ADOLESCENTS' PERCEPTIONS OF FAMILY COHESION AND FAMILY ADAPTABILITY AND THEIR RELATIONSHIP TO GENDER AND RISK-TAKING BEHAVIORS

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CHAPTER I

INTRODUCTION

Adolescents are an important resource to our American society. Throughout history America has been concerned with protecting its young. From the onset of adolescence to early adulthood, the process of development is influenced by biological, sociological, and psychological phenomena. Continually, there are a variety of new events and circumstances that have an impact on adolescent development. Some of the new events and circumstances facilitate positive development while others tend to mitigate positive growth. Adolescents who are highly motivated toward increased independence are more vulnerable than most as far as decision-making skills are concerned (Conger & Petersen, 1984).

Adolescence is qualitatively different from childhood. It is a period of rapid change--physically, socially, intellectually, and emotionally (Conger & Petersen, 1984). According to White and Speisman (1977), when looking at the "whole child," physical changes which are universal seem secondary to the changes that occur in thought and emotion. Adolescence is a time in life when an individual begins evaluating and conceptualizing his/her moral values. It is

a time when one may define and apply his/her own personal code of ethics.

An adolescent is exposed to numerous shifts and conflicts concerning values and standards. By developing a set of sound values, an adolescent can better adapt to a society full of changing circumstances and remain constant in his/her concept of self. Values influence one's reaction to change, and change requires choices about what one will do and where one is going (Conger & Petersen, 1984).

According to Erikson (1959), adolescence is a critical stage in development where individuals are more prone to risk-taking behaviors. This is the stage when identity formation becomes the central issue.

Whatever the behavior of young adolescents is, their moral judgments are nonautonomous. Rather than formulate their own codes, they incorporate the predigested codes of others. Herein lies the dilemma of many young adolescents. They are beginning to feel the need to achieve some separateness from their parents. It is often the assumption in adolescent psychology that teenagers rely on their peer group for emotional support. According to White and Speisman (1977), young adolescents tend to rely on peer-group judgments in superficial matters such as clothing and hair length, but they rely on parental judgments in matters such as life plans and choice of potential mates. The family has an impact in terms of influencing behaviors.

With choices or decisions comes the opportunity to look at consequences or alternative actions. Adolescents are able to abstractly perceive probabilities and possibilities about their future. Each possible choice involves taking risks. Risks are either a spontaneous action carried out by an individual with previous planning or a steady inclination to undertake actions in which the probability of remaining safe and healthy is relatively low. Risks are generally taken with the perception that benefits accrue (Keinan, Meir, & Gome-Nemirovsky, 1984).

To understand the impact of families and the dynamics of the individual members involved, one could turn to systems theory which presents the view that family members are organized, structured, and function in interdependent ways. The behavior of all members has an effect on each and the behavior of each has an effect upon all other members. The wholeness of the system is evidenced (Becvar & Becvar, 1982). In a healthy system, morphogenesis (change) and morphostasis (stability) are both necessary. A balance needs to be maintained between the two. Morphogenesis will allow for growth, creativity, innovation and change Morphostasis will enhance feelings of security and a sense of belonging and trust.

In times of stress, morphogenesis is probably desirable. If change should occur too often or at too great a deg2ree, the stability of the family would be threatened.

As stated by Becvar and Becvar (1982), the ability to change is necessary for growth and development.

Adolescents who are perceiving an increasing quantity and variety of inputs from other systems, may want more rapid change in the family system than what is desired by their parents. Within a family, the rules, values and beliefs in the system must be flexible if the family is to contribute to the normal development of its members (Becvar & Becvar, 1982).

In looking at an individual's perception of the family there are two dimensions that work well in defining the system (Olson, Russell, & Sprenkle, 1983). One is called family cohesion, which has to do with the degree an individual is separated or connected from his or her family system, and another is family adaptability, which focuses on the extent to which the family system is flexible and able to change. Bahr (1979) states that adolescents continually undergo changes and are frequently faced with decision-making situations. Making decisions involves risks which require action. It is a person's values which influence those actions.

According to Bahr (1979), the values of the family, particularly the parents, are a major influence in the values internalized by the children. The more the values of the family of orientation are law-abiding, the less the probability of criminal behavior. The level of attachment children have with family members is an influencing value

related to behavior. Attachment refers to the affectional ties that one has with other individuals. Lack of attachment is seen as a major cause of deviant behavior.

According to Magid and McKelvey (1987), children who have not formed proper attachments cannot love or feel guilt. They have no conscience and may become destructive to themselves and others.

Researchers are still searching for some answers to explain adolescents' decision-making behaviors. Why do adolescents who have the cognitive ability to think abstractly and reason at a high moral level fail to use that ability in their moral decisions? Why do adolescents who are at a peak age for participating in risk-taking behaviors take risks that are negative to their growth and development?

Statement of the Problem

Contemporary American society is quite different from that of the sixties. In the United States today, adolescents are virtually excluded from adult society The gap between puberty and psychosocial maturity is wider than ever before and is likely to remain wide. Puberty is reached at an earlier age today than in the past. Entry into the adult world of commitment and responsibility is often delayed (Baumrind, 1987).

Baumrind (1987) states that dependency on peers relative to parents has increased in the last twenty-five

years, but it is not because parents lack the ability to be influential. Baumrind (1987) proposes that parents have chosen to withdraw from the lives of their youngsters and that this withdrawal creates an emptiness in the lives of adolescents. The withdrawal is also a basis for the growth of feelings of abandonment and alienation. The issues of alienation and commitment are central to understanding adolescent behavior.

Ideally, all adolescents should be aided in their growth and development by an effective family system. Cooper, Grotevant, and Condon (1983) used Olson's description of an effective family system as one that avoids both enmeshment (family members are expected to act and think alike) as well as disengagement (family members are so separate they have little effect on each other). There needs to be a balance, members neither too close nor too far apart, in the amount of emotional distance within the family.

Risk-taking behaviors characterize normal adolescent development, however, if the behaviors are dangerous they may be socially and personally destructive. Examples of dangerous behaviors would include drug use, promiscuous sex, reckless driving, and delinquency (Baumrind, 1987). For adolescents with high risk-taking behaviors, there may be the necessity for courses to provide more challenging and stimulating learning experiences. Adolescents who perceive extreme imbalances in the cohesiveness or adaptability of

the family may need additional counseling or more emotional support than adolescents who do not perceive extreme imbalances in cohesiveness or adaptability of the family. The interaction of the variables family cohesion, family adaptability, and risk-taking appears complex.

It is a social concern that risk-taking behaviors among adolescents are common features of the contemporary youth culture. Adults worry that tentative value structures, lack of skill in decision making, and naivete with respect to behavioral consequences all work against young people as they transcend their adolescent years. These same adults feel stymied with their own lack of understanding and predictive skills about why youth take the risks that they do. Are there family characteristics that are related to adolescent risk-taking? Are young people who are closely networked (enmeshed) in the family more or less likely to participate in dangerous risk-taking?

According to Farley (1986), the more parents, educators, clinicians and researchers can understand about adolescents and their development, the better prepared they can be in creating an environment that will help adolescents make decisions that are in their best interest. The problem that needs to be investigated is whether or not there is any significant difference between the adolescent's perceived level of family cohesion and family adaptability and the degree of risk-taking behavior in adolescence. Because of the availability of instrumentation on family cohesion and

family adaptability, these concepts may be readily studied in families today.

Purpose of the Study

The purposes of this study were to (1) examine the adolescent's perception of family cohesion and family adaptability and the relationship to risk-taking behavior and (2) to determine any gender differences related to the perception of family cohesion and family adaptability and the degree of risk-taking behavior.

Research Questions

The primary research questions to be investigated were:

(1) What are adolescents' perceptions of their families' cohesion and adaptability? Is there a relationship between these perceptions and the degree of risk-taking behavior?

The secondary research questions investigated for this study were:

(1) Does gender influence risk-taking behavior?

(2) Do these perceptions of family cohesion and family adaptability differ according to gender?

Theoretical Framework

According to Kerlinger (1986), "A theory is a set of interrelated constructs (concepts), definitions, and propositions that present a systematic view of phenomena by

specifying relations among variables, with the purpose of explaining and predicting the phenomena" (p. 9). The theoretical frameworks for this study are systems theory and developmental theory. The Olson Circumplex Model of Marital and Family Systems and Erikson's psychosocial theory are each utilized. The theoretical frameworks are briefly described in the following paragraphs.

Systems Theory

Systems theory provides the framework for the concepts of family cohesion and family adaptability in this research. This theory describes a system as a "whole" rather than as isolated individual parts. Systems have both sub-systems and supra-systems, wholes in themselves, yet a part of another larger system (Becvar & Becvar, 1982).

Circumplex Model of Marital and Family Systems

While systems theory is the underlying conceptual framework, Olson's Circumplex Model (Olson, Sprenkle, & Russell, 1979) provides the basis for this research. Olson's model was developed as a model of family functioning incorporating dual emphases on cohesion and adaptability.

The Circumplex Model has three dimensions: family cohesion, family adaptability, and family communication. Within the model are variables that can be used to diagnose and measure the family cohesion dimensions, such as

emotional bonding, boundaries, coalitions, time, space, friends, decision-making, interests and recreation. There are four levels of cohesion ranging from disengaged (very low) to separated (low to moderate) to connected (moderate to high) to enmeshed (very high). It is hypothesized that the central levels of cohesion (separated and connected) make for optimal family functioning (Olson et al., 1983).

Within Olson's Circumplex Model, the concepts that are used in the family adaptability measures include: family power, negotiation styles and relationship rules. The four levels of adaptability range from rigid (very low) to structured (low to moderate) to flexible (moderate to high) to chaotic (very high). As with cohesion, it is hypothesized that central levels of adaptability (structured and flexible) are more conducive to marital and family functioning with the extremes (rigid and chaotic) being the most problematic for families (Olson et al., 1983). Family communication is a facilitating dimension and is not shown on the model.

An important element in the Circumplex Model is that it relates to balance, and a balance of the dimensions is related to more adequate functioning. Being balanced means a family can experience extremes on the dimension, but that members don't typically function on the extremes for an extended period of time (Olson et al., 1983).

Developmental Theory

Erikson's psychosocial theory of development focuses on the period of adolescence, but included in the theory are eight major psychosocial crises the individual must work through in order to achieve ego identity and psychological health (Thomas, 1985).

Each crisis or stage is phrased as a struggle between two opposing or conflicting personality characteristics. The trait of trust vies for dominance over mistrust in the infant's personality. In adolescence the struggle is identity versus identity diffusion. The confusion this creates for the adolescent has been labeled the "identity crisis" by Erikson (Thomas, 1985).

According to Erikson (1963), the great danger of this period, which has been termed either role confusion or identity diffusion, is that the youth does not know who he is to himself or to others. As a defense, an adolescent may overidentify with heroes, cliques, crowds and/or causes. In search for self, the individual often comes into conflict with parents, siblings, and others close to them.

Conceptual Hypotheses

The general null hypothesis for this study is that there will be no significant association between the level of family cohesion and family adaptability and an adolescent's degree of risk-taking behavior. Operational

hypotheses are presented in Chapter 3. Conceptual hypotheses are as follow:

1. There will be no significant association between the level of family cohesion and the degree of risk-taking among adolescents.

