

ADOLESCENT PERCEPTIONS OF FATHERS'
AUTHORITY AND ADOLESCENT
BEHAVIORAL AUTONOMY

By

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CHAPTER I

INTRODUCTION

A primary goal of adolescence is the development of autonomy. The attainment of autonomy is essential for adolescents in order to function independently in the world when they are no longer being taken care of by their parents (Peterson, Steinmetz, & Wilson, 2005). Studies have shown that father involvement is related to adolescent behavioral autonomy (Shulman & Klein, 1993).

The research design, methodology, and analysis of fatherhood research have become increasingly more complex to more closely depict the numerous ways fathers are involved with their children and adolescents and how father involvement relates to child and adolescent outcomes. In the current study a cross disciplinary approach is taken to determine how adolescents' perceptions of fathers' authority relate to adolescent behavioral autonomy. More specifically, the purposes of this study is to examine the relationship between adolescent perception of fathers' expert, legitimate, reward, coercive, and referent authority and adolescent behavioral autonomy.

Background of the Problem

Earliest Fathering Research

The study of fathers as a distinct scholarly field began during the late 1960's and early 1970's. The earliest research focused on fathering behaviors with their infants and very young children. Results showed that fathers provide direct care and are nurturing of

their infant children but not as much as mothers. Fathers were found to have very different interaction styles than mothers with their children in regards to play and spent a greater percentage of their time playing with their children. Fathers spend much less time with their children in general and provide much less direct care for their children when compared to mothers, this had been found to be true for children of all age groups up to adolescents (Larson & Richards, 1994; Parke, 1996).

Another area of early research found differences between how mothers and fathers talk to their young children. Sachs (1977) found that when mothers talk to their infants they slow down their rate of speech, repeat and shorten phrases and words, and exaggerate in their annunciation. In contrast, fathers used more complex forms of speech compared to mothers. Research also shows that fathers give more commands or orders, ask children to clarify more, ask more probing questions, and provide more contextual linkages to past events (Bellinger & Gleason, 1982; Fash & Madison, 1981). These more complex forms of speech provide children with more advanced language skills, enabling them to function more independently outside of family relationships (Ely, Gleason, Narasimhan, & McCabe, 1995; Lamb & Tamis-LeMonda, 2004).

Fathering Research in 1970's

As the divorce rates in the United States increased rapidly in the 1970s, researchers turned towards determining the influence of fathers' presence or absence on children as a result of divorce. Zimmerman, Salem, and Maton (1995) conducted a study to determine the effect of father presence or absence in the home and child well-being. The results of the study determined that children who spent more time with their fathers and received more emotional support reported higher life satisfaction and self-esteem and

lower rates of depression. Research consistently shows that children fare better when they maintain consistent positive relationships with their fathers following parental divorce (Kelly, 2000).

Criticisms of the earliest research on fathering include using a “maternal template” to study fathering (Marsiglio, Amato, Day, & Lamb 2000), the use of dichotomies (Dienhart, 1998; Lamb & Tamis-LeMonda, 2004), and overly focusing on fathering of young children (Hosley & Montemayor, 1997). When fathering is studied by examining what men as fathers are doing compared to women the unique contributions of fathers are ignored (Marsiglio et al.). The use of dichotomies to study fathering ignores the contributions of men as fathers. Whether comparing mothers to fathers or residential fathers to nonresidential fathers post divorce, dichotomies are an over simplification of the complex ways men function as fathers (Dienhart; Lamb & Tamis-LeMonda). Important early works helped increase the understanding of the relationship between fathers and their infants and young children. However, the relationships between fathers and their adolescents are also important and require additional research (Hosley & Montemayor). Research in the field of fatherhood after the 1960’s and 1970’s addressed the criticisms of the earliest research on fathering and began to look at the complex ways in which fathers relate to children of all ages, including adolescents (Dienhart; Hosley & Montemayor).

Fathering Research in 1980’s

During the 1980s an increasing number of studies focused on father-adolescent relationships. The first studies that focused on fathering adolescents lacked theoretical models and were primarily descriptive. The fathering studies which examined adolescent

outcomes continued the dichotomous approach comparing mothers to fathers (Hosley & Montemayor, 1997). When compared to mothers, fathers were underrepresented in the study of parenting and adolescent outcomes. In a review of research articles addressing parental influences on adolescents from 1984 to 1991, 48% of the studies included information only on mothers compared to 1% providing information about fathers only (Phares & Compas, 1992). In studies that simultaneously compared fathers and mothers and their adolescents the results were similar to studies with younger children. Mothers and fathers have different types of relationships with their adolescents (Hawkins, Amato, & King, 2006). Fathers spend less time with their adolescents and talk to them less than mothers, but there are specific areas in which fathers are more influential (Hosley & Montemayor). One of the areas in which fathers are particularly influential is facilitating the development of autonomy in their adolescents (Shulman & Klein, 1993).

In a study conducted by Shulman and Klein (1993) fathers had more influence on the development of autonomy of their adolescents than mothers. These authors contend that since fathers spend less direct time with their children and more time engaged in activities outside of the family they serve as role models for autonomy and adolescents look towards their fathers on advice related to more autonomous functioning outside of the home. In an open-ended question pertaining to the importance of mothers and fathers, a 14 year-old girl replied as follow: “During adolescence the father is more important than the mother. New concerns like school, friends, and boys issues arise. Fathers better know how to deal with such issues. Matters that the mother was responsible for like what to eat or taking a bath become less important as you grow up” (p. 52). This statement suggests that adolescent perceptions of the physical presence of parents may be less

salient than as parental advice or support in relation to events that occurs outside of the home as adolescents become more autonomous.

In addition to serving as role models for autonomy, fathers may actively support the autonomous functioning of their adolescents via more complex communication patterns (Bellinger & Gleason, 1982; Fash & Madison, 1981). Hauser et al. (1987), for example, found that fathers utilized communication strategies that enabled adolescents to better problem solve and self-generate solutions to their own problems, allowing them to engage in more independent decision making.

Fathering Research in the 1990's

In the 1990s, researchers moved beyond research comparing mothers and fathers on how much time they spent with their offspring or how much direct aid they provided (Lamb & Tamis-LeMonda, 2004). Scholars engaged in fathering research in the late 1990's began exploring issues that are still salient in the field today, these issues include ways: (a) fathering affects men's experiences (Dienhart, 1998), (b) fathers influence their children or adolescents beyond direct contact (Palkovitz, 1997), (c) to conceptualize the multitude of ways fathers influence their children (Lamb & Tamis-LeMonda) (d) to go beyond obtaining information from fathers to obtain information from children about their fathers (Roggmann, Fitzgerald, Bradley, & Raikes, 2002) and, (e) more complex statistical techniques can take into account the interrelations among variables and multiple ways in which fathers influence child outcomes (Tamis-LeMonda & Cabrera, 2002).

Generative Fathering

Snarey (1993) conceptualized father and child relationships as part of the Eriksonian developmental concept of generativity since fathering contributes to men's development as well as of child development. Based on this idea, Hawkins and Dollahite (1997) proposed the concept of "generative fathering" as "fathering that meets the needs of the next generation across time and context" (p.xiii). Hawkins and Dollahite's sought to move fathering research beyond simplistic dichotomous conceptualizations of fatherhood to recognize the unique and varied ways men simultaneously contribute to the development of their children and meet their own generative needs.

One way of achieving generativity is through parenting (Erikson, 1963). Initially, this may seem to be a paradox since most men and women often become parents in their twenties and thirties and Erikson's developmental stage of generativity versus stagnation does not occur until approximately forty (Peterson & Stewart, 1993). Yet, each of Erikson's eight stages is a time frame in which the particular developmental crisis is most salient, even though individuals struggle with all eight developmental crises at some level throughout the life course. Thus, the use of generative fathering to study fathers and offspring of all life ages and stages is consistent with the Eriksonian model of development.

Indirect Fathers' Influence

Palkovitz's (1997) critiques of the earliest fathering research include the belief that father involvement requires physical proximity and can always be directly observed and counted. In contrast, father involvement does not necessarily involve proximity or

direct contact (Lamb, 2004) noting that the “recognition that indirect patterns of influence are pervasive and perhaps more important than direct learning represents another of the major conceptual revolutions marking” (p. 9) the scholarship of fatherhood research over the last 30 years. During the same time frame research conducted on parental power and adolescent development came to similar conclusions; direct contact with parents is not the only form of parental influence on adolescent development (Smith, 1970).

Multidimensional Roles

In the past several years, fathering research moved beyond studying one-dimensional roles of fathers or contrasting dichotomies of fathers to multidimensional and more complex conceptualizations of fathering (Lamb, 2004). Men recognize the different ways in which they relate to their children (Palkovitz, 2002). Even historically during times in which narrow views of fatherhood were being researched fathers never viewed themselves as one-dimensional as research studies depicted (LaRossa, 1997). Research conducted on social power and parental power and adolescents came to a similar conclusion, a one-dimensional conceptualization of parental power is insufficient. French and Raven (1959) were the first to identify the five power bases: (a) expert, (b) legitimate, (c) reward, (d) coercive, and (e) referent power. Smith (1970) was the first to use the power bases in studying parent-child relationships.

Information from Children and Adolescents

Historically research studies on fathering obtained information from fathers, mothers, and in some instances information was obtained from both fathers and mothers. While studies obtaining information from fathers and mothers about fathering is essential, studies that obtain information from children and adolescents about their fathers are

grossly underrepresented in fathering research. Future studies should include “ways of obtaining meaningful information about fathers from their children” (Roggman et al. 2002, p. 23).

More Complex Analyses

Finally, more complex statistical techniques are more readily available with the proliferation of statistical software packages and their relative ease of use compared to when fathering research began over 30 years ago. Structural equation modeling is a technique that will allow for testing models of how adolescent perceptions of fathering relate to adolescent qualities by taking into account both direct and indirect effects and can account for interrelationships among variables (Roggman et al., 2002).

Statement of the Problem

Historical and contemporary weaknesses in the way fatherhood has been and is currently being studied include: (a) comparing fathers to mothers or dichotomous categories of fathers to each other (Dienhart, 1998; Lamb & Tamis-LeMonda, 2004; Marsiglio et al.), (b) only considering direct contact with fathers as involvement and influential (Palkovitz, 1997), (c) insufficient study of fathers and adolescents (Phares & Compas, 1992), (d) failure to get the perspective of children about their fathers (Roggman et al., 2002), and (e) one-dimensional conceptualizations of fathering (Palkovitz, 2000). Roggman et al. suggest taking an interdisciplinary approach to study fathering by going across disciplines to get a new perspective on how to study fathering.

The current study is building on past research by addressing weaknesses in prior studies on fathering and looking at fathering research by utilizing the framework developed by researchers studying the perception of parental authority and adolescent

outcomes (Peterson, 1986; Smith, 1970). In the current study parental authority is the ability to bring about change in the adolescent without the use of force or threat and is met with little or no resistance from the child. The different types of parental authority include: (a) expert, (b) legitimate, (c) reward, (d) coercive, and (e) referent authority (French & Raven, 1959; Smith, 1970). The adolescent outcome of behavioral autonomy will be examined due to past research indicating fathers influence on autonomy development of their adolescents (Peterson, 1986; Shulman & Klein, 1993).

Theoretical Framework

Exchange Theory

The assumptions of exchange theory that apply not only to the father-adolescent relationship but to all relationships are as follows:

1. Humans seek reward and avoid punishment
2. When interacting with others, humans seek to maximize profits for themselves while minimizing costs.
3. Humans are rational beings and within the limitations of the information that they possess, they calculate rewards, costs, and consider alternatives before acting.
4. The standards that humans use to evaluate rewards and costs differ from person to person and can vary over the course of time.
5. The importance that humans attach to the behavior of others in relationships varies from person to person and can vary over the course of time.
6. The greater the value of a reward exceeds one's expectations, the less valued the reward will become in the future (Sabatelli & Shehan, 1993, p. 396).

Rollins and Thomas (1979) utilized concepts from exchange theory as presented by Thibaut and Kelley (1959) and Homans (1974) to analyze authority in families. The basic assumption is that within all interactions in a family each participant attempts to maximize profit while minimizing losses. The basic exchange in the father-adolescent-dyad is between support from the father and compliance from the adolescent. The basic question to be answered is under what conditions do both the father and the adolescent “receive profits above the comparison level for alternative exchanges” (Rollins & Thomas, 1979, p. 355). In the current study the basic question is how adolescent perceptions of fathers' authority relate to adolescent behavioral autonomy.

Weller and Luchterhand (1976) utilized exchange theory to study parental authority. Specifically, they note that human behavior is based on the perceived ratio of rewards versus costs. Exchanges will continue to occur between the parent and adolescent as long as both parties perceive that they are getting greater rewards than costs incurred. In the father-adolescent dyad, as with all exchanges, the “one who possesses more resources can exercise power on the member with lesser resources” (Weller & Luchterhand, 1976, p. 283). The father will continue the exchange relationship to receive the reward of instilling desired values or behaviors in the adolescent. The adolescent usually has less power in the relationship, but continues the relationship as long as his/her needs cannot be met elsewhere.

Weller and Luchterhand (1976) expand on the idea of conformity as a resource for adolescents. When children are very young, before school age, they are completely dependent on their parents. When children enter school they are no longer completely dependent on their parents and have many needs met by teachers and peers at school.

During this transition to sources of need fulfillment beyond of the family, children learn that through their compliance they can obtain desired resources from their parents (Szinovacz, 1987).

In the current study, exchange theory explains how adolescent perceptions of fathers' authority relate to adolescent behavioral autonomy. The relationship dynamic of interest in this study between the father and adolescent is based on authority. Authority occurs in the context of a relationship involving at least two people when one person has the potential to influence another without the use of force or threat and is met with little or no resistance by the person who is being influenced (Blood & Wolf, 1960; Henderson, 1981; Johnson, 1995). In making a decision to accept fathers' authority the adolescent determines if he or she will profit or if the rewards of accepting fathers' authority will outweigh the costs (Klein & White, 1996).

Adolescents consider each of the bases of fathers' authority separately determining if the reward outweighs the cost of accepting fathers': (a) expert, (b) legitimate, (c) reward, (d) coercive, and (e) referent authority (Bush, Supple, & Lash, 2004; Smith, 1970). In regards to fathers' expert authority, fathers have the resource of domain specific knowledge that has the potential to serve as a reward to adolescents. If adolescents perceive that their fathers have specialized knowledge and resources in an area that is important to them then adolescents view this as rewarding and acceptance of fathers' expert authority increases. If fathers attempt to utilize expert authority in an area that adolescents do not perceive their fathers as having specialized knowledge or resources then this intrusion is seen as a cost and perception of fathers' expert authority decreases. (Klein & White, 1996; Smith).

Adolescents make a comparison level to other adolescents and their fathers to determine what types of domains or issues other fathers exercise legitimate authority over and develop normative expectations about what domains their fathers have a right to exercise legitimate authority over. If fathers only attempt to exercise legitimate authority over domains that adolescents consider normative they perceive they are being treated the same as other adolescents they know and fathers' authority increases. If adolescents perceive that their fathers are attempting to utilize legitimate authority over domains in which other adolescents' fathers do not exercise legitimate authority, this violation of normative expectations is seen as a cost to the adolescent and fathers' legitimate authority decreases (French & Raven, 1959; Klein & White, 1996).

Fathers often have many resources that may be perceived as rewarding to adolescents (Henry, Wilson, & Peterson, 1989). If fathers consistently deliver resources that are valued and rewarding to adolescents then fathers' reward authority increases. If fathers make promises for rewards that they do not deliver this is perceived as a cost by adolescents and fathers' reward authority decreases. Fathers' coercive authority increases as adolescents attempt to minimize future costs or negative consequences as a result of fathers' use of coercive authority (French & Raven, 1959; Klein & White, 1996).

Lastly, fathers' referent authority increases when adolescents receive help and support from their fathers and want to model their fathers' behaviors. Adolescents find it rewarding to identify with or be similar to a helpful supportive father. Fathers' referent authority decreases due to the cost of adolescents not receiving support or guidance from their father and not identifying with their father (French & Raven, 1959).

There is a relationship between adolescents' perceptions of rewards and costs and perception of fathers' authority and there is a relationship between perception of fathers' authority and adolescent behavioral autonomy. When perception of fathers' expert, legitimate, reward, and referent authority increase and perception of fathers' coercive authority decreases adolescents develop more behavioral autonomy. Fathers' authority does not require proximity between the parent and adolescent to influence adolescent behavior. When perception of fathers' authority increases adolescents are able to determine the reward and cost of their behaviors in relation to their fathers without their physical presence. The increase in proximity and time spent away from fathers but still looking to them as a resource when needed allows the adolescents to develop behavioral autonomy.

Rationale

Peterson (1986) found a significant positive relationship between adolescent perception of fathers' reward, referent, legitimate, and expert power and adolescent behavioral autonomy; and a negative relationship between perception of fathers' coercive power and adolescent behavioral autonomy. The current study builds on the work of Peterson by validating the measures of fathers' authority 20 years later and extends Peterson's work by conceptualizing a model for the relationship between adolescents' perception of fathers' authority and adolescent behavioral autonomy. While Peterson used exploratory factor analyses, the present study will use confirmatory factor analysis to examine the fit between the data collected for the sample used in this study and the model developed by Peterson.

Peterson (1986) utilized multiple regression analyses to explore the relationship between parental power and adolescent behavioral autonomy. In the current study, structural equation modeling will be used to explore the relationship between perception of fathers' authority and adolescent behavioral autonomy. The rationale for using structural equation modeling includes the ability to: (a) interpret the model even when multicollinearity is present, (b) incorporate mediating variables into the model, (c) test the overall model rather than each variable independently, and (d) compare two subgroups (Garson, 2006).

Multicollinearity is present when two or more independent variables are highly correlated making it impossible to determine how each independent variable is uniquely related to the dependent variable(s) (Vogt, 2006). In the Peterson (1986) study it was not possible to determine the individual contributions of adolescents' perception of fathers' expert, reward, legitimate, referent, and coercive authority to explaining adolescent behavioral autonomy. In the current study structural equation modeling will account for the correlation among the bases of fathers' authority and provide information on the relationship between each father's authority variable and adolescent behavioral autonomy.

A mediating variable is "a variable that transmits the effect of another variable" (Vogt, 2006, p. 138). In the following model of variables A, B, and C: $A \rightarrow B \rightarrow C$, B is a mediating variable. Variable A has an indirect effect on variable C through the mediating variable B. In Peterson's (1986) study, only the direct effect of the basis of fathers' authority on the dependent variable adolescent behavioral were analyzed. In the current study the use of structural equation modeling based on a theoretical model allows for

mediating variables. It is hypothesized that adolescent perception of fathers' expert and referent authority will serve as mediating variables of the indirect effect of adolescent perception of fathers' legitimate authority on adolescent behavioral autonomy. Also, adolescent perception of fathers' coercive and reward authority will serve as mediating variables for the indirect relationship between age of the adolescent and adolescent behavioral autonomy. This complex relationship between the variables to include indirect relationships in structural equation modeling is not possible with multiple regression (Garson, 2006).

Another rationale for using structural equation modeling is that it provides an overall measure of model fit while multiple regression can only provide regression coefficients on an equation by equation basis. Measure of fit indexes will also allow for comparison of alternate models, such as different models of fathers' authority for boys and girls or for fathers and stepfathers, while this is not possible in multiple regression (Tomarken & Waller, 2005).

The current study provides a validation of the subscales of adolescent perception of parental authority as a multidimensional measure of indirect father involvement and to provide an overall model of the relationship between perception of fathers' authority and adolescent behavioral autonomy and how it differs by gender.

Purpose of the Study

The purposes of this study are to examine: (a) the extent to which the five bases of authority provide a valid measure of fathers' authority, and (b) adolescent perception of fathers' expert, legitimate, reward, coercive, and referent authority in relation to adolescent behavioral autonomy. Figure 1 represents the visual model of the relationships

between perception of fathers' authority and adolescent behavioral autonomy for the research questions and conceptual hypotheses.

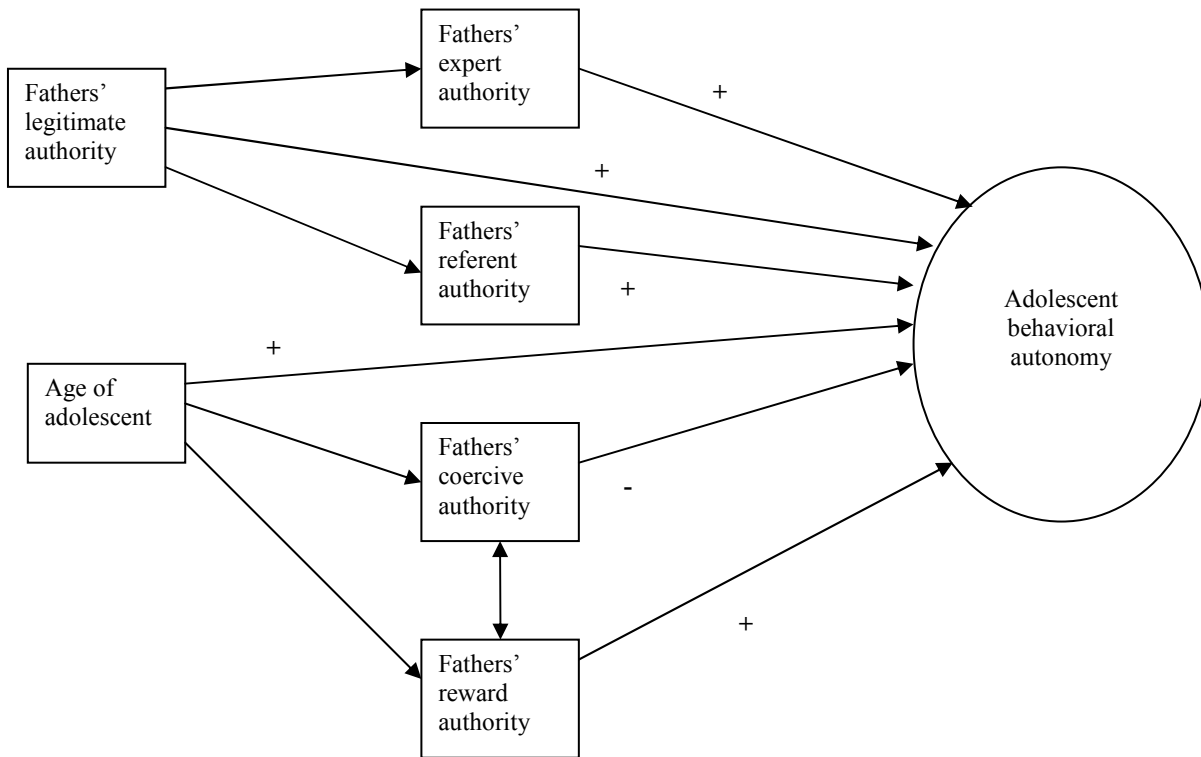


Figure 1. Conceptual model of the relationship between adolescent perception of fathers' authority and adolescent behavioral autonomy.

Research Questions

Two research questions will be investigated in the present study as described below.

Research Question 1

Does Peterson et al.'s (1986) self-report measure of adolescent perceptions of the bases of parental authority which was developed using exploratory factor analysis need to be refined after being subjected to confirmatory factor analysis?

Research Question 2

How do adolescent perceptions of aspects of fathers' authority relate to adolescent reports of behavioral autonomy?

Theoretical Model and Conceptual Hypotheses

Research Question 1 is addressed by Conceptual Hypothesis 1. This hypothesis proposes that the dimensions of fathers' authority are valid measures.

Hypothesis 1

Adolescents' perceptions of fathers' authority is multidimensional and is composed of fathers' legitimate, expert, referent, coercive, and reward authority.

Research Question 2 is addressed with the theoretical model in Figure 1 (see Figure 1) and through Conceptual Hypotheses 2-9. Variables that are expected to be directly related to adolescent behavioral authority are addressed by Conceptual Hypotheses 2-7. Variables that are expected to be indirectly related to adolescent behavioral autonomy are addressed by Conceptual Hypotheses 8 and 9.

Hypothesis 2

Adolescents' perceptions of fathers' legitimate authority will have a direct positive relationship with adolescent behavioral autonomy.

Hypothesis 3

Adolescents' perceptions of fathers' expert power will have a direct positive relationship with adolescent behavioral autonomy.

Hypothesis 4

Adolescents' perceptions of fathers' referent authority will have a direct positive relationship with adolescent behavioral autonomy.

Hypothesis 5

Adolescents' perceptions of fathers' coercive authority will have a direct negative relationship with adolescent behavioral autonomy.

Hypothesis 6

Adolescents' perceptions of fathers' reward authority will have a direct positive relationship with adolescent behavioral autonomy.

Hypothesis 7

Age of the adolescent will have a direct positive relationship with adolescent behavioral autonomy.

Hypothesis 8

Adolescents' perceptions of fathers' legitimate authority will have an indirect relationship with adolescent behavioral autonomy through adolescents' perceptions of fathers' expert and referent authority

Hypothesis 9

Age of the adolescent will have an indirect relationship with adolescent behavioral autonomy through adolescents' perceptions of fathers' coercive and reward authority.

Conceptual/Theoretical Limitations

Conceptual limitations exist when attempting to differentiate between the concept of power and authority. At first, the difference may only seem to serve a heuristic function but real differences do exist as previously mentioned that make a difference when exploring the father-adolescent relationship.

Historically, studies of family authority typically assumed that authority is a characteristic of an individual family member or a personality attribute. This study builds on French and Raven's (1959) conceptualization that fathers' authority occurs within relationships rather than being an attribute held by one person. More specifically, fathers' authority occurs as adolescents perceive their fathers to hold the potential to bring about rewards or costs in the form of expert, referent, reward, coercive, or legitimate authority. Thus, adolescents are seen as progressing toward behavioral autonomy, in part, based on the authority they perceive their fathers hold. Thus, in the present study, fathers' authority is viewed as a characteristic of the father-adolescent relationship (Beckman-Brindley & Tavormina, 1978).

