = 22.39, $p > .05$. The second discriminate function was not significant, χ^2 (6) = 1.92, $p > .05$.

In this study there were no significant findings relating to age of parent at initial testing shortly after contact with child protective services and level of abuse. Connelly and Straus, (1992) reported inconsistent findings related to age and child maltreatment and determined that when age of parent at abuse was measured there were non-significant findings but when age of mother at birth was observed there were some indications of a relation between mother age and child maltreatment. The findings of this study partially support these findings concerning age of parents at time of maltreatment. In addition, the current study adds to previous research by including fathers. This study did not address the age of the parents at child's birth.

Another interesting finding from the demographics is in education and income levels. Although neither were statistically significant both were skewed towards lower levels for this sample as seen in Table 5. Education level and income level did not

predict level or maltreatment but there does appear to be a relationship between education level and child maltreatment and income level and child maltreatment. Numerous studies have suggested a relationship with income level and child maltreatment as it is common to see at-risk samples described as being at, near, or below the poverty level or as being of lower income (Baumrind, 1994; Connell, Bergeron, Katz, Saunders, & Tebes, 2007; Connelly & Straus, 1992; Guthrie et al., 2009; Marcenko et al., 2000; Sidebotham et al., 2001). Reitman, Currier, & Stickle (2002) have pointed to low income contributing to parent-child dysfunction through parental stress.

Table 5

Income and Education by Percentage

Income	
Under $15000	51.6
$15001 to $25000	12.9
$25001 or higher	6.9
Education Level	
Did Not Complete High School	50.4
Completed High School	30.2
Beyond High School	19.0

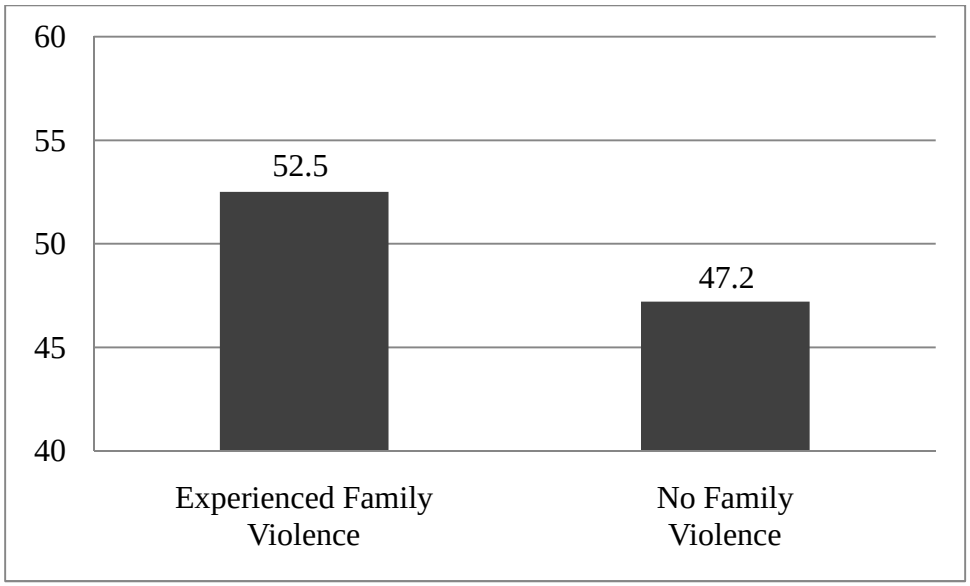
Note. Percentages listed do not show percentages of no response.
2009 poverty lines (Department of Health and Human Services, 2009). 1 person $10,830, 2 persons $14,570, 3 persons $18,310, 4 persons $22,050, 5 persons $25,790. 93.8% of respondents reported 5 children or less indicating poverty lines ranging from $25790 or less or approximately 63% of the sample.

Past experience of family violence resulted with interesting findings. Although past experience of family violence did not reach significance as a predictor of risk for child maltreatment there does appear to be a relationship between experience of family violence and child maltreatment. Just over half of the participants reported experiences

of family violence as can be seen in figure 1. This supports findings from Appel and Holden (1998) in their meta-analysis of studies investigating the relationship of domestic violence and child abuse where the median rate of co-occurring violence was 41%.