2. There will be no significant association between the level of family adaptability and the degree of risk-taking among adolescents.

3. There will be no significant association between the degree of risk-taking and gender.

4. There will be no significant association between the level of family cohesion and gender.

5. There will be no significant association between the level of family adaptability and gender.

Importance of Study

Olson, Russell, and Sprenkle (1980) have postulated that a balance of cohesion and adaptability is related to adequate functioning in a family system. It is proposed that risk-taking behavior of adolescents is related to the balance of family cohesion and family adaptability as defined by Olson

An adolescent is an individual member (a sub-system) in the family system. A family system is part of a larger supra-system, such as the community or culture (Wertheim, 1973). In any system a balance between change and stability is necessary for a system to develop and function over time

(Olson et al., 1983). Cohesion and adaptability are two variables useful in describing a family.

Change requires an individual to take risks A dynamic life is full of risks, but not hazardous risks. An adolescent frequently finds himself in one confusing jam after another and seems to be over his head in chaotic risking activities all the time (Viscott, 1977). By looking at an adolescent's perception of the level of family cohesion and family adaptability, and the adolescent's degree of risk-taking behavior, perhaps there can be a better understanding of factors that attribute to his/her behavior.

Definition of Terms

For this study, the following terms are defined:

Adolescence is a stage in the development process that begins when the individual begins to feel less dependent upon family supervision and protection, when physiological and hormonal development begin to approximate adult maturity, and when the child begins to assume responsibility (Adams, 1980). It is characterized as a period of variation among individuals within the same age group on almost any dimension of growth--physical, intellectual, or psychosocial (Douvan & Adelson, 1966).

Attachment is the affection one has for an individual or individuals.

Balanced refers to the most adequate type of family functioning. A family system can experience the extremes on the cohesion and adaptability dimensions when appropriate, but do not typically function at these extremes for long periods of time (Olson et al., 1979).

Circumplex Model is a theoretical model of system functioning using the dimensions of cohesion and adaptability. The model includes sixteen possible categories for describing the system. These categories range from showing extremely high cohesion (enmeshed) to showing extremely low cohesion (disengaged) while also ranging from extremely high on adaptability (chaotic) to extremely low on adaptability (rigid). The middle ranges of both dimensions reflect a balanced or moderate system.

Family Adaptability is the ability of a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress (Olson et al , 1983).

Family Cohesion is the emotional bonding that family members have toward one another (Olson et al., 1983).

Morphogenesis refers to change that occurs in the family system; the potential to develop and grow as a system (Olson et al., 1983).

Morphostasis refers to no change or the stability of the system; the pattern of resistance to change (Olson et al., 1983).

Risk-taking behaviors are behaviors that reflect either spontaneous actions carried out by an individual without previous consideration or planning, or a steady inclination on the part of an individual to undertake roles in which the person seeks change, novelty and adventure (Keinan et al., 1984).

System is defined as a complex of elements or components which are directly or indirectly related to a network such that each component is related to at least some others in a more or less stable way at any point in time.

Assumptions

The assumptions concerning the study are:

1. The influence of social desirability in students responses may introduce some bias.
2. The subjects must be assumed to respond truthfully.
3. The instruments will measure the constructs under consideration.
4. The subjects participated voluntarily.

Limitations

The limitations concerning the study are:

1. The sample has limited generalizability.
2. The sample was not randomly selected.
3. The instruments used in this study were not pilot tested specifically for this study.

4. Some responses of the items may be biased due to social desirability.

Overview of the Study

The first chapter provides an introduction to the area of investigation, the statement of the problem, the purpose of the study, and the conceptual framework which serves as a basis for the empirical study. It also includes the assumptions, limitations, and definition of terms.

Chapter 2 presents a review of literature concerning risk-taking behavior among adolescents and family cohesion and family adaptability. A discussion of systems theory, Olson's Circumplex Model and Erikson's psychosocial theory is also presented.

Chapter 3 contains the research design, procedures, operational hypotheses, and selection of subjects. Also included in this chapter are descriptions of the instruments, methods of data collection, and the statistical analysis procedures used for the study.

The analyses of the data and the results are presented in Chapter 4. A detailed examination of the data is explained.

Chapter 5 contains a summary of the study. Recommendations for further study are also described in this chapter.

CHAPTER II

REVIEW OF LITERATURE

In our culture, adolescence has traditionally been viewed as a difficult period in the lives of children and in the lives of their parents. The difficulties of this period appear to have increased over the past two decades, partly as a consequence of continuing changes in the family itself and in its relation to society, and partly because of the accelerated rate of these changes (Conger & Petersen, 1984).

Cultural Perspectives

The nature of the American family and the lives of its members are significantly different from what they were less than half a century ago and the rate of change is increasing. According to Conger (1981) families are more mobile, more women participate in the labor force, and there is a more visible adolescent peer culture. As functions of the family have changed and its stresses have mounted, parental separation, desertion, and divorce have also increased. The American adolescent is granted responsibilities and freedoms gradually over a broad span of years before he/she is said to have reached adult status. Given an extended period of dependency, the adolescent may

wish for independent adult status and may express it through increased adolescent sexual behavior and childbearing.

The developing adolescent is exposed to a number of shifting and sometimes conflicting values and standards of behavior among which he or she must make choices. The task is not easy according to Conger and Petersen (1984). Making choices involves taking risks, and the family and its members are affected. While there have been some studies done on risk-taking behaviors among adolescents and some studies on family cohesion and family adaptability, the researcher found no studies that looked at the relationship between the two.

Family Cohesion and Adaptability

Families in our culture vary greatly in the extent to which they encourage and give support to individuals. Olson et al, (1980) state

> While parents would prefer their children to develop values and ideas similar to theirs, most parents can enable their children to become somewhat autonomous and differentiated from the family system. A sizable minority, however, have normative expectations that strongly emphasize family togetherness, often at the expense of individual development (p. 137).

Cohesion and adaptability tend to emerge as core concepts in family characteristics. Cohesion refers to the emotional bonding in a family, and adaptability refers to

the ability of a family system to change its power structure, role relationships, and rule relationships (Vega, Patterson, Sallis, Nader, Atkins, & Abramson, 1986).

Family Cohesion, Family Adaptability and Behavior

Smets and Hartup (1988) conducted a study which focused on age differences and the relationship between family cohesion and family adaptability and behavior problems in children who were referred to community health clinics. Olson's Circumplex Model was used to assess the level of cohesion in 120 families. The levels of cohesion studied were: a) balanced system--those families moderately cohesive and moderately adaptable. These conditions should promote good psychosocial functioning in both children and adults; b) mid-range systems--families whose scores on one of these dimensions are moderate, but whose scores on the other are extreme; c) the remaining families can be classified as extreme, since cohesion and adaptability are both extremely high, extremely low, or high and low in combination.

According to Smets and Hartup (1988), previous work of other researchers using the Circumplex Model had suggested a relationship between family functioning and childhood symptoms as follows. a) families of juvenile offenders scored more frequently in extreme regions than in balanced regions, b) families referred to clinics were less likely to score in the balanced region than non-clinic families,

c) families with runaway adolescent girls were less likely to score in balanced regions than control families, and d) in mother-headed families, the cohesion level turned out to be a frequent predictor of internalization types of problem behavior among children between six and sixteen years of age. The general trend seems to be that extreme scores on the Circumplex Model are associated with dysfunctional child behavior, while scores in the balanced regions are associated with fewer difficulties (Smets & Hartup, 1988).

The results of the study by Smets and Hartup (1988) indicated that the scores of the adolescent subjects were as highly correlated with the parents' reports as the parents' reports were with each other. The study found that total behavior problem scores were greater in the extreme range families than those scores in the mid-range or balanced families. Smets and Hartup (1988) suggest that to understand the child is to understand the family and that the treatment of the child implies the treatment of the family.

In a study by Cooper, Holman, and Braithwaite (1983) of 467 school children, the perception of cohesion in the family was related to the development of the child's self-esteem. There was a balance that needed to be established between the level of attachment and the child's sense of self.

Campbell, Adams, and Dobson (1984) also measured family connectedness as perceived by the parents and adolescents

and found the scores were consistently correlated. The youth reporting levels of personal commitment and self-defined commitments had higher degrees of affection with parents than youth that reported no personal commitments and were seeking self-defined commitments. The affection was defined as enmeshment.

According to Vega et al. (1986), there were no important differences between low-income Mexican-American and middle-income Anglo parents and their perception of levels of family cohesion and family adaptability. The Circumplex Model was used to describe the cohesion and adaptability of the families. Most families fell within areas of the Circumplex Model that are associated with successful coping, the balanced and mid-range levels. Anglos were somewhat more likely to be represented in the balanced region and Mexican-Americans were more likely to be represented in the mid-range or extreme regions. While culture made a slight difference in family behavior, the variations remained within the criteria of well-functioning and resilient families.

Cohesion and Adolescent Development

Grotevant (1983) concluded that identity formation is promoted and established by a balance between family connectedness and the encouragement of individuality. Campbell et al., (1984) interpreted Grotevant's position to reflect the idea that weak affectionate bonding with parents

and poor communication levels were thought to provide an insecure or constricted psychological base for exploration. Campbell et al. stated, "Extreme affection (enmeshment) between adolescents and their parents and limited family-based tolerance for individuality might enmesh adolescents and encourage foreclosure in identity formation" (p. 512).

Cooper, Grotevant, and Condon (1983) reported that a combination of separateness and permeability in parent-adolescent communication behaviors were related to advanced identity formations. They have proposed that a balance in family connectedness and encouragement of individuality may be necessary to facilitate healthy adolescent identity formation.

A study conducted by Campbell et al., (1984) involving 286 late adolescents found that identity-achieved youths (those that have arrived at self-defined commmitment following a period of searching and questioning) perceived themselves as highly attached to their mothers, but had greater independence from their parents. Moratorium youths (those in the searching and questioning period) perceived high levels of emotional attachment to their parents and had a sense of independence from family. Diffused youths (those that express no interest in exploring values or attitudes and have no personal commitments) were the least emotionally attached to their parents, while foreclosed youths (those that accept values and attitudes without examination, but do

have personal commitments) had the highest affectionate relationships.

Galvin and Brommel (1982) state that cohesion is not a static process with a family coming together and staying there. Most families experience special moments of closeness and connectedness. In some families those moments are everyday, and in others they are very rare.

Adaptability and Adolescent Development

Adaptability in a family involves ability to change in rule and role relationships. To grow and develop, change must occur. The parent/adolescent relationship is in the transition of moving from an adult/child relationship to an adult/adult relationship. A study by Holmbeck and O'Donnell (1991) which involved mothers and daughters in the sample, indicated less attachment to the adolescent by mothers when both mothers and adolescents agreed that the adolescents were in charge of making decisions. Mothers reported more conflict in the relationship when the adolescents desired more autonomy than the mothers were willing to grant. Adolescents reported more emotional detachment when mothers were less willing to grant autonomy.

A lack of response to discrepencies between parent and adolescent perceptions may lead to increased conflict in the family (Holmbeck & O'Donnell, 1991). However, discrepencies between parent and adolescent perceptions of the family may

also provide a stimulus for adaptive transformations in family relationships that occur in adolescence.