Criticisms of exchange theory include the assumption that humans, especially family members, are rational and tautology (Klein & White, 1996; Sabatelli & Shehan, 1993). To be rational is to have the ability to determine the costs and rewards of each exchange and choose the outcome with the most net benefit. To be rational is even more difficult in relationships within the family because families are "characterized by intense loyalty and emotions" (Klein & White, 1996; p. 83) and that children do not "choose" their parents, thus the idea of father and adolescent choosing to enter an exchange relationship and calculating their rewards and costs before enacting a behavior may not be realistic.

Nye (1979) addresses this concern by proposing that family members make decisions based on the best information that they have at the time and that the principles of exchange would still apply and have explanatory benefit.

Within exchange theory there are many instances in which concepts are used to define one another leading to a tautological circle (Klein & White, 1996). For example, a father's expert authority in relation to a specific adolescent involves adolescents' recognition of the fathers' specialized knowledge that potentially serves as a reward for the adolescent. Thus, the fathers' resources to influence the adolescent are based on adolescents valuing their fathers' resources. Further, the adolescent is seen as more responsive to the fathers' valued resources. Thus, it is difficult to define the concepts independent of each other.

Exchange theories can be classified as either a microexchange theory or a macroexchange theory. The current study utilizes a microexchange approach in which the individual, in this case the adolescent, is the basic unit of analysis. A criticism of microexchange theories is that it is not suitable to study family relationship, although microexchange theory has been utilized to study family relationships (Klein & White, 1996). Obviously it would add information to have the basic unit of analysis in this study be the father-adolescent relationship, but information obtained only from the adolescent perspective is still important and explains the relationship from their perspective.

Scope and Delimitations

The subjects in this study were 250 high school students in 9th, 10th, and 12th grade attending a large metropolitan high school in Oklahoma. The 11th grade students were not available to be included in the study due to state standardized testing on the day

of data collection. Adolescents' perception of fathers' authority and behavioral autonomy was assessed by administering a paper and pencil questionnaire to the students during school hours. Only students who brought back both a signed parental written informed consent and a signed written student assent were eligible to participate in the study.

No data were collected from parents or legal guardians, in the current study the interest is in the adolescents' perception of their parents and how it influences their own autonomy. It is entirely possible and almost certain that if fathers were questioned they would have an entirely different perception of their parenting in relation to their child. Nonetheless, it is believed that for the adolescents in the study their perception is their reality and drives how they perceive the rewards and costs of fathers' authority and their own behavioral autonomy. Delimitations in the study include a self-selection bias, the use of cross-sectional data, the use of a convenience or accidental sample, and the lack of diversity in the sample (Isaac & Michael, 1995; Kerlinger & Lee, 2000),

Self-selection bias is a threat to internal validity and has the potential to confound the relationship between the variables of interest in the study, fathers' authority and adolescent behavioral autonomy. Self-selection occurs when members of your sample have attributes that made it more likely for them to participate in the study and the same attributes could be related to the variables under investigation (Isaac & Michael, 1995; Kerlinger & Lee, 2000). In the current study, adolescents that followed through and took the consent form home, had their parents sign it, signed the assent form themselves, and returned both back to the teacher could be more likely to be more responsible and function more independently than adolescent that did not return the consent and assent forms. The sample of adolescents participating in the study could be more autonomous

than other adolescent not in the study, thus confounding the relationship between perception of fathers' authority and adolescent behavioral autonomy (Kerlinger & Lee).

Cross-sectional data is taken at a single point in time across different age groups, as in the current study the age of the adolescents is between 13 and 18 years of age. The main problem with cross-sectional data is that one has to use caution when making conclusion about how the variable under study develop over time. In the current study it would be inaccurate to suggest that behavioral autonomy changed as the adolescent aged. What we would be able to conclude is that adolescents in the study had different levels of behavioral autonomy at different ages (Vogt, 2006).

Convenience sampling and the lack of demographic diversity in the study limit the generalizability of study results beyond the students in the current sample. Convenience sampling usually takes advantage of any available sample. In the current study repeated attempts were made to get a more diversified sample but due to the lack of agreement by more diverse schools the current sample was used. When using a convenience sample it is important to remember to not over generalize the results to other samples or populations (Kerlinger & Lee, 2000).

Even with the delimitations mentioned the current study still has valuable contributions to add to the existing knowledge base on perception of parental authority and adolescent behavioral autonomy. Validating the scale used to measure fathers' authority and the use of structural equation modeling will provide an extension of the research conducted by Peterson (1986) on parental power and adolescent behavioral autonomy.

Definitions

Power is the “potential an individual has for compelling another person to act in ways contrary to their own desires” (Hoffman, 1960, p. 129).

Authority occurs in the context of a relationship involving at least two people when one person has the potential to influence another without the use of force or threat and is met with little or no resistance by the person who is being influenced (Blood & Wolf, 1960; Henderson, 1981; Johnson, 1995).

Fathers’ authority refers to ability to bring about change in the adolescent without the use of force or threat and is met with little or no resistance from the adolescent (Henderson, 1981).

Reward authority is the adolescents’ perception of the fathers’ ability to deliver desired rewards (Henry et al., 1989).

Coercive authority is the adolescents’ perception of the fathers’ ability to deliver negative consequences (Henry et al., 1989).

Legitimate authority is the adolescents’ perception of the fathers’ right to exercise control over them (Henry et al., 1989).

Expert authority is the adolescents’ perception of the fathers’ ability to provide knowledge or abilities on important issues (Henry et al., 1989).

Referent authority is the adolescents’ perception of their fathers’ potential to act as an identification object or a significant other (Smith, 1970).

Behavioral autonomy is the “extent to which adolescents acquire freedom of action from parents” (Peterson, 1986, p. 232).

Summary

Chapter I was an overview for the rationale for the study and provides the basis for Chapters II through V. Included in this chapter was the background of the problem, rationale for the study, definition of terms used in this study, and general research hypotheses. The purpose of the study is to examine the relationship between adolescent perception of fathers' expert, legitimate, reward, coercive, and referent authority and adolescent behavioral autonomy; while doing so determine if the five basis of authority are a valid measure of fathers' authority and if there are difference between adolescent girls and boys in the way fathers' authority accounts for adolescent behavioral autonomy. The primary variables of interest in this study are the basis of fathers' authority: (a) expert, (b) legitimate, (c) reward, (d) coercive, and (e) referent authority and adolescent behavioral autonomy. Age of the adolescent is also examined in relation to adolescent behavioral autonomy. Chapter II provides a review of the literature on the basis of fathers' authority and autonomy.

CHAPTER II

REVIEW OF LITERATURE

Chapter Overview

The literature review in Chapter II pertains to three main issues and their interrelatedness: (a) parental authority, (b) exchange theory, and (c) adolescent autonomy. First differences between power and authority are examined. Next, the bases of parental authority are defined and how exchange theory relates to the bases of parental authority. Then, the conceptualization and definition of autonomy is explored, how autonomy develops, how the development of autonomy differs by gender, and how adolescents' perceptions of authority relate to adolescent behavioral autonomy.

Power and Authority

Power as a concept in the social sciences is problematic due to its over use, multiple meanings, and entrenchment in everyday language (Boudon, 1989; Schloper, 1965). The earliest definitions of power in the social sciences viewed power as something held by an individual or group. During this time power was defined as:

1. The capacity of an individual or group to change the behavior of other individuals or groups in the direction desirable to the power holders. (Tawney, 1931)
2. The production of intended effects. (Russell, 1938)
3. The ability to employ force (Bierstedt, 1950).

4. A special case of influence in which the behavior of others is controlled with the help of severe consequences for lack of compliance (Laswell & Kaplan, 1950).

Sociologist Max Weber provided the most often utilized definition of power as “the ability to control others, events, or resources – to make happen what one wants to happen in spite of obstacles, resistance, or opposition” (Johnson, 1995, p. 209). Weber is credited with being the first to isolate the concept of power and define it not only as an attribute of the more influential person or group but also in terms of the interaction. The interaction is asymmetrical with the more powerful person still imposing his or her will on the lesser, but Weber set the stage to explore power as a characteristic of the relationship not just an individual (Boudon, 1989).

The functionalist conception of power does not necessitate the domination or coercion of one individual over another but still conceptualizes power as an interactional process. Power is seen as the ability to coordinate people and resources toward mutually agreed upon goals. The power holder will act in the direction that will benefit the greater good of all involved. The feminist approach is compatible to the functionalist approach; power is not based on dominance and submission but on the ability to work together to achieve common goals (Johnson, 1995).

The concept of power developed over time from a characteristic of the individual or group for the purpose of self-interest and enforced by the use or implied threat of an undesirable consequence to an interactional process in which power is an aspect of the relationship and mutually agreed upon by the parties for the purpose of common good. However, over time a qualitative change occurred in the conceptualization of power, the new concepts were related to power but were fundamentally different and resulted in

confusion about the differences between power and related concepts. Henderson (1981) notes that there is often confusion in the concepts related to power, one of the terms most commonly used synonymously with power is authority. Further clarification on the differences between power and authority will contribute to the conceptualizing and defining of a primary concept under investigation, authority.

When attempting to clarify the meanings of concepts related to power, it is beneficial to have a framework or criteria to aid in the subtle differences, real or conceptualized, that exist in the terms. Henderson (1981) created such criteria that will serve as a framework to compare and contrast authority and power and provide the tools necessary to conceptually define authority. When determining the differences between authority and power one must consider whether:

1. The desire is to describe the potential ability to influence another, the actual behaviors of influencing another, or both.
2. Intentionality on the part of the power holder is important.
3. The use of force or the threat of negative consequences is a factor.
4. Resistance by the person of less power is important for conceptualization.
5. There must be a relationship between specific roles or positions.

Authority and power diverge on the point of whether influence has to be overtly carried out or the mere potential to influence another is sufficient in facilitating change. In a relationship based on power between individuals there is evidence or observations that the person with more power was able to impose his or her will on another person. In a relationship based on authority it is not always directly observable how the person of greater influence facilitated the change in the other person. Authority is the potential to

influence outcomes on others, while power is ones' ability to enforce desired outcomes on others (Minton, 1972).

Authority and power differ on the purposefulness of intentions in a person who is changing the behavior of another person. In early work on the conceptualization of power Dahl (1957) considered only purposeful attempts to produce change as power. Walster and Festinger (1962) recognized that more than just overt attempts affect behavior in the person who is the target for control. They demonstrated that the perception of the person who is being targeted for control is important. If a person perceives that another intends to target them for control, this will have an affect on the outcome of the interaction. Henderson (1981) addresses the issue of the intentionality of power by stating it is not necessary for a person to have a specific intent to influence a target for it to create change in behavior. Authority requires intentionality or the perception of the target of intentionality to bring about change in the target; power does not require intentionality to bring about change in the target.

Johnson (1995) provides a parsimonious yet insightful description of the difference between authority and power as they relate to the use of fear or force. Johnson conceptualized authority as based on legitimacy and does not require the use of fear or force but is supported by those that are subject to it. Johnson's conceptualization of authority is similar to Weber's (1994) in that it does not require the use of fear. Weber defined authority as the ability of the source to impose his or her will on another without the use of fear. In contrast, power is not legitimate and requires the use of force or the implied use of force to create desired outcomes. Boudon (1989) clarified that power does not always mean the use of physical force but can also include the mere threat of force.

So authority does not require the use of force, fear, or threats of one person on another to create desired change, but power does.

Authority and power differ on whether the person attempting to influence change must overcome resistance by the person who is being targeted for change. Weber (Smelser, 1988) and Hirsanyi (1962) had compatible opinions on the necessity to overcome resistance to bring about change in others. Weber viewed power as the ability of one party to exercise his or her will on another despite resistance (Smelser) and Hirsanyi viewed power as overcoming the resistance of another to imposes one's will on the other person. Contrary to power, authority does not necessitate resistance by the person of less influence. In a relationship characterized by authority the imbalance of power is accepted and not met with resistance (Henderson, 1981).

Blood and Wolfe (1960) recognized that authority is closely related to power in their research on marital power. They define power as the "ability of one partner to influence the other" (p. 11) and authority as "power held by one partner because both partners feel it is proper for him to do so" (p.11). Blood and Wolfe differentiate power and authority on the basis of mutual agreement on who has the right to exercise influence in the specific relationship of husband and wife. Weber (1994) generalized the definition of authority of the husband and wife to other types of relationships between two or more people. Weber defines authority as "the probability that specific commands will be obeyed by a given group of people" (p. 30). Johnson (1955) similarly describes authority as power enacted from the context of a particular social position. Authority occurs via the relationship between occupants of specific social positions, whereas the utilization of power may occur outside of a specified relationship.

In summary, the use of authority is characterized by: (a) the potential ability to influence another, (b) an intentional act on part of the person with greater resources, (c) the lack of force or threat to create change, (d) little or no resistance by the person who is the target for change, and (e) occurs in the give and take of the relationship between at least two people. In giving the historical context the term power will be utilized when it is the term that the authors used, but the primary concept and term of interest is indeed authority and more specifically, fathers' authority in relation to their adolescents.

Bases of Authority

Some social scientists posit that the concept of authority has not been very useful in social science research; it has been characterized as being too abstract and vague to be of any real use (McDonald, 1979). Turk (1975) noted that this is particularly true when using the concept of authority and applying it to the family. An additional problem in the use of authority is that it historically has been used as a one-dimensional concept. Olson (1975) recognized the complexities in the use of power as a concept and to advance the use of the concept proposed the development of a more complex multidimensional model of power.

French and Raven (1959) were the first to identify a multidimensional model of social power. Hallenbeck (1966) was the first to apply this model to the family, while Smith (1970) was the first to use this multidimensional model of power in studying parent-child relationships. The five dimensions of social power developed by French and Raven and modified to refer to parental authority by Smith are: (a) expert, (b) legitimate, (c) reward, (d) coercive, and (e) referent authority. Parental expert authority is the degree to which children perceive their parents as having the ability to provide specialized

knowledge on pertinent issues. Parental legitimate authority is perceived by children as their parents having a right to influence or control some aspect of their behaviors.

Parental reward authority pertains to the perception that parents have the ability to deliver desired resources. Parental coercive authority is derived from the perception that parents can deliver negative consequences for undesirable behaviors (Henry et al., 1989).

Parental referent authority is based on previously established patterns of the child turning to the parent for guidance or as a model for some desirable behavior (Smith, 1970). The bases of authority as just defined are seen as being qualitatively different but they are not assumed to be independent dimension of parental authority. Relationships do exist among the different bases of parental authority and some of the bases have a larger and more direct influence than others.

McDonald (1982) examined the relationship between adolescent characteristics and perception of parental power. The independent variables in the study were adolescent's gender, grade, religiosity, and birth order. The dependent variables were perception of parental legitimate, referent, expert, and outcome-control power. Outcome-control power is a combination of reward and coercive power and defined as the adolescents' perception of "the ability of the parent to provide rewards and mediate punishment" (McDonald, p. 6). The sample in the study consisted of 458 adolescents from grades 10 through 12 and college freshman and sophomores that were no older than 20 years of age. Multiple regression analysis was used with separate equations for mothers and fathers. The most salient finding to the present study was that there were statistically significant differences between boys and girls in relations to perception of fathers' power.

Authority and conformity

Several studies have been conducted examining the relationship between perceptions of fathers' power and adolescent conformity to parents (Bush, Lash, Peterson, & Wilson, 2002; Peterson, Bush, Supple, Day, Bodman, 1997; Peterson, Rollins, & Thomas, 1982; Peterson et al., 1999). Conformity can be conceptualized as a result of external control from parental surveillance or from internal control from the adolescent making a choice to conform to parental expectations. Conformity as measured by internal control is "consistent with the development of autonomy and individuality" (Peterson et al., 1985, p. 398). No explicit relationship between adolescent autonomy and conformity is implied in the current study. However the relationship between the perception of parental power and conformity are reviewed due to conceptual similarities between adolescent autonomy and conformity as a result of adolescent choice (Peterson).

Peterson et al. (1985) examined the relationship between parental reward, expert, and legitimate power and adolescent conformity. In an effort to determine the effect of gender of the adolescent on the relationship between parental power and adolescent conformity a stratified random sample of junior and senior high school students from the Salt Lake City School District was obtained. The sampling plan resulted in four different groups; all families had to have married parents living at home and one adolescent in junior high and another adolescent in high school. The four different groups were: "(a) 206 families with 2 male adolescents; (b) 189 families with 2 female adolescents; (c) 196 families with an older male adolescent and a younger female adolescent; and (d) 196 families with an older female adolescent and a younger male adolescent" (Peterson et al., 1985, p 404). Multiple regression analysis was utilized with separate models for mothers

and fathers. The results indicated a positive relationship between fathers' expert and legitimate power and internal compliance and female adolescents possess more internalized conformity to their fathers than male adolescents.

Research has been conducted on parental authority and adolescent conformity in other countries, including Mexico, Russia, and China (Bush et al., 2002; Peterson et al., 1999; Peterson et al., 1997). The data collection method, sample sizes, and statistical methods were very similar, if not identical, in each country. The same survey questionnaire translated into the native language was utilized to measure adolescents' perceptions of parental authority for each study; the same measure of fathers' authority was utilized in the current study. All three studies had large sample sizes of adolescents: (a) Mexico = 534, (b) Russia = 582, and (c) China = 496. Also, each study utilized multiple regression analysis with separate models for mothers and fathers. In the Mexican study only the relationship between parental legitimate authority and coercive authority with adolescent conformity was examined; only adolescent perception of fathers' coercive power showed a statistically significant relationship with adolescent conformity (Bush et al., 2002).

In the Russian study, parental expert, legitimate, reward, and coercive authority were used to study adolescent conformity. Results of the study showed that perceptions of parental authority were more influential than parenting behaviors in relation to conformity. Results also showed that "Russian fathers tended to have a more complex influence on adolescent conformity through a greater variety of influence" (Peterson et al., 1999); for fathers there was a statistically significant relationship between perception of fathers' legitimate, reward, and coercive authority and adolescent conformity. Similar

results were found in the Chinese sample, parental authority appears to be more influential than parental behaviors and fathers play a more dimensional role than the mothers in relation to conformity. There was a significant relationship between all fathers' bases of authority included in the study, reward, coercive, expert, and legitimate, and adolescent conformity (Peterson et al., 1997).

Results from the studies on adolescent conformity on samples from the United States (Peterson et al., 1985), Mexico (Bush et al., 2002), Russia (Peterson et al., 1999), and China (Peterson et al., 1997) provide convergence in that perception of parental authority play a larger role than parenting behaviors and fathers play a more central role than mothers via adolescents' perceptions of fathers' authority.

Parental Authority and Exchange Theory

Parental reward authority pertains to the perception that parents have the ability to deliver desired resources (Henry et al., 1989). The strength of reward authority is dependent on parents' ability to deliver the reward as perceived by the child, if a parent can deliver the reward then the parent's reward authority increases. The use of actual rewards rather than the promise of rewards relates to greater parental reward authority over time. Parental reward authority decreases if a parent attempts to exert reward authority over a domain in which the child does not have the ability to perform to the required standard, a request by a parent to behave perfectly at all times may cause a parent to lose reward authority because the request is unattainable and the reward will never be delivered (French & Raven, 1959).

Parental coercive authority is derived from the perception that parents can deliver negative consequences for undesirable behaviors (Henry et al., 1989). Coercive authority

increases as the magnitude of the negative consequence increases and as the likelihood that the negative consequence can be avoided decreases. Reward authority and coercive authority are at times difficult to differentiate. Issues such as, is the withholding of a reward comparable to administering a negative consequence or is the withdrawing of a negative coercive event equivalent to administering a reward. Reward and coercive authority have different effects on the individuals involved. The use of reward authority is perceived more favorably than the use of coercive authority. The use of reward authority will increase the attraction between individuals, while coercive authority will decrease the attraction.

Parental legitimate authority is perceived by children as their parents having a right to influence or control some aspect of their behaviors (Henry et al., 1989). Parental legitimate authority is the most complex of the bases for authority, due to the consideration on behalf of the children of the normative expectations of the parental role. Children develop normative expectations and values from the broader culture as to what domains parents have a right to influence their children's behaviors. If parents attempt to exercise legitimate authority outside of the domains considered normative by the children, the parents' legitimate authority decrease. Parental legitimate authority not only influences their children's perceptions of the right of parents to influence their behaviors but parental legitimate authority also influences parents ability to utilize other bases of authority. The use of reward authority and coercive authority to influence behavior are highly dependent on children's belief that parents have a legitimate right to administer rewards and punishment to influence behavior (French & Raven, 1959).

Parental referent authority is based on previously established patterns of the child turning to the parent for guidance or as a model for some desirable behavior (Smith, 1970). Referent authority increases as the child identifies more with his or her parent or develops a sense of “oneness” with them. Parental referent authority is based on previously established patterns of the child turning to the parent for guidance or as a model for some desirable behavior (Smith). If a child could verbalize the process in which parental referent power is enacted it might be as follows, “I am like my parent, so I will behave and act as they do” (p. 327). There are differences between referent authority and reward authority and coercive authority that can be illustrated by an example. If a child conforms to the expectations or directives of a parent to receive praise, this is an example of reward authority. If a child conforms to the expectations or directives of a parent out of fear of punishment, this is an example of coercive authority. Referent authority is when a child conforms to a parent’s expectations or directives as a result of identification with the parent or a feeling of oneness, regardless of the consequences.

Parental expert authority is the degree to which children perceive their parents as having the ability to provide specialized knowledge on pertinent issues. The strength of parental expert authority is dependent on the child’s perception that his or her parent has knowledge in the area pertinent to the child. If a parent attempts to utilize expert authority outside of an area in which they are knowledgeable, their expert knowledge will decrease. Expert authority has a very limited scope of influence when compared to the other bases of authority; expert authority is only influential in domains in which the children perceive that their parents have the requisite knowledge (Smith, 1970).

The concept of parental authority is of particular importance in adolescence due to the decreased time parents spend in direct contact with their children. Parental authority is not subject to mere presence or enactment of the parent-adolescent dyad to be influential. Smith (1983, p. 29) summarizes this point by stating, “the distinction among the five bases of social power in terms of their capacities for bringing about change which persists without a necessity for continued surveillance and action on the part of the powerful person has special relevance” when applied to parent-adolescent relationships. The focus of this study will be the application of the five bases of fathers’ authority applied to the father-adolescent relationship.

Adolescent Autonomy

Conceptualization and Definitions

The concept of autonomy has been conceptualized and defined in a multitude of ways from a single globalization of the concept to the differentiation of specific types of autonomy germane to the lives of adolescents. In the social science a distinction is often made between the term autonomy and independence based on the whether distance and separation is a desired outcome or consequence, independence, or if the regulation of one’s behavior while maintaining interdependence with others is the desired outcome or goal, autonomy (Collins, Gleason, & Sesma, 1997).

In the social sciences, the majority of the conceptualizations of autonomy incorporate the idea that true autonomous behavior requires maintaining connectedness to significant others while become more self-motivating and self-directed (Zimmer-Gembeck & Collins, 2003). Ryan, Deci, and Grolnick (1995) describe autonomy as when one behaves authentically from one’s core self in a manner that is self-initiated and self-

regulated. Noom, Devovic and Meeus (1999) defined autonomy as “the ability to give direction to one’s own life, by defining goals, feeling competent and being able to regulate one’s actions” (p. 771). Holmbeck and Hill (1986) studied autonomy in adolescents and defined autonomy as, “the freedom to carry out actions on the adolescent’s own behalf while maintaining appropriate connections to significant others” (p. 316).

The definitions and conceptualizations of autonomy can be categorized as either autonomy as separation or autonomy as agency. Autonomy of separation is based on the psychoanalytic or neoanalytic view of adolescent development in which at the beginning of puberty adolescents have a need or desire to be independent from parents. Adolescents move away from their parents in order to achieve separation and a sense of individuality. Within the autonomy as agency perspective adolescents are not seen as moving away from their parents but rather as just moving towards becoming more independent (Beyers, Grossens, Vansant, & Moors, 2003). Autonomy as agency is the most widely held perspective because it is commonly believed that for most adolescents the achievement of autonomy does not include disengagement from their families and they are still relatively engaged in family life (Holmbeck & Hill, 1986).

Within the autonomy as agency perspective, social scientists further added to the explanatory and descriptive richness of the concept of autonomy by reconceptualizing autonomy as a multidimensional concept. Various researchers have demarcated autonomy in various ways. Sessa and Steinberg (1991) and Zimmer-Gembeck and Collins (2003) propose that autonomy is manifested in three different domains: affective, cognitive, and behavioral. Affective or emotional autonomy results in the individuation

of the adolescent while simultaneously deidealizing perceptions of parents (Sessa & Steinberg). The development of emotional autonomy in adolescence necessitates that the conception of and relationship with parents changes as the adolescent develops a more mature conception of his or her parents, they are seen as real people in addition to being a parent. Cognitive autonomy is the “belief that one has control over his or her life, and subjective feelings of being able to make decisions without excessive social validation (Sessa & Steinberg, p.42). Behavioral autonomy is when one can regulate his or her own behavior and make decisions for oneself. Steinberg (1985) also conceptualizes autonomy into three different domains, in addition to emotional and behavioral autonomy Steinberg includes value autonomy. Value autonomy refers to the development of morals or guiding principals about what is right or wrong.

Noom et al. (2001) conducted an empirical study to examine the concept of adolescent autonomy. They recognized the difficulty in trying to compare studies or theories pertaining to autonomy without a general consensus on the types of autonomy and their meaning. The purpose of their study was to “examine different theoretical perspectives and to search for general dimensions in the concept of adolescent autonomy” (p. 578). After a conceptual analysis on the existing literature on theories of adolescent autonomy they found common dimensions across theories. In most theories of adolescent autonomy three distinct dimensions were found: cognitive, emotional, and regulatory.

The cognitive dimension refers to the ability to problem solve in order to make choices in determining one’s perception of what is right and wrong and to determine goals for the future. More simply put the cognitive dimension of autonomy pertains to the adolescent perceptions and the decision-making process of what they want to do with

their lives. Noom et al. (2001) refer to this as attitudinal autonomy and define it as “the ability to specify several options, to make a decision, and to define a goal” (p. 578).