Figure 1

Experiences of Family Violence by Percentage



Summary

The statistical analysis in this study found some slight significance for the use of the AAPI-2 in determining level of risk for parents involved with Child Protective Services. However, this appears to be based primarily on only one construct of the AAPI-2, restricting power and independence. The structure coefficients for the discriminate analysis indicate the constructs of restricting power and independence, family role reversal, and empathy were related to the first significant discriminate function. Other constructs of the AAPI-2 that should possible connections were family role reversal and empathy, although they did not reach significance. Eigenvalues for the discriminate functions indicates poor discriminating ability, with only 39% of cases

correctly classified in to level of risk. This was only an 18% increase in correct classification over chance. Demographics related to the AAPI-2 also yielded few findings with only one demographic, gender, showing significance. Again although the overall model reached statistical significance it appears to be a function of the one construct and R^2 of only .07 shows little variance is explained by the model. The R^2_{adj} was only .04 indicating a very poor model fit.

The final analysis exploring possible relationships between demographics and level of risk for child maltreatment as determined by DHS safety assessment yielded no significant findings for the predication of level of risk for maltreatment based on demographics presented in the study.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMENDATIONS

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2; Bavolek & Keene, 2001) as a predictor of risk for child maltreatment. There have been only a limited number of empirical studies to validate the use of the AAPI-2 as a diagnostic tool for measuring the risk for maltreatment despite its wide use in the social service field. The focus of past research has been on the use of the AAPI-2 as a measure of program or treatment effectiveness and has failed to focus specifically on samples of individuals investigated by child protective services (CPS). The conclusions from this study may be useful in development of early identification, prevention, and intervention services for families at-risk for child maltreatment.

Summary of Findings

Quantitative data analysis methods were used in this study to respond to the research questions. Predictive discriminate analyses was performed to investigate the ability of the scales of the AAPI-2 to predict level of child maltreatment and to investigate what demographics might predict level of child maltreatment. A multiple regression was performed to investigate what demographics might influence the total score of the AAPI-2. The data consisted entirely of archival records from adults referred

to a community parent education program due to investigations by CPS for child maltreatment. Data used in this study included initial AAPI-2, Department of Human Services Safety Assessment rating of risk for child maltreatment, and the following demographics: gender, ethnicity, age of parent at initial assessment, education level, employment status, income level, and experience of family violence.

Although some significant findings were indicated from the data analysis for full model structures, interpretation of the analysis indicates a poor model fit for the use of the AAPI-2 as a diagnostic tool with parents involved with CPS. In the first analysis, a discriminate analysis indicated one significant function. Based on observation of the structure coefficients, this discriminate function was defined by three constructs: restricts power and independence, parental role reversal, and empathy. Although this function was statistically significant when the classification results were observed it was found to have only a 39% prediction rate which results in only an 18% improvement over chance in predicting the level of risk for maltreatment for parents involved with CPS. Due to such poor classification results and poor model fit, it would be better to accept the null hypothesis that the scales of the AAPI-2 do not predict level of risk for child maltreatment in CPS involved parents.

In the second analysis, a multiple regression with all constructs entered was used to identify potential predictors of the AAPI-2 composite score with demographics commonly researched in their relationship with child maltreatment. Past findings regarding demographics and the AAPI-2 scores have been mixed. The overall model was significant but with only one construct, gender, showing any individual significance. Gender was significant at $p < .001$. The R square value for the model was low and

indicated the model only accounted for about 7% of the variance. The adjusted R square value for the model was low indicating a poor model fit. Given these low figures, in practical terms, it is best to accept the null hypothesis that demographics presented in the study do not predict the outcome of scores on the AAPI-2.

The third analysis was exploratory in nature as well and utilized a discriminate analysis to identify if certain demographics predicted level of risk for parents involved with CPS. In this analysis, no significant functions were identified.

Conclusions

The results of the study indicated that although there was statistical significance of the full model, it appears that very little variance is explained by the constructs of the AAPI-2 and that the model fit was poor. This indicates that with parents involved with CPS for child maltreatment, the AAPI-2 is not effective in discriminating parents at different levels of risk for maltreatment as determined by the DHS safety assessment. Furthermore, the AAPI-2 had the poorest predictability for parents who were high risk for maltreatment. This could have serious implications for prevention and treatment services. If our available tools are not able to accurately identify those at high risk, we may not assign or direct those individuals to appropriate services to prevent future maltreatment. A key determinate to successful treatment is accurate diagnosis and effective screening. With current funding constraints, States increasingly require stringent evidence of need or diagnosis before covering the costs of treatment. Evidence based treatments are focused on the specific needs of the client. If parents are provided with services, we then need a tool that can accurately determine their risk level to know what services would be the best for that client's needs and to measure for intervention or

treatment gains. If we cannot accurately identify their level of risk after treatment, we may be placing children at continued risk of maltreatment with parents who did not respond to a particular treatment modality. The current results indicate the AAPI-2 to improve prediction of level of risk for child maltreatment only slightly over chance. This is not sufficient as a screening or diagnostic tool.