Risk-taking

What is risk-taking? According to Ginsburg, Blascovich and Howe (1976) certain criteria must be met before it can be said that risk-taking is occurring. They are:

1) The person must recognize that something is or will be at stake and that he/she is or will be engaging in risk-taking behavior.

2) The person must take action which makes the stake irreversible and which will lead to an outcome (a stake requires both the possibility of loss and gain; of course, what may be lost need not be the same as what may be gained). What is at stake may be symbolic, rather than physical, such as an aspect of pride or self-esteem.

In a study of 134 college students, Cohen, Jaffray, and Said (1987) found an instability in risk-taking attitudes. Subjects moved from risk aversion to risk-seeking, if the possibility for gain was decreased. The opposite was true for the loss side. The subjects moved from risk-seeking to risk aversion, if the probability of loss decreased. Subjects who were risk averse in the domain of gains became risk-seeking in the domain of losses and vice versa. The researchers concluded that subjects never equate uncertainty with risk, but sometimes on the loss side, equate risk with uncertainty (Cohen et al., 1987).

Millstein (1990) states, "Unfortunately, contemporary adolescents are making decisions that can have life-threatening implications. Substance use and sexual experimentation may serve to fulfill normal developmental needs, but they can have dire consequences."

Risk-taking and Personality

Research by Keinan et al. (1984) suggested that the risk-taker is characterized mainly by sensation seeking, difficulty in adaptation to norms, and the desire for personal freedom. Farley's (1986) research produced similar results. He concluded that an individual with a high level of risk-taking behavior will have a sensation seeking, independent, non-conformist personality.

Farley (1986) reported that an individual whose personality manifests low risk-taking behavior will cling to certainty and predictability, be dependent and conforming, and have the tendency to avoid the unfamiliar. If a person's needs for stimulation and risk-taking can be met with an appropriate environment, he/she will be less likely to get into trouble.

In a study conducted by Drake (1985), the more optimistic individual was the one who perceived a greater probability for positive outcomes and a lesser probability for negative outcomes and was more likely to take risks and recommend them to others as well.

Frost, Fiedler, and Anderson (1983) conducted a study with army and fire department leaders. They found that personal risk-taking in dangerous conditions was related to leadership effectiveness.

Eysenck and McGurk (1980) postulated that the most impulsive individuals are most "at risk" in many ways. Using the Eysenck Personality Questionnaire, their study indicated offenders scored significantly higher on extraversion than normal, but did not differ on venturesomeness, the extraversion component of impulsiveness. They suggested that sociability, liveliness and impulsiveness are more implicated in criminality than risk-taking and sensation-seeking, which largely comprised the venturesomeness component of their personality questionnaire. Criminals that evaluate the risk of being caught were less likely to be among the prison population (Eysenck & McGurk, 1980).

Kerr and Svehak (1989) in a study comparing selection of "risk" or "safe" sports concluded that subjects opting for the risk sports scored much lower on an arousal avoidance scale. The study suggested that participants, who plan activities well, might be at less physical risk in a "risk" sport than participants who are impulsive and do not plan activities carefully.

Stewart and Hemsley (1984) conducted a study that investigated the relationship between personality factors and an individual's perception of risk and the individual's

likelihood of action. The subjects in the study were 32 adult men; 16 criminal offenders and 16 non-offenders. The dimensions of personality that were considered were neuroticism, extraversion and psychoticism. Personality measures used were the Eysenck Personality Questionnaire and Zuckerman's Sensation-Seeking Scale.

A significant positive relationship was found between psychotism and the individual's perception of risk in all subjects. Results indicated that psychoticism in some way influences a person's perception of risk. A person scoring high in psychoticism may fail to see risk cues, so excludes them from his/her awareness; or the person may see risk cues, but fails to attribute "threat" to them (Stewart & Hemsley, 1984).

Risk-taking and Gender

In a study conducted by Bofinger (1984) of 280 college students in a master's program of business, a higher percentage of males fell into the risk-taking categories, 66%, compared to only 44% of the females. Fifty percent of females fell into moderate risk categories compared with 27% of the males. The percent of males and females in the low risk categories were relatively equal as measured by the Job Preference Inventory. When measured by another instrument, there was not any significant difference in risk-taking and the gender of the respondents.

According to Sanoff (1987), the go-for-it attitude of a

risk-taker, at least in the business world, has not been shared equally among the sexes. While women are climbing career ladders and starting businesses, their zest for risk-taking appears to be more moderate than that of their male counterparts. Farley (1986) found that stimulation seeking and risk-taking personalities seem to be more likely male than female

Risk-taking and Age

Farley (1986) found that differences between creative and destructive behavior is both physiological and environmental. Persons with risk-taking, sensation-seeking personalities, Farley referred to as Type T (Big T) personality. The Type t (Little t) people avoid risks and stimulation. The Big T is more likely to be man than woman, and seems to be most often identified in the sixteen to twenty-four year age range. Two large studies included subjects 10 to 75 years old.

In a study reported by Bofinger (1984) there were no significant differences between age groups 20 to 24 years of age and those 40 and older in relation to risk-taking levels.

Contrarily, a study of 105 male college students (Himelstein & Thorne, 1985), showed the earlier the age in participation of activities such as drinking, engaging in sex, being away from home, etc., the greater the score in the risk-taking behavior as compared to subjects that

participated at an older age However, the subjects wishing to participate in an activity as opposed to whether they had actually participated in an activity (as in a biographical inventory) may show differences in risk-taking levels.

Risk-taking Behaviors

Westbrook (1987) studied 447 black adolescents ages 16 to 20 years old that were attending high school. The researcher examined the relation between potential risk-taking behaviors and perceived social support and negative life events. Results concluded that risk-taking behaviors are primarily associated with negative life events. Drinking alcohol, smoking cigarettes, and drug use were highly correlated to other risk-taking behaviors, such as suicide potential.

Risk-taking and Alcohol. Alcohol has been reported to affect risk-taking and risk evaluation. According to Mongrain and Standing (1989) subjects that participated in a driving simulation and a game simulation were tested and subjects with alcohol were affected One group had alcohol before being tested, and a second group had twice as much alcohol as the first group. A third group had no alcohol in its drinks. The alcohol impaired the subjects ability to detect a brief visual stimulus, and the alcohol decreased the subjects' perceptual caution. They also increased their behavioral risk-taking.

Alcohol has also been suggested as one of the factors influencing pregnancy risk-taking. Flanigan, McLean, Hall, and Propp (1990) found that almost one-third of the young pregnant female subjects in their study had used alcohol in conjunction with the intercourse that resulted in the pregnancy

Most of the alcohol consumed by the young women in the study by Flanigan et al., (1990) was in a social context with other males and females. Of the women that drank prior to intercourse, 92% of their partners had also been drinking, while only 11% of the non-drinking women had partners who drank. Ninety-one percent of the subjects stated that they did not plan to have intercourse. Of the subjects in the sample that did plan to have intercourse, none had been drinking. Overall, 87% of the non-drinkers did not plan to have sex, while 100% of the drinkers did not plan to do so (Flanigan et al., 1990).

Risk-taking and Sexual Activity. Teenagers behavior with regard to contraception seems to be more of a function of how likely they think they are to get pregnant than how likely they actually are General propensity toward risk-taking, in a study conducted by Namerow, Lawton, and Philliber (1987), was related to the perceived probability of pregnancy. The more likely women were to take risks in general, the less likely they were to estimate their own risk of pregnancy to be high. The subjects most apt to take

risks were the least likely to think they would become pregnant.

Even though the AIDS epidemic has increased the risks associated with sexual activity, adolescents have not changed sexual practices nor methods of contraception (DiClemente, 1990). In a recent study of potential factors affecting condom use among adolescents, DiClemente found that perceived referent-group normative behavior was identified as the only factor that significantly differentiated adolescents who use condoms from those who do not. Those that perceived peers as supporting condom use were almost twice as likely to report using condoms during sexual intercourse.

An AIDS problem will not result as an immediate consequence of a risky action. The costs of sexual risk-taking may be paid years in the future. Often an adolescent will discount future time This can have an effect on the individual's decision making. According to Gardner and Herman (1990), the person with a high discount rate for the future may take sexual risks as if he/she only has a few years to live. The adolescent may focus only on the immediate consequences of an act.

A study conducted by Slonim-Nevo, Ozawa, and Auslander (1991) assessed youths knowledge of AIDS, attitudes toward prevention, and degree to which they participated in high risk behaviors related to AIDS. The sample consisted of 54 youth, ages 10-18, placed in residential centers because of

emotional disturbances, delinquency, and/or inability to adjust to foster care. One treatment group was given a one-and-a-half hour intervention program related to AIDS The sample was pre-assessed. Of the sample, 72% had already experienced sexual intercourse and 17% had shared needles for drug use. A post-assessment was conducted after one month. Results of the study revealed that the intervention did not achieve significant and consistent change in the desired direction. There was some improvement in attitudes toward AIDS prevention. The study affirmed that while the knowledge level may be raised, it is not likely to change their behavior.

According to Neubauer (1989), attitudes toward avoiding AIDS is not related to age, gender or race. Attitudes toward avoiding AIDS appeared to be related to other risk-taking behaviors, however. Subjects who smoke and subjects who did not wear seat belts were less likely than other subjects to take precautions to avoid getting AIDS, but these observations held true only for subjects that perceived themselves as relatively healthy.

Risk-taking and Drug Abuse. The wave of adolescent drug use is multi-faceted and multi-leveled. Certain factors can be identified as contributing to the use of drugs among adolescents. "Curiosity" is ranked by adolescents as the most common reason to start using drugs and the reason to continue the use Youth are intrigued by an experience that is both prohibited by adults and readily

accessible. The media glorify the issue by reporting the exciting and dangerous effects of drug use, indirectly provoking the curiosity of the adolescent to experience the effects and danger of drugs (Jalali, Jalali, Crocetti, & Turner, 1981)

According to Jalali et al. (1981), a certain portion of adolescents use drugs for pleasure seeking, relief from boredom, and peer group identification. From their study it was concluded that no one factor can be identified as the reason for drug abuse, rather a combination of factors is likely to be present.

Kovach and Glickman (1986) found "curiosity" also an important reason for drug use by adolescents. Other reasons given were simply "to feel better," "to get high," "friends do," and "just for fun or kicks." Three of four respondents in a study of 480 urban high school students did not indicate the "desire to escape" as a motivating factor in their drug use.

From the research of Capuzzi and Lecoq (1983), it was found that internal sensation seeking individuals seemed to require greater stimulation than was available from their environment. Capuzzi and Lecoq (1983) concluded that for some subjects, drug use may help alleviate the distress caused by lack of adequate external stimulation.

Risk-taking and Unsafe Driving. In the study by Neubauer (1989), the healthy subjects were more likely to say they would wear seat belts, but were more annoyed by

slow drivers. Among the self-perceived unhealthy subjects, there were less aggressive drivers and they were less likely to take the precaution to wear a seat belt.