Adolescence is often a time when one has to make a choice in competing and contradictory alternatives. Parental wishes, peer pressure and one’s own choices need to be considered when making personal decisions. The adolescent must become adept at making choices to satisfy their own goals while being considerate or respectful of the desires of others. Noom et al. (2001) refer to this as emotional autonomy and define it as “a feeling of confidence in one’s own choices and goals” (p. 581).

Lastly, the regulatory dimension refers to how adolescents go about achieving their goals. In order to successfully achieve a goal the adolescent must have a repertoire of skills and the confidence and ability to make the correct choices to accomplish the goal. Noom et al. refer to this regulatory process as functional autonomy and define it as “the ability to develop a strategy to achieve one’s goal” (p.581).

In their empirical test of the concepts of attitudinal, emotional, and functional autonomy Noom et al. established four hypotheses:

1. A confirmatory factor analysis was conducted of a large national study after selecting items from the survey that related to the attitudinal, emotional, and functional autonomy. A smaller pilot study of the selected items was conducted prior to the larger analysis to validate if the correct items were chosen to measure the different types of autonomy.
2. There will be a positive correlation between attitudinal, emotional, and functional autonomy since they all measure a common theme, “giving direction to one’s life” (p. 582).

3. There will be convergent and divergent validity with concepts that are similar and different from attitudinal, emotional, and functional autonomy.
4. The developmental nature of adolescent autonomy was examined. If autonomy increases with age then there will be a positive correlation between autonomy scores and age of the adolescents.

Statistical analysis conducted supported all four hypotheses. The confirmatory factor analysis showed that the 15 items measuring overall autonomy were best represented by a three-factor model compared to a one-factor model with all of the autonomy survey items included; goodness of fit indicators empirically showed that the three-factor model was superior to the one-factor model. The results support the “hypothesis that adolescent autonomy can be conceptualized as a construct with three dimensions” (p. 590): attitudinal, emotional and functional autonomy.

Intercorrelations were computed between attitudinal, emotional, and functional autonomy. All correlations were statistically significant at $p < .01$ and range from $r = .38$ to $r = .50$. The moderate positive correlations showed that the different dimensions of autonomy were related. If the correlations were closer to 0 or 1 the relationships would not be related at all or too related, thus measuring the same exact construct. Attitudinal, emotional, and functional autonomy are related concepts that all measure ways in which adolescents give direction to their lives. Noom et al. (2001) conducted intercorrelations among attitudinal, emotional, and functional autonomy and constructs that were thought to be conceptually related. Positive significant correlations were found with all three dimensions of autonomy and their purposed related construct. The hypothesis of

convergent validity was supported, providing further evidence of three distinct dimensions of adolescent autonomy.

An analysis of variance was conducted with age of the adolescent as the independent variables and attitudinal, emotional, and functional autonomy as the dependent variables. Significant main effects were found for attitudinal and emotional autonomy, but not for functional autonomy, partially supporting the hypothesis that autonomy is a developmental function that increases with age.

In the current study the relationship between adolescent perception of fathers' authority and behavioral autonomy is being explored. Behavioral autonomy is the "extent to which adolescents acquire freedom of action from parents" (Peterson, 1986, p. 232). Behavioral autonomy has been shown to be the most important type of autonomy to adolescents, valuing it over other forms (Peterson et al., 1999). The study of adolescent behavioral autonomy and adolescent perception of fathers' power are complimentary with adolescents desiring more physical separation from parents and perception of fathers' power not requiring proximity.

The Process of Development

One of the primary developmental tasks of adolescence is the development of autonomy. It is expected that when the adolescent reaches young adulthood that he or she has developed a sense of self-reliance and has the basic skills needed to meet the challenges of living autonomously. The developmental task of autonomy requires the adolescent to develop a sense of one's self as independent and capable while simultaneously staying connected to parents, other family members, and friends and seeking support when needed (Baltes & Silverberg, 1994). There are at least three

different perspectives on how autonomy develops in adolescents the: (a) organismic-maturational view, (b) self and motivational views, and (c) social relationship views.

Organismic-Maturational Views

According to Katz (1997), adolescence begins with the biological phenomenon of puberty and ends with the sociological phenomenon of the assumption of adult roles. Pubertal maturation is often seen as the cause of psychological and social changes during adolescence but more contemporary research has shown a more indirect link. The physical changes that occur during puberty cause others and the adolescents themselves to have different expectations for behavior. As adolescents become more adult like in appearance it is expected that the adolescent will become more autonomous, these “altered expectations and reactions, rather than physiological changes per se, contribute to behavioral and emotional changes” (Collings, Gleason, & Sesma, 1997, p. 82) in adolescents.

The psychoanalytic perspective of autonomy development was first developed by Anna Frued (1958). According to the psychoanalytic perspective the development of autonomy is a result of urges or drives within adolescents that cause them to become more detached and separated from his or her parents. The separation from parents enables the adolescent to become more autonomous by allowing more freedom to decide how he or she feels, thinks, and behaves. The neoanalytic perspective does not support the idea of detachment from parents as a necessary condition of the development of autonomy. Adolescents go through a process of individuation from their parents, so they may be relatively emotionally disengaged but not physically detached from their parents. Through the process of detachment and individuation adolescents are able to go outside

of the family to form relationships with others and become more and more autonomous by being able to meet more and more needs according to one's own desires and wishes (Zimmer-Gembeck & Collins, 2003).

Self and Motivational Views

Similar to the organismic-maturational views, self and motivation views emphasize the impetus for the development of autonomy comes from within the organism but the mechanism or process of change differs. Self and motivational views share the theme that individuals have a need for agency, or to act authentically from one's core self. Individuals have an innate need to perceive oneself as the origin of one's own action. As stated by Zimmer-Gembeck and Collins (2003), "an innate need for autonomy energizes and motivates all individuals to seek their own course of behavior, while a need for relatedness to others simultaneously promotes behaviors that maintain connections with others" (p. 183). Autonomy develops in the context of social relationships that are free from control, coercion, and manipulation, letting actions unfold from the true self (Deci & Ryan, 2000).

Social Relationship Views

In contrary to the psychoanalytic perspective, the social relationship view of developing autonomy does not require disengagement from parents in order to develop autonomy. The development of autonomy and connection to parents coexist and influence each other in a bidirectional manner. The development of autonomy requires a continued, albeit qualitatively different relationship with parents (Zimmer-Gembeck & Collins, 2003). The nature of adolescent-parent relationships changes from that of young

child-parent as adolescents become more independent and able to function autonomously (Collins, 1997).

The foundation for the development of adolescent autonomy begins at a much earlier age. Early attachments to parents allow children a secure base to monitor their own models of self and how they represent others and continually rework self-perception and how they view others. As children become more adept at self regulating their perceptions of self and others, they become more autonomous in performing the tasks. This practice of revising their own models of self prepares adolescents to revise models of relationships with parents, allowing for a balance between autonomy and closeness with parents (Zimmer-Gembeck & Collins, 2003).

Importance of Autonomy Development

The development of autonomy during adolescents, or the lack there of, has important implications in other areas of functioning and adolescent development. The inability to development sufficient levels of autonomy in relation to one's parents may result in one of two extremes, either too early entry into adult like roles without really being ready for the responsibility or a continued dependency on parents (Blos, 1994). It has also been shown that healthy levels of independence while maintaining a desire to remain connected to others is related to overall physical and psychological health. Peers that have healthy levels of autonomy in relation to parents are able to think more independently but seek support and guidance from parents when necessary, these adolescents are less like to succumb to negative behaviors as a result of peer pressure (Brown, Classen, & Eicher, 1986).

Cultural Differences in Autonomy

Autonomy is a strongly held cultural value in the United States and other Western industrialized societies. Over time parents socialize their children to make decisions for themselves, and to become more autonomous and responsible; with increased age, adolescents express the desire and show behaviors that indicating a willingness to take on more decision making and adult like responsibilities. The culmination of this socialization process is for adolescents to move out of their home of origin and become self-supporting. However this socialization process of autonomy is not universal, “these expectations and desires vary among cultures within and outside of the United States” (Zimmer-Gembeck & Collins, 2003, p. 193).

In order to understand cultural differences in the development of adolescent autonomy across racial and ethnic groups in the United States it is helpful to look the extent to which adolescents develop autonomy across societies throughout the world. In the United States and other Westernized countries it is commonly believed that the development of autonomy is a primary goal of adolescence (Larson & Wilson, 2004). Although more and more studies have confirmed that the development of autonomy in the United States does not mean a separation from parents, compared to non-Westernized countries emotional and behavioral distancing does occur during adolescence (Larson, Richards, Moneta, Holmbeck, & Duckett, 1996). In a study of middle-class adolescents from India and the United States, Larson, Verma, and Dworkin (2001) found that Indian 8th graders spend approximately 39 percent of their time with family members compared to 23 percent for American 8th graders. In addition to spending more time with their families, Indian adolescents spend twice as much time engaged in conversation with their

family members. In general, Indian adolescents want to spend more time with their family compared to American adolescents; emotional and behavioral autonomy from parents is not as much a priority for Indian adolescents compared to their Western counterparts.

Rosenthal and Feldman (1991) conducted research on adolescent expectations for behavioral autonomy of 10th and 11th grade students in Hong Kong, Australia, and the United States. It was hypothesized that due to the Chinese cultural value of placing family obligation before personal freedom, adolescents living in Hong Kong will have later expectations for behavioral autonomy compared to Australian and American adolescents. In addition to the study finding that adolescents from Hong Kong have later expectations for behavioral autonomy the authors also determined why. The adolescents from Hong Kong reported that their parents monitor them more and are more demanding but less autocratic. The Hong Kong youth reported lower levels of individualism and cared less about individual competence and having success outside the family.

In the United States our study of how culture influences the development of adolescent autonomy has been predominantly between group comparisons of different cultures, although there are obviously significant with-in group variations as well. (Zimmer-Gembeck & Collins, 2003). Asian American and Latin American families hold collectivistic values in which they have a strong sense of obligation to and responsibility for family members. Latino and Asian adolescents' obligation to the family is contrary to the European Americans increased desire for individual autonomy and more time spent with their same age peers.

Fuligina, Tseng, and Lam (1999) conducted a study to examine the collectivist orientation towards family obligation of 800 American adolescents. The youth were enrolled in the tenth or twelfth grade in high school and their ethnicity and or geographical origin were: Filipino, Chinese, Mexican, Central American, South American, and European. The adolescents completed surveys in their social studies class while at school. The surveys assessed three different domains regarding family obligations: (a) current assistance, (b) respect for family, and (c) future support. The adolescents from every Asian and Latin American group scored significantly higher on all measures of family obligation compared to adolescents of European descent.

Goldstein, Davis-Kean, and Eccles (2005) conducted a study examining the relationship between adolescent family relationships, including autonomy, peer relationships, and problem behavior. The sample consisted of 1,357 African American and European American adolescents in a longitudinal design that assessed the youth in 7th grade, summer after 8th grade, and in 11th grade. At every data collection time African American adolescents reported lower autonomy scores and subsequently reported higher level of parental intrusiveness compared to European American adolescents.

Autonomy and Gender

In the three domains of autonomy previously mentioned, much more is known regarding behavioral autonomy compared to emotional or cognitive autonomy. Adolescent girls develop behavioral autonomy much later than adolescent boys across all race and ethnic groups. According to Zimmer-Gembeck and Collins (2003) differences in levels of behavioral autonomy in same aged adolescent boys and girls is due to the distinction between agency and communion. Agency is self-assertive and independent

behaviors typically perceived as masculine traits in the United States. Communion is defined as “interpersonal concern, caring, and cooperation, and reflects an orientation toward others” (pp. 194-195). Thus gender differences in autonomy reflect expectations for behavior based on the larger societal context.

Dowdy and Kliever (1998) conducted a study of 859 10th and 12th grade public high school students. The purpose of the study was to determine the relationship between adolescent dating with parental conflict and behavioral autonomy. Behavioral autonomy was measured by the Decision Making Scale developed by Steinberg (1987). The scale assesses to what degree adolescents make their own decisions regarding their behavior. Although not the primary purpose of the study, the authors found that male adolescents scored higher on the scale compared to female adolescents in both grade groups, thus adolescent males were found to be more behaviorally autonomous compared to females.

Geuzaine, Debry, and Liesens (2000) conducted a study on differences in emotional autonomy based on gender in late adolescence. The authors warned not to draw conclusions or place a value of right or wrong about when adolescent boys and girls develop autonomy since each have their own struggles in developing autonomy from parents. The challenge for girls is to be able to separate from parents and for boys the challenge is to maintain connections with parents (Steinberg, 1987). For the study, data was collected from 190 college students between and including the ages of 18 to 22 years. Results of the study supported the premise that girls display less emotional autonomy from parents when compared to boys.

In one of the limited studies assessing gender differences in adolescent cognitive autonomy, Noom et al. (2001) also studied differences in functional autonomy and

emotional autonomy. Cognitive autonomy was defined as “the ability to specify several options, to make a decision, and to define a goal” (p. 578). Functional autonomy is “the ability to develop a strategy to achieve one’s goal” (p. 581). Emotional autonomy was defined as “a feeling of confidence in one’s own choices” (p. 581). The subjects in the study were 400 adolescents between the ages of 12 and 18 years. Results of the study showed that boys develop behavioral autonomy at a much earlier age compared to girls and have higher levels of cognitive autonomy. The limited research available on gender differences in the development of adolescent autonomy suggests that adolescent boys display more behavioral, emotional, and cognitive autonomy compared to adolescent girls of the same age.

Fathers’ Authority and Adolescent Behavioral Autonomy

Fathers and Adolescent Autonomy

Fathers play an important role in facilitating the development of autonomy at a time when adolescents are spending longer periods of time away from both parents. Many studies have indicated that fathers are less involved and spend less direct time with their adolescent children compared to mothers (Lamb, 1987). Research conducted by Montemayor and Brownlee (1987) found that children spend approximately half the amount of direct time with their father compared to their mother. Do not mistake the lower amount of direct time with their children as lack of involvement on the behalf of fathers. Fathers are equally involved in school related activities when compared to mothers (Roberts, Block, & Block, 1984) and as a function of being more involved in extrafamilial activities serve as models for “long-term achievement-related issues,

professional identity, and relationships with the extrafamily environment” (Shulman & Klein, 1993, p. 42).

Adolescents spend longer periods of time away from their parents and fathers are more likely to encourage autonomous behavior and discourage dependency compared to mothers. It is not the amount of time that fathers spend with their adolescent children that encourages autonomy but the availability of the father when needed by the adolescent that promotes autonomous behavior. In a study of seventy-eight students in seventh, ninth, and eleventh grades Shulman and Klein (1993) found that while fathers spend less direct time with their children compared to mothers they were not seen as aloof or uninvolved. Fathers were seen as involved and available and were reported to be more supportive of autonomous functioning outside of the family. One adolescent reported that fathers are more important during adolescence because they are able to give better advice related to school and friends. The more confidence that adolescents have in the advice of their fathers the more fathers are able to influence the development of adolescent autonomy.

Fathers' Authority and Autonomy

Peterson (1986) conducted a study to determine whether parental power bases were associated with behavioral autonomy in adolescents and hypothesized that expert, legitimate, reward and referent power would be positively related to behavioral autonomy, while coercive power would be negatively related to behavioral autonomy in adolescence. The subjects included in the study were 392 white adolescents at a metropolitan high school in eastern Tennessee. Data collection for the students occurred at high school in their English classes. The measure of parental power is identical to the

one used in the current study. Multiple regression analysis was performed with adolescent perception of coercive, expert, legitimate, reward, and referent power as the independent variable and adolescent behavioral autonomy as the dependent variable. Separate multiple regression equations were used for mothers and fathers.

The results of the study showed that coercive power of both the mothers and fathers were negatively related to behavioral autonomy. Maternal expert and referent power along with fathers' expert, legitimate, reward, and referent power were positively related to behavioral autonomy in adolescents. Peterson (1986) noted that all of the power bases for the fathers were statistically significant and "fathers may have a different and more diversified role than mothers in socializing the young for autonomy" (p.246) and serve as the primary facilitator of the adolescents to the outside world.

Peterson et al. (1999) conducted a study in which the relationship between family cohesiveness, parental support, adolescent conformity, parent and adolescent influence to adolescent behavioral autonomy was examined. The measures for parental influence were adolescent perception of expert, legitimate, reward, and coercive power. The subjects included in the study were 594 Caucasian adolescents attending a large metropolitan high school in the southeastern United States. Multiple regression analysis was used and the results indicated that adolescents' perception of fathers' reward, expert, and legitimate power were positively related to adolescent behavioral autonomy and adolescent perception of fathers' coercive power was negatively related to adolescent behavioral autonomy. Similar to previous studies fathers' power in relation to adolescent behavioral autonomy is more multifaceted and accounts for more variance compared to maternal power. There was also a gender difference in the relationship between perception of

fathers' power and adolescent behavioral autonomy that was not present for mothers. Due to the use of multiple regression analysis, it was not possible to determine how each individual father's power base differed due to gender of the adolescent. In the current study structural equation modeling will address this weakness of regression by examining the differences in the relationship between expert, legitimate, reward, referent and coercive authority for adolescent boys and girls.

The current study is based on the conceptualization of a positive relationship between adolescents' perceptions of fathers' coercive, expert, legitimate, reward, and referent authority with adolescent behavioral autonomy. As previously mentioned, adolescents' perception of fathers' authority increases as adolescents have repeated positive experiences in each of the domains related to fathers' authority. When adolescents perceive greater fathers' authority, less proximity is required between fathers and adolescents for fathers to be seen as influential by their adolescent children. Adolescents develop an understanding of how their fathers might respond to issues or situations and are able to determine possible rewards and consequences for their behaviors and decisions without the direct involvement of their fathers. Less time with their fathers affords the opportunities for adolescents to develop behavioral autonomy.

Summary

Chapter II provided a literature of the variables under investigation in this study. First, the differences between power and authority were explored with authority being the chosen term. The adolescents' perceptions of bases of fathers' authority were examined along with adolescents' perceptions of changes in fathers' power. Then the concept of autonomy is explored including how it develops, why it is important, how it differs by

gender, and how fathers influence autonomy. This review serves as a foundation to explore the relationship between adolescents' perceptions of fathers' authority and adolescent behavioral autonomy.

CHAPTER III

METHODOLOGY

Introduction

Chapter I and Chapter II present the statement of the problem, the theoretical framework, and the theoretical model and hypothesized relationships between fathers' authority and adolescent behavioral autonomy. Chapter III describes the methodology used to examine the research questions about the relationship between adolescent perception of fathers' authority and adolescent behavioral autonomy as influenced by gender and age of the adolescent. This chapter includes the research design, participant selection and characteristics, measurement of variables, research procedures, operational hypotheses, statistical analyses, methodological assumptions, and limitations of the study.

Research Design

This study uses a correlational research design "to investigate the extent to which variations in one factor correspond with variations in one or more factors based on correlation coefficients" (Isaac & Michael, 1995, p. 53). Correlation research is appropriate when the variables are complex or the researcher is unable to exert control of the variables of interest. Benefits of correlation research include the ability to: (a) simultaneously measure multiple variables, (b) consider the effects of relationships

among the variables, and (c) explore relationships among variables other than those tested merely by hypothesis testing.

Correlational research is well suited for the current study due to the relationships among the five bases of fathers' authority and their relationship to adolescent behavioral authority. No experimental control was possible due to the data collection method of a written survey with no comparison or control groups. Structural equation modeling will be utilized for analysis in this study and it is based partly on correlations (Kline, 1998). Structural equation modeling shares with correlational research the ability to examine relationships among variables other than those identified as the hypotheses (Tomarken & Waller, 2005).

Limitations of correlation research include: (a) not being able to determine cause-and-effect; (b) the inability to control independent variables; (c) difficulty in differentiating spurious relationships among variables; and (d) in lieu of thoughtful consideration, meaningless interpretation of numerous variables can result. In the current study it is impossible to have a true control group with random selection and assignment of subjects to experimental and control groups. Further, it is not possible to develop a sampling frame of adolescents and randomly assign them to parents. Advancements in research design and statistical techniques allow for statistical control where experimental control is not possible, thus making the case for correlation research as the appropriate and realistic approach to this study (Isaac & Micheal, 1995).

The independent variables utilized in this study are the bases of fathers' authority: (a) legitimate authority, (b) expert authority, (c) coercive authority, (d) reward authority, and (e) referent authority (Bush et al., 2004; Smith, 1970). The dependent variable of

interest is adolescent behavioral autonomy. Using a correlational research design, this study is designed to test the fit of data collected to the theoretical model using structural equation modeling. The relationships between the five basis of fathers' authority and adolescent behavioral autonomy will be examined taking into consideration age of the adolescent.

Historical Background

The current study is part of a research project "Parenting and Adolescent Social Competence Across Cultures" funded by Oklahoma Agricultural Experiment Station (Carolyn S. Henry, Principal Investigator; Joey Fronheiser, Graduate Research Associate). The current study utilized the same research design, instrumentation, and method of data collection as an international study on the influences of adolescents' perceptions of parenting behaviors and adolescent social competence (Gary W. Peterson and Kevin R. Bush, Co-Principal Investigators, currently affiliated with Miami University of Ohio. The research design, instrumentation, and method of data collection were previously used with samples of adolescents in China, Russia, Chile, Mexico, India, and the Czech Republic, as well as the United States. The sample sizes ranged from 480 to 582 adolescents per country (Peterson et al., 1999). The current study utilized a unique sample collected for the purposes of the current study and the larger project.

Participant Selection and Characteristics

Nonprobability sampling techniques were utilized in the study. Efforts were made to obtain a purposeful sample by selecting Oklahoma urban and metropolitan high schools whose demographics would compare favorably to the overall state demographics and whose student populations were large enough to allow for a large enough sample size

to make comparison among different racial and/or ethnic groups (Kerlinger & Lee, 2000). Selection criteria were established to develop a list of high schools to contact for participation in the study. The selection criteria utilized were:

1. Geographical location within one of Oklahoma's two large metropolitan statistical areas.
2. High schools including grades nine through twelve.
3. Total student populations of 1,000 or greater.
4. Student racial demographics comparable to the overall state: (a) Caucasian 72.9%, (b) American Indian 8.1%, (c) African American 7.7 %, (d) Hispanic or Latino 6.3% (U.S. Census Data, 2000).

An initial list of 30 high schools was compiled based on the above criteria. The recruitment process involved mailing a stamped self addressed return introductory letter to the high school principal briefly explaining the research project and asking permission to contact them by phone for further explanation or to indicate that they were not interested in further contact. If no response was given to the initial letter, telephone contact was made to solicit participation by phone. Due to the few numbers of favorable initial responses high schools outside of the two largest metropolitan statistical areas with student populations of over 1,000 but did not necessarily meet the demographic criteria listed above were included resulting in the inclusion of 20 more high schools or 50 schools total.

Out of the initial 50 schools, six principals gave approval to be contacted for further explanation of the research project. Telephone calls were made to further explain the research project and in person meetings at the schools were scheduled. Out of the six

school principals that expressed initial interest, three school districts required internal review processes by the school board or superintendent that subsequently declined approval, one principal declined after further explanation, and two principals agreed and consented to participate in the study. One principal only allowed subject recruitment to occur in the human environmental science classes due to the research project's content alignment with the curriculum. The other principal scheduled data collection on a day in which the 11th graders were taking standardized assessments so data was collected only on the 9th, 10th, and 12th grader students. For the current study the sample includes only students from the high school where the more comprehensive recruitment and data collection occurred.

The total enrollment for the high school included in this study for grades 9 through 12 was 2,642 students. As previously mentioned the 11th grade students were not able to participate in the study due to a schedule conflict. Other groups of students that were unable to participate in the study included: (a) students that were absent from school, (b) students whose teachers forgot to send home informed consent packets, and (c) students attending offsite vocational training during the school day. Approximately 1,600 students were available for inclusion in the study with 250 students completing the parental consents, student assent, and the study questionnaire, resulting in a response rate of 15.6 percent.

Students were asked various demographic information and the resultant sample characteristics are as seen in Table 1.

Table 1

Adolescent Demographic Characteristics

Category	Frequency	Percent
Gender		
Male	126	50.4
Female	124	49.6
Age		
13 years	1	0.4
14 years	23	9.3
15 years	92	37.2
16 years	57	23.1
17 years	12	4.9
18 years	62	25.1
Grade		
9th	105	42.0
10th	72	28.8
12th	72	28.8
Race		
Caucasian	210	84.0
African American	5	2.0
Native American	12	4.8
Hispanic/Latino	9	3.6
Asian American	8	3.2

The demographic percentages of race/ethnicity for the sample included in the study compare favorably to the percentages for the entire district. The school district reported that the district is comprised of 83% Caucasian, 6% African American, 2% Asian American, 3% Hispanic/Latino, and 6% Native American (State of Oklahoma Office of Accountability, 1999). The sample of high school students utilized in the study is representative of the overall students in the school and district in regards to race and/or ethnicity.

Participants reported on demographic data including parental marital status, parental educational attainment, and parental employment status. See Table 2 below for parental demographic characteristics reported by the participants. Participants also reported on which parent(s) they reside with and who functions as their father on a daily basis. See Table 3 below for parental residential status and who functions as adolescents' father on a daily basis.

Table 2

Fathers' Demographic Information

Category	Frequency	Percent
Marital status		
Married	183	73.2
Divorced	53	21.2
Separated	5	2.0
Widowed	6	2.4
Single	1	0.4
Missing data	2	0.8
Fathers' education		
High school or less	13	5.2
Vocational training	27	10.8
Some college	26	10.4
Bachelor's degree	89	35.6
Graduate degree	89	35.6
Missing data	6	2.4
Fathers' Employment		
Yes	207	82.8
No	8	3.2
Retired	24	9.6
Missing Data	11	4.4

Table 3

Fathers' and Adolescents' Residential and Functioning Status

Category	Frequency	Percent
Biological father same residence		
Yes	184	73.6
No	66	26.4
Who functions as father		
Biological father	187	74.8
Adoptive father	10	4.0
Stepfather	20	8.0
Other	8	3.2
No one	21	8.4
Missing data	4	1.6
Parental residential status		
Bio mother/bio father	165	66.0
Bio mother/stepfather	28	11.2
Bio mother only	28	11.2
Other	12	4.8
Bio father/stepmother	10	4.0
Bio father only	6	2.4
Missing Data	1	.4

Measurement

The overall project questionnaire consisted of 184 self-report items composed of demographic items, existing self-report questionnaires, and measures developed specifically for the overall project. The questionnaire was administered to the participants assessing their perception of demographic information, aspects of adolescent social competence, and parental behaviors. The variables used in the present study are the bases of parental authority, adolescent behavioral autonomy, and various demographic variables. The complete questionnaire can be obtained by contacting Dr. Gary W. Peterson, Department of Family Studies and Social Work, 101A McGuffey Hall, Miami University, Oxford, OH 45056. See Table 3 below for information on variables included in this study.