One surprising finding in regard to the variables associated with classification of risk for child maltreatment by the AAPI-2 was that the only AAPI-2 scales to show individual significance was the construct of oppressing children's power and independence. Research on the construct of oppressing children's power and independence has resulted in mixed findings. Palusci et al. (2008) reporting little or no change for this scale. Bavolek and Keene (2001) report this construct as having the lowest predictability. Bavolek and Keene report that the one scale that is sufficient on its own to discriminate between abusive and non-abusive individual was empathy. In the current study, empathy did not reach individual significance, although there was an association with the significant discriminate function seen in the structure coefficient for empathy showing sufficient correlation in the structure matrix to report. It would be expected that empathy and family role reversal would be key constructs in child maltreatment. Bavolek (2000) has reported that these constructs have some relation to each other at the same time being very distinct. Grella and Greenwell (2006) found significant results for the family role scale in comparing incarcerated women who had lost parental rights and incarcerated women who retained their parental rights. Therefore, it appears that certain scales of the AAPI-2 appear to be more sensitive with different populations of individuals and should be a topic of future research.

The fact that there was such poor classification found for the scales of the AAPI-2 for risk of maltreatment was surprising given that the AAPI-2 was developed for the purpose of identifying at-risk parenting attitudes. The group of individuals for which prediction would be most beneficial would be the high-risk parents. The current study found that this is the group with the lowest correct classification. This is a problem for identifying individuals for prevention or early intervention. With such poor classification with this sample, it suggests the need for the overall structure of the AAPI-2 to be reviewed.

In addressing the second research question, whether certain demographics predict AAPI-2 scores, the full model reached statistical significance; however, the overall model shows to be a poor fit. Previous studies such as Guthrie et al. (2009) found demographics of education, household size, and employment status showed significant relations to AAPI scores, although they found small effect sizes. In the current study there was not a strong fit, but the one construct that did reach individual significance was gender. This is in line with previous research by Bavolek (1984) finding men and women score differently with men showing significantly more high-risk attitudes than women on the AAPI.

It was a little surprising that education level did not affect the overall score on the AAPI. A number of studies have found correlations with education and AAPI scores (Bavolek, 2001; Drummond et al., 2002; Guthrie & Greenwell, 2006). Appel and Holden (1998) found a negative correlation between education level and corporal punishment. The current study did not find any differences in education and scores on the AAPI-2. These results correspond to research by Chung et al. (2009). In the current study,

education was not a significant predictor with parents involved with CPS regardless of their level of risk. It is interesting to note, however, that for this sample the level of education was skewed towards those with less than high school education. However, given the poor model fit of the AAPI-2 found in this study, it is difficult to draw definitive conclusions from the demographics in connection with the AAPI-2 and further research on this area is warranted.

The third research question was concerned whether certain demographics would predict level of risk as measured by the DHS safety assessment for parents involved with CPS. There were no statistically significant findings for this question; however, there were some interesting patterns noted in the demographics presented for discussion. Some past research has found a moderately high correlation with experiences of family violence and child abuse (Appel & Holden, 1998; Palusci et al., 2008). This study found no statistically significant predictability among experiences of family violence and child abuse; however, it is interesting to note that over 50% of respondents reported experiences of family violence. As family violence was not the central focus of this study and merely an exploratory variable, specifics of the demographic, such as if the violence was current, if it occurred as a child growing up, was it direct, was it observed, was it from child violence or adult violence, these relevant questions were not asked. Implications regarding experiences of family violence include the following. Although not a predicator of level of risk for child maltreatment, there does seem to be some association to family violence and child maltreatment as over 50% of the sample reported experiencing some level of family violence. This follows with other research such as Appel and Holden (1998) in finding 20% to 100 % of cases with co-occurring domestic

violence and child abuse depending on the study parameters, with a median rate of co-occurring violence of 41%. Additional research is needed to investigate factors that may be involved in the co-occurrence or in the distinct occurrence of these two issues.