Nathan (1983) states that adolescence is the age when youth begin to drink, drive, and drink while driving. Problem drinking increases sharply with advancing age during adolescence and is typically accompanied with other anti-social behavior. Traffic accidents, many alcohol related, constitute the most frequent cause of death and disability among American youth.

The myth that young motorcyclists are reckless and risk-taking was not evidenced in research by Leaman and Fitch (1987). The motorcyclists did not have higher levels of venturesomeness than their peers, nor did those who had more accidents tend to have higher levels of venturesomeness. The researchers found that the older motorcyclists had raised levels of impulsiveness compared to their peers. While most young people become less impulsive as they go from their teens to their twenties, the impulsiveness of the older motorcyclists had not diminished with age.

Risk-taking and Delinquency. According to Abrams, Simpson, and Hogg (1987), youth seem to see delinquency as a reaction to a lack of alternative stimulating activities. In the study, some popular explanations given by youth for delinquency were. trying to impress friends, the excitement of breaking the law, and lack of parental support. Each of

these explanations were concerned with social functions of delinquency rather than with individual pathology or broad environmental circumstances. The most rejected explanations by the adolescents were imitation, mental instability, and a lack of discipline

Conger and Petersen (1984) stated that delinquents more than non-delinquents have been found to have attentional problems, to be socially assertive, impulsive, and lacking in self control. Some studies have found them to be more daring. They also appeared to be less considerate, less fair in dealing with others, less responsible, and more impulsive. The fact that theft, according to White and Speisman (1977), was a major form of delinquent activity, indicates personality traits such as courage, autonomy and daringness exist.

Truscott and Fehr (1986) examined perceptual reactance and willingness to take criminal risk-taking among 46 undergraduate students ages 18 to 26. Subjects were blindfolded and a testing procedure with wooden blocks was used (KAE) to place subjects into categories of Reducer, Augumenter, or Moderate. If the subjects' scores for the width of the blocks exceeded 0.0cm, the subjects were classified as Augmenters; if the subjects' scores were less than -0.6cm, the subjects were classified as Reducers, and if the subjects' scores were between 0.0cm and -0.6cm the subjects were classified as Moderates. A behavior prediction scale questionnaire was also given to the group.

Subjects scoring high as perceptual reducers did have a greater willingness to take criminal risks, but it was not the result of being less sensitive to risk conditions. The study found they were more concerned for others with the consequences of their actions. Perceptual reducers had greater tolerance for pain. This may have contributed to a lack of motivation for avoiding punishment, a prominent reinforcer in social learning. Moderates scored between Reducers and Augmenters in their willingness to take criminal risks.

Risk-taking and Suicide. Research to date does indicate a relationship between risk-taking and suicide behavior (Silberfeld, Streiner, and Ciampi, 1985). Risk-taking in the study by Silberfeld et al. (1985) appeared to have two dimensions related to suicidal population, responsibility, and self-esteem. The general risk-taking instrument used was the Choice Dilemma Questionnaire. The dimensions of risk-taking, harm avoidance, and desirability did not reach significance. However, the fact that the study did not significantly discriminate the risk factor could have been explained by the lack of situational dilemmas in the questionnaire that were related to willful self-harm.

According to Hicks (1990), risk-taking behaviors, defiance, and a desire to control one's own destiny can be warning signs of suicidal youth. Suicide is not normally a spontaneous activity, for it is often well-planned.

Adolescents are known to kill themselves impulsively, but they do not change from non-suicidal to highly suicidal instantly. Suicide cannot be traced to any one single cause.

Measurement Techniques

Risk-taking

There are a number of major measurements used in assessing risk-taking of individuals. The Kogan and Wallach Choice Dilemma Questionnaire has been used in numerous studies to measure individual risk-taking. The Choice Dilemma Questionnaire consists of twelve hypothetical situations which involve a choice of a safe course of action with a certain outcome or a riskier course of action with a more desirable outcome (Cecil, 1972; Finney, 1978, Kogan & Wallach, 1964; Silberfeld et al., 1985).

The Sensation Seeking Scale by Zuckerman, Kolin, Price, and Zoob, (1964) and the Torrance-Ziller Biographical Inventory (1957) were used in a study by researchers Himelstein and Thorne (1985) to measure risk-taking tendencies. In the Sensation Seeking Scale, two subscales taken together reflect much of the same item content as the Risk Scale by Torrance and Ziller (1957). The Thrill and Adventure Seeking subscale expresses desire to engage in sports and other activities involving danger, risk or personal challenge and the Disinhibition subscale describes

the desire to engage in behavior such as drinking, partying and seeking variety in sexual partners.

Eysenck and Eysenck (1969, 1978) developed the Eysenck Personality Questionnaire. Two subscales from the questionnaire are used by researchers to measure risk-taking behavior. Venturesomeness and impulsiveness are the dimensions used to target risk-taking behavior. Thornton (1985) used the subscales when testing 276 male detention trainees between the ages of fourteen and sixteen.

The Lethal Behaviors Scale developed by Thorson and Powell (1987) assesses levels of the inclination to engage in lethal behaviors. This scale integrates actual behaviors with orientations toward risky activities. The scale has been used with both high school students and adults.

A sample of university students completed the Lethal Behaviors Scale (Thorson & Powell, 1989), and Zuckerman's Sensation Seeking Scale. The study confirmed the hypothesis that the Lethal Behaviors Scale and Thrill and Adventure Seeking subscale were measuring similar constructs. Men scored significantly higher on both scales than women.

Some researchers measure risky behavior by having subjects participate in driving simulations. There are no measurements that have been validated to use with young children that can measure their degree of risk-taking.

Cohesion and Adaptability

The Family Adaptability and Cohesion Scale (FACES) developed by Olson et al. (1980) is a measurement designed to assess adaptability and cohesion in families. The most recent version (FACES III) contains two 20 item scales; one scale measures the individual's perception of the family at present and the other scale measures how the individual wishes the family to be.

There are more measurements for risk-taking and family cohesion and family adaptability than are discussed here. Measurements were not found in the literature that accurately test the risk-taking behaviors of young children. Most of the measurements for risk-taking were more appropriate for adults than for adolescents.

Theoretical Bases

Systems Theory

Systems are made up of parts which are themselves systems (sub-systems) and are related to other systems in still larger organizations (supra-systems). Each system has its own boundary. When the system is changing and growing, the boundaries may need to be altered. There is a need for communication about the state of affairs within the boundary (Skynner, 1976).

Circumplex Model. Olson et al. (1979) introduced the theoretical model of cohesion and adaptability in families.

Since its inception, a third dimension, communication, has been added (Olson et al., 1983). Communication is considered the "facilitating dimension" because it is critical for couples and families to be able to move on the other two dimensions. The communication dimension is not visually illustrated on the figure of system types (see Figure 1). In order to represent communication, the model would need to be three dimensional.

Olson, Portner, and Lavee (1985) describe family cohesion as the degree to which family members are separated or connected to their family. Family cohesion is defined as the emotional bonding that family members have toward one another.

Family adaptability is described as having to do with the extent to which the family system is flexible and able to change (Olson et al., 1985). Family adaptability is defined as the ability of a marital or family system to change its power structure, role relationships, and relationship rules in response to situational and developmental stress.

In the Circumplex Model, the dimensions of cohesion and adaptability each have four levels: two extreme levels and two middle levels. The cohesion levels range from an extreme high, enmeshed (extreme bonding and limited individual authority), through the mid-ranges of connected and separated, to an extreme low, disengaged (little bonding). The adaptability levels are identified as chaotic

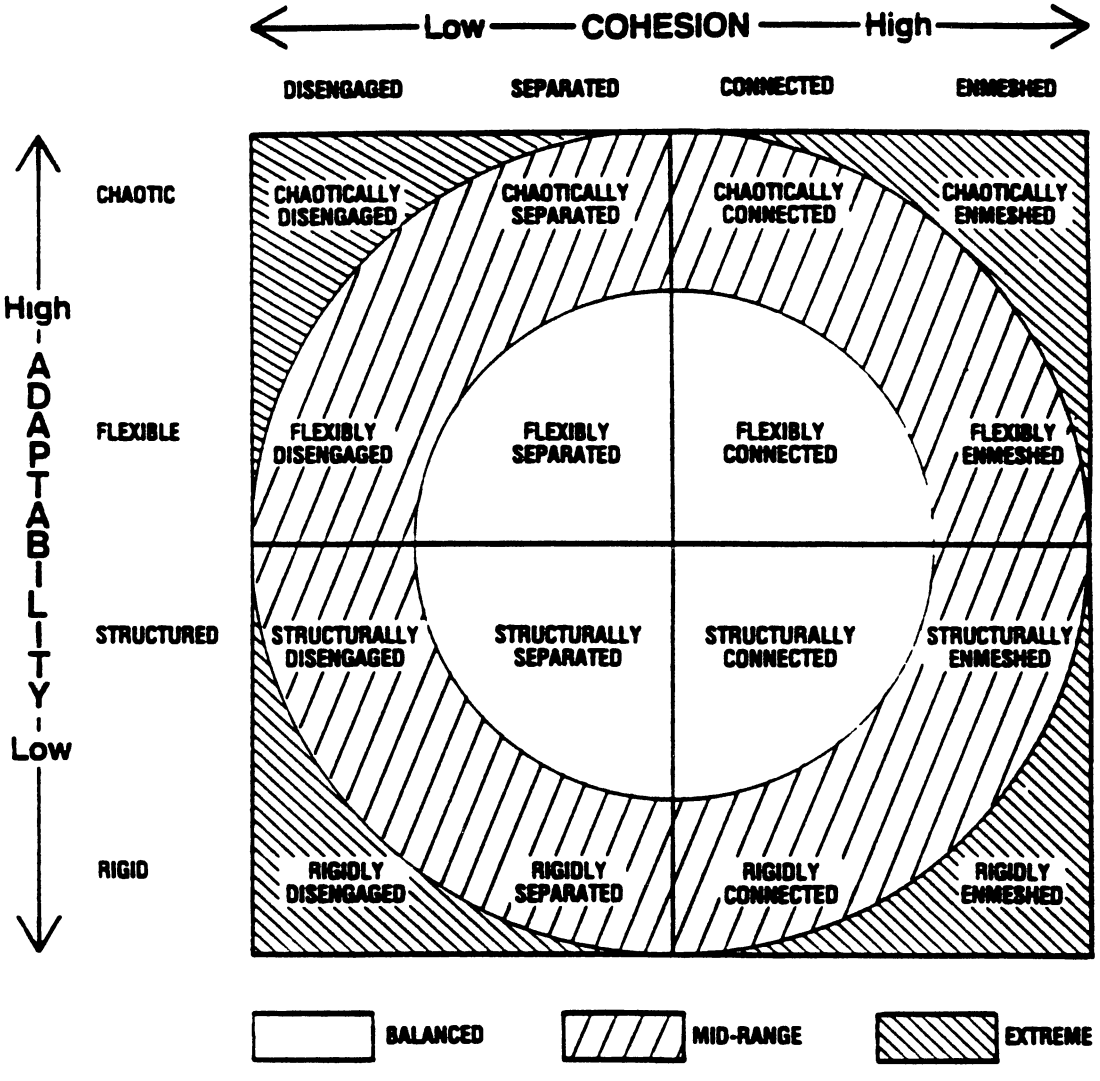


Figure 1. Olson's Circumplex Model of Family Systems: An Overview

(high change), the mid-ranges of structured and flexible, to an extreme low, rigid (little change). The model combines the four levels of each dimension to form sixteen family categories. From the sixteen categories, three family types are identified. extreme, mid-range and balanced.