Table 4

Summary of Measures

Variable	Measure and Source	# Items	Range of Scores	Cronbach's α Previous	Cronbach's α Current
Age of adolescent	Standard fact sheet question	1	14 to 18	not applicable	not applicable
Adolescent behavioral autonomy	Scale measuring adolescent reports of adolescent behavioral autonomy (Bush, 2000)	10	1 to 4	.88	.87
Fathers' expert authority	Subscale measuring adolescent reports of fathers' expert authority (Peterson et al. 1985; Peterson, 1986)	8	1 to 5	.79	.67
Fathers' legitimate authority	Subscale measuring adolescent reports of fathers' legitimate authority (Peterson et al. 1985; Peterson, 1986)	6	1 to 5	.84	.85
Fathers' coercive authority	Subscale measuring adolescent reports of fathers' expert coercive (Peterson et al. 1985; Peterson, 1986)	6	1 to 5	.80	.74
Fathers' referent authority	Subscale measuring adolescent reports of fathers' referent authority (Peterson et al. 1985; Peterson, 1986)	4	1 to 5	.74	.78
Fathers' reward authority	Subscale measuring adolescent reports of fathers' reward authority (Peterson et al. 1985; Peterson, 1986)	3	1 to 5	.73	.80

Measure of Adolescent Behavioral Autonomy

Behavioral autonomy was measured by a 10-item Likert scale designed to assess adolescents' perception of their freedom to make their own decisions regarding friends, dating, clothes they wear, and choices of educational and career goals. An example item from the scale is, "This parent has confidence in my ability to make my own decisions". Adolescents responded on a 4-point Likert scale ranging from 1 = *strongly disagree* to 4 = *strongly agree*. Each of the 10 items were summed then divided by 10 for a possible score of 1 to 4, the higher the score the more behavioral autonomy reported. Cronbach's alpha measuring reliability of the scale for behavioral autonomy from father is .88 (Bush, 2000).

Measure of Parental Authority

Parental authority was measured by a 27-item instrument designed to assess adolescents' perceptions of their parents' interpersonal resources within the parent adolescent relationship in such areas as occupational goals, educational plans, and relations with the opposite sex (McDonald, 1977; Peterson et al., 1985; Smith, 1970). Earlier studies using the measure were based on exploratory factor analyses. Factor analysis is a data reduction technique to reduce a larger set of variables to a smaller set of variables also known as factors. (Vogt, 2006). Factor analysis determines construct validity or the way in which the factors relate to performance on an assessment (Isaac & Michael, 1995; Vogt). Principal components factor analysis with varimax rotation was conducted in previous studies on the 27 items and dimensions of parental authority were identified as: expert (8 items), legitimate (6 items), coercive (6 items), referent (4 items), and reward authority (3 items) (Peterson et al.; Peterson, 1986). The previously

established reliabilities (Cronbach's alphas) for the subscales for the dimensions of fathers' authority are: expert (.79), legitimate (.84), coercive (.80), referent (.74), and reward authority (.73).

Sample questions representing the dimensions of parental authority follow: (a) "This parent has the right to influence me about my education." (legitimate authority), (b) "This parent is able to give me useful advice when it comes to choosing an occupation." (expert authority), (c) "If I did not follow this parent's advice about my classroom behavior, I would really suffer the consequences." (coercive authority), (d) "This parent is the kind of person who could make me feel very good if I followed his or her advice about the friends I choose." (reward authority), and (e) "This parent's opinions should be given as much weight as those of anyone when I am making decisions about my occupation." (referent authority). Responses to the items were given on a 5-point Likert scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The responses to each item on the subscales were summed and divided by the number of items for a possible score for each subscales from 1 to 5, the higher the score the more perceived authority.

Measurement of Demographic Items

Demographic variables in the study were used for sample description and/or in the structural equation models. Fathers' employment, fathers' education, fathers' figure type, parental marital status, gender of the adolescent, and age of the adolescent are all used to describe sample characteristics. Gender of the adolescent and age of the adolescent will also be used in the structural equation models. Fathers' employment was measured for the biological father or other fathers' figure if applicable (i.e., biological father, stepfather, or grandparent). Based on the questions asked it can be determined if the

father or father figure: (a) works full-time (more than 35 hours a week), (b) works part-time (less than 35 hours a week), (c) is unemployed, or (d) retired from employment.

Fathers' education was measured as: (a) some grade school, (b) completed grade school, (c) junior high school, (d) completed junior high, (e) some high school, (f) completed high school or GED, (g) completed high school and technical training, (h) some college, (i) bachelor degree, (j) some graduate classes, and (k) completed graduate degree.

Parental marital status was measured as: (a) married, (b) divorced, (c) separated, (d) widowed, (e) single, and (f) other. For gender and age of the adolescent they were asked to circle the correct response from provided categories.

Research Procedures

Prior to the implementation of the research procedures the institutional review board for human subject research at Oklahoma State University approved the use of all consent and assent forms, the survey instrument, research procedures, and procedures to ensure participant confidentiality. All procedures approved by the Oklahoma State University Institutional Review Board were strictly followed to ensure participant informed consent or assent, confidentiality, and no harmful consequences as a result of participation in this study.

One week prior to data collection packets were delivered to the school, one for each student eligible for participation in the study. Written instructions were provided to the teachers on the procedures to follow, when to pass out the packets, what to do with them upon their return, and when we would be back to collect the packets and administer the assessments. The packets included an explanation of the study, an informed parental consent form, and either a student assent form or a student consent form for students 18

years of age or older. All students regardless of age were required to obtain parental consent. All consent and assent forms were enclosed in a manila envelope and participants were instructed to seal the envelope to protect their right to confidentiality and then return the envelope to their homeroom teacher. Data collection was to occur in the students' homeroom class so the individual packets were delivered grouped together dependent on the number of students in each participating homeroom class.

Data Collection

Three members of the research team were at the high school at the time of data collection. Each member of the research team visited homerooms to collect the parental consents and student consents or assents and to give the teacher a questionnaire for each student to complete after returning the required signed consent and assent forms. The students were given approximately 75 minutes to complete the questionnaire before a member of the research team returned to the homeroom to collect the completed questionnaire and give the adolescents the small non-monetary incentives for participating in the research project. The study questionnaires were collected, compiled and then entered into the *Statistical Package for the Social Sciences* (Version 8.0). Data cleaning was conducted by using stem and leaf plots to determine if there were frequencies outside of the specified range for the variables and by using box and whisker plots to look for outliers in the variables for every case (Francis, 2005).

Operational Hypotheses

Research question 1 is tested by Operational Hypothesis 1. Research question 2 is addressed with the theoretical model in Figure 1 and through Operational Hypotheses 2-9.

Operational Hypothesis 1

The measure of fathers' authority will yield five dimensions (legitimate, expert, referent, coercive, and reward authority) when subjected to confirmatory factor analysis.

Operational Hypothesis 2

Adolescents' responses to the measure of fathers' legitimate authority will have a direct positive relationship with adolescents' responses to the measure of adolescent behavioral autonomy.

Operational Hypothesis 3

Adolescents' responses to the measure of fathers' expert authority will have a direct positive relationship with adolescents' responses to the measure of adolescent behavioral autonomy.

Operational Hypothesis 4

Adolescents' responses to the measure of fathers' referent authority will have a direct positive relationship with adolescents' responses to the measure of adolescent behavioral autonomy.

Operational Hypothesis 5

Adolescents' responses to the measure of fathers' coercive authority will have a direct negative relationship with adolescents' responses to the measure of adolescent behavioral autonomy.

Operational Hypothesis 6

Adolescents' responses to the measure of fathers' reward authority will have a direct positive relationship with adolescents' responses to the measure of adolescent behavioral autonomy.

Operational Hypothesis 7

Age of the adolescent will have a direct positive relationship with adolescents' responses to the measure of adolescent behavioral autonomy.

Operational Hypothesis 8

Adolescents' responses to the measure of fathers' legitimate authority will have an indirect relationship with adolescents' responses to the measure of adolescent behavioral autonomy through adolescents' responses to the measure of fathers' expert and referent authority.

Operational Hypothesis 9

Age of the adolescent will have an indirect relationship with adolescents' responses to the measure of adolescent behavioral autonomy through adolescents' responses to the measure of fathers' coercive and reward authority.

Analyses

The present study uses confirmatory factor analysis to test Hypothesis 1 and structural equations modeling to test the theoretical model that includes Hypotheses 2 through 9.

Confirmatory Factor Analysis

Confirmatory factor analysis is "based on a strong theoretical and/or empirical foundation that allows the researcher to specify an exact factor model in advance. The model usually specifies which variables will load on which factors" (Stevens, 2002, p. 411). Confirmatory factor analysis differs from exploratory factor analysis in that confirmatory factor analysis requires that the factors be placed a priori in specific groups or domains while exploratory factor does not have this requirement (Kerlinger & Lee,

2000). In the current study confirmatory factor analysis will be utilized to determine if the 27 item measure of parental authority previously grouped into the common factors of: (a) legitimate authority, (b) expert authority, (c) coercive authority, (d) reward authority, and (e) referent authority by the use of factor analysis will be upheld in the current sample (McDonald, 1977; Peterson et al., 1985; Smith, 1970).

Assumptions of confirmatory factor analysis. Assumptions of confirmatory factor analysis include:

1. All common factors are correlated.
2. All observed variables are directly affected by all common factors.
3. Unique factors are uncorrelated with one another.
4. All observed variables are affected by a unique factor. (Long, 1983, p.12)

It is expected that the individual question items will load in the groups of: (a) legitimate authority, (b) expert authority, (c) coercive authority, (d) reward authority, and (e) referent authority as listed under each heading in the Appendix.

Structural Equation Modeling

The research model will be tested using structural equation modeling. Structural equation modeling is a statistical method that allows one to test the theory behind a hypothesized relationship among variables explaining some phenomenon. Byrne (2001) states that the two most important aspects of a structural equation model are that structural equations based on regression imply a casual relationship among variables and the ability to use a graphical representation to help explain a more complex theoretical model. Hoyle (1995) describes the process involved in using structural equation modeling

in terms of five sequential steps: (a) model specification, (b) estimation, (c) evaluation of fit, (d) interpretation, and (e) communication.

Model specification. Within structural equation modeling, specification is the process of formally stating the relationships among the variables (Byrne, 2001). The relationship between variables are assumed to be causal in nature (Bollen, 1989). In the current study with the use of a correlational research design causality is inferred based on a knowledge of the existing literature and a specification of the relationships among variables based on theory (Kline, 1998; Mitchell & James, 2001).

There are three types of relationships among the variables in structural equation modeling: association, direct effect, and indirect effect. *Association* is the nondirectional relationship between two variables that is measured by a correlation coefficient. *Direct effect* is the directional relationship among two variables. Direct effect is similar to the relationship of the independent variable and dependent variable in regression analysis. Benefits of structural equation modeling related to the direct effect and model specification are: (a) a variable can be a dependent variable for one direct effect and an independent variable for another direct effect; (b) several independent variables can each have a direct effect on one dependent variable, and (c) a single independent variable can have several direct effects to more than one dependent variable. An *indirect effect* is the relationship between an independent variable and dependent variable through a mediating variable (Byrne, 2001).

When specifying a structural equation model one has to be concerned with identification or the process of distinguishing a unique estimate for every parameter in the model (Hoyle, 1995). When a model has a unique estimate for each parameter then

the model is described as *identified*. In contrast, *underidentification* occurs when there are more parameters than observations. Finally, *overidentification* occurs when there are more observations than parameters (Kline, 1998).

Estimation. The next step in structural equation modeling is estimation. Model estimation is fundamental in providing the basis for indexes of model fit. Estimation is an iterative process that involves repeated “attempts to obtain estimates of free parameters that imply a covariance matrix like the observed one” (Hoyle, 1999, p.5). The iteration process begins with start values supplied by the computer software and comparisons are made to the observed covariance matrix. The comparisons are made over and over until there is the least overall difference between the implied covariance matrix and the observed covariance matrix, the end result of the difference is the residual matrix. Once the values in the residual matrix can no longer be reduced the estimation process is over and *convergence* has occurred. Convergence results in a single number that summarizes the relationship between the implied and observed covariance matrices. This number is the starting point for future model fit indexes.

Evaluation of fit. The next step is the evaluation of fit which involves the extent to which the implied covariance matrix is similar to the observed covariance matrix or how close the elements of the residual matrix are to zero. The evaluation of fit is a statistical judgment that “must take into account features of the data, the model, and the estimation method” (Hoyle, 1999, p. 5). As sample size decreases, sampling error increases due to the observed covariance matrix being derived from the population covariance matrix. Also, the more free parameters the more likely the model is going to fit the data. More than one estimation method should be used to evaluate fit; due to different estimation

methods may lead one to make different judgments about the goodness of fit of the structural equation model. Another way to evaluate fit is to compare different theory based models using the same data.

Interpretation. Once it has been determined that there is overall good fit of the structural equation model attention can turn to interpreting specific components of the model. The two types of parameter estimates are unstandardized parameter estimates and standardized parameter estimates. *Unstandardized parameter estimates* can only be interpreted in relation to the scaling used for the original instrument. *Standardized estimates* are transformed scores that remove the effect of scaling and allow for comparison of parameters throughout the model and are analogous to effect size.

Communication. The last step in conducting structural equation modeling is communicating and reporting the results. Hoyle (1995) states that the two main ways that results are communicated are through visual diagramming and with the use of tables, but there is no consistent way that the results are reported. McDonald and Ho (2002) provide guidance on what and how to report regarding structural equation models. The use of mutually agreed upon symbols to represent the relationships between variables helps communicate the model. In the *visual model arcs* or the lack thereof communicate relationships or the lack thereof between variables. *Directed arcs* indicate a relationship between variables in a direction consistent to the way the arrow is pointing. A *nondirected arc* is drawn with two arrow heads and indicates a correlation between the variables. The *absence of an arc* between variables indicates the absences of a direct effect and correlation between variables.

When reporting the identification of the structural equation model, three distinct problems should be addressed: “identifiability of the measurement model, identifiability of the path model, and scaling of the latent variables” (McDonald & Ho, 2002, p. 67). To identify the parameters of the measurement model the factor loadings must form independent clusters, each observed variable must load on only one factor. The path model is *identified* when there are no nondirectional arcs between variables that are also connected by a directional arc. McDonald and Ho state that the use of standardization either before or after estimation is essential, not only does it satisfy the decision of the scaling of the latent variables it also aides in interpreting the results.

When reporting it is important to include results of univariate and multivariate tests of normality (McDonald & Ho, 2002). Normality is the extent to which a variable follows a normal or standard distribution. Two characteristic to determine a normal distribution are skew and kurtosis. Skew is present when there are too many cases above or below the mean of a standard distribution instead of the cases being symmetrical to the mean. Kurtosis is present when there are too many cases present in the outer regions or tail of a standard distribution curve. One can examine the frequencies distribution or normal probability plots for a visual indicator of skew and kurtosis. Statistical Package for the Social Sciences (Version 12.0) has the ability to provide indexes to report skew and kurtosis (Kline, 1998).

One should also report the extent to which missing data is a problem and what was done about it. Other suggestions made by McDonald and Ho (2002) when reporting structural equation models include:

1. When reporting data include the covariance or correlation matrix to allow the reader to formulate their own conclusions about the model.
2. Although several goodness of fit indicators are available, regardless of which one is used it is also important to examine the scores for the measurement model and the path model.
3. No global fit index can substitute for a detailed examination of correlations and discrepancies, which should be reported, but the goodness-of-fit (GFI) and the root mean square error of approximation (RMSEA) can be reported to help interpretation. GFI is similar to squared multiple correlation in that it is an indicator of how much of covariance is accounted for by the structural equation model. The value of GFI ranges from 0 to 1, with 1 being a perfect fit and a GFI score of greater than .9 being a good fit. RMSEA is the difference in covariances between the data driven model and theory driven model. A perfect fit is indicated by 0 and a RMSEA of less than .05 indicates a good fit between the data and the structural model. (Browne & Cudeck, 1993; Kline, 1998).
4. The direct assessment of the fit of the path model can be determined by a two-step process. The first step is to fit the measurement model and then study the pattern of discrepancies between the between the path model and the latent variable correlation matrix.
5. All parameters should be reported including independently estimated loadings and error variances and covariances in the measurement model, the independently estimated directed arc coefficients, and disturbance variances and covariances in the path model.

Assumptions of structural equations modeling. Assumptions of structural equations modeling include: (a) a reasonable sample size, (b) continuously and normally distributed endogenous variables, (c) model identification, (d) complete data or appropriate handling of missing data, and (e) there must be a theoretical basis for model specification.

It is difficult to determine the exact sample size needed to conduct structural equation modeling analysis, but the more complex the model being represented the larger the sample size must be to obtain stable results. Kline (1998) provides crude guidelines in determining the adequacy of sample size. Sample sizes less than 100 are considered small, between 100 and 200 observations are considered medium sample sizes and anything over 200 observations are considered large sample sizes. According to Breckler (1990) the median sample size utilized in psychology journals was 198, with 22 percent having fewer than 100 subjects. Using the subject to variable ratio as a guide for sample size, Bentler and Chou (1987) suggest a subject to variable ratio of 5 subjects for each variable used for normally distributed samples or at least 10 subjects per variable when the sample does not follow a normal distribution. Kline states that a subject to variable ratio of 10 to 1 is realistic (1998).

Structural equation modeling assumes that the endogenous or dependent variables are continuous and normally distributed, both on the univariate level and the multivariate level. Two characteristics of non-normal univariate distribution are skew and kurtosis, each can occur singularly or together within the same distribution. Skew occurs when too many observations are either below or above the mean instead of symmetrical in relation to the mean as in normally distributed samples. Kurtosis occurs when too many

observations are in the tail or outer standard deviation units of the normal curve. According to Kline (1998), multivariate normality occurs when all the univariate endogenous variables are normally distributed and the combination of any univariate variables are normally distributed. Techniques to ameliorate the issue of non-normal data include using transformed scores for variables and screening for influential outliers.

As mentioned above, identification is a necessary component of model specification when conducting structural equation modeling (Hoyle, 1995). Model identification is also an assumption when conducting structural equation modeling. Identification occurs “when it is theoretically possible to calculate a unique estimate of every one of its parameters” (Kline, 1998, p. 108), with the operative word being theoretically. Identification is a characteristic of the theoretical relationships between the variables and not a characteristic of the data. Determining if a model is specified involves complex computations, but most if not all statistical programs provide tests for model identification (Maruyama, 1998).

Another assumption of structural equation modeling is that there is no missing data or if data is missing it is dealt with appropriately. Although there is no hard rule about how much missing data is too much there are guidelines that give some guidance (Kline, 1998). Cohen and Cohen (1983) determined that a missing data rate of up to 10 percent for any one variable is not large. Possibly more concerning than the percentage of missing data is why it is missing. If data is missing at random there are statistical procedures that can be utilized to replace the missing data. If data is missing for some systematic reason and not at random then there is no statistical fix. The most common techniques used to deal with missing data include listwise deletion, cases with any

missing data are not included; pairwise deletion, other variables not missing from the case are utilized in computations; mean replacement, means of the variables are used to replace the missing data. These techniques are all problematic for different reasons when conducting structural equation modeling. The preferred technique to deal with missing data in structural equation modeling is maximum likelihood estimation, each pattern of missing data is determined uniquely and each case of missing data is replaced based on its own unique pattern (Schumacker & Lomax, 1996).

Methodological Limitations

Limitation of the research design, correlational research, was previously noted but included: (a) not being able to determine cause-and-effect, (b) the inability to control independent variables, (c) difficulty in differentiating spurious relationships among variables, and (d) in lieu of thoughtful consideration meaningless interpretation of numerous variables can result (Isaac & Michael, 1995). Many of the limitations of the research design can be ameliorated by the use of structural equation modeling. Structural equation modeling through the process of specification will help determine cause and effect, at least in the model, by determining which variables are exogenous variables and which variables are endogenous. Exogenous variables are similar to independent variables, they are not influenced by other variables in the structural equation model but influence endogenous variables. Endogenous variables are similar to dependent variables in that they are influenced by other variables in the model but they can also influence other endogenous variables (Kline, 1998). Also, thoughtful consideration will be given when determining which of the numerous variables to include in the model. Structural equation modeling is not without its own set of limitations.

According to Tomarken and Waller (2005) many people are familiar with the strengths associated with structural equation modeling but are unaware of the limitations; leading many researchers to overstate the magnitude and certainty of the results. Some of the limitations when using structural equation modeling include: (a) omitted variables, (b) neglecting lower-order model components, (c) the estimation and testing of individual parameters, (d) other models will also fit the data, and (e) rules of thumb can be inaccurate.

Structural equation models are only approximation of reality, the decision to omit variables that might be important to the casual model is often made at the discretion of the researcher. When specifying the model the decision to omit certain variables can lead to a misrepresentation of the measurement or causal model, leading to biased parameter estimates and inaccurate estimates of standard errors. Furthermore, omitted variables not included in the model are rarely reported. Thus, when reporting the results of structural equation models acknowledge the omitted variables and their harmful effect on parameters and standard errors (Tomarken & Waller, 2005).

Lower-order components in structural equation models include parameter estimates and variance. Users of structure equation modeling often focus on global fit test at the expense of these lower-order components. An example of this is that it is possible for a global fit index to indicate a near perfect fit of the model while only accounting for a very small amount of the variance. In addition to global fit indexes the researchers should pay attention to effect size, confidence intervals, and the amount of variance accounted for (Bollen, 1989; Tomarken & Waller, 2005).

There are problems with estimates and parameters that are commonly ignored by structural equation users. Parameter estimates and associated standard errors are only unbiased when the specification of the model is accurate. Models that are not specified correctly impact not only the specified parameter but also effect other parameters that follow. Tomarken and Waller (2005) summarize this by stating, “the cost of misspecification are not as localized as many users might hope (p. 52)”.

Many users of structural equation modeling draw too firm of conclusions about the results of the analysis. Structural equation modeling does not prove that any one specific model is correct, there may be other models that fit the data equally well or even better. Users of structural equation modeling should keep this in mind when analyzing and communicate results (Tomarken & Waller, 2005).

Another limitation of structural equation modeling mentioned is rules of thumb are often inaccurate. An example of this is the assessment of fit indexes which are often over simplified, too lenient, and just wrong. As mentioned previously in the steps of conducting structural modeling, in addition to fit indexes a certain amount of subjectivity is called for when determining the overall fit of the model to the data (Marsh et al., 2004; Tomarken & Waller, 2005).

Other limitations of the current study are the threats to internal and external validity. Internal validity is the extent to which a casual relationship can be inferred between the independent and dependent variables (Vogt, 2006). The most salient threats to internal validity in the current study are instrumentation and selection. An instrumentation effect could be present due to differences in the way individual adolescents respond to survey items, otherwise known as a response set. In the current

study an over-rater bias may exist due to the adolescents' desire for others to view their fathers more favorably than he actually is in real life (Isaac & Michael, 1995). According to Kerlinger and Lee (2000), response sets are a mild threat to internal validity but their effect has been dramatically overrated and should not preclude someone from using a particular measure. Selection is the differential loss of subjects (Isaac & Michael).

Unfortunately, the 11th grade students at the high school were not available to participate in the study due to their involvement in state standardized assessments. This is a severe threat to validity that will be considered when specifying the structural equation model.

External validity is the extent to which one can generalize results of the current study to other subjects and contexts (Vogt, 2006). Two threats to external validity in the current study are the interaction effect of selection bias and the experimental variables and instrumentation. The interaction effect of selection bias and the experimental variables very likely exists in the current study. The sample of adolescents in the current study is from a very affluent and predominantly Caucasian high school and may not generalize to more economically and racially diverse settings (Isaac & Michael, 1995). It is very likely that the adolescents that participated in this study have different perceptions of their fathers' authority and report different levels of behavioral autonomy than adolescents from other racial and economic backgrounds.

The last limitation of the current study to be mentioned is the effect of confounded variables. Confounded variables occur when "the variance of one or more independent variables, usually outside the focus of the research, mixes with the variance arising from the independent variable(s) built into the research problem" (Isaac & Michael, 1995, p. 87). This results in the inability to determine how much influence the

variables have individually on the dependent variable. In the current study confounded variables are fathering type (biological or step) and length of time of the relationship between stepfather and adolescent. It is possible to determine the effect of time in the relationship between adolescents and their fathers on adolescent perception of fathers' authority and adolescent behavioral autonomy by using the age of the adolescent. The length of time in the stepfather relationship was not a focus of the current study and was not asked. Therefore, it is not possible to determine the effect of time in the relationship on perception of adolescents' stepfathers' authority and adolescent behavioral autonomy.

The limitations of correlational research design can be overcome by the use of a well thought out theoretically specified structural equation model to fit the observed data from the study sample to the theoretical model (Isaac & Michael, 1995). Also, many of the limitations of structural equation model can be overcome by specifying the model on a sound theoretical basis and reporting the variables that were left out of the model, attending to other indicators of fit other than global fit indexes, and being careful to not overstate the results. The transformation of score will help reduce the threat of internal validity due to selection bias and although the results may not generalize to an abundance of adolescents and contexts the results can still meaningfully inform on the relationships between fathers' authority and adolescent behavioral autonomy.