In this study there were no significant findings relating to age of parent at initial testing shortly after contact with child protective services and level of abuse. Connelly and Straus, (1992) reported inconsistent findings related to age and child maltreatment and determined that when age of parent at abuse was measured there were non-significant findings but when age of mother at birth was observed there were some indications of a relation between mother age and child maltreatment. The findings of this study partially support these findings concerning age of parents at time of maltreatment. In addition, the current study adds to previous research by including fathers. This study did not address the age of the parents at child's birth.

Another interesting note from the demographics is in education and income levels. Although neither were statistically significant, both were skewed towards lower levels for this sample. Education level and income level did not predict level or maltreatment but there does appear to be a relationship between education level and child maltreatment and income level and child maltreatment. Numerous studies have suggested a relationship with income level and child maltreatment as it is common to see at-risk samples described as being at, near, or below the poverty level or as being of lower income (Baumrind, 1994; Connell et al., 2007; Connelly & Straus, 1992; Guthrie et al, 2009; Marcenko et al., 2000; Sidebotham et al., 2001). Reitman, et al. (2002) have pointed to low income contributing to parent-child dysfunction through parental stress.

The results of this study indicate very little potential ability for the AAPI-2 to predict level of risk with CPS involved parents. This is an important finding for programs using the AAPI-2 to determine completion of a program. With such low correct classification, many at-risk parents might exit a program without sufficiently addressing issues placing them at risk. One significant issue related to this may be that the AAPI-2 does not contain a "lie" scale or measure for social desirability responses to account for respondents who may be attempting to give a false positive due to risk of consequences such as with parents involved with CPS. One limitation of this assessment and many behavioral health and risk assessments are that they are self-report and subject to social desirability errors.

Another possible explanation to the lack of positive results in this study is that parents involved with CPS may have a higher than normal tendency towards antisocial behaviors that may have initially brought them to the attention of CPS. If the facilitating issue resulting in the child abuse and neglect was high callous-unemotional traits or lack of empathy of the parents, these individuals may be able to answer appropriately for knowledge of different parenting skills and attitudes but not be willing or have any intent to carry out those behaviors. Another explanation for the results of this study could point to the measurement of level of risk. Although CPS workers receive extensive training in scoring the DHS safety assessment, human bias in the form of prejudice or being emotionally charged could affect the scores given the grievous nature of the assessment, child maltreatment. There is also the issue of definition of child maltreatment. The level of risk for child maltreatment was based on the definition of child maltreatment followed

by CPS. This definition may be different from the community definition of child maltreatment.

This study indicates a need for further review of the AAPI-2 structure and appropriate uses and appropriate populations to use with the AAPI-2. This study used data from a special population. On a wider scale, the AAPI-2 may be able to discriminate between levels of abusive parenting but not be able to identify levels of risk within a high-risk sample sufficiently for meeting diagnostic level needs. There have been inconsistent findings related to the different scales on the AAPI-2 given different populations of parents. There is no indication from this study that the AAPI-2 can operate as a diagnostic tool to identify the level of risk in a high-risk population, specifically with parents involved with CPS. Treatment providers working with parents involved with CPS should not use the AAPI-2 as a diagnostic or screening tool or in the assessment of successful treatment. More research is needed with the AAPI-2 and its use, norming samples, and overall structure. Additional research regarding associations of various demographics and their relationship is needed.

Limitations

There are limitations for this study that should be noted. First, this study was restricted by the available data in the archive. The archival database did not contain item level data needed to measure reliabilities and to investigate the structure of the AAPI-2 using a confirmatory factor analysis. Therefore, an assumption of this study was to accept previously reported alpha levels for reliability that ranged from .80 to .92 when forms A or B were used independently as it was in this study. These previously reported alpha levels would be considered sufficient for screening and diagnostic level use

(Conners et al., 2006). Future studies should collect item level data to measure reliabilities of the scales of the AAPI-2 and investigate the overall structure of the AAPI-2.

The archival data consisted of only parents involved with CPS due to child maltreatment and there was not a comparison group of identified non-abusive parents. The goal of this study was to determine if the AAPI-2 was strong enough to look at such a finely defined group for diagnostic purposes with this special population. Future research should seek to include comparison groups of both maltreating and non-maltreating parents to evaluate further the overall use of the AAPI-2

Another limitation related to the available sample was that all data was representative of only a small region, primarily rural citizens. Future research should include a larger sample size from across regions including both rural and metro areas and may give a better view of the prediction capacity of the AAPI-2, as there may be distinct socio-cultural differences by region.