Extreme families' scores are in the extreme ranges of both cohesion and adaptability. Mid-range families' scores are extreme on one level of one dimension and the middle level of the other dimension. Balanced families' scores are in the middle level on both dimensions, cohesion and adaptability (Olson et al., 1983).

Olson's Circumplex Model has been used in numerous studies. In 1984, Clarke (cited in Olson et al., 1985) used the Circumplex Model to examine families with mental health problems and found schizophrenic and neurotic families to be represented on the Circumplex Model in one of the extreme categories.

Other studies have supported the use of the Circumplex Model and the hypothesis that balanced families seem to function more adequately throughout the family life cycle. Olson's Circumplex Model looks at both the individual and the family as a group functioning in the system of the family (Olson et al., 1985).

Developmental Theory

Developmental theory refers to the description, explanation, and optimization of intraindividual change in

behavior and interindividual differences in such change across the life span. Intraindividual change is within-individual change; interindividual differences are between-individual differences. Development refers to change with time, either 1) with age or 2) with biocultural evolution. Different models of development imply differences in the nature of change (Baltes, Reese, & Nesselroade, 1988)

A study conducted by Holliday (1988) with subjects ranging in age from 20-76 years supported the position that all adults of all ages treat decision situations similarly. The study concluded that the elderly are not averse to risk. The elderly did not pick a dis2proportionate number of safe options as compared to the younger age groups.

Erickson's Psychosocial Stages. Erickson proposed that it is the nature of the human species to pass through identifiable stages of psychosocial stages as the individual grows up, stages determined genetically, regardless of the culture in which the growth occurs. Erickson felt, however, that the social environment does have a significant effect on the nature of the crises arising at each stage and on the success with which the individual will master the stage (Thomas, 1985).

There are a series of eight psychosocial crises the individual must work through in order to achieve eventual ego identity and psychological health. The stage at adolescence is called "Identity versus Role Confusion." Youths who solve the problems of the adolescent years come

through with a strong sense of their own individuality and feel they are acceptable to society (Thomas, 1985).

Erickson depicted three adult stages that one must work through for positive ego development. The three adult conflicts are intimacy versus isolation, generativity versus stagnation, and integrity versus despair (Thomas, 1985).

Summary

The review of literature included information concerning Systems Theory, as it relates to Olson's Circumplex Model, and Developmental Theory. Discussions of numerous research studies on family cohesion, family adaptability, and adolescents' risk-taking behaviors were also included. There were no studies found that examined the relationship between adolescents' perceptions of family cohesion and family adaptability and the relationship to risk-taking behaviors.

CHAPTER III

METHODOLOGY

Introduction

The topic addressed in this study was the relationship between family cohesion and family adaptability, as measured by Olson's Circumplex Model (Olson et al. 1979), and the risk-taking behavior of adolescents. The study documents and describes adolescent perceptions of the family on two dimensions, cohesion and adaptability. It also describes the adolescent's level of risk-taking behaviors. The study documents any gender differences related to the previously mentioned variables.

A significant relationship among family cohesion, family adaptability, the adolescent's degree of risk-taking behavior, and gender were hypothesized. This chapter describes the specifics of the research design. Included are discussions of operational hypotheses, instrumentation, selection of subjects, data collection procedures, and statistical analyses.

Research Design

This study was designed to yield more information about the lives of a selected group of adolescents. The

characteristics of students in three Oklahoma high schools were examined with emphasis on their risk-taking behaviors.

Isaac and Michael (1981) identified and discussed nine categories of research. Using their categories, the present research may be classified as both descriptive and correlational. Descriptive research describes situations or events and does not necessarily seek to explain relationships or make predictions. Correlational research investigates the extent to which variations in one factor correspond with variations in one or more other factors based on correlational coefficients. Correlational research is appropriate where variables are complex, and it permits the measurement of several variables and their interrelationships simultaneously in a realistic setting.

Adolescent perceptions of family cohesion, family adaptability, and personal risk-taking behaviors are *described.* Further, *relationships* between family cohesion, family adaptability and the variables, risk-taking behavior and gender are explored.

The collected information can be used to partially fill the knowledge gap concerning youth. Knowledge gained can be used in future research and for recommendations to help educators, parents, and practitioners.

The data for this study consist of adolescents' self-reported assessments of family cohesion, family adaptability, and their risk-taking behaviors. The research design includes analyzing the relationships of these data.

The levels of family cohesion and family adaptability are divided into 16 categories of families, or the levels can be more broadly described by placing families in one of four quadrants in the Circumplex Model. The four quadrants in the model are labeled as follows: (I) flexibly-separated, (II) flexibly-connected, (III) structurally-separated, and (IV) structurally-connected (Olson et al., 1985).

Risk-taking behavior was described by the individual's orientation to danger, orientation toward bravery and adventure, thrill-seeking, safe or unsafe habits (Thorson & Powell, 1987), and by venturesomeness and impulsiveness (Eysenck & Eysenck, 1978).

Operational Hypotheses

The research questions in Chapter 1 are the basis for the development of these specific hypotheses. A discussion of the results of the hypotheses is presented in Chapter 4. The operational hypotheses for this study are:

Hypothesis 1. Individual scores on the family cohesion scale will be significantly associated with scores on risk-taking behavior scale.

Hypothesis 2. Individual scores on the family adaptability scale will be significantly associated with scores on risk-taking behavior scale.

Hypothesis 3. The individual's score on the risk-taking behavior scale will be significantly associated with gender.

Hypothesis 4. The individual's score on the family cohesion scale will be significantly related to gender.

Hypothesis 5. The individual's score on the family adaptability scale will be significantly related to gender.

Instrumentation

This research project utilized questionnaires as the single method of collecting data. Questionnaires are often used to obtain information concerning individual perceptions and behaviors. Instruments utilized in this research included a questionnaire which requested demographic information, such as grade, age, and gender; the Family Cohesion and Adaptability Scale (FACES III) (Olson et al., 1985), the Lethal Behaviors Scale (Thorson & Powell, 1987); and the Venturesomeness and Impulsiveness Scale (Eysenck & McGurk, 1980). Copies of these instruments may be found in Appendix A.

Family Cohesion and Adaptability Instrument. The instrument for assessing family cohesion and family adaptability was designed by Olson et al. (1983). FACES III contains 20 items; ten items measure family cohesion and ten items measure family adaptability. The two dimensions are combined into the Olson Circumplex Model to identify a family system. The scale scores for family cohesion and

family adaptability are derived from items in each scale with each item offering a response on a 5-point continuum.

The dimensions were hypothesized to be related to risk-taking behaviors among adolescents. The extreme levels of cohesion (engaged or disengaged) are theorized to reflect more adolescent risk-taking behavior and the balanced level is theorized to be more reflective of less adolescent risk-taking behavior. Likewise, extreme levels on the adaptability dimension (rigid or chaotic) are theorized to reflect more adolescent risk-taking behavior than the balanced level. The possible scores for cohesion range from 10-50, and the possible scores for adaptability range from 10-50. Reliability scores for the FACES III instrument range from .75 to .90 (Olson et al., 1983).

The Circumplex Model (Olson et al., 1979) makes it possible to classify a system into one of 16 family categories within the model. Figure 2 identifies the 16 categories in the Olson's Circumplex Model. The model may also be divided into four quadrants (See Figure 3). The quadrants are intended to describe underlying relationship dynamics of the family. The four categories in the innermost circle reflect balanced levels of cohesion and adaptability; the eight categories in the middle circle reflect a mid-range level and the four categories in the outer areas reflect extreme levels of adaptability and cohesion (see Figure 4). Dividing the model enhances its use in describing family systems.

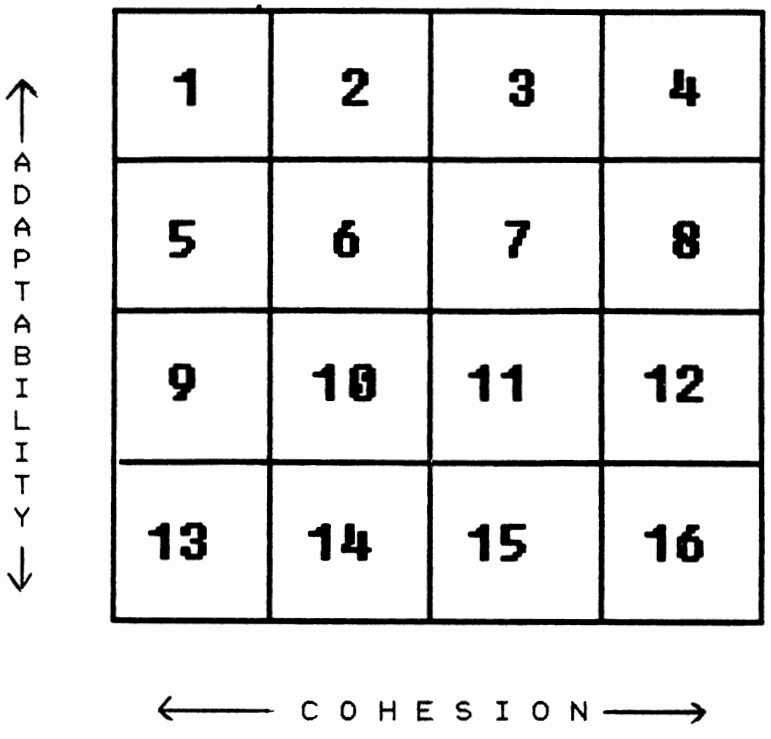
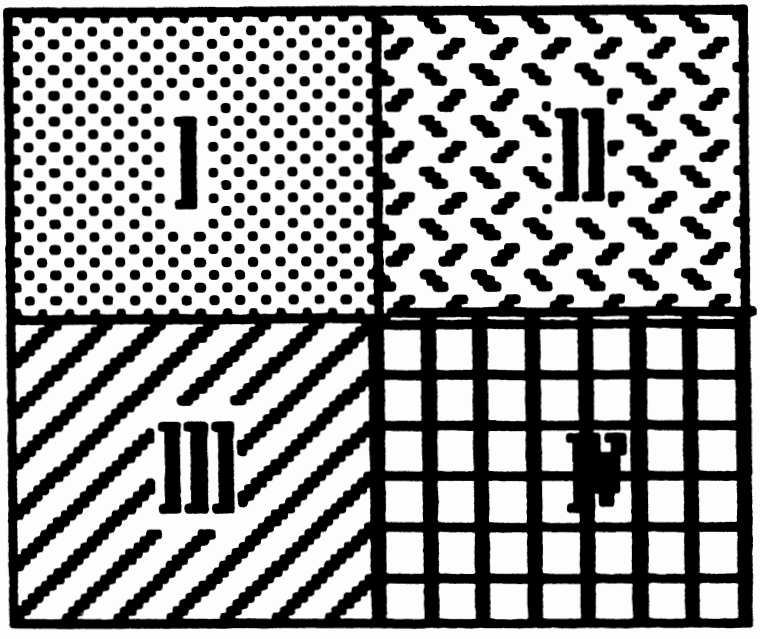


Figure 2. Sixteen Categories of Families in the Circumplex Model.