Summary

The methodology described in Chapter III was to examine the problem, the theoretical framework, the statistical techniques utilized, and the hypothesized relationships between fathers' authority and adolescent behavioral autonomy from Chapter I and Chapter II. The results of the analyses are detailed in Chapter IV.

CHAPTER IV

RESULTS

Introduction

The analysis and the results of the relationship between fathers' authority and adolescent behavioral autonomy are presented in Chapter IV. The statistical techniques, as detailed in Chapter III, were utilized to examine the research questions presented in Chapter I. First, confirmatory factor analysis was utilized to determine if the model of adolescent perceptions of parents legitimate, expert, referent, coercive, and reward authority as developed by Peterson (1986) fits the data from the sample used for the current study. Next, structural equation modeling was utilized to determine how adolescent perceptions of fathers' legitimate, expert, referent, coercive, and reward authority relate to adolescent reports of behavioral autonomy.

The content of Chapter III is organized in the following order. First descriptive statistics of adolescents' perceptions of fathers' legitimate, expert, referent, coercive, and reward authority and adolescent behavioral authority are presented to provide some context for examining the research questions and hypotheses. Then, the analysis of results pertaining to Research Question 1 and Research Hypothesis 1 is presented. Next, the results pertaining to Research Question 2 and Research Hypotheses 2 to 9 are presented.

Descriptive Statistics

Separate structural equation models were conducted for boys and girls to determine the influences of perceptions of fathers' authority on adolescent behavioral autonomy separately for boy and girl adolescent, comparisons are not made across gender. Data from 97 adolescent boys and 93 girls are examined separately using identically specified models.

The mean and standard deviation of the variables used in the study are reported by gender and then by age (see Tables 6 & 7). The purpose of providing the descriptive statistics is not to make inferential comparisons across groups, but to provide more understanding of possible trends or differences in the variables that may be meaningful to readers.

The variables reported in Table 6 and Table 7 have a possible range from 1 to 4 with higher scores indicating higher levels of the particular variable. In general, there are relatively few differences in the variables between boys and girls. Adolescent perceptions' of coercive authority and adolescent behavioral autonomy have higher means than other variables. There is a slight upward trend for legitimate, reward, referent, and expert authority in relation to the adolescents' age. See Table 6 and Table 7.

Table 5

Mean of Variables by Gender

Variables (Range 1 to 4)	Boys (n=97)		Girls (n=93)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Legitimate authority	1.8	.55	1.9	.48
Reward authority	2.0	.60	2.0	.66
Coercive authority	2.8	.59	2.9	.48
Referent authority	1.9	.60	2.0	.60
Expert authority	2.1	.48	2.2	.50
Behavioral autonomy	3.3	.54	3.2	.50

Table 6

Mean (Standard Deviation) of Variables by Age

Variables (Range 1 to 4)	Age of Adolescent in Years				
	14 (n=18)	15 (n=77)	16 (n=40)	17 (n=9)	18 (n=44)
Legitimate authority	1.6 (.46)	1.8 (.42)	1.9 (.56)	2.1 (.81)	1.9 (.56)
Reward authority	1.9 (.67)	2.0 (.56)	2.1 (.71)	1.7 (.65)	1.9 (.64)
Coercive authority	3.0 (.69)	2.8 (.51)	2.8 (.55)	2.7 (.57)	2.9 (.52)
Referent authority	1.6 (.47)	1.9 (.46)	2.1 (.75)	2.0 (.82)	2.0 (.59)
Expert authority	1.9 (.47)	2.1 (.42)	2.3 (.55)	2.2 (.63)	2.3 (.47)
Behavioral autonomy	3.3 (.51)	3.2 (.48)	3.2 (.58)	3.3 (.69)	3.4 (.49)

Table 7

Intercorrelations Between Variables for Boys and Girls

Variables	1	2	3	4	5	6	7
Boys (n = 97)							
1. Legitimate authority	-	.50**	-.01	.70**	.59**	.41**	.14*
2. Reward authority		-	.33**	.42**	.38**	.24**	.09
3. Coercive authority			-	-.04	-.10	-.35**	-.02
4. Referent authority				-	.55**	.39**	.08
5. Expert authority					-	.45**	.21**
6. Behavioral autonomy						-	-.1
7. Age of adolescent							-
Girls (n=93)							
1. Legitimate authority	-	.44**	-.13*	.76**	.58**	.49**	.21**
2. Reward authority		-	.09	.50**	.41**	.25**	-.07
3. Coercive authority			-	-.11	-.12	-.36**	-.11
4. Referent authority				-	.56**	.53**	.24**
5. Expert authority					-	.51**	.17*
6. Behavioral autonomy						-	.04
7. Age of adolescent							-

** indicates significance at $p = .01$

* indicates significance at $p = .05$

Research Question 1

The first research question addressed whether Peterson's (1986) bases of parental authority would emerge when tested using confirmatory factor analysis. Research hypothesis 1 addresses this research question.

Research Hypothesis 1

Adolescents' perceptions of fathers' authority is multidimensional and is composed of fathers' legitimate, expert, referent, coercive, and reward authority. The purpose of Hypothesis 1 was to validate the multidimensional conceptualization of fathers' authority. Peterson (1986) conducted an exploratory factor analysis to construct the assessment and five domains of fathers' authority utilized in this study. Since the original study conducted by Peterson was used exploratory factor analysis over 20 years ago, confirmatory factor analysis was performed to determine if the original subscales of legitimate, expert, referent, coercive, and reward authority needed to be refined for the current study sample.

The AMOS Graphics interface of AMOS 5.0 (2003) was used to specify the model and to conduct the confirmatory factor analysis. Model specification was based on the factor groupings from Peterson (1986) factor analysis of the 27-item scale measuring fathers' authority. The resultant 5-factor solution of the exploratory factor analysis for the five bases of parental authority (legitimate, expert, referent, coercive, and reward authority) were used in several studies over the last 20 years: (Bush et al., 2004; Henry et al., 1989). When specifying the model, each of the 27 question items are latent variables with a single direct effect pointing to each question from each of their perspective base of fathers' authority. Measurement error was accounted for in each of the 27 questions

(latent variables) using the variable names 1e through 27e. Each of the five bases of parental authority was specified to be correlated to one another. Lastly, to set the scale of the 27 questions (latent variables), one factor loading from each base of parental authority was constrained to 1. See Figure 2.

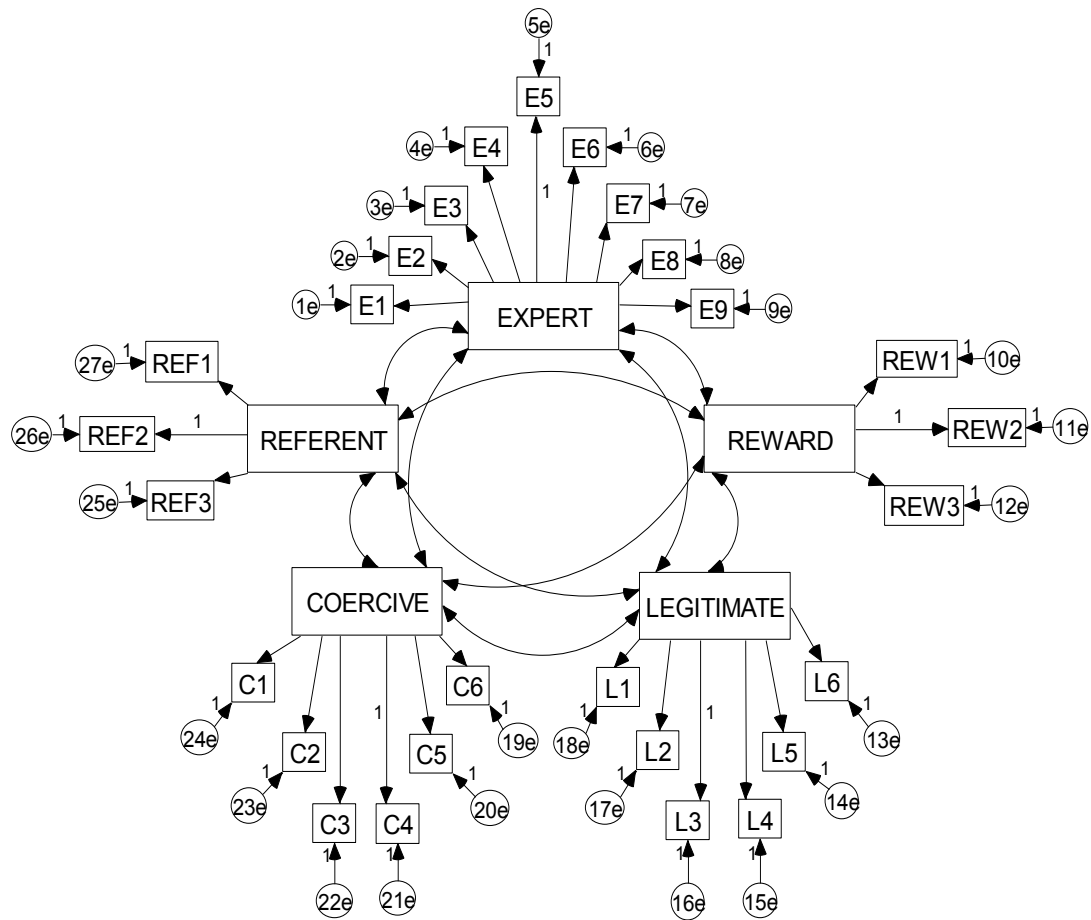


Figure 2. Confirmatory factor analysis of the bases of parents' authority.

The sample size utilized in the present confirmatory factor analysis is 463. The larger sample of all adolescents in this study is utilized to more closely reflect the sample used by Peterson (1986) in conducting his exploratory factor analysis, thus “confirming” Peterson’s model to similar data. The results of the analysis are discussed in the following order: (a) the standardized regression coefficients between the five bases of parental authority and each of the latent variables/questions comprising their subscales, (b) the amount of variance accounted for in each latent variable/question by the base of parental authority to which it belongs, (c) overall model fit indices and the residual matrix, and (d) modification indices and respecification.

Standardized regression coefficients used in the analysis and interpretation of structural equation modeling are similar to those used in linear regression. Standardized regression coefficients in linear regression indicate the strength of the relationship between an independent and dependent variable (Field, 2005). Standardized regression coefficients with confirmatory factor analysis using AMOS indicate the strength of the relationship between the specified factors and their indicators (Arbuckle & Wothke, 2003). In the current confirmatory factor analysis, the standardized regression coefficients indicate the strength of the relationship between each base of parental authority and the questions associated with the base.

The results showed a strong positive relationship between parental legitimate, expert, referent, coercive, and reward authority and the corresponding questions and all of the reported relationships were significant at $p < .000$. AMOS does not compute and report the p values for the regression coefficients in which the factor loadings are

constrained to one. Thus, the exact p value of one of the regression coefficients for each base of authority is unknown. See Figure 3 below for the standardized regression coefficients indicating the strength of the relationship between the bases of authority and the question items.

In the current confirmatory factor analysis and reporting, variance is the amount of variability in each question accounted for by the proposed base of parental authority. With the exception of E3 the variance accounted for in each question by its base of parental authority is medium to high, ranging from $R^2 = .32$ to $R^2 = .74$ (Field, 2005). The variance for E3 is .08 and the question pertaining to E3 is "*This parent's ideas would not be very helpful to me in deciding what kind of friends I should or should not get involved with?*" There is very little variance accounted for in this question by parental expert authority. Figure 3 presents variances accounted for in the questions by its base of parental authority.

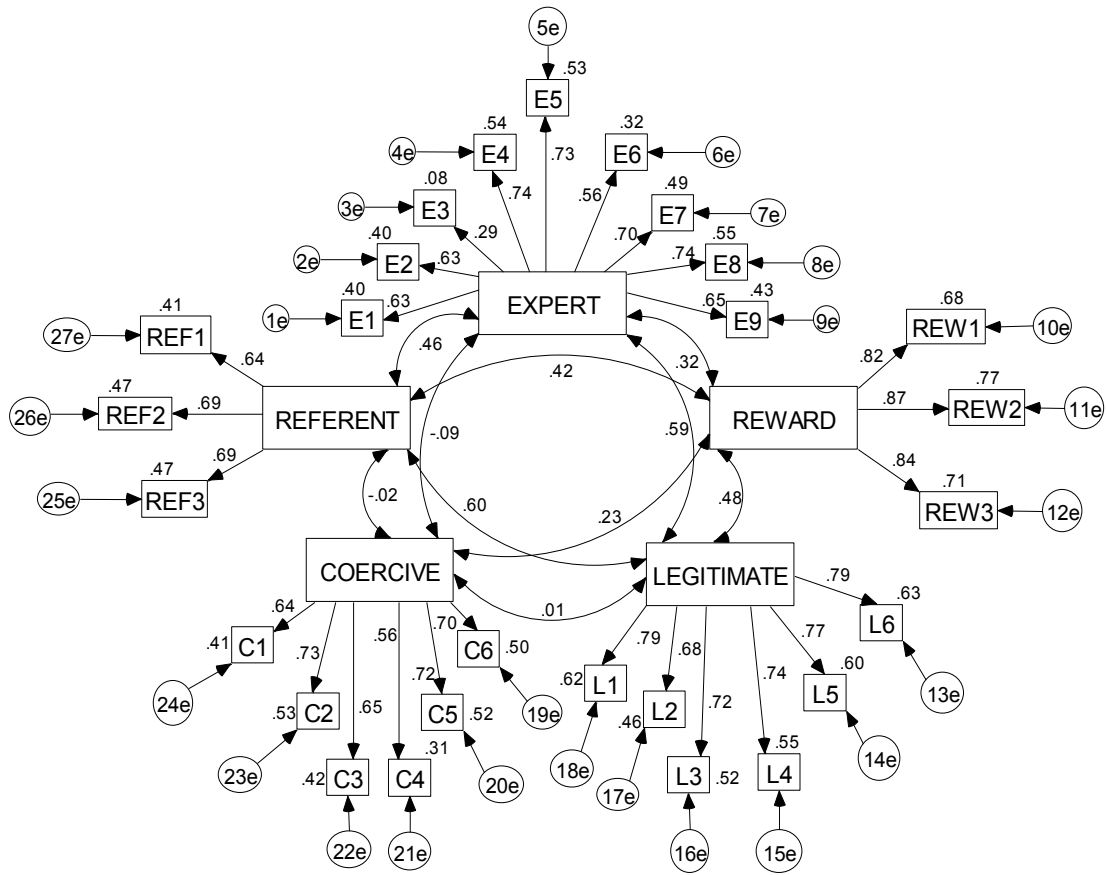


Figure 3. Standardized path coefficients and variances for the confirmatory factor analysis of the bases of fathers' authority.

Model Fit

Caution is warranted when interpreting model fit indices. Despite the appeal of cut-off criteria or “rules of thumb” to make the process evaluating overall fit more “objectively,” McDonald and Ho (2002) recommend against this approach. McDonald and Ho identify problems in attempting to create objective measures of fit (a) there are no empirically based guidelines to establish the levels of fit or no fit., (b) numerous fit indices available and no research indicates which index is better or worse than others, making it impossible to decide which “objective” fit index to use., and (c) the use of objective fit indexes may negate the benefit of refitting the structural model by failing to look further into why the model may not fit well. Thus, McDonald and Ho recommend using the fit indexes *chi square*, *RMSEA*, and *RFI* as supplements based on the researcher’s judgment of the residual matrix.

Chi-square is a test statistic with an associated *p* value for testing whether the structural equation model fits the data; *p* values less than .05 indicate a poor fit of the model to the data. In the current confirmatory factor analysis model $\chi^2 = 6,440.57$, *df* = 464, *p* < .00. The *p* value of less than .05 suggests a poor fit of the model to the data. Chi-square is influenced by the sample size, the larger the sample size the larger the *chi-square* square, lessening the probability of finding a fit between the model and the data. In the current analysis the sample size is 463, large enough to have an influence on *chi-square* and to further evaluate model fit with *RMSEA*, *RFI*, and the residual matrix (Arbuckle & Wothke, 2003).

Root mean square error of approximation (*RMSEA*) is a measure of multivariate centrality in relation to degrees of freedom and sample size (Hancock & Freeman, 2001).

Many authors suggest an *RMSEA* of .05 and below as an indication of model fit and others suggest an *RMSEA* of .1 and below as acceptable fit (McDonald & Ho, 2002). In the present study, the *RMSEA* for the confirmatory factor analysis model is .17, indication that the model may not fit the data very well. More specifically, it is an indication that the bases of parental authority as developed by Peterson (1986) may not fit the data well used in the current study.

Relative fit index (*RFI*) is a ratio of discrepancy and degrees of freedom of the model being tested divided by the discrepancy and degrees of freedom of the original model. The value of *RFI* has a range of 0 to 1 with scores closer to 1 indicating a better fit. An *RFI* of .9 or below is an indication that the data does not fit the model very well. The *RFI* in the current analysis is .56, again an indication of a poor model fit.

McDonald and Ho (2002) recommend providing a table of the standardized discrepancies unless the numbers of variables are too large to make this feasible as in the current analysis. When the numbers of variables is too large summary information regarding the discrepancies suffices. AMOS provides a standardized residual covariance matrix to examine the residuals from discrepancies between the structural model and the measurement model based on the current data (Arbuckle & Wothke, 2003). A structural model is a good fit the discrepancies has a value of less than an absolute value of two. In the standardized residual covariance matrix for the current analysis, approximately 100 (20%) of the residuals have an absolute value of greater than 2. The largest residual has an absolute value of 7.14. The standardized residual covariance matrix affirms the results of the *RMSEA* and *RFI*. The confirmatory factor analysis model based on Peterson's

(1986) exploratory factor analysis and resultant five bases of parental authority may not be a good fit with the data obtained for the current sample.

There is a good possibility that there is more than one structural equation model possible and model modification may improve the model fit with the data. McDonald and Ho (2002) caution that modifications in the model should only occur if there are theoretical reasons to do so. They further suggest that only a “few” modifications of the initial model should occur and the author should document a clear history of the steps taken to modify the structural model. AMOS provides modification indices to suggest the addition of parameters between variables and the resultant decrease in *chi-square* for the model. In the current analysis, the modification for over 200 parameters along with the decrease in *chi-square* was presented. The suggested modifications did not make sense theoretically, had relatively little affect on *chi-square*, and were far too numerous to consider. McDonald and Ho (2002) stated that with this information it is possible to determine if the poor fit of the model is a result of “a correctable misspecification of the model, or to a scatter of discrepancies, which suggests that the model is possibly the best available (p.73)” fit to the current data.

The purpose of Hypothesis 1 was to determine if adolescents’ perceptions of fathers’ authority is multidimensional and is composed of fathers’ legitimate, expert, referent, coercive, and reward authority. Considering all of the objective information available and reported above from the AMOS output it is ultimately up to the author to make a subjective judgment about model fit for his or her particular purpose (McDonald & Ho, 2002). The analysis showed a statistically significant relationship between the specific base of parental authority and individual questions and the bases of parental

authority accounted for moderate to high levels of variance in the questions. Although the confirmatory factor analysis using structural equation modeling did not indicate a good model fit based on the fit indices *RMSEA* and *RFI*; based on the large number of modifications suggested with relatively small decreases in *chi-square* and the pattern of discrepancies in the standardized discrepancy matrix the model is the is the best fit available for the current sample (McDonald & Ho, 2002). For the purpose of addressing Hypothesis 1, adolescents' perceptions of fathers' authority is multidimensional and is composed of fathers' legitimate, expert, referent, coercive, and reward authority.

Research Question 2

Research Question 2 involved testing the hypotheses included in the theoretical model (see Figure 1). Research Question 2 pertaining to Research Hypotheses 2 through 9 were tested using structural equation modeling based on the research and theory as outlined in the previous chapters. Also presented previously were the five sequential steps to follow when using structural equation modeling: (a) model specification, (b) estimation, (c) evaluation of fit, (d) interpretation, and (e) communication. Model specification, estimation, and evaluation of fit are discussed first since they apply to the overall model. Then, the results of the analysis for each research hypothesis are interpreted singularly.

Model Specification

Specification of the model is based on existing literature of adolescents' perception of fathers' legitimate, expert, referent, coercive, and reward authority and the relationship between fathers' authority and adolescent behavioral autonomy (Bush et al, 2004; Henry et al., 1989; Peterson, 1986). The specification of the model was identical

for adolescent boys and girls but separate analysis was conducted to look at each gender separately. The samples used for the analysis includes only adolescents who report their biological father functions as their father on a daily basis. There were a total of 97 boys and 93 girls included in the samples used for the analysis, meeting the requirements of sample size based on a subject variable ratio of at least 10 to 1 (Kline, 1998).

There are both endogenous and exogenous variables used in the model. Exogenous variables are similar to independent variables, they are not influenced by other variables in the structural equation model but influence endogenous variables. Endogenous variables are similar to dependent variables in that they are influenced by other variables in the model but they can also influence other endogenous variables (Kline, 1998). The endogenous variables are fathers' expert, referent, coercive, and reward authority and adolescents' behavioral autonomy. The exogenous variables are fathers' legitimate authority and age of the adolescent and an error term associated with each of the five endogenous variables to fix the measurement error.

The specification of the structural equation model involving the relationship between adolescents' perception of fathers' authority and adolescents' behavioral autonomy depicted in Figure 1 is as follows:

1. Fathers' legitimate authority has a direct relationship to adolescents' behavioral autonomy, fathers' expert authority, and fathers' referent authority and two indirect relationships with adolescent behavioral autonomy, one through fathers' expert authority and the other through fathers' referent authority.
2. Fathers' expert authority has a direct relationship to adolescents' behavioral autonomy.

3. Fathers' referent authority has a direct relationship to adolescents' behavioral autonomy.
4. Age of the adolescent has a direct relationship to adolescents' behavioral autonomy, fathers' coercive authority, and fathers' reward authority and two indirect relationships with adolescent behavioral autonomy, one through fathers' coercive authority and the other through fathers' reward authority.
5. Fathers' coercive authority has a direct relationship to adolescents' behavioral autonomy.
6. Fathers' reward authority has a direct relationship to adolescents' behavioral autonomy.
7. There is one fixed error variable to each of the following: fathers' expert, referent, coercive, and reward authority and adolescents' behavioral autonomy.

As mentioned previously the same specified model is utilized separately for boys and girls. See Figure 4 below.

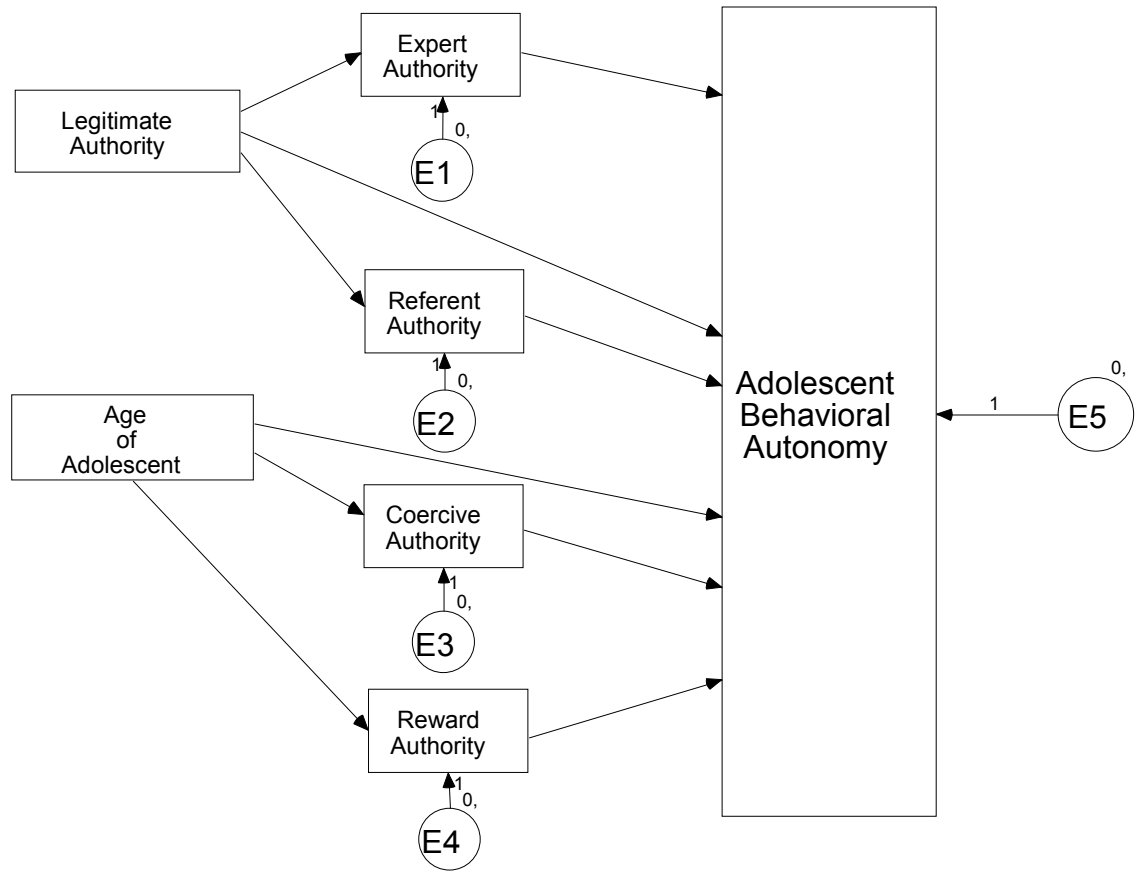


Figure 4 . Model specification for structural equation model of adolescents' perceptions of fathers' authority and adolescent behavioral autonomy.

Estimation

Estimation was performed using AMOS in which an iterative process occurred comparing a covariance matrix first supplied by the software and comparing it to the actual observed covariance matrix over and over until the least overall difference occurred between the implied covariance matrix and the observed covariance matrix. The end result of this process is called convergence and it resulted in a single number that is used to calculate fit indices (Hoyle, 1995).