This study does not consider different distinct types of child maltreatment that may have differing profiles. Future research may look at the relationship between AAPI-2 scales and demographics related to sexual abuse, physical abuse, and neglect individually.

Recommendations

The following section provides a summary of recommendations for research, practice, and theory based on the results and conclusions of this study.

Recommendations for Research

Future research should continue to investigate the special population of parents involved with child protective services (CPS) and the use of the AAPI-2 as a diagnostic tool but should include samples from diverse settings, such as rural, suburban, and urban. Future research should seek to include a control group that consists of parents confirmed to have no history of child maltreatment in their homes either as a child or as a parent. There are still mixed findings regarding demographics and their relation to scores on the AAPI-2 and for level of risk for maltreatment. Studies should continue to collect data regarding demographics and investigate possible relationships among demographics and AAPI-2 scores and level of risk for maltreatment until a consistent trend or relationship is established. Future research should seek to include additional measures of risk for maltreatment as comparisons. Future studies should investigate differences in various types of child maltreatment and responses on the AAPI-2. The types of child maltreatment that may show differing results are physical abuse, neglect, and sexual abuse. Each specific type of maltreatment may show distinct patterns and associations that may be useful in directing future prevention and treatment options. Additional research is needed regarding the structure of the AAPI-2 to confirm validity and reliability. A confirmatory factor analysis on the scales of the AAPI-2 utilizing data from a sample that includes a significant number of individuals involved with CPS will assist in determining if the scales are in fact valid for this special population as well as other high-risk populations.

Recommendations for Practice

This study could not confirm that the AAPI-2 is an effective predictor of risk of maltreatment in child protective service involved parents. Caution should be used when

using the AAPI-2 with this special population until additional confirmatory research is completed. The AAPI-2 should not be used as a primary diagnostic tool to determine if treatment for CPS involved parents has been completed or successful. One of the primary uses of the AAPI-2 has been in pre-post testing situations to show gains after education on parenting skills. However, if the scales are unable to discriminate between levels of risk for CPS involved parents at initial start of treatment it makes sense that the same problems with discriminating between low and high-risk parents after treatment to determine effectiveness will be questionable as well. It should be noted that demographics investigated in this study did not show any causal relationship and it should not be assumed that any of the demographics in this study would indicate the presence of child maltreatment but may be seen concurrent but independent of child maltreatment.

Recommendations for Theory

The current study finds very little support for the theory presented by Bavolek through the development of the AAPI-2 with a population of high-risk parents involved with child protective services. The concepts that make up the AAPI-2 seem to have some relation to good parenting but do not seem to be associated with high-risk parenting. The theoretical basis for the AAPI-2 comes from theories proposed in the mid-1970's to mid-1980's. In this time, the field of child abuse prevention has increased in knowledge. The AAPI-2 may not be taking into account new changes in knowledge in its current form. A confirmatory factor analysis would provide us with a better picture of what the AAPI-2 is really measuring and if that model still holds true for today's families. The AAPI-2 was developed with the purpose of discriminating between positive parenting attitudes and

abusive attitudes. There are two inherent problems with this goal in mind. First, who's definition of positive parenting and abusive attitudes are we going to use. There has yet to be a unified definition of what constitutes child maltreatment. Second, attitudes do not always translate into behavior. This would lead to errors in diagnosis for missing high-risk parents even after treatment and for mis-diagnosing low risk parents as high-risk possibly delaying reunification with children. In order to make overarching generalizations about the theoretical sustainability of the AAPI-2 additional research is needed to look at the structure of the AAPI-2 with high-risk populations and determine if the scales accurately measure what they should and if those scales truly relate to risk of child maltreatment.

REFERENCES

Ackley, D. C. (1977). A brief overview of child abuse. *Social Casework, 58,* 21-24.

Appel, A. E., & Holden, G. W., (1998). The co-occurrence of spouse and physical child abuse: A review and appraisal. *Journal of Family Psychology, 12,* 578-599.

Ateah, C. A., & Durrant, J. E. (2005). Maternal use of physical punishment in response to child misbehavior: Implications for child abuse prevention. *Child Abuse & Neglect, 29,* 169−185. doi: 10.1016/j.chiabu.2004.10.010

August, G. J., Bloomquist, M. L., Lee, S. S., Realmuto, G. M., & Hektner, J. M., (2006). Can evidence-based prevention programs be sustained in community practice settings? The Early Risers' advanced-stage effectiveness trial. *Prevention Science, 7,* 151-165. doi: 10.1007/s11121-005-0024-z

Azar, S. T., Robinson, D. R., Hekimian, E., & Twentyman, C. T., (1984). Unrealistic expectations and problem-solving ability in maltreating and comparison mothers. *Journal of Consulting and Clinical Psychology, 52,* 687-691.