I FLEXIBLY-SEPARATED

II FLEXIBLY-CONNECTED

III STRUCTURALLY-SEPARATED

IV STRUCTURALLY-CONNECTED

Figure 3. Olson's Circumplex Model divided into Four Quadrants

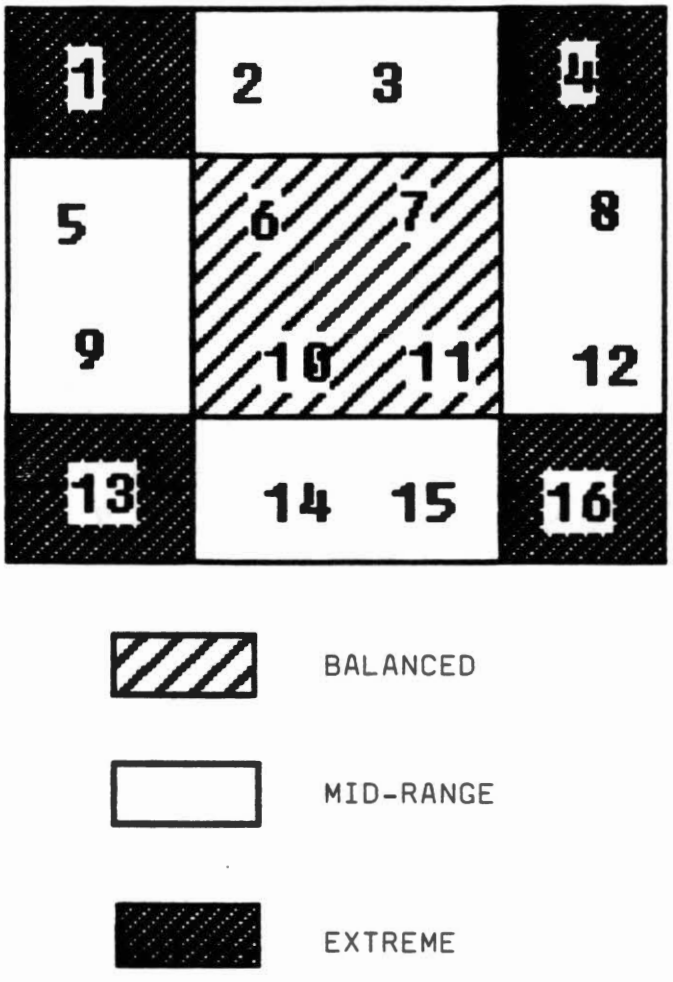


Figure 4. Balanced, Mid-Range, and Extreme Levels of Family Types

Risk-taking Instruments. The Lethal Behaviors Scale (Thorson & Powell, 1987) integrates actual behaviors with orientations toward risky activities. The focus of the scale is on dangerous behaviors rather than merely attitudes toward thrill seeking.

Four principal factors were found when the Lethal Behaviors Scale was administered to a sample of 399 adolescents and adults: orientation toward danger and violence, bravery and adventure, thrill seeking and fast driving, and safe or unsafe habits (Thorson & Powell, 1987). The Cronbach alpha reliability measure for the scale is .622 (Thorson & Powell, 1990).

The Lethal Behaviors Scale instrument consists of 19 items. Thorson and Powell (1987) assigned a score value of 1 for a safe response, a value of 2 for neutral or skipped items, and a value of 3 for more dangerous responses. The possible range of the Lethal Behaviors Scale is 19 to 57, with the higher scores indicating more lethal behavior (Thorson & Powell, 1990).

Another instrument included in the study for measuring risk-taking behavior is the Impulsiveness and Venturesomeness Scale developed by Eysenck and Eysenck (1978). The impulsiveness sub-scale includes 24 items and the venturesomeness sub-scale contains 17 items, a total of 41 responses. Impulsiveness is described as the result of non-evaluation of a situation, while venturesomeness is caused by a conscious decision to take a risk. Cronbach's

Alpha reliabilities for the two scales range from .79 to .84. The range of scores for impulsiveness is 24-72 and the range of scores on venturesomeness is 17-51. A "Yes-No" format was used on each of the risk-taking scales (Eysenck & Eysenck, 1978).

A copy of the instrument and instructions for 2administering it were submitted to the Institutional Review Board at Oklahoma State University. The questionnaire was approved for use with human subjects.

Selection of Subjects

The subjects for this study consisted of high school juniors and seniors from three highschools in southeastern Oklahoma. The sizes of the schools are representative of those in the state. As classified by the Oklahoma Secondary School Association for the 1990-1991 school year, the schools range in size from 1A to 5A. The smallest school in the study is a Class A school, the mid-sized school is Class 3A, and the largest school is a Class 5A school.

A non-random sample of convenience was used. In order to obtain a sample size of approximately 250 subjects, the number of classes and class sizes were discussed with the administrators and teachers participating in the study. All juniors and seniors enrolled in English III and English IV at one small Oklahoma high school (the smallest school in the sample), all students enrolled in two sections of English III and two sections of English IV in the largest

school, and three sections of English III and English IV in the mid-sized Oklahoma school, comprised the sample. Through discussions with school administrators and teachers, it was determined which sections were most representative of the entire student body. Two English teachers from each school administered the questionnaires, involving a total of six high school teachers. The teachers from the two larger schools administered the test to both regular and honors classes. The participants in the study included all students that were present in the specific classes the day the questionnaire was administered. The total enrollment for the 14 classes was 263 students. A total of 240 responses were received, all but one was usable. The number of students included in the analysis was 239. Twenty-three students were absent from their classes the day the questionnaire was administered. A study was not conducted on the non-participants.

English classes were selected because English is a required subject in the high schools, therefore, it was felt the students in these classes would be more representative of adolescents in general. While generalizability cannot be claimed, efforts toward representativeness included the selection of schools of various sizes and the selection of classes within those schools that were representative of the schools as a whole. Juniors and seniors were selected because of their greater exposure to potentially dangerous risk-taking behaviors as compared to younger adolescents.

Participation in the survey was voluntary and anonymous. Every student present in the classes agreed to participate in the study.

The researcher contacted the superintendents and principals of the schools by telephone. When the administrators agreed to participate, specific teachers were recommended for the research project. Letters were sent to the teachers requesting their participation with a brief description of the procedures to be used. The teachers were contacted by phone to set a date for administering the questionnaire.

Methods of Data Collection

The teachers willing to allow their classes to participate in the study received a packet of materials containing instructions, background information form, the family cohesion and adaptability instrument, and the risk-taking behavior instrument. The researcher delivered the questionnaires to the teachers before the date to be administered and collected the questionnaires the day after they had been administered. The teachers were given the following instructions:

1) Tell the students that the information is confidential and anonymous. Students in the class that do not wish to participate in the study will be excused from participating.

2) Inform the students that the survey may contain some items that may be regarded as sensitive, and answering any or all questions is voluntary.

3) Distribute the survey to each student that is willing to participate.

4) Explain that the information will be used to help describe adolescents and their families.

5) Ask the students to read carefully so they do not overlook an item. The questionnaire will take approximately twenty minutes to complete.

6) Collect the surveys immediately upon completion.

Letters were sent to administrators and instructors thanking them for participating in the project. Thank you cards were sent to the instructors after the survey was given.

Statistical Analyses

The PCFILE (Button, 1985) statistical program was used to install the data provided by the instruments and the background information. The SAS program was used to compute the statistical analyses (SAS Institute, 1985). The statistical analysis procedures used were analysis of variance, t-test, chi-square, and Pearson correlation coefficient.

Analysis of Variance. Analysis of variance is a statistical method for testing the significance of differences between means of two or more groups (Kerlinger,

1986). This procedure demonstrates how the variability among groups compares with the variability within groups. The specific test of significance for analysis of variance which determines significance is the F-ratio. Analysis of variance techniques were used to test differences among family system types and degree of risk-taking behaviors. The level of significance was set at $p < .05$.

Assumptions for the analysis of variance, a parametric technique, are:

(1) the samples were drawn at random from the population under consideration

(2) the variances in the population are homogeneous

(3) the scores are normally distributed in the population.

Empirical studies do indicate that violations of the assumptions of equal variances and normal distribution of scores do not severely affect the outcome of analysis of variance or of the t-test (Linton & Gallo, 1975).

T-test. The t-test involves one independent variable with two groups. The number of subjects in each group need not be equal. This test uses the means of the two groups to determine any significant differences between the groups. Assumptions for the t-test are as follows:

(1) the observations must be independent

(2) the observations must be drawn from a normally distributed population

(3) populations must have same variance, and

(4) variables must have been measured in at least an interval scale.

If some of the assumptions are not clearly met, the power of the test can be increased by enlarging the size of the sample (Siegel, 1956).

Pearson correlation coefficient. Pearson correlations are applicable to data in an interval scale. The coefficient itself represents the degree of the association. In the parametric use, the usual measure of correlations is the Pearson product-moment correlation coefficient *r*. This statistic requires scores which represent measurement in an interval scale (Siegel, 1956).

Pearson *r* is the most common correlational technique. The Pearson *r* has limits of +1 to -1. For a value of +1, the relationship is both perfect and positive. For a value of -1, the relationship is perfect, but negative (high scores for one variable are associated with low scores for the other). The sign always indicates the direction of the association. The closer the value is to 1, the stronger the relationship; the closer to 0, the weaker the relationship, regardless of the sign. A correlation of 0 indicates no association at all.

Chi-square analysis. A chi-square technique can be used with categorical or nominal data. It has wide applicability and is a relatively easy computation. The chi-square test can properly be used only if fewer than 20%

of the cells have an expected frequency of less than five and no cell has an expected frequency of less than 1. It does not make any assumptions about the shape of the population of scores and it requires only nominal measurement of the variables (Siegel, 1956).

Data Analysis Plan

A data analysis plan for this study is summarized in Table I. It includes the hypotheses, the questionnaire items from the various instruments which are used to test each hypothesis, and the statistical procedure used to test each hypothesis.

TABLE I

SUMMARY OF DATA ANALYSIS PLAN

Hypothesis	Questionnaire Items	Statistical Tests
1. There will be no significant relationship between level of cohesion and degree of risk-taking behavior	FACES III Cohesion Dimension Items 1,3,5,7,9, 11,13,15,17,19 Personality Measure Lethal Behaviors Items 1-19 Venturesomeness Items 20-36 Impulsiveness Items 37-60	Pearson r ANOVA X^2
2. There will be no significant relationship between level of adaptability and degree of risk-taking behavior	FACES III Adaptability Dimension Items 2,4,6,8,10 12,14,16,18,20 Personality Measure Lethal Behaviors Items 1-19 Venturesomeness Items 20-36 Impulsiveness Items 37-36	Pearson r ANOVA X^2
3. There will be no significant relationship between risk-taking and gender	Personality Measure Lethal Behaviors Items 1-19 Venturesomeness Items 20-36 Impulsiveness Items 37-60 Demographic Information Male Female	t-test X^2

TABLE I (Continued)

Hypothesis	Questionnaire Items	Statistical Tests
4. There will be no significant relationship between level of family cohesion and gender	FACES III Cohesion Dimension Items 1,3,5,7,9, 11,13,15,17,19 Demographic Information Male Female	t-test
5. There will be no significant relationship between level of family adaptability and gender	FACES III Adaptability Dimension Items 2,4,6,8,10, 12,14,16,18,20 Demographic Information Male Female	t-test

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

The purposes of this study were (a) to examine the adolescents' perceptions of family cohesion and family adaptability and their relationship to risk-taking behavior and (b) to determine any gender differences related to adolescents' perceptions of family cohesion and family adaptability and their degree of risk-taking behavior. This chapter describes the demographic characteristics of the sample, analyses of the data, discussion, and conclusions.