Evaluation of Fit

There has been little agreement about what to report when communicating the evaluation of fit for structural equation modeling. McDonald and Ho (2002) suggest that when determining the evaluation of fit one should report: (a) the extent the variables are normal and follow a standard distribution, (b) how much missing data was a problem and what was done about it, (c) a summary of the residual matrix, and (d) the relative fit index (*RFI*) and the root mean square of approximation (*RMSEA*). McDonald and Ho also suggest that the parameters should be reported and this was done for each of the Research Hypotheses 2 to 9.

AMOS provides output to determine the extent of skew and kurtosis in the standard distribution of the variables. Skew is too many cases above the mean or below the mean as opposed to being symmetrical to the mean and kurtosis is too many cases in the outer regions of a standard distribution curve (Kline, 1998). The output from AMOS should be between -2 and +2 for skew and kurtosis to indicate that they are not problematic and the variables follow a normal standard distribution (Arbuckle & Wothke, 2003). Results indicate that skew and kurtosis are not problematic for any of the variables

included in the model run separately for boys and girls, all values are between -2 and +2.

See Table 8 and Table 9.

Table 8

Assessment of Normality for Adolescent Boys' Model

Variable	Skew	Kurtosis
Age of adolescent	.33	-1.11
Legitimate authority	.40	-.80
Reward authority	.66	.74
Coercive authority	.19	-.10
Referent authority	.78	1.24
Expert authority	.12	-.40
Behavioral autonomy	.61	-.47

Table 9

Assessment of Normality for Adolescent Girls' Model

Variable	Skew	Kurtosis
Age of adolescent	.74	-.82
Legitimate authority	.45	1.67
Reward authority	.33	.22
Coercive authority	-.47	-.27
Referent authority	1.07	1.56
Expert authority	.75	1.12
Behavioral autonomy	.50	-.22

Missing data was not problematic for either the boys' model or the girls' model; no more than two cases were missing for any variable in either model. The data that was missing was handled by AMOS using full information maximum likelihood (*FIML*) estimation. *FIML* has been shown to be less biased than other missing data methods, including pairwise deletion, listwise deletion, and imputation. According to Arbuckle and Wothke (2003), *FIML* estimation is the preferred method to handle missing data for structural equation modeling.

The standardized residual covariance matrix is a result of the discrepancies between the specified structural model and the measurement model based on the data. As previously mentioned, if the structural model is a good fit the discrepancies will have a value of less than an absolute value of two (Arbuckle & Wothke, 2003). Examination of the standardized residual covariance matrices for the separate boys' and girls' models show relatively few discrepancies larger than an absolute value of 2 for the boys' and girls' models. This could be a sign of correctable misspecifications of the models when goodness of fit indicators show poor fit (McDonald & Ho, 2003). See Table 10 and Table 11 below.

Table 10

Standardized Residual Covariances for Boys Model

	Age	Legitimate	Reward	Coercive	Referent	Expert	Autonomy
Age of adolescent	.00						
Legitimate authority	1.62	.00					
Reward authority	.00	6.09	.00				
Coercive authority	.00	-1.11	-1.12	.00			
Referent authority	.71	.00	3.21	2.25	.00		
Expert authority	2.55	.00	4.66	-2.46	.14	.00	
B. autonomy	1.03	1.21	3.13	-.58	-.16	1.21	.82

Table 11

Standardized Residual Covariances for Girls Model

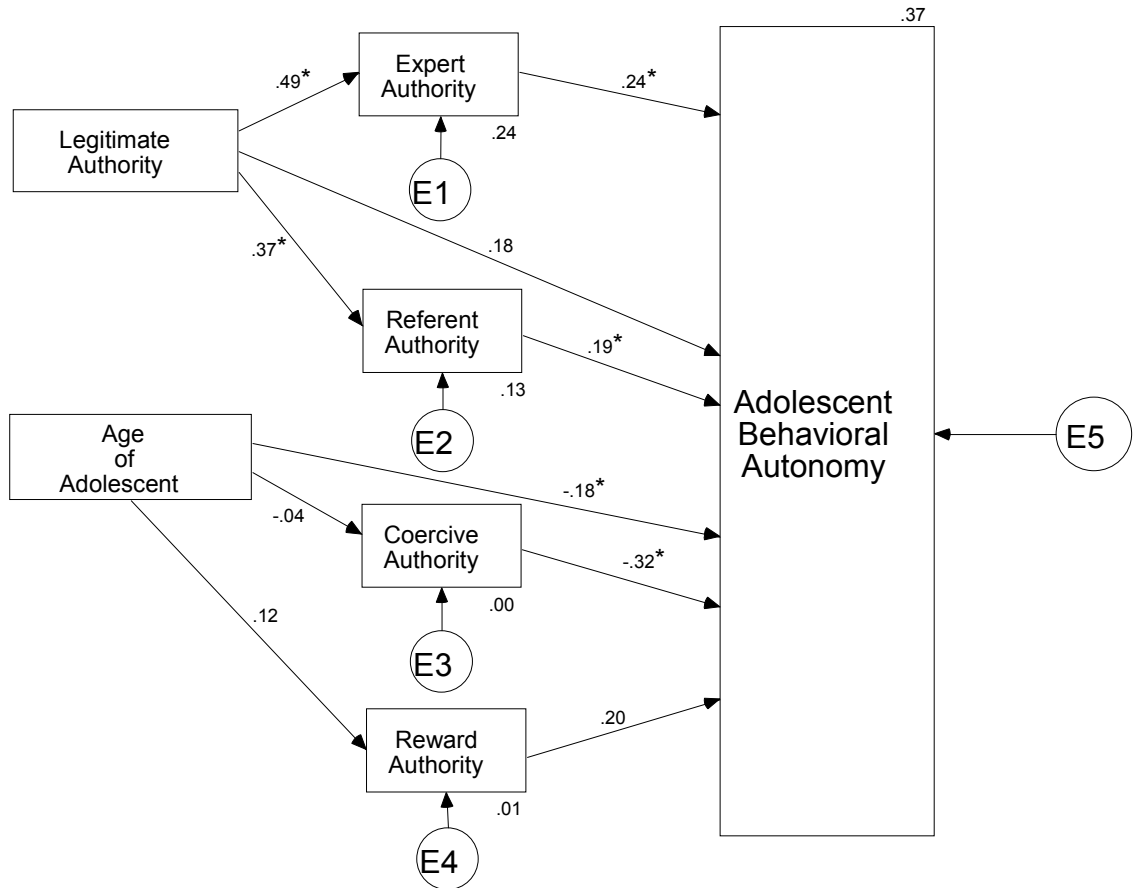
	Age	Legitimate	Reward	Coercive	Referent	Expert	Autonomy
Age of adolescent	.00						
Legitimate authority	.92	.00					
Reward authority	.00	7.55	.00				
Coercive authority	.00	-.87	-.57	.00			
Referent authority	-.23	.00	5.57	.67	.00		
Expert authority	2.00	.00	5.22	-1.59	.86	.00	
B. autonomy	.89	3.02	1.88	-.99	2.52	1.86	1.11

For the model of adolescent boys' perception of fathers' authority and behavioral autonomy $\chi^2 = 76.26$, $df = 11$, $p < .00$ and for the model of adolescent girls' perceptions of fathers' authority and behavioral autonomy $\chi^2 = 114.1$, $df = 11$, $p < .00$. The p value of less than .05 for the boys' and girls' model suggests a poor fit of each model to the data.

RMSEA and *RFI* both range between 0 and 1. *RMSEA* values of less than .05 and an *RFI* of greater than .9 suggest a good model fit (Arbuckle & Wothke, 2003). For the boys model *RMSEA* is .25 and *RFI* is .16; for the girls model *RMSEA* is .32 and *RFI* is .11. The model fit indices for both the boys and girl model indicate a poor fit of the data to the model.

In summarizing the overall fit of the model with adolescent boys' perceptions of fathers' authority and behavioral autonomy and adolescent girls' perceptions of fathers' authority and behavioral autonomy, the variables included in the model follow a normal standard distribution and missing data is not a problem. Also, the fit indices *RMSEA* and *RFI* indicate that neither the boys' data nor the girls' data fit the model very well. Closer examination of the standardized residual covariance matrices indicate that a model respecification may improve model fit for both the boys' and girls' model. This is done after closer examination of Research Hypotheses 2 to 9.

Following are the standardized path models for boys' and girls' perceptions of fathers' authority that include the standardized path coefficients and the variances. The specific path coefficients and variances are presented and discussed as they apply to the Research Hypotheses (see Figure 5, Figure 6, Table 12 and Table 13).



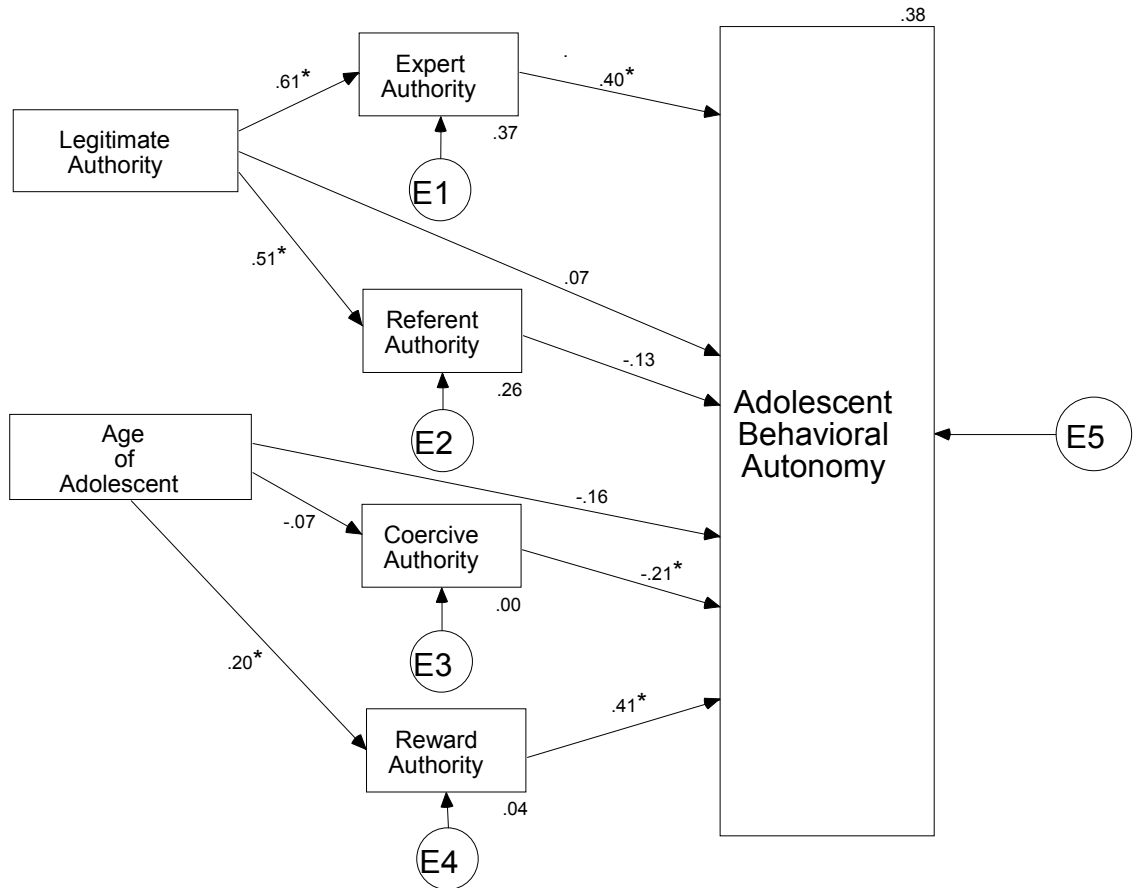
$\chi^2 = 76.26, p < .00$; RMSEA = .25; RFI = .16
 *Indicates statistically significant at $p = .05$

Figure 5. Standardized estimates of adolescent boys' perceptions of their fathers' authority and adolescent behavioral autonomy.

Table 12

Standardized path coefficients and p-values for adolescent boys' original model.

Variables	Coefficient; <i>p</i> -value
Legitimate authority → Behavioral autonomy	.18; <i>p</i> = .10
Expert authority → Behavioral autonomy	.24; <i>p</i> = .02
Referent authority → Behavioral autonomy	.19; <i>p</i> = .04
Coercive authority → Behavioral autonomy	-.32; <i>p</i> < .000
Reward authority → Behavioral autonomy	.20; <i>p</i> = .06
Age of adolescent → Behavioral autonomy	.20; <i>p</i> = .03
Legitimate authority → Expert authority	.49; <i>p</i> < .000
Legitimate authority → Referent authority	.37; <i>p</i> < .000
Age of adolescent → Reward authority	.12; <i>p</i> = .23
Age of adolescent → Coercive authority	-.04; <i>p</i> = .66



$\chi^2 = 114.1, p < .00$; RMSEA = .32; RFI = .11
 *Indicates statistically significant at $p = .05$

Figure 6 . Standardized estimates of adolescent girls' perceptions of their fathers' authority and adolescent behavioral autonomy.

Table 13

Standardized path coefficients and p-values for adolescent girls' original model.

Variables	Coefficient; <i>p</i> -value
Legitimate authority → Behavioral autonomy	.07; <i>p</i> = .62
Expert authority → Behavioral autonomy	.40; <i>p</i> < .000
Referent authority → Behavioral autonomy	-.13; <i>p</i> = .22
Coercive authority → Behavioral autonomy	-.21; <i>p</i> = .01
Reward authority → Behavioral autonomy	.41; <i>p</i> = .01
Age of adolescent → Behavioral autonomy	-.16; <i>p</i> = .06
Legitimate authority → Expert authority	.61; <i>p</i> < .000
Legitimate authority → Referent authority	.51; <i>p</i> < .000
Age of adolescent → Reward authority	.20; <i>p</i> = .05
Age of adolescent → Coercive authority	.07; <i>p</i> = .52

Research Hypothesis 2

Adolescents' perceptions of fathers' legitimate authority will have a direct positive relationship with adolescent behavioral autonomy. Hypothesis 2 was tested separately for boys and girls by examining the path coefficient and p -value between fathers' legitimate authority and adolescent behavioral autonomy. In the structural equation model, the relationship is represented by a one-way arrow from legitimate authority to adolescent behavioral autonomy.

For the boys' model the standardized path coefficient between legitimate authority and adolescent behavioral autonomy is .18; $p=.10$. For the girls' model the standardized path coefficient between legitimate authority and adolescent behavioral autonomy is .07; $p=.62$. There is a positive relationship between fathers' legitimate authority and adolescent behavioral autonomy for boys and girls, although the relationship is not statistically significant at $p = .05$ for either gender.

Hypothesis 3

Adolescents' perceptions of fathers' expert authority will have a direct positive relationship with adolescent behavioral autonomy. Hypothesis 3 was tested separately for boys and girls by examining the path coefficient and p -value between fathers' expert authority and adolescent behavioral autonomy. In the structural equation model the relationship is represented by a one-way arrow from expert authority to adolescent behavioral autonomy.

For the boys' model, the standardized path coefficient between expert authority and adolescent behavioral autonomy is .24; $p = .02$. For the girls' model, the standardized path coefficient between expert authority and adolescent behavioral autonomy is

.40; $p < .000$. There is a positive relationship between fathers' expert authority and adolescent behavioral autonomy for the boys' model and the girls' model and the relationship is statistically significant in both models.

Hypothesis 4

Adolescents' perceptions of fathers' referent authority will have a direct positive relationship on adolescent behavioral autonomy. Hypothesis 4 was tested separately for boys and girls by examining the path coefficient and p -value between fathers' referent authority and adolescent behavioral autonomy. In the structural equation model the relationship is represented by a one-way arrow from referent authority to adolescent behavioral autonomy.

For the boys' model the standardized path coefficient between referent authority and adolescent behavioral autonomy is .19; $p = .04$. For the girls' model the standardized path coefficient between referent authority and adolescent behavioral autonomy is -.13; $p = .22$. For the boys' model the relationship is as hypothesized, there is a positive and statistically significant relationship between fathers' referent authority and adolescent behavioral autonomy. For the girls' model there is a negative relationship between fathers' referent authority and adolescent behavioral autonomy, although the relationship is not statistically significant at $p = .05$.

Hypothesis 5

Adolescents' perceptions of fathers' coercive authority will have a direct negative relationship on adolescent behavioral autonomy. Hypothesis 5 was tested separately for boys and girls by examining the path coefficient and p -value between fathers' coercive authority and adolescent behavioral autonomy. In the structural equation model the

relationship is represented by a one-way arrow from coercive authority to adolescent behavioral autonomy.

For the boys' model the standardized path coefficient between coercive authority and adolescent behavioral autonomy is $-.32$; $p < .000$. For the girls' model the standardized path coefficient between coercive authority and adolescent behavioral autonomy is $-.21$; $p = .01$. The relationship is as hypothesized for boys and girls. There is a statistically significant negative relationship between fathers' coercive authority and adolescent behavioral autonomy for boys and girls

Hypothesis 6

Adolescents' perceptions of fathers' reward authority will have a direct positive relationship with adolescent behavioral autonomy. Hypothesis 6 was tested separately for boys and girls by examining the path coefficient and p -value between fathers' reward authority and adolescent behavioral autonomy. In the structural equation model the relationship is represented by a one-way arrow from reward authority to adolescent behavioral autonomy.

For the boys' model the standardized path coefficient between reward authority and adolescent behavioral autonomy is $.20$; $p = .06$. For the girls' model the standardized path coefficient between reward authority and adolescent behavioral autonomy is $.41$; $p = .01$. There is positive and statistically significant relationship between girls' perceptions of their fathers' reward authority and adolescent behavioral autonomy, for boys the relationship is positive but not statistically significant.

Hypothesis 7

Age of the adolescent will have a direct positive relationship with adolescent behavioral autonomy.

Hypothesis 7 was tested separately for boys and girls by examining the path coefficient and p -value between age of the adolescent and adolescent behavioral autonomy. In the structural equation model the relationship is represented by a one-way arrow from age of the adolescent to adolescent behavioral autonomy.

For the boys' model the standardized path coefficient between age of the adolescent and adolescent behavioral autonomy is .18; $p = .03$. For the girls' model the standardized path coefficient between age of the adolescent and adolescent behavioral autonomy is .16; $p = .06$. There is a positive relationship between age of the adolescent and adolescent behavioral autonomy for boys and girls. The relationship is statistically significant at $p = .05$ for boys but not for girls.

Hypothesis 8

Adolescents' perceptions of fathers' legitimate authority will have an indirect relationship with adolescent behavioral autonomy through adolescents' perceptions of fathers' expert and referent authority. Hypothesis 7 was tested separately for boys and girls by examining the standardized indirect effect and associated significance level of fathers' legitimate authority on adolescent behavioral autonomy as mediated by fathers' expert and referent authority. In the structural equation model the relationship is represented by a one-way arrow from fathers' legitimate authority to fathers' expert authority and referent authority and a one-way arrow from fathers' expert authority and referent authority to adolescent behavioral autonomy.

For the boys' model the standardized indirect effect of fathers' legitimate authority on adolescent behavioral autonomy is .19, which is statistically significant at $p = .01$. For the girls' model the standardized indirect effect of fathers' legitimate authority on adolescent behavioral autonomy is .18, which is not statistically significant with a p value of .08.

Hypothesis 9

Age of the adolescent will have an indirect relationship with adolescent behavioral autonomy through adolescents' perceptions of fathers' coercive and reward authority. Hypothesis 8 was tested separately for boys and girls by examining the standardized indirect effect and associated significance level of age of the adolescent on adolescent behavioral autonomy as mediated by fathers' coercive and reward authority. In the structural equation model the relationship is represented by a one-way arrow from age of the adolescent to fathers' coercive authority and reward authority and a one-way arrow from fathers' coercive authority and reward authority to adolescent behavioral autonomy.

For the boys' model the standardized indirect effect of age of the adolescent on adolescent behavioral autonomy is .04, which is not statistically significant at $p = .40$. For the girls' model the standardized indirect effect of age of the adolescent on adolescent behavioral autonomy is .09, which is statistically significant at $p = .05$.

Model Respecification

In both the boys and girls model the modification indices indicated that with the same one addition to each model, χ^2 will decrease from 76.26 to 30.8 in the boys' model and from 114.1 to 25.2 in the girls' model. Model fit also improved with this change,

RMSEA decreased from .25 to .15 in the boys' model and from .32 to .13 in the girls' model. The lower end of the 90% confidence interval for *RMSEA* in both the boys' and girls' models fell below .10, to .09 and .07 respectively. The modification indices for both the boys and girls model indicated a parameter added to the model from fathers' legitimate authority to fathers' reward authority would greatly reduce chi-square and improve model fit. This change is represented by the addition of a one-way arrow from legitimate authority to reward authority (see Figure 7).

The new path coefficient in each model was also statistically significant. For the boys' model the standardized path coefficient between legitimate authority and reward authority is .62; $p < .000$. In the girls model the standardized path coefficient between legitimate authority and reward authority is .78; $p < .000$. The respecification substantially improved the model fit for both adolescent boys' and girls' perceptions of fathers' authority and adolescent behavioral autonomy. The overall variance accounted for in adolescent behavioral autonomy also improved for both the boys' and girls' models. In the boys' model, variance accounted for increased from .37 to .43 and in the girls model it increased from .38 to .47 (see Figure 8, Figure 9, Table 14, and Table 15).

Summary

Chapter IV utilized confirmatory factor analysis and structural equation modeling to analyze the research questions and hypotheses for this study. The general findings indicate that there is a relationship between adolescent perceptions' of fathers' legitimate, expert, referent, reward, and coercive authority and adolescent behavioral autonomy. Respecification and closer examination of the structural equation models evidenced the importance of fathers' legitimate authority and how the relationship between perceptions

of fathers' authority and behavioral autonomy differs by gender of the adolescent. The results of Chapter IV are discussed in more detail in Chapter V.

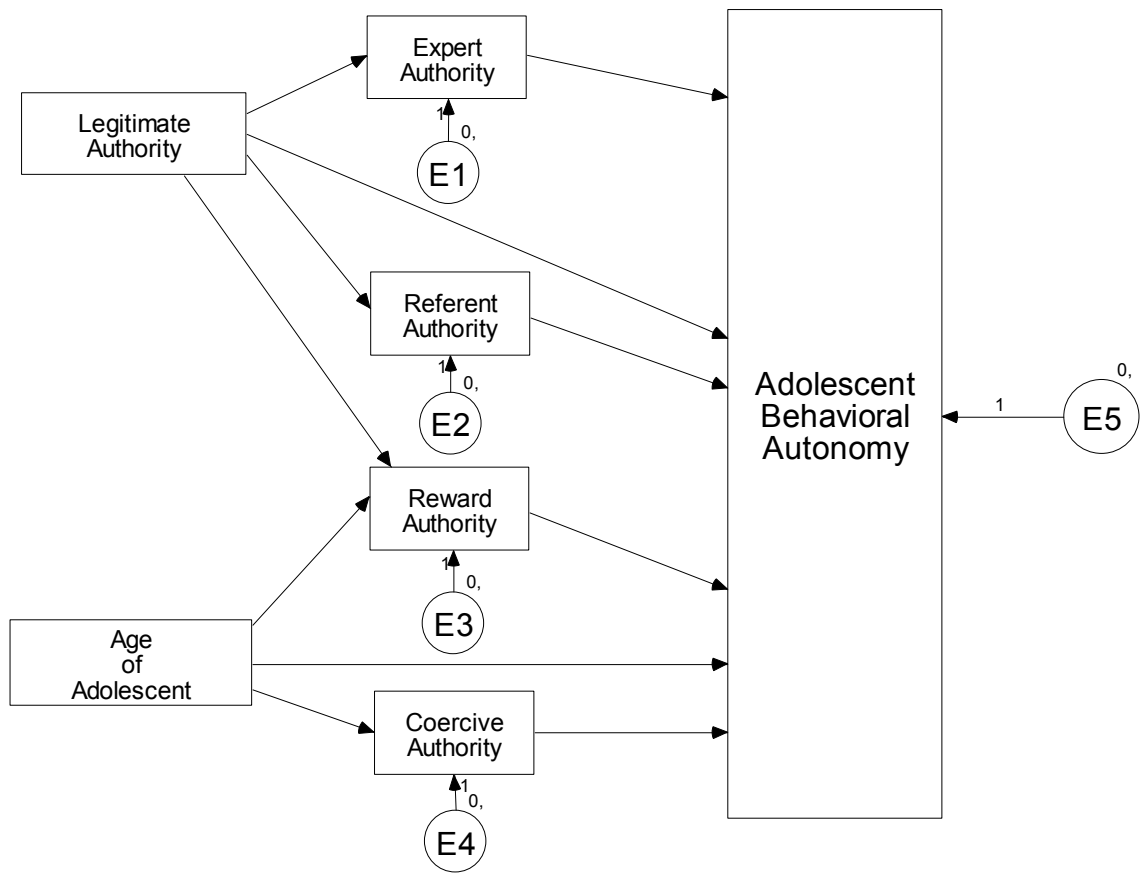
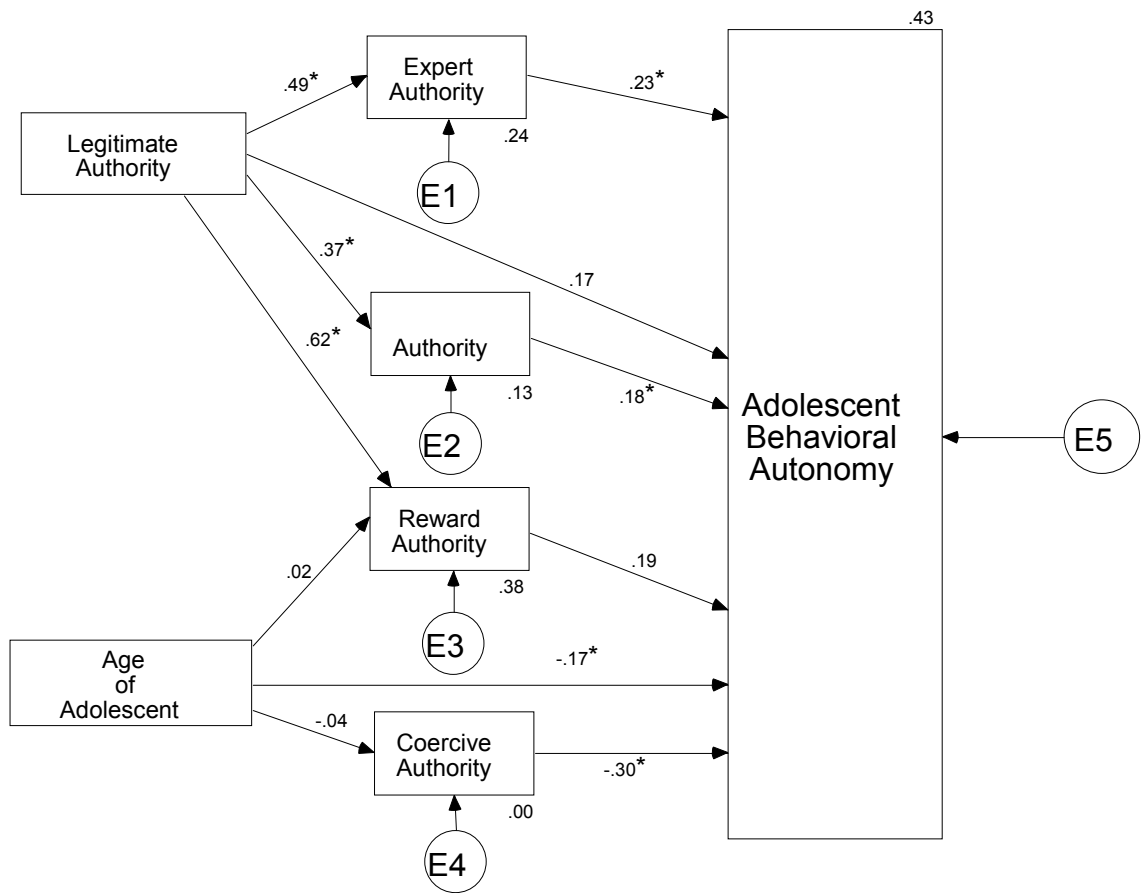


Figure 7. Respecification for structural equation model of adolescents' perceptions of fathers' authority and adolescent behavioral autonomy.