Bandura, A. (1977). *Social learning theory*. New York, NY: General Learning Press.

Baumrind, D. (1994). The social-context of child maltreatment. *Family Relations, 43,* 360-368. Retrieved from http://www.jstor.org/stable/585365

Bavolek, S. J. (1984). *Adult–Adolescent Parenting Inventory AAPI.* Park City UT: Family Development Resources.

Bavolek, S. J. (2000). The Nurturing Parenting Programs. *Juvenile Justice Bulletin.* Washington DC, US Department of Justice.

Bavolek, S. J., Comstock, C. M., & McLaughlin, J. A. (1996). The nurturing program: A validated approach for reducing dysfunctional family interactions. In S. J. Bavolek (Ed.), *Research and validation report of the nurturing programs* (pp. 11−21). Eau Claire, WI: Family Development Resources.

Bavolek, S. J., & Keene, R. G. (2001). *Adult–Adolescent Parenting Inventory AAPI-2: Administration and development handbook.* Park City UT: Family Development Resources.

Bavolek, S. J., Kline, D. F., McLaughlin, J. A., & Publicover, P. R. (1979). Primary prevention of child abuse: Identification of high-risk adolescents. *Child Abuse and Neglect, 3*, 1071–1080.

Brems, C., & Sohl, M. A. (1995). The role of empathy in parenting strategy choices. *Family Relations, 44*, 189-194.

Burgess, R. L., & Conger, R. D. (1978). Family-interaction in abusive, neglectful, and normal families. *Child Development, 49*, 1163-1173.

Child Abuse Prevention and Treatment Act (CAPTA) of 1974 - P.L. 93-247.

Chung, E. K., Mathew, L., Rothkopf, A. C., Elo, I. T., Coyne, J. C., & Culhane, J. F. (2009). Parenting attitudes and infant spanking: The influences of childhood experiences. *Pediatric, 124*, 278-286. doi: 10.1542/peds.2008-3247

Combs-Orme, T. & Cain, D. S. (2008). Predictors of mothers' use of spanking with their infants. *Child Abuse & Neglect, 32*, 649-657.

Connell, C. M., Bergeron, N., Katz, K. H., Saunders, L., & Tebes, J. K. (2007). Re-referral to child protective services: The influence of child, family, and case characteristics on risk status. *Child Abuse & Neglect, 31*, 573-588.

Connelly, C. D., & Straus, M. A. (1992). Mothers' age and risk for physical abuse. *Child Abuse &Neglect, 16*, 709-718.

Conners, N. A., Whiteside-Mansell, L., Deere, D., Ledet, Toni, & Edwards, M. C. (2006). Measuring the potential for child maltreatment: The reliability and validity of the Adult Adolescent Parenting Inventory-2. *Child Abuse & Neglect, 30*, 39-53.

Department of Health and Human Services (2009). Annual Update of the HHS Poverty Guidelines. (Federal Register Doc. E9-1510, DOCID: fr23ja09-64). Retrieved from http://aspe.hhs.gov/poverty/09fedreg.shtml

Dodge, K. A., & Somberg, D. R. (1987). Hostile attributional biases among aggressive boys are exacerbated under conditions of threats to the self. *Child Development, 58*, 213-224. doi: 10.2307/1130303

Drummond, J. E., Weir, A. E., & Kysela, G. M. (2002). Home visitation programs for at-risk young families - A systematic literature review. *Canadian Journal of Public Health-Revue Canadienne De Sante Publique, 93*, 153-158.

Giles-Sims, J., Straus, M. A., & Sugarman, D. B. (1995). Child, maternal, and family characteristics associated with spanking. *Family Relations, 44*, 170-176.

Grella, C. E., & Greenwell, L. (2006). Correlates of parental status and attitudes toward parenting among substance-abusing women offenders. *The Prison Journal, 86*, 89-113. doi: 10.1177/0032885505283925

Guthrie, K. F., Gaziano, C., & Gaziano, E. P. (2009). Toward better beginnings: Enhancing healthy child development and parent child relationships in a high-risk population. *Home Health Care Management & Practice, 21,* 99-108. doi: 10.1177/1084822308322650

Huxley, P. & Warner, R. (1993). Primary prevention of parenting dysfunction in high-risk cases. *American Journal of Orthopsychiatry, 63*, 582−588.