Description of Respondents

A selected convenience sample of 263 students from three schools in southeastern Oklahoma comprised the sample. The 263 students were from student bodies of 821 juniors and seniors. The three schools were representative of the various sizes of schools in the state. Based on the classification guidelines of the Oklahoma Secondary Activities Association, the three schools ranged in size from Class A to Class 5A. The total enrollment of juniors and seniors for the Class A (the smallest) school in the study was 51; enrollment of juniors and seniors for the

Class 3A (the mid-sized) school was 243; and enrollment of juniors and seniors for the Class 5A (the largest) school was 527 students. From this population, 263 students were selected to participate in the study. Of the students selected, 23 were absent, leaving 240 to complete the questionnaire. One of the questionnaires could not be used due to missing data, resulting in 239 questionnaires available for analysis. Of the 239 students in the sample, 45 respondents were from the smallest school; 112 respondents were from the mid-sized school; and 82 respondents were from the largest school. Refer to Chapter 3 for additional information on the method of selecting the sample.

Demographic characteristics of the respondents are summarized in Table II. By classification of the schools, School A was the 5A school, School B was the 3A school, and School C was the 1A school. The sample consisted of 58.6% females (n = 140) and 41.4% males (n = 99). Juniors comprised 53.1% of the sample and 46.9% of the sample were seniors.

The ages of the respondents ranged from 16-19 years of age with 73.8% of the subjects 17-18 years of age. Parental presence in the household was reported by the respondents as follows: single parent (17.7%), both parents (58.0%), parent/step-parent (20.6%), guardianship (0.8%), and other (2.9%).

TABLE II

DEMOGRAPHIC CHARACTERISTICS
OF RESPONDENTS

Demographic Characteristic	School A n=82		B n=112		C n=45		Total N=239	
Grade	n	%	n	%	n	%	n	%
11	43	52.0	57	50.8	27	60.0	127	53.1
12	39	48.0	55	49.2	18	40.0	112	46.9
Age								
16	19	23.2	27	24.3	11	24.4	57	25.0
17	37	45.1	53	47.8	17	37.8	107	44.0
18	25	30.5	31	27.0	16	35.6	72	29.8
19	1	1.2	1	.9	1	2.2	3	1.2
Gender								
Male	36	43.9	48	42.9	15	33.3	99	41.4
Female	46	56.1	64	57.1	30	66.7	140	58.6
Parent in Household								
Single	10	12.2	27	24.1	5	11.1	42	17.7
Both	54	65.9	58	51.8	26	57.8	138	58.0
Guardian	1	1.2	0	0.0	1	2.2	2	.8
Parent/ Step	14	17.1	23	20.5	12	26.7	49	20.6
Other	3	3.6	4	3.6	1	2.2	7	2.9
Children in Household								
One	16	19.5	26	23.2	8	17.8	50	20.9
Two	36	43.9	45	40.1	15	33.3	96	40.2
Three	23	28.1	23	20.5	10	22.2	56	23.4
Four/ More	7	8.5	18	16.2	12	26.7	37	15.5

TABLE II (Continued)

Demographic Characteristic	School A n=82		B n=112		C n=45		Total N=239	
Birth Order	n	%	n	%	n	%	n	%
Oldest	25	30.5	46	40.5	25	55.6	96	39.9
Middle	17	20.7	24	21.6	11	24.4	52	21.9
Youngest	34	41.5	31	28.0	7	15.6	72	30.2
Only	6	7.3	11	9.9	2	4.4	19	8.0

The number of children in the home, including the respondent consisted of: the respondent only (20.9%), two children (40.2%), three children (23.4%), and four or more children (15.5%). Of the respondents, 39.9% were the oldest child in the family, 30.2% were the youngest, 21.9% were a middle child, and 8% were the only child in the family.

The respondents included in the study were students that were present the day the questionnaire was administered. In the smallest school (C), 55.6% of the respondents, as compared to 30.5% and 40.5% in the other schools, were the oldest child in the family. This indicates younger families in the smaller school. The small school also had a larger percentage of step-parent families, 26.7% compared to 17.1% for the largest school and 20.5% for the mid-sized school. School B (the mid-sized school) had 24.1% of the respondents from single parent homes. School A

(the largest school) had the highest percentage living with both parents, 65.9%. In the mid-sized school (B), 51.8% had both parents present in the home, and in the small school 57.8% had both parents present. The distribution among the ages of the respondents in the schools was similar.

Findings

The dimensions of family cohesion and family adaptability were hypothesized to be associated with gender and risk-taking behaviors. Olson's Circumplex Model was used to help illustrate the levels of the two dimensions, cohesion and adaptability (see Figure 1).

Distribution of Subjects for the Circumplex Model

National norms for the four levels of cohesion and adaptability have been established for three groups: adults (parents) across the family life stages, parents and adolescents, and young couples (Olson et al., 1985). National norms of adolescents alone for cohesion and adaptability were not available. The norms for the group of parents and adolescents were used as a basis for this study. Percentages established with the norm scores were used as a guide in the study. The percentages of the respondents whose scores placed them at each level of cohesion are as follows: disengaged, 18.0%; separated, 34.3%; connected, 30.5%; and enmeshed, 17.2%. The percentages of the

respondents whose scores placed them at each level of adaptability are as follows: rigid, 18%; structured, 29.7%; flexible, 36.4%; and chaotic, 15.9%.

In this study, the four levels of cohesion and the respective raw score ranges were: disengaged, 10-23; separated, 24-32; connected, 33-40; and enmeshed, 41-50. The four levels of adaptability and the respective raw score ranges were: rigid, 10-18; structured, 19-24, flexible, 25-30; and chaotic, 31-50.

The four quadrants in the Circumplex Model are: (I) flexibly-separated, (II) flexibly-connected, (III) structurally-separated, and (IV) structurally-connected (Olson et al., 1985). See Figure 3 in Chapter 3. Table III illustrates the four quadrants and the manner in which respondents were grouped in each according to the number and percentage of respondents in each quadrant. The respondents who perceived their families as flexibly-separated, Quadrant I, were 31.4%, and 31.4% also perceived their families as structurally-connected, Quadrant IV. Quadrant II, flexibly-connected, contained 16.3% of the respondents. Quadrant III, structurally-separated, contained 20.9% of the respondents.

Table IV illustrates the 16 categories of families as described in the Circumplex Model. The cells in the model represent the categories. Included in the cells are the number and percentage of respondents who perceived their families at a particular level of cohesion and adaptability.

TABLE III

TYPOLOGY OF SUBJECTS' PERCEPTIONS OF FAMILY TYPES IN FOUR QUADRANTS

ADAPTABILITY	COHESION: Disengaged 10-23	Separated 24-32	Connected 33-40	Enmeshed 41-50
high		I		II
Chaotic 31-50		FLEXIBLY SEPARATED		FLEXIBLY CONNECTED
Flexible 25-30		n = 75		n = 39
		31.4 %		16.3 %
		III		IV
Structured 19-24		STRUCTURALLY SEPARATED		STRUCTURALLY CONNECTED
Rigid 10-18		n = 50		n = 75
		20.9 %		31.4 %
low				high

TABLE IV

ADAPTABILITY BY COHESION: SIXTEEN FAMILY CATEGORIES

ADAPTABILITY	COHESION: Disengaged	Separated	Connected	Enmeshed
high				
Chaotic	Cell 1 n = 14 5.9%	Cell 2 n= 17 7.1%	Cell 3 n = 10 4.2%	Cell 4 n = 2 .8%
Flexible	Cell 5 n = 15 6.3%	Cell 6 n = 29 12.1%	Cell 7 n = 19 7.9%	Cell 8 n = 8 3.3%
Structured	Cell 9 n = 10 4.2%	Cell 10 n = 26 10.9%	Cell 11 n = 36 15.1%	Cell 12 n = 15 6.3%
Rigid	Cell 13 n = 4 1.7%	Cell 14 n = 10 4.2%	Cell 15 n = 8 3.3%	Cell 16 n = 16 6.7%
low				high

*cell
frequency
percentage

For example, fourteen adolescents perceived their families as chaotically-disengaged as shown in cell 1, and 36 respondents perceived their families as structurally-connected as stated in cell 11.

Once the appropriate family category is determined, according to its placing in one of the 16 cells, the family can then be classified as a balanced, mid-range, or extreme family type. Cohesion and adaptability scores that are found in cells 6, 7, 10 and 11 indicate a balanced family type; scores in cells 2, 3, 5, 8, 9, 12, 14, and 15 indicate a mid-range type; and scores in cells 1, 4, 13, and 16 indicate an extreme family type (see Figure 4). Table V illustrates the family types of the study sample for the balanced, mid-range, and extreme family types. Of those surveyed, 46.0% perceived their families as balanced, 38.9% perceived their families in mid-range, a total 84.9% of the respondents. In terms of cohesion and adaptability, 15.1% perceived their families in the extreme range.

Family Types and Adolescent Risk-taking Behaviors

The primary research questions to be investigated were: What are adolescents' perceptions of their families' cohesion and adaptability? Is there a relationship between these perceptions and the degree of risk-taking? An analysis of variance procedure was used to determine a relationship between family types and risk-taking behavior. The classification method of the Circumplex Model used for this analysis was the balanced, mid-range and extreme family type classification.

TABLE V

FAMILY SYSTEM TYPES: BALANCED, MID-RANGE, AND EXTREME

Cell 1 n=14 5.9%	Cell 2 Cell 3 n=27 11.3%	Cell 4 n=2 0.8%
Cell 5 n=25 10.5% Cell 9	Cell 6 Cell 7 n=110 46.0% Cell 10 Cell 11	Cell 8 n=23 9.6% Cell 12
Cell 13 n=4 1.7%	Cell 14 Cell 15 n=18 7.5%	Cell 16 n=16 6.7%

Balanced - Cells 6, 7, 10, 11
Extreme - Cells 1, 4, 13, 16
Mid-Range -Cells 2, 3, 5, 8, 9, 12, 14, 15

Table VI shows no significant relationship between an adolescent's perception of the level of family cohesion and family adaptability and risk-taking behaviors as measured by the Lethal Behaviors Scale (Thorson & Powell, 1990) and the Venturesomeness Scale and Impulsiveness Scale (Eysenck & Eysenck, 1978).