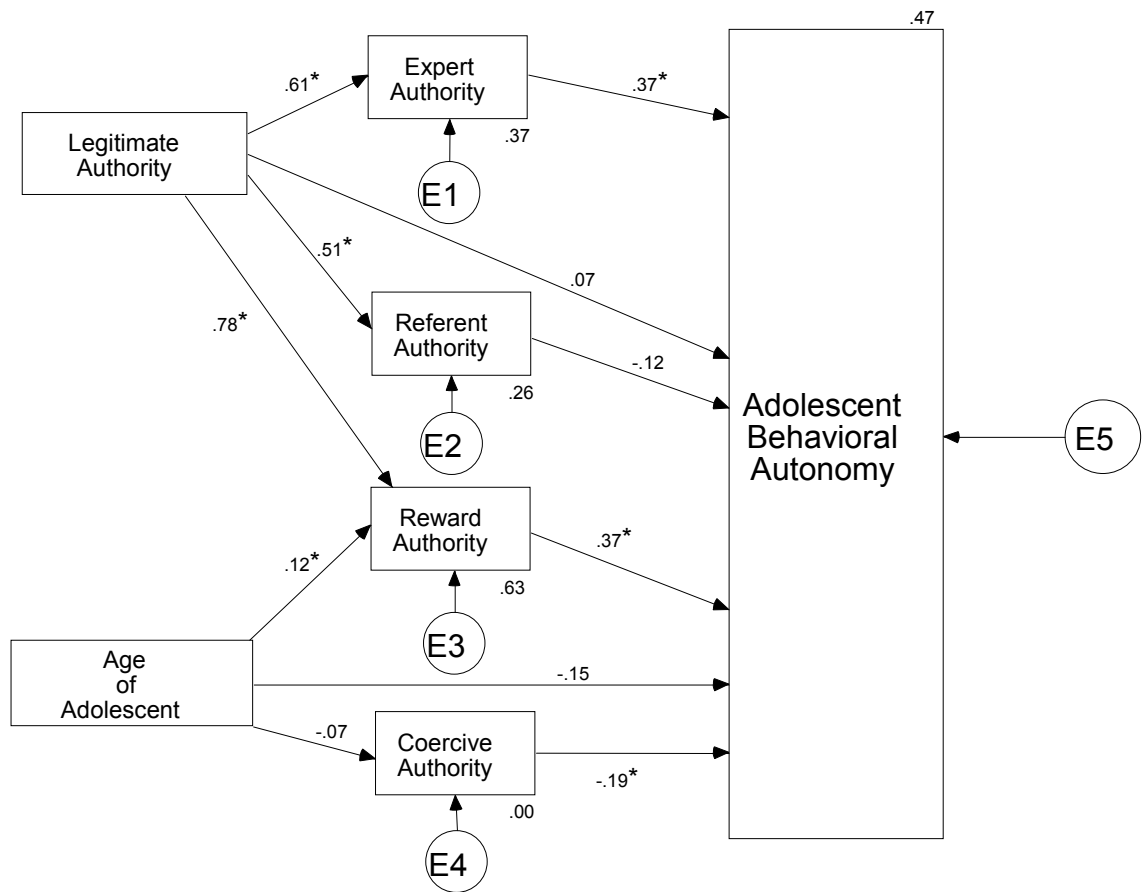
$\chi^2 = 30.8, p < .00$; RMSEA = .15; RFI = .63
 *Indicates statistically significant at $p = .05$

Figure 8. Standardized estimates for respecified model of adolescent boys' perceptions of their fathers' authority and adolescent behavioral autonomy.

Table 14

Standardized path coefficients and p-values for adolescent boys respecified model.

Variables	Coefficient; <i>p</i> -value
Legitimate authority → Behavioral autonomy	.17; <i>p</i> = .10
Expert authority → Behavioral autonomy	.23; <i>p</i> = .02
Referent authority → Behavioral autonomy	.18; <i>p</i> = .04
Coercive authority → Behavioral autonomy	-.30; <i>p</i> < .000
Reward authority → Behavioral autonomy	.18; <i>p</i> = .04
Age of adolescent → Behavioral autonomy	-.17 <i>p</i> = .03
Legitimate authority → Expert authority	.49; <i>p</i> < .000
Legitimate authority → Referent authority	.37; <i>p</i> < .000
Age of adolescent → Reward authority	.02; <i>p</i> = .81
Age of adolescent → Coercive authority	-.04; <i>p</i> = .66
Legitimate authority → Reward authority	.62; <i>p</i> < .000



$\chi^2 = 25.2, p < .00$; RMSEA = .13; RFI = .78
 *Indicates statistically significant at $p = .05$

Figure 9. Standardized estimates for respecified model of adolescent girls' perceptions of their fathers' authority and adolescent behavioral autonomy.

Table 15

Standardized path coefficients and p-values for adolescent girls respecified model.

Variables	Coefficient; <i>p</i> -value
Legitimate authority → Behavioral autonomy	.07; <i>p</i> = .62
Expert authority → Behavioral autonomy	.37 <i>p</i> < .000
Referent authority → Behavioral autonomy	-.12; <i>p</i> = .22
Coercive authority → Behavioral autonomy	-.19; <i>p</i> = .01
Reward authority → Behavioral autonomy	.37; <i>p</i> = .01
Age of adolescent → Behavioral autonomy	-.15; <i>p</i> = .01
Legitimate authority → Expert authority	.61; <i>p</i> < .000
Legitimate authority → Referent authority	.51; <i>p</i> < .000
Age of adolescent → Reward authority	.12; <i>p</i> = .05
Age of adolescent → Coercive authority	-.07; <i>p</i> = .52
Legitimate authority → Reward authority	.78; <i>p</i> < .000

Table 16
Summary of Hypotheses

Hypothesis Variables	Accepted	
	Boys	Girls
Hypothesis 2 Legitimate authority → Behavioral autonomy	No	No
Hypothesis 3 Expert authority → Behavioral autonomy	Yes	Yes
Hypothesis 4 Referent authority → Behavioral autonomy	Yes	No
Hypothesis 5 Coercive authority → Behavioral autonomy	Yes	Yes
Hypothesis 6 Reward authority → Behavioral autonomy	No	Yes
Hypothesis 7 Age of adolescent → Behavioral autonomy	No	No
Hypothesis 8** Legitimate authority → Behavioral autonomy	Yes	No
Hypothesis 9** Age of Adolescent → Behavioral autonomy	No	Yes

** Denotes indirect relationship

Table 17

Original and respecified standardized path coefficients and p-values for adolescent boys.

Hypothesis Variables	Structural Equation Model	
	Original	Respecified
Hypothesis 2 Legitimate authority → Behavioral autonomy	.18; p = .10	.17; p = .10
Hypothesis 3 Expert authority → Behavioral autonomy	.24; p = .02	.23; p = .02
Hypothesis 4 Referent authority → Behavioral autonomy	.19; p = .04	.18; p = .04
Hypothesis 5 Coercive authority → Behavioral autonomy	-.32; p < .000	-.30; p < .000
Hypothesis 6 Reward authority → Behavioral autonomy	.20; p = .06	.18; p = .04
Hypothesis 7 Age of adolescent → Behavioral autonomy	.20; p = .03	-.17; p = .03
Hypothesis 8** Legitimate authority → Behavioral autonomy	.19; p = .01	.30; p < .000
Hypothesis 9** Age of Adolescent → Behavioral autonomy	.04; p = .40	.06; p = .07

** Denotes indirect relationship

Table 18

Original and respecified standardized path coefficients and p-values for adolescent girls.

Hypothesis Variables	Structural Equation Model	
	Original	Respecified
Hypothesis 2 Legitimate authority → Behavioral autonomy	.07; p = .62	.07; p = .62
Hypothesis 3 Expert authority → Behavioral autonomy	.40; p < .000	.37; p < .000
Hypothesis 4 Referent authority → Behavioral autonomy	-.13; p = .22	-.12; p = .22
Hypothesis 5 Coercive authority → Behavioral autonomy	-.21; p = .01	-.19; p = .01
Hypothesis 6 Reward authority → Behavioral autonomy	.41; p = .01	.37; p = .01
Hypothesis 7 Age of adolescent → Behavioral autonomy	-.16; p = .06	-.15; p = .01
Hypothesis 8** Legitimate authority → Behavioral autonomy	.18; p = .08	.45; p < .000
Hypothesis 9** Age of Adolescent → Behavioral autonomy	.09; p = .05	.06; p = .07

** Denotes indirect relationship

CHAPTER V

DISCUSSION

Chapter V discusses the study findings for the relationship between aspects of fathers' authority and adolescent behavioral autonomy within the theoretical context of exchange theory. Also, implications for future research and practice are presented.

Introduction

The current study provided substantial support for the hypothesis that five distinct bases of fathers' authority are measured by Peterson's (1986) measure and for a respecification of the theoretical model of perception of fathers' authority and adolescent behavioral autonomy. In both the boys' and girls' models two direct and two indirect relationships were found. Direct negative relationships were found between (a) age of the adolescent and behavioral autonomy and (b) fathers' coercive power and behavioral autonomy. Two aspects of fathers' authority (expert authority and reward authority) mediated the relationship between fathers' legitimate authority and adolescent behavioral autonomy. In addition, in the boys' model, the relationship between fathers' legitimate authority and adolescent behavioral authority was mediated by fathers' referent authority. The current findings in relation to Research Question One and Research Question Two are presented, followed by a discussion of the implications for theory, research, and practice.

Research Question One

The first research question addressed whether the multidimensional measure of paternal authority (Peterson, 1986) developed using exploratory factor analysis is supported by confirmatory factor analysis. Hypothesis 1 proposed that Peterson's (1986) multidimensional measure of adolescents' perceptions of fathers' authority is a valid and reliable measure of adolescent perceptions of fathers' legitimate, expert, referent, coercive, and reward authority when tested using a confirmatory factor analysis measurement model. Hypothesis 1 was confirmed; accordingly the measure of parental authority developed by Peterson (1986) did not need to be refined for use in the current study.

This finding is important in light of it has been over twenty years since the measure was first developed and since that time numerous studies have been undertaken using the assessment of the bases of parental authority (Bush et al., 2002; Henry et al., 1989; Peterson et al., 1997). The finding that the measure does not need to be refined after twenty years supports the use of the measure and the history of research conducted on parental authority using the measure.

Adolescent perception of fathers legitimate, expert, referent, coercive, and reward authority have the potential to serve as a resource for adolescents in developing adolescent behavioral autonomy. According to Sabetelli and Shehan (1993) a resource can be either concrete or symbolic, is transmitted in the context of a relationship, and has the potential to reward another. So although perceptions of father authority are not concrete they still have the ability to serve as a resource and as a reward that is transmitted from father to adolescent.

Research Question Two

The theoretical models of fathers' authority and adolescent behavioral autonomy provide evidence for the importance of the relationship with the father at a time when adolescents are spending less time with family members and preparing for adult life. Perceptions of fathers' authority are differentially utilized by adolescents as a resource in developing autonomy. Adolescents who perceive high levels of expert and legitimate authority and low levels of coercive authority are most likely to develop autonomy. Gender differences exist in which boys utilize referent authority and girls utilize reward authority to become more autonomous.

These findings are discussed in relation to exchange theory and existing scholarship about fathers' expert, legitimate, and coercive authority and adolescent behavioral autonomy; gender of adolescent differences are also discussed.

Expert Authority

Adolescent boys and girls who perceive their fathers to have higher levels of specialized knowledge (expert authority) in varying domains reported higher levels of behavioral autonomy. If the resource of knowledge is germane to the lives of the adolescents, they are able to utilize the specialized knowledge as a resource to develop behavioral autonomy. Exchange theory provides understanding on how the perception of authority is able to serve as a resource in developing autonomy.

A resource is any "commodity, material, or symbolic, that can be transmitted through" (Sabatelli & Shehan, 1993, p. 398) the exchange relationship. Foa and Foa (1980) proposed six types of resources that may exist in a relationship, one of which is information. The domain specific expert knowledge that comprises fathers' expert

knowledge is symbolic and the specific information is a commodity that passes from the father to the adolescent. The perception of domain specific expert knowledge is the basis for fathers' expert authority. Adolescents that perceive their fathers to have domain specific expert authority are able to develop behavioral autonomy; they have the ability to utilize the resource of expert knowledge to develop more autonomous behavior.

Legitimate Authority

Exchange theory supports the idea that adolescents establish a comparison level in relation to peers and their peers' fathers to determine in what domains or issues other fathers exercise legitimate authority. Adolescents then develop normative expectations about what their fathers' have a right to exercise legitimate authority over. Consequently, fathers only have legitimate authority over domains or issues that the adolescents perceive they have a legitimate right to do so. Thus, legitimate authority decreases when fathers are seen as violating the normative expectations of their adolescent children. It was hypothesized that as legitimate authority increased adolescents would find their fathers' normative behavior rewarding and would consult with their fathers on issues and domains over which they saw their fathers as having legitimate authority. Thus, it was expected that fathers' legitimate authority would serve as a resource enabling adolescents to increase behavioral autonomy as they come to understand what issues and/or domains their fathers have a legitimate right to give advice or counsel (French & Raven, 1959; Klein & White, 1996).

The hypothesis was not supported, adolescents' perceptions of fathers' legitimate authority did not show a direct positive relationship with behavioral autonomy. French and Raven (1959) suggested that legitimate authority influences other bases of authority

by the adolescents determining their fathers have a legitimate right to exercise authority over other domains of authority. Hypothesis 8 examines the indirect influence of fathers' legitimate authority on adolescent behavioral autonomy through fathers' expert and referent authority.

Hypothesis 8 states that adolescents' perceptions of fathers' legitimate authority will have an indirect relationship with adolescent behavioral autonomy through adolescents' perceptions of fathers' expert and referent authority. Hypothesis 8 was accepted for the boys and rejected for the girls, although the same trend exists for boy and girl adolescents. Perception of fathers' legitimate authority has an indirect relationship with behavioral autonomy through fathers' expert and referent authority. When fathers' have higher levels of legitimate authority adolescent perceive that their fathers' are adhering to normative expectations compared to the comparison level of their friends and their fathers. When fathers have higher levels of legitimate authority adolescents are more likely to see their fathers as possessing other resources in the forms of expert authority and referent authority. Thus, adolescents are more likely to recognize the resource of domain specific expert knowledge of their fathers and more likely to find identifying with their father as rewarding and develop higher levels of adolescent behavioral autonomy when they perceive their fathers as having legitimate authority.

Coercive Authority

Hypothesis 5 states that adolescents' perceptions of fathers' coercive authority will have a direct negative relationship on adolescent behavioral autonomy. Hypothesis 5 is confirmed for the boys and the girls. Adolescent boys' and girls' perceptions of their fathers' coercive authority decrease as they experience fewer costs and more rewards in

their relationships with their fathers. The decrease in coercive authority is rewarding to the adolescents and as they experience less fear of negative consequence from their fathers they are better able to make decisions to increase their level of behavioral autonomy.

Cost is the inverse of reward. So if a reward is something that is desirable and sought after, then a cost is undesirable and should be avoided. The Principle of Least Costs refers to situations in which there is no possibility of rewards and one must try to minimize costs. The minimization or alleviation of costs within a relationship becomes a reward when there are no rewards available in the relationship (Klein & White, 1996). By definition coercive power is fathers' ability to deliver negative consequences (Henry et al., 1989) and more coercive power will never be rewarding, only through avoidance of the negative consequences related to coercive authority is the adolescent able to develop autonomy.

Differences by gender

Adolescent boys and girls differ in how referent authority and reward authority relate to behavioral autonomy. For adolescent boys it was rewarding for them to perceive their father as having higher levels of referent authority. One possibility is that boys see their fathers as functioning autonomously and the boys find it rewarding to emulate or model their fathers' behaviors and to behave with more autonomy like their fathers. For adolescent girls, the perception of their fathers as being able to provide rewards is directly and positively related to reports of behavioral autonomy. Thus, girls who see their fathers as having greater ability to reward them are more likely to accept responsibility for their own behavior and report greater behavioral autonomy.

Judson, Gray, and Duran-Aydintug (1994) utilize rational choice modeling to help explain how individuals come to decisions about what they perceive as a reward and/or a cost in a relationship and how the rewards and costs relate to desirable outcomes. In an exchange relationship individuals assess the likelihood of obtaining a positive outcome and make decisions that will increase the likelihood of obtaining the positive outcome. Adolescent boys and girls both value the outcome of their own autonomy but they differ in their perceptions on what is the most likely domain of fathers' authority that will help them achieve autonomy; for boys it is identifying with their fathers through perception of referent authority and for girls it is utilization of desirable resources through perception of reward authority.

Theoretical Implications

In this section, results of the present study are considered in the context of exchange theory and in relation to Peterson's (1986) conceptualization of Smith's (1970) application of French and Raven's (1959) bases of power to understanding parental authority in relation to adolescent social competence. In the current study, Peterson's (Peterson et al., 1985; Peterson, 1986) theoretically-based measure of parental authority relates to adolescent behavioral autonomy was examined using confirmatory factor analysis. In addition, an exchange theory based theoretical model (or middle range theory) of how adolescent perceptions of bases of fathers' authority and age relate to adolescent behavioral autonomy was tested and refined. Substantial support for the respecified model was found as a result of hypothesis testing and interpretation of the model within exchange theory.

The scope and breadth of exchange theory easily allow for the application and interpretation of exchange theory to fathers' authority and adolescent behavioral autonomy (Klein & White, 1996). The early development of exchange theory was done with a deductive approach to theory construction. Homans took exception to the deductive approach to theory building and proposed an inductive approach should be utilized by building on empirical observations and findings (Sabatelli & Shehan, 1993). Nye (1980) was also a proponent of inductive theory building and demonstrated the usefulness of exchange theory in developing middle-range theories. According to Nye, the benefits of this approach are parsimony and extension of mini-theories that could lead to the overall testing of exchange theory in general.

An inductive approach is taken in the current study by utilizing the results of the testing of the research hypotheses to create propositions that will support the development of a middle-range theory of adolescent perception of fathers' authority and adolescent behavioral autonomy. First, the dependent variable of adolescent behavioral autonomy is presented, next Research Question One is examined, and finally Research Question Two is discussed; all three will be conducted within the context of exchange theory.

Adolescent Behavioral Autonomy

The current study found a relationship between adolescent perceptions of aspects of fathers' authority and adolescent behavioral autonomy. Exchange theory helps ascertain why and how adolescents utilize their fathers' authority to develop autonomy. In order for exchange theory to be applied to families, a set of generalizable rewards or costs must exist for each participant to determine what is most profitable for him or her

within the relationship. Nye identified several potential sources of generalizable rewards or costs: (a) approval, (b) predictability, (c) security, (d) agreement, (e) equality of resources, and (f) autonomy. Thus, while recognizing the importance of individual values placed upon each of these, based on the general desirability of individuals within a family relationship to obtain levels of these rewards; Nye's (1979) work provides theoretical support for the idea that adolescents evaluate autonomy in the context of their exchange relationship with their fathers as rewarding and worth obtaining (Klein & White, 1996).

Rewards and costs and equality of resources and their relation to autonomy are implicitly utilized in Emerson's (1972) exchange network approach to describe the process of obtaining balance of power and rewards in a relationship. The more dependent one is on someone else for rewards, the less power one has in the relationship. Emerson proposes that imbalanced relationships move towards balance over time. One way in which balance can occur is to increase "the number of alternative sources of valued rewards for the less powerful person" (Sabatelli & Shehan, 1999, p. 393) in the relationship. In early adolescence, the relationship between fathers and adolescents is imbalanced by fathers having control of the disproportionately allocated resources. Adolescents desire the reward of autonomy in the relationship and as they achieve more autonomy from fathers they gain alternative sources of rewards once available predominantly from their father. The development of autonomy and subsequent alternative sources of rewards serve to balance the power in the relationship between fathers and adolescents.

Homans adeptly described the dynamics of the exchange between father authority and adolescent behavioral autonomy. According to Homans, the "secret of human

exchange is to give the other man behavior that is more valuable to him than it is costly to you and to get from him behavior that is more valuable to you than it is costly to him” (1961, p. 62). In the exchange relationship of fathers’ authority and adolescent behavioral autonomy adolescents give up or consent to their fathers’ authority in order to obtain something that is more valuable to them, adolescent behavioral autonomy. The resultant output of the relationship is a win-win for the father and adolescent; the father is able to remain influential in the lives of their adolescent children and the adolescents are able to function more autonomously. All adolescents in the current study reported higher levels of autonomy when they perceived higher levels of expert and reward authority and lower levels of coercive authority. Adolescent boys that perceived higher levels of referent authority reported higher levels of autonomy.

Autonomy is a generalizable reward that adolescents want to develop and achieve and the development of autonomy serves to balance the power in the relationship with the father, which in itself is rewarding. The middle range theory of fathers’ authority and adolescent autonomy developed, tested, and refined in this study advances the conceptualization of how adolescent perceptions of fathers’ legitimate, expert, referent, reward, and coercive authority relate to the generalizable reward of adolescent behavioral autonomy.

Bases of Fathers’ Authority

The theoretical model provides support for Peterson’s (1986) original conceptualization of parents’ legitimate, expert, reward, coercive, and referent authority. However, the present study refines Peterson’s model of fathers’ authority and adolescent behavioral autonomy. Specifically, Peterson’s research utilized perceptions of both

mothers' and fathers' authority and used multiple regression analyses to find a direct relationships between aspects of parents' authority and adolescent behavioral autonomy. The focus in the present study on fathers' authority supports a theoretical model in which expert, referent, and reward authority serve as mediating variables between fathers' legitimate authority and adolescent behavioral autonomy; these findings are important in light of French and Raven's (1959) original work on the bases of social power. French and Raven hypothesized that legitimate power not only has the potential to influence the behavior of another person but also the "attempts to use other types of power" (p. 160). In the current model legitimate authority is not directly related to behavioral autonomy, instead legitimate authority "influences" expert, referent, and reward authority. In the current model, coercive authority is not influenced by legitimate authority as speculated by French and Raven.

The current model only includes the perceptions of fathers' authority and adolescent behavioral autonomy but the findings in support of the work of French and Raven (1959) and Peterson (1986) are worthy of replication to explore if the model extends to mothers' authority and other adolescent outcomes. The results and finding of the study are discussed within the scope of exchange theory, including, the desirability of autonomy as a reward and how adolescents' perceptions of fathers' authority relate to behavioral autonomy. Concepts from symbolic interaction theory assist in understanding a broader context in which adolescent perceptions of fathers' authority occurs (Thibaut & Kelley, 1959). The research design and sample utilized can be improved upon to further generalize the results of the current study and provide additional support for the model. In

addition to research implications, the findings of the study have practice implications and are detailed later in the chapter.

Limitations

Two major criticisms of exchange theory are methodological individualism and the assumption of rationality (Klein & White, 1996). Methodological individualism is the assumption that the appropriate level of analysis of family relationships is the individual members. The family is more than the sum of its parts. Consideration of each family members' rewards and costs individually does not accurately reflect family dynamics. Families are complex and have roles unlike any other group. Rationality is the consistent ability to calculate the ratio of rewards to costs. Rationality implies that different individuals with identical information will come to the same conclusion as to what is a reward and what is a cost in an exchange relationship. Methodological individualism and the assumption of rationality share a common deficit, neither considers the larger context in which an exchange relationship occurs. Thibaut and Kelley (1959) recognized the need to include the larger context in which exchanges occurred by considering roles and norms that govern exchange, concepts more often utilized in symbolic interaction theory.

Concepts utilized within symbolic interaction that help understand the larger context within which exchange relationships occur are context, position, role and norm. Strauss (1978) developed the negotiated order approach in which context is the connection between the individual and society. In this approach *negotiation* would occur between the father and adolescent to reach a compromise related to father's authority and/or behavioral autonomy. The *negotiation context* are the things that are most related to the current negotiation. For example, an adolescent may have an upcoming prom that

he/or she wants to attend and this may impact the commitment to negotiation to obtain behavioral autonomy. The *structural context* also affects the negotiation context but is much larger in scale, often the larger society. Societal expectations for how much autonomy an adolescent should have would likely affect the negotiation for more adolescent behavioral autonomy.