Littell, J. H., & Girvin, H. (2005). Caregivers' readiness for change: Predictive validity in a child welfare sample. *Child Abuse & Neglect, 29*, 59−80. doi: 10.1016/j.chiabu.2004.08.004

Marcenko, M. O., Kemp, S. P., & Larson, N. C. (2000). Childhood experiences of abuse, later substance use, and parenting outcomes among low-income mothers. *American Journal of Orthopsychiatry, 70*, 316−326.

Martin, H. (1976). The environment of the abused child. In H. Martin (Ed.), *The Abused Child. A Multidisciplinary Approach to Developmental Issues and Treatment.* Cambridge: Ballinger.

Massie, H., & Szajnberg, N. (2006). My life is a longing: Child abuse and its adult sequelae. Results of the Brody longitudinal study from birth to age 30. *International Journal of Psychoanalysis, 87,* 471-496.

Morrow, C., Mansoor, E., Hanson, K., Vogel, A., Rose-Jacobs, R., Genatossio, C., … Bandstra, E. (2010). The starting early starting smart integrated services model: Improving access to behavioral health services in the pediatric health care setting for at-risk families with young children. *Journal of Child and Family Studies, 19,* 42-56. doi: 10.1007/s10826-009-9280-z

Palusci, V. J., Crum, P., Bliss, R., & Bavolek, S. J. (2008). Changes in parenting attitudes and knowledge among inmates and other at-risk populations after a family nurturing program. *Children and Youth Services Review, 30,* 79-89. PLACE: Pergamon-Elsevier Science. doi: 10.1016/j.childyouth.2007.06.006

Patterson, G. R. (2002). The early development of coercive family process. In Reid, J. B., Patterson, G. R., Snyder, J. (Eds.), *Antisocial Behavior in Children and Adolescents: A developmental analysis and model for intervention,* 25-44. Washington DC, US: American Psychological Association.

Reitman, D., Currier, R. O., & Stickle, T. R. (2002). A critical evaluation of the Parenting Stress Index-Short form (PSI-SF) in a Head Start population. *Journal of Clinical Child and Adolescent Psychology, 31,* 384-392.

Salzinger, S., Feldman, R. S., Hammer, M., & Rosario, M. (1993). The effects of physical abuse on children's social relationships. *Child Development, 64,* 169-187.

Salzinger, S., Feldman, R. S., Ng-Mak, D. S., Mojica, E., Stockhammer, T., & Rosario, M. (2002). Effects of partner violence and physical child abuse on child behavior: A study of abused and comparison children. *Journal of Family Violence, 17,* 23-52.

Salzinger, S., Rosario, M., & Feldman, R. S. (2007). Physical child abuse and adolescent violent delinquency: The mediating and moderating roles of personal relationships. *Child Maltreatment, 12,* 208-219. doi: 10.1177/1077559507301839

Sidebotham, P., & Golding, J., & the ALSPAC Study Team (2001). Child maltreatment in the "Children of the Nineties" - A longitudinal study of parental risk Constructs. *Child Abuse & Neglect, 25*, 1177-1200.

Steele, B. F. (1975). Working with abusive parents from a psychiatric point of view (Publication No. DHEW-OHD-75-70). National Center for Child Abuse and Neglect, Washington, D. C.

Steele, B. F. (1986). Notes on the lasting effects of early child abuse throughout the life cycle. *Child Abuse & Neglect, 10,* 283-291.

Steel, B. F. & Pollock, C. D. (1968). A psychiatric study of parents who abuse infants and small children. In C. H. Kempe & R. E. Helfer (Eds.) *The Battered Child.* Chicago: University of Chicago Press.

Straus, M. A. (1991). Discipline and deviance: Physical punishment of children and violence and other crime in adulthood. *Social Problems, 38,* 133-154.

Straus, M. A. (2001). New evidence for the benefits of never spanking. *Society, 38,* 52-60.

Straus, M. A. & Paschall, M. J. (2009). Corporal punishment by mothers and development of children's cognitive ability: A longitudinal study of two nationally representative age cohorts. *Journal of Aggression, Maltreatment & Trauma, 18,* 459-483. doi: 10.1080/10926770903035168

Straus, M. A., Sugarman, D. B., & Giles-Sims, J. (1997). Spanking by parents and subsequent antisocial behavior of children. *Archives of Pediatrics & Adolescent Medicine, 151,* 761-767. American Medical Association.