A position is embedded within a system of interrelated position and each position has many roles comprising it. A role is the “normative expectations attached to a specific position in a social structure” (Klein & White, 1996, p. 96) and norms are shared expectations for occupants in a specific role. Applied to the current study, positions would be that of father and (adolescent) child and a role for the child would be that of an increasingly autonomous adolescent. The norm or shared expectation would be that both the father and child expect more adolescent behavioral autonomy.

The symbolic interaction concepts of context, position, role and norm do not negate the application of exchange theory to perception of father’s authority and adolescent behavioral autonomy. Incorporating concepts from symbolic interaction help address the limitations of exchange theory mentioned above, methodological individualism and the assumption of rationality. In fact the context, positions, roles, and norms present in an exchange relationship contribute to the assessment of rewards and costs (Thibaut & Kelley, 1959). Understanding of the larger context in which exchange relationships occur will only improve the understanding of the relationship between fathers’ authority and adolescent behavioral autonomy.

Implications for Practice

Adolescents' perceptions of their relationship with their fathers play a central role in the development of behavioral autonomy. Adolescents' perceptions of their fathers' expert, legitimate, reward, coercive, and referent authority and their relationship to behavioral autonomy development have implications when working with adolescents and their fathers.

The importance of legitimate authority in relation to other types of authority has implications when working with adolescents and their fathers. Understanding how perceptions of fathers' legitimate authority influence other bases of authority may assist the practitioner when working with fathers and adolescent children. For instance a typical exchange between fathers and their adolescents may include the adolescents insisting that their fathers are not being fair because all of their friends' fathers let them do something. Fathers may be tempted to reply with "I don't care what all of your friends' fathers do, this is my house and until they pay my bill I make the rules." Family practitioners can help fathers understand this approach may not be the best approach for them because this may diminish their adolescents' perceptions of their legitimate authority and also diminish the fathers' expert, referent, and reward authority. The adolescents' perceptions of their fathers' legitimate authority decreases due to the costs associated with the violation of normative expectations by their fathers making decisions that lead to the adolescent receiving less rewards from their fathers due to their fathers trying to make decisions in situations that their friends' fathers do not attempt to exert influence. When adolescents' perceptions of their fathers' legitimate authority decreases they no longer believe that their fathers have a right to exercise control over them (Henry et al., 1989).

The results of the structural equation model show a direct positive relationship of fathers' legitimate authority with fathers' expert, referent, and reward authority. Thus, adolescents may believe that their fathers do not have a right to give them expert advice or reward their behaviors; they may also not see their father as someone to refer to as a model to emulate. The fathers attempting to exercise control in situations that their adolescent friends' fathers do not attempt to exercise control may lead to their adolescents' decrease in perception of their father's legitimate, expert, referent, and reward authority. The potential exists for adolescents to perceive their fathers as having low levels of legitimate, expert, referent, and reward authority and behavioral autonomy may decrease as a result of fathers violating normative expectations for control.

Adolescents' perceptions of their fathers' coercive authority has a direct negative relationship to behavioral autonomy. Not only could high amounts of fathers' coercive authority lead to low levels of behavioral autonomy it could also increase the physical and psychological distance between the fathers and adolescents as the adolescents seek to avoid the potential of their fathers' perceived ability to bring about negative consequences. This increase in distance could interfere with the adolescents taking advantage of the resources and rewards associated with their fathers' legitimate, expert, referent, and reward authority. In extreme cases the avoidance of negative consequences could lead to the devaluing of their fathers' authority altogether and adolescents' perceptions of their fathers authority will not be available as a resource to aid the adolescent in developing behavioral autonomy.

There are relatively no differences in adolescents' perceptions of their fathers' authority based on gender of the adolescent. Boy and girl adolescents perceive similar

amounts of father's legitimate, expert, referent, reward, and coercive authority, but how adolescents perceive them as a resource to develop behavioral autonomy does differ by gender.

Before elaborating on the differences between adolescent boys and girls perceptions of their fathers' authority and how they are related to behavioral autonomy, the similarities will be presented. For adolescent girls and boys their perceptions of their fathers' legitimate authority was not related to behavioral autonomy. Both adolescent boys' and girls' perceptions of fathers' expert authority was positively related to behavioral autonomy and the less father coercive authority perceived by the adolescents the more likely the adolescents are to develop behavioral autonomy. So for fathers to serve as a resource to their adolescents in developing behavioral autonomy they should offer advice in areas that are important to the adolescent such as school and career planning while using minimal threats of negative consequences. The increased level of adolescents' perceptions of fathers expert authority serves as a resource for adolescent boys and girls in developing behavioral autonomy and the decreased level of fathers' coercive authority increases their behavioral autonomy by adolescents not spending resources in trying to avoid the negative consequences of their fathers' coercive authority and by the adolescents being able to take advantage of resources from the perception of other bases of fathers' authority.

As previously mentioned, there are differences in the way adolescent boys and girls perceive the resources of their fathers' authority to develop behavioral autonomy. The differences are in the relationships between: (a) referent authority and behavioral autonomy, (b) reward authority and behavioral autonomy, and (c) the indirect

relationship between perception of fathers' legitimate authority and adolescent behavioral autonomy as mediated by expert and referent authority. Adolescent boys' perceptions of their fathers' referent authority may serve as a resource that helps them develop behavioral autonomy and legitimate authority, as mediated by expert and referent authority, may also facilitate the development of behavioral autonomy. As adolescent girls grow older their perceptions of their fathers' reward and coercive authority is related to higher levels of behavioral autonomy.

For fathers of adolescent boys it is important to remember that they serve as a reference for their sons to identify with and model behaviors that are perceived by their sons as positive, including healthy levels of behavioral autonomy. In addition to serving as a reference for identification it is also important for fathers of adolescent sons to be knowledgeable about issues that are important to their adolescent sons, such as school, going to college, and choice of occupations. When fathers are perceived to have higher levels of referent and expert authority their adolescent sons are more likely to develop behavioral autonomy.

For fathers of adolescent girls, it is important to remember that as their daughters' age they increasingly perceive their fathers' as having higher levels of reward and coercive authority. Unlike adolescent sons, as daughters increase in age and recognize fathers' reward and coercive authority, they are likely to develop higher levels of behavioral autonomy. For fathers of adolescent girls it may be helpful to explicitly state expectations for behavior and what the consequences are for adhering to or violating expectations. Then, it would be important for fathers to follow through with the positive

consequences to maintain or increase reward authority while not delivering the costs associated with coercive authority.

It was hypothesized that as adolescents became older they would develop greater levels of behavioral autonomy. This was not found to be the case for boys or girls, there is actually a negative relationship between age of the adolescent and adolescent behavioral autonomy found in the structural equation model. It is not until adolescents' perceptions of fathers' reward and coercive authority are taken into account as mediating variables between age of the adolescent and behavioral autonomy is there an influence of age of the adolescent on behavioral autonomy, in this case an indirect effect.

Parents in general and more germane to this study, fathers may have unrealistic expectations for their adolescent children to develop behavioral autonomy merely as a function of chronological age. Fathers are important in helping adolescents develop behavioral autonomy by continuing to serve as an authority figure, as adolescents' age they are more likely to use perceptions of their fathers' reward and coercive authority as a resource to develop greater levels of behavioral autonomy.

Research Implications

In the current study there was a relationship between adolescent perceptions of fathers' authority and adolescent behavioral autonomy. Improvements in the research design and modifying the theoretical model based on what was learned in the current study will improve generalizability of the study and more accurately represent how perceptions of fathers' authority relates to behavioral autonomy in boy and girl adolescents. Three main issues related to the study design or improvement in the theoretical model are: (a) sample characteristics of the current study, (b) methodological

limitations of the current study, and (c) utilizing information learned from the structural equation model and respecification in the current study to improve the theoretical model for future studies.

The sample from the current student was predominantly Caucasian adolescents whose parents are still married and residing in the same home. The parents are highly educated and would be considered upper middle class. Also due to the lack of availability of the 11th grade students to participate, a full cross-section of the high school students from 9th to 12th grade was not available to participate in the study. Although the results and interpretation of the confirmatory factor analysis indicate that the data from the current sample is the best fit available, other samples that are more diverse and include a full cross-section of high school students would be more comparable to the original sample used by Peterson (1986) and may be a better fit to the original model. So another confirmatory factor analysis of Peterson's original model with a more representative sample may provide more affirmation of the conceptualization of parents' legitimate, expert, referent, coercive, and reward authority. Bush, Supple, and Lash (2004) and Bush (2001) report that due in part to collectivism perception of fathers' authority and adolescent autonomy differ by race and ethnicity; replication in more schools with a more racially/ethically and economically diverse sample would also provide more insight for the theoretical model of the relationship between fathers' authority and adolescent behavioral autonomy. In addition inclusion of other types of fathers to include stepfathers and nonresidential fathers would increase the generalizability of the model and results.

An additional methodological limitation of the current study that would warrant future studies is the source of data collection. The current study collects data only from

the adolescents and their perceptions of their fathers' authority and their own behavioral autonomy. Although the current source of data collection is appropriate to answer the questions of interest in this study, collecting information about the adolescents' perceptions of their mothers' authority or information regarding fathers' own perceptions of their authority in relation to their adolescent children may provide a more complete understanding of how fathers' authority relates to adolescent behavioral autonomy. The additional sources of data collection could contribute to a more complete understanding of the context in which the exchange relationship occurs. The additional perceptions of the mothers' authority and/or the addition of the fathers' perception of their own authority has the potential to provide a more complete understanding of the resources available related to the bases of authority. Better measurement of the total authority available to the adolescent has the potential to provide more precision in understanding adolescent behavioral autonomy.

Future studies could also incorporate information learned from the analysis and interpretation of the original model and respecified model. More specifically the original models showed differences between boy and girl adolescents' perceptions of the different bases of fathers' authority and how they are related to the development of behavioral autonomy and the higher levels of perception of coercive authority compared to the other bases of authority. The respecified model evidences the importance of legitimate authority in relation to expert, referent, and reward authority. Future research could benefit by using what was learned in the current research and make different a priori specifications of the relationships between the bases of fathers' authority and adolescent behavioral autonomy, contributing more precision to the theoretical relationships.

Different models for the boy and girl adolescents should be specified to take into consideration the different ways adolescent boys and girls perceptions of fathers' referent and reward authority is related to behavioral autonomy. Also, any direct relationship between age and behavioral autonomy should be omitted; the influence of age is mediated by fathers' authority. Finally, the importance of legitimate and coercive authority as exogenous variables in the model should be visually depicted by the variables both being isolated on the far left of the visual model with directional arcs pointing to the right to the variables that they influence.

In addition to the issues related to the experimental design and generalizability, the findings have implications related to the research of parental authority and power, as well as fatherhood. Peterson's (1986) multidimensional conceptualization of parental authority applied to fathers and a relationship with adolescent behavioral autonomy was supported, although different than conceptualized. The theoretical model found in the current model is support by French and Raven's (1959) original work in which they proposed legitimate authority is related to other bases of authority.

The published research on parental authority has been less numerous in recent years compared to the time frame of Peterson's work on parental authority and autonomy (1986). The current study and previous work on fathers' authority could help revitalize the field of study by joining forces with fatherhood research, which has become more and more prevalent over the last 20 years. The conceptualization of fathers' authority can provide the field of fatherhood research a multidimensional way to measure father involvement that extends beyond direct contact with a rich theoretical and research history.

Summary

This chapter presented conclusions regarding the acceptance or rejection of the research hypotheses, implications of the findings, and recommendations for future research.

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Appendix A

Questionnaire Items Used in this Study

Background information

1. How old are you?
 - a. 13
 - b. 14
 - c. 15
 - d. 16
 - e. 17
 - f. 18

2. Are you male or female?
 - a. Male
 - b. Female

3. What is your ethnicity or race?
 - a. Black or African/American
 - b. White or Anglo/American
 - c. Asian
 - d. Native American Indian
 - e. Mexican-American
 - f. Other Hispanic
 - g. Other

4. In what grade are you in school? (Please circle)
 - a. 8
 - b. 9
 - c. 10
 - d. 11
 - e. 12

5. Are your parents: (circle your answer)
 - a. married
 - b. divorced
 - c. separated
 - d. widowed
 - e. single
 - f. other

6. Do you live at home?
 - a. Yes
 - b. No

7. Does your natural biological father live with you?
 - a. Yes
 - b. No

8. Is your natural/biological father employed?
 - a. No
 - b. He is retired from employment.
 - c. This question does not apply to me

Measure of Adolescents' Perceptions of Fathers' Authority

Please circle an answer for the following statements about your perceptions of your father's attitudes.

SA= Strongly Agree
A= Agree
D= Disagree
SD= Strongly Disagree

PLEASE RESPOND ABOUT THE PERSON WHO FUNCTIONS AS YOUR FATHER ON A DAILY BASIS.

Legitimate authority

1. This parent has a right to give me advice about my relationships with members of the opposite sex.

Father a. SA b. A c. D d. SD

2. This parent has a right to influence my decisions about the friends I choose.

Father a. SA b. A c. D d. SD

3. This parent has a right to give me advice about my education.

Father a. SA b. A c. D d. SD

4. This parent has a right to influence me about my education.

Father a. SA b. A c. D d. SD

5. This parent has the right to give me counsel and advice about selecting an occupation.

Father a. SA b. A c. D d. SD

6. This parent has a right to influence my choices in planning for my occupation.

Father a. SA b. A c. D d. SD

Expert Authority

1. This parent knows a lot about what it's like to be a teenager.
Father a. SA b. A c. D d. SD
2. This parent knows a great deal about the friendships of teenagers.
Father a. SA b. A c. D d. SD
3. This parent's ideas would not be very helpful to me in deciding what kind of friends I should or should not get involved with.
Father a. SA b. A c. D d. SD
4. This parent knows how to help me do well in my school work.
Father a. SA b. A c. D d. SD
5. This parent has a great deal of knowledge about education.
Father a. SA b. A c. D d. SD
6. This parent knows little or nothing about the names and activities of various academic fields and college departments.
Father a. SA b. A c. D d. SD
7. This parent is able to give me advice when it comes to choosing an occupation.
Father a. SA b. A c. D d. SD
8. This parent has a great deal of knowledge about occupations.
Father a. SA b. A c. D d. SD
9. This parent knows a lot about the training required and the type of work involved in the various types of occupations.
Father a. SA b. A c. D d. SD

Reward Power

1. This parent is the kind of person who could make me feel very good if I followed his or her advice about the friends I choose.

Father a. SA b. A c. D d. SD

2. This parent is the kind of person who could make me feel very good if I followed his or her advice about studying and getting good grades.

Father a. SA b. A c. D d. SD

3. This parent is the kind of person who could make me feel very good if I followed his or her advice about preparing for an occupation.

Father a. SA b. A c. D d. SD

Referent Power

1. This parent's wishes should be considered as much as anyone else's when I am making decisions about my choice of friends.

Father a. SA b. A c. D d. SD

2. This parent's opinions should be given as much weight as those of anyone when I am making decisions about my education.

Father a. SA b. A c. D d. SD

3. This parent's opinions should be given as much weight as those of anyone when I am making decisions about my occupation.

Father a. SA b. A c. D d. SD

Coercive Authority

1. This parent is the kind of person who could make me feel very bad if I didn't follow his or her advice about the friends I choose.

Father a. SA b. A c. D d. SD

2. If I did not follow this parent's advice about the friends I choose, I would really suffer the consequences.

Father a. SA b. A c. D d. SD

3. This parent is the kind of person who could make me feel very bad if I didn't follow his or her advice about studying and getting good grades.

Father a. SA b. A c. D d. SD

4. If I did not follow this parent's advice about my classroom behavior, I would really suffer the consequences.

Father a. SA b. A c. D d. SD

5. This parent is the kind of person who could make me feel bad if I did not follow his or her advice about preparing for an occupation.

Father a. SA b. A c. D d. SD

Measure of Adolescent Behavioral Autonomy

PLEASE CIRCLE THE ANSWER WHICH INDICATES HOW MUCH YOU AGREE OR DISAGREE WITH EACH STATEMENT AS FOLLOWS:

SA = Strongly Agree
A = Agree
D = Disagree
SD = Strongly Disagree

PLEASE RESPOND ABOUT THE PERSON WHO FUNCTIONS AS YOUR PARENT ON A DAILY BASIS

1. I feel that this parent gives me enough freedom.

Father a. SA b. A c. D d. SD

2. This parent allows me to choose my own friends without interfering too much.

Father a. SA b. A c. D d. SD

3. This parent allows me to decide what is right and wrong without interfering too much.

Father a. SA b. A c. D d. SD

4. This parent allows me to decide what clothes I should wear without interfering too much.

Father a. SA b. A c. D d. SD

5. This parent allows me to choose my own dating partner without interfering too much.

Father a. SA b. A c. D d. SD

6. This parent has confidence in my ability to make my own decisions.

Father a. SA b. A c. D d. SD

7. This parent encourages me to help in making decisions about family matters.

Father a. SA b. A c. D d. SD

8. This parent allows me to make my own decisions about career goals without interfering too much.

Father a. SA b. A c. D d. SD

9. This parent allows me to make my own decisions about educational goals without interfering too much.

Father a. SA b. A c. D d. SD

10. This parent lets me be my own person in enough situations.

Father a. SA b. A c. D d. SD

APPENDIX B

School Solicitation Letter

Date

Dear _____ :

As a fellow professional educator we know your time is valuable and scarce so I will be brief. I am a faculty member within the Department of Family Relations and Child Development at Oklahoma State University and have been awarded a research grant to study how parenting relates to social competence of adolescents. It is an important and timely study that will help gain a better understanding of what is going on in the lives of adolescents today and will give you some insight into the student population at your school.

I am asking you to consider your school's participation in this project. Please indicate your decision by marking a choice provided at the bottom of the page and then fold this letter back so the return address is showing. If you have any questions regarding this research project you may call me at (405) 744-5057.

Sincerely,

Carolyn Henry, Ph.D.
Professor/Principal Investigator

_____ Yes, I am interested in participating and may be reached at _____
to further discuss the study. (phone number)

_____ No, I am not interested in participating in this study.

Consent Form for Students 18 years or Older

I _____, hereby give my permission to participate in the following research study conducted by **Carolyn Henry, Ph.D.** and other assistants of the OSU research team. I understand that my participation in this project will take approximately 40 minutes on only one occasion. The collection of data will occur during a class at my school. I authorize the use of data collected in this project as a part of a study on parental influence on the development of social competence of adolescents. Also, I authorize the use of the data in future research studies.

The study is designed to examine how parenting affects the abilities of youth to function effectively within the family and broader environment. I will answer questions pertaining to: perceptions of parental attitudes, feminine gender roles, family values, parent/child interaction, adolescent attitudes, school activities, family cohesion and adaptability, satisfaction with family life, and demographic information. The results will be used to expand the knowledge base of parent/adolescent interaction within Oklahoma and in comparison to other countries also participating in the study: Chile, Mexico, India, China, and Russia.

Assurance of Confidentiality

I understand my name will not be identified with any data collected in the study and the questionnaires will be considered for confidential research use only. I understand this consent form will be kept within a locked file cabinet in a secured office and will also be kept separate from the questionnaires' responses. The collected data will be viewed only by members of the research team who are authorized by the project director and who have signed an agreement to assure confidentiality of information about the participants. I understand that my participation is voluntary, that I am free to not respond to any item, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director.

I may contact **Carolyn Henry, Ph.D.** at (405) 744-8357. I may also contact **Gay Clarkson**, IRB Executive Secretary, Oklahoma State University, 203 Whitehurst, Stillwater, OK 74078; (405) 744-5700 as a resource person.

I have read and fully understand this form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____

Signed: _____
(Signature of participant)

Signed: _____
(Signature of investigator/witness)

Script for Explaining the Study to the Adolescents

On March 9, 1998 a research team from the Oklahoma State University Department of Family Relations and Child Development will be at Jenks High School to collect data for a study of adolescents and their families.

The data collection will take approximately 45 minutes on only one occasion during seminar. You will be asked to complete a questionnaire about yourself and your family.

The study is designed to examine how parenting affects the abilities of youth to function effectively within the family and broader environment. You will answer questions pertaining to: perceptions of parental attitudes, feminine gender roles, family values, parent/child interaction, adolescent attitudes, school activities, family cohesion and adaptability, satisfaction with family life, and demographic information. The results will be used to expand the knowledge base of parent/adolescent interaction within Oklahoma and in comparison to other countries also participating in the study: Chile, Mexico, India, China, and Russia.

Your name will not be identified with any data collected in the study and the questionnaires will be considered for confidential research use only. The questionnaires will be kept in a locked file cabinet in a secured office and will be seen only by members of the research team.

Your participation is voluntary, you will be free to not respond to any item, and there is no penalty for refusal to participate. You may withdraw assent and participation in this project at any time without penalty after notifying the project director.

Students who complete the questionnaires will receive a small token of our appreciation, such as a small flashlight, blank cassette tapes, a small calculator, or a keychain.

To participate, take the letter being distributing to your parent/guardian and return it to your teacher not later than March 9, 1999. You may only participate in the study if we have a consent form signed by your parent or guardian. For students 18 years of age or older a consent form is provided for you to sign.

If you or your parents have questions, you will find the name and phone number of the director of the research project and the OSU Institutional Review Board on the letter to your parents.

Parental Informed Consent Form

I _____, hereby give permission for my child
(print name)
_____, to participate in the following research study
(print name)

conducted by **Carolyn Henry, Ph.D.** and other assistants of the OSU research team. I understand that my child’s participation in this project will take approximately 40 minutes on only one occasion. The collection of data will occur during a class at my child’s school. I authorize the use of data collected in this project as a part of a study on parental influence on the development of social competence of adolescents. Also, I authorize the use of the data in future research studies.

The study is designed to examine how parenting affects the abilities of youth to function effectively within the family and broader environment. Your child will answer questions pertaining to: perceptions of parental attitudes, feminine gender roles, family values, parent/child interaction, adolescent attitudes, school activities, family cohesion and adaptability, satisfaction with family life, and demographic information. The results will be used to expand the knowledge base of parent/adolescent interaction within Oklahoma and in comparison to other countries also participating in the study: Chile, Mexico, India, China, and Russia.

Assurance of Confidentiality

I understand my child’s name will not be identified with any data collected in the study and the questionnaires will be considered for confidential research use only. I understand this consent form will be kept within a locked file cabinet in a secured office and will also be kept separate from the questionnaires’ responses. The collected data will be viewed only by members of the research team who are authorized by the project director and who have signed an agreement to assure confidentiality of information about the participants. I understand that my child’s participation is voluntary, that they are free to not respond to any item, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and child’s participation in this project at any time without penalty after notifying the project director.

I may contact **Carolyn Henry, Ph.D.** at (405) 744-8357. I may also contact **Gay Clarkson**, IRB Executive Secretary, Oklahoma State University, 203 Whitehurst, Stillwater, OK 74078; (405) 744-5700 as a resource person.

I have read and fully understand this form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____

Signed: _____
(Signature of parent and/or guardian authorizing child to participate)

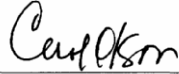
Signed: _____
(Signature of investigator/witness)

Institutional Review Board Approval

**OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD**

Date: April 7, 2000 IRB #: HE-99-007
Proposal Title: "PARENTING AND ADOLESCENT COMPETENCE ACROSS CULTURES"
Principal Investigator(s): Carolyn Henry
Joey Fronheiser
Reviewed and Processed as: Continuation
Approval Status Recommended by Reviewer(s): Approved

Signature:



Carol Olson, Director of University Research Compliance

April 7, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office **MUST** be notified in writing when a project is complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

APPENDIX C

Dissertation Abstract

Peterson (1986) examined the direct relationships between bases of fathers' authority and adolescent behavioral autonomy. The current study examines the direct and indirect relationships between adolescent perceptions of fathers' legitimate, expert, reward, coercive, and referent authority (French & Raven, 1959) using structural equations modeling and adolescent behavioral autonomy. A convenience sample was obtained consisting of 97 boys and 93 girls with a mean age of 16.0. The measurement model supported the dimensions identified by Peterson using exploratory factor analysis. The structural equations model required respecification which yielded $\chi^2 = 30.8, p < .00$; RMSEA = .15; RFI = .63 for the boys' model and $\chi^2 = 25.2, p < .00$; RMSEA = .13; RFI = .78 for the girls model. Significant relationships were found at $p < .05$ between expert, reward, and coercive authority and behavioral autonomy for boy and girl adolescents and referent authority and behavioral autonomy for boys only. Expert, reward, and referent authority mediated the relationship between legitimate authority and behavioral autonomy for boy and girl adolescents.

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Candidate for the Degree of

Doctor of Philosophy

Dissertation: ADOLESCENT PERCEPTIONS OF FATHERS' AUTHORITY AND ADOLESCENT BEHAVIORAL AUTONOMY.

Major Field: Human Environmental Sciences

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Pages in Study: 178

Candidate for the Degree of Doctor of Philosophy

Major Field: Human Environmental Sciences

Scope and Method of Study:

Peterson (1986) examined the direct relationships between bases of fathers' authority and adolescent behavioral autonomy. The current study examines the direct and indirect relationships between adolescent perceptions of fathers' legitimate, expert, reward, coercive, and referent authority (French & Raven, 1959) using structural equations modeling and adolescent behavioral autonomy. A convenience sample was obtained consisting of 97 boys and 93 girls with a mean age of 16.0. The measurement model supported the dimensions identified by Peterson using exploratory factor analysis.

Findings and Conclusions:

The structural equations model required respecification which yielded $\chi^2 = 30.8$, $p < .00$; RMSEA = .15; RFI = .63 for the boys' model and $\chi^2 = 25.2$, $p < .00$; RMSEA = .13; RFI = .78 for the girls model. Significant relationships were found at $p < .05$ between expert, reward, and coercive authority and behavioral autonomy for boy and girl adolescents and referent authority and behavioral autonomy for boys only. Expert, reward, and referent authority mediated the relationship between legitimate authority and behavioral autonomy for boy and girl adolescents.

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