Thornberry, T. P., Ireland, T. O., & Smith, C. A. (2001). The importance of timing: The varying impact of childhood and adolescent maltreatment on multiple problem outcomes. *Development and Psychopathology, 13*, 957-979.

U.S. Census Bureau, (2000). Census 2000. Retrieved from http://censtats.census.gov/data/OK/05040071.pdf

U.S. Department of Health and Human Services, Administration on Children, Youth and Families (2009). *Child Maltreatment, 2007* (Washington, DC: U.S. Government Printing Office.

APPENDIX

Oklahoma State University Institutional Review Board

Date:	Monday, May 03, 2010
IRB Application No	ED1068
Proposal Title:	The Psychometric Properties of the Adult-Adolescent Inventory-II
Reviewed and Processed as:	Exempt

Status Recommended by Reviewer(s): Approved Protocol Expires: 5/2/2011

Principal Investigator(s):

John William Hitchcock
1800 Yale
Ponca City, OK 74604

Diane Montgomery
424 Willard
Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

☐ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Beth McTernan in 219 Cordell North (phone: 405-744-5700, beth.mcternan@okstate.edu).

Sincerely,

Shelia Kennison, Chair
Institutional Review Board

VITA

John William Hitchcock

Candidate for the Degree of

Doctor of Philosophy

Thesis: ADULT-ADOLESCENT PARENTING INVENTORY-II AS A PREDICTOR OF RISK FOR CHILD MALTREATMENT

Major Field: Educational Psychology

Biographical:

Personal Data: Born in Shawnee, Oklahoma, on October 19, 1974, the son of Ronald and Lana Hitchcock

Education: Completed the requirements for the Doctor of Philosophy in Educational Psychology at Oklahoma State University, Stillwater, Oklahoma in December 2010. Completed the requirements for the Master of Science in Educational Psychology at Oklahoma State University, Stillwater, Oklahoma in 2004. Completed the requirements for the Bachelor of Arts in Psychology at University of Oklahoma, Norman, Oklahoma in 2010. Graduated from Shawnee High School, Shawnee, Oklahoma in May 1992.

Experience: Instructor for Parent Education Program at Northern Oklahoma Youth Services 2002-2010. Prevention Service Coordinator at Northern Oklahoma Youth Services 2000-2010 Instructor for grades 5-8 in general subjects at Ponca City Christian Academy 2008-2010. Instructor for Psychology of Adolescence at Oklahoma State University 2008.

Professional Memberships: American Psychological Association, American Educational Research Association

Name: John William Hitchcock Date of Degree: December, 2010

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: ADULT-ADOLESCENT PARENTING INVENTORY-II AS A PREDICTOR OF RISK FOR CHILD MALTREATMENT

Pages in Study: 74 Candidate for the Degree of Doctor of Philosophy

Major Field: Educational Psychology

Scope and Method of Study:

The purpose of this study was to investigate the Adult-Adolescent Parenting Inventory (AAPI-2) as a predictor of level of risk for child maltreatment as determined by the Department of Human Services (DHS) safety assessment. The AAPI-2 consists of five scales. The scales are inappropriate parental expectations, empathy, value of corporal punishment, family role reversal, and restrict power and independence. Archival data from a community education program for CPS referred parents was used in the study. The archival data consisted of 341 records of adult participants in the program. Predictive discriminate analysis was performed to investigate the ability of the AAPI-2 to predict risk as determined by DHS safety assessments. Exploratory investigation of influences of various demographics on the AAPI-2 composite score and on level of risk utilized multiple regression and discriminate analysis techniques.

Findings and Conclusions:

Results indicated significant results put poor model fit for the AAPI-2 in correctly classifying level of risk for maltreatment as determined by the DHS safety assessment. The exploratory analysis found gender to predict scores on the AAPI-2, $p < .05$. There were no significant findings related to demographics and prediction of level of risk for child maltreatment, although strong associations for education level, income level, and experiences of family violence. Implications of the results point to the need for future research to investigate the structure of the AAPI-2. Demographics of low income and experience of family violence both support previous research in their association with child maltreatment. Results indicate that in practice the use of the AAPI-2 with populations involved with child welfare services should be done so with caution.

ADVISER'S APPROVAL: Dr. Diane Montgomery