TABLE VI

RESULTS OF ANALYSIS OF VARIANCE FOR THE BALANCED, MID-RANGE, AND EXTREME LEVELS OF FAMILY COHESION AND FAMILY ADAPTABILITY WITH RISK-TAKING BEHAVIORS

Source	DF	Sum of Squares	Mean Square	F Value	P > F
Variable: Lethal behaviors					
Balanced, Mid-Range, & Extreme	2	77.9641	38.9820	0.78	0.4586
Error	236	11763.2157	49.8441		
Total	238	11841.1799			
Variable: Venturesomeness					
Balanced, Mid-Range, & Extreme	2	28.1810	14.0905	0.36	0.7011
Error	236	9351.0658	39.6231		
Total	238	9379.2468			
Variable: Impulsiveness					
Balanced, Mid-Range, & Extreme	2	58.7048	29.3524	0.29	0.7482
Error	236	23855.7721	101.0837		
Total	238	23914.4769			

Family Cohesion and Adolescent Risk-taking Behavior

The first operational hypothesis concerns adolescent perception of family cohesion and its relationship to adolescent risk-taking behavior. The hypothesis states that individual scores on family cohesion will be significantly associated with scores on risk-taking behavior. Results of a Pearson correlation coefficient analysis for risk-taking behaviors and family cohesion indicated no significant association at $p \leq .05$ between family cohesion and venturesomeness. A significance was found between cohesion and lethality, and cohesion and impulsiveness. However, the coefficients of -0.14 and 0.22 indicate weak relationships. Table VII presents a summary of the Pearson correlation coefficient analysis.

The mean scores for items on the cohesion dimension, in the family questionnaire (FACES III), can be found in Appendix B. The odd items account for the cohesion dimension. Frequency of responses for FACES III (Appendix C) and the personality measurement (Appendix D) may also be reviewed. Item 3 on the FACES scale had the highest mean (3.88), "We approve of each other's friends." Of the total respondents, 65.5% answered "frequently" and "almost always." The lowest mean on the cohesion dimension was 2.45 on item 9, "We like to do things with just our immediate family." Only 24.7 percent responded "frequently" or "almost always."

TABLE VII

PEARSON CORRELATION MATRIX FOR
RISK-TAKING, FAMILY COHESION
AND FAMILY ADAPTABILITY

Variable	Lethal	Venture	Impulse	Cohesion	Adapt
Lethal	1.00000 0.0	0.65976 .0001	0.43529 .0001	-0.14342 .0269	0 16532 .0110
Venture	0.65976 .0001	1.00000 0.0	0.41783 0.0001	-0.05914 0.3637	0.16065 0.0135
Impulse	0.43529 0.0001	0.41783 0.0001	1.00000 0.0	-0.22047 0.0006	0.00148 0.9820
Cohesion	-0.14342 0.0260	-0.05914 0.3637	-0.22047 0.0006	1.00000 0.0	0.36294 0.0001
Adaptab	0.16532 0.0110	0.16065 0.0135	0.00148 0.9820	0.36294 0.0001	1.00000 0.0

significance $p < .05$

A chi-square analysis of cohesion and the individual items on the Lethal Behaviors Scale (the first 19 items on the personality measure, see Appendix A), did reveal some associations between an adolescent's perception of family cohesion and his/her degree of risk-taking at the .05 level of significance. Item 5 on the personality measure, "Do you ever take chances or do dangerous things for the thrill of it?" was significantly associated with the adolescent's perceived level of family cohesion, $X^2(3, N = 238) = 12.77$, $p < .05$. Of the 64.7% of the students responding "yes", fewer than expected perceived their family as enmeshed and more than expected perceived their family level of cohesion

as disengaged. Of the students that said they did not take chances or do dangerous things for the thrill of it, more than expected perceived their level of family cohesion as enmeshed (refer to Appendix D for frequencies to responses).

An association between the level of cohesion and risk-taking was also found for item 6 on the personality measure, "When driving, do you most often use seatbelts," $X^2(3, N = 237) = 11.57$, $p \leq .05$. Sixty percent of the respondents said they did not often wear seat belts. Of those that reported not using seat belts often, 60% perceived their level of family cohesion as disengaged or separated. Forty percent of the respondents said that they do wear seatbelts often when driving. Of that forty percent, 59% perceived their level of family cohesion as connected or enmeshed. Respondents that said "yes" they do wear seatbelts and perceived family cohesion at the enmeshed level contributed the most to the level of significance.

Analysis of two other items revealed an association between perceived level of family cohesion and risk-taking behavior, namely items 11 and 13. Of the adolescents that have physical checkups regularly, more than expected (25%) perceived their families as enmeshed. Of those that do not have regular physical checkups, only 11% perceived their families as enmeshed. Results of chi-square analysis were $X^2(3, N = 238) = 8.75$, $p \leq .05$. The response was similar for respondents who had or had not driven a motorcycle. Of those who had not driven a motorcycle, the percentage (25%)

who perceived their families as enmeshed was twice as large as the percentage of respondents who had driven a motorcycle (12%) and yet perceived their families as enmeshed. Seventy-one percent of the subjects who had driven a motorcycle, perceived their families in the connected and separated level of cohesion. There was a significant association between the perceived level of cohesion and whether or not the subjects had ever driven a motorcycle, $X^2(3, N = 238) = 9.34, p \leq .05$.

Family Adaptability and Adolescent Risk-taking Behavior

Another hypothesis for the study compared the relationship between adolescent perceptions of family adaptability and adolescent risk-taking behavior. The hypothesis stated that individual scores on adolescent perceptions of family adaptability will be significantly associated with scores on risk-taking behavior. The Pearson correlation coefficient analysis for risk-taking behaviors and perceived family cohesion indicated a significant relationship between family adaptability and lethality, and family adaptability and venturesomeness. However, the correlation coefficients of 0.16 for both lethality and venturesomeness variables indicates a weak relationship. There was no significance found between family adaptability and impulsiveness. See the correlation matrix in Table VII. Mean scores for the adaptability dimension can be found in

Appendix B. The even numbered items on the FACES III measurement refer to the adaptability dimension, while the odd numbered items refer to the cohesion dimension. Frequency of responses for the family questionnaire (FACES III) (Appendix C) and the personality measurement (Lethal Behaviors Scale, Venturesomeness Scale, and Impulsiveness Scale) (Appendix D) may also be reviewed.

On the FACES III measurement, item 14 "Rules change in our family" had the highest mean (2.89) on the adaptability dimension. "The children make the decisions in our family," item 12, had the lowest mean (1.97). Of the total respondents, 41.8% answered "almost never" and 29.5% said "once in a while" regarding the children making decisions.

A chi-square analysis of the level of family adaptability and the individual items on the Lethal Behaviors Scale resulted in a finding of significance on two items. For item 18, "Would you like to pilot your own airplane," $\chi^2(3, N = 238) = 7.94$. When subjects were asked, "Would you like to pilot your own plane," 65% said "yes." Of the students that perceived their family level of adaptability as chaotic, 82% said they would like to pilot their own plane. This is more than four times the percentage of students that would not like to pilot their own plane and yet saw their families as chaotic (18%). Of the 35% of the respondents that said they would not like to pilot their own plane, (24%) perceived their families as rigid. Only 14% of those that would pilot a plane perceived

their families as rigid. The extremes of rigid and chaotic contributed to the significant relationship of perceived family adaptability and risk-taking on this item.

Item 19, "When driving do you generally pass most of the other cars on the highway," was also associated with family adaptability, $X^2(3, N = 234) = 9.25$, $p \leq .05$. Sixty-two percent of the respondents said they do generally pass most of the other cars. Of those, fewer than expected perceived their families as rigid. Of the 38% who said they do not generally pass most of the other cars on the highway, more subjects than expected perceived their families as rigid. Subjects who perceived their families' level of adaptability as rigid contributed the most to the significance. Of the total respondents who perceived their families as chaotic, almost three times as many (74%) said they generally pass most of the other cars on the highway, as compared to 26% who said they do not generally pass most of the other cars on the highway.

Risk-taking Behavior and Gender

A third hypothesis examines any differences between adolescent risk-taking behavior and gender. The mean scores of male respondents were higher than the mean scores of female respondents. See Table VIII for the risk-taking score means for three measures; lethal behaviors, venturesomeness, and impulsiveness. A t-test analysis of the three measures for risk-taking and their relationship to

gender indicates a significant relationship in gender differences at $p \leq .05$ level of significance on the lethal and venturesomeness measures. There was no significant difference between gender and impulsiveness at $p \leq .05$. See Table IX for the analysis of the t-test procedure used to compare the relationship between gender and risk-taking behaviors.

TABLE VIII

MEANS FOR RISK-TAKING SCORES
OF THREE MEASURES BY GENDER

Measurement	Possible Scores	Males n=99	Females n=140	Total N=239
Lethal Behaviors Scale	19-57	42.2	36.6	38.94
Venturesomeness	24-72	41.1	38.8	39.94
Impulsiveness	17-51	48.3	46.7	47.55

TABLE IX

RESULTS OF T TEST PROCEDURE:
RISK-TAKING AND GENDER

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Lethal Behaviors					
F	140	36.60714286	6.44366448	0.54458905	0.8288
M	99	42.24242424	6.56846348	0.66015542	

Variances	T	DF	Prob > T
Equal	-6.6067	237	0.0000

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Venturesomeness					
F	140	38.82857143	5.85796249	0.49508819	0.1805
M	99	41.12121212	6.62751335	0.66609015	

Variances	T	DF	Prob > T
Equal	-2.8215	237	0.0052

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Impulsiveness					
F	140	46.69285714	9.94220452	0.84026964	0.8446
M	99	48.28282828	10.115i69845	1.01666595	

Variances	T	DF	Prob > T
Equal	-1.2091	237	0.2278

The Lethal Behaviors Scale by Thorson and Powell (1987) consists of four factors: orientation to danger, bravery and adventure, thrill-seeking, and safe and unsafe habits. A t-test analysis was utilized to determine any significant differences between gender and these four factors. Table X includes the data analysis of the four factors. The mean scores for males were higher on two factors, orientation to danger and thrill-seeking. The mean scores for females were higher on the two factors; bravery and adventure, and safe or unsafe habits. None of the factors had a significant difference at the .05 level.

A chi-square analysis on the 19 items in the Lethal Behaviors Scale and their relationship to gender indicated an association between several risk-taking behaviors and gender. Of the males, 82% reported enjoying watching movies or TV shows that have a lot of violence, compared to 39% of the females (Item 1), $X^2(1, N = 237) = 44.95$, $p \leq .05$. Almost 70% of the boys stated that they would most likely try to interfere if they saw a crime being committed as compared to 55% of the females. Of the total respondents, 61% said that they would most likely try to interfere (Item 2). The number of males that said they would not most likely try to interfere was significantly less than expected and contributed the most to the difference, $X^2(1, N = 234) = 4.71$, $p \leq .05$.

TABLE X

RESULTS OF T TEST FOR LETHAL FACTORS
AND RELATIONSHIP TO GENDER

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Orientation to Danger					
F	139	16.62589928	3.77879933	0.32051358	0.5592
M	98	16.65306122	3.57281269	0.36090858	

Variances	T	DF	Prob > T
Equal	-0.0557	235	0.9556

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Bravery and Adventure					
F	138	10.97246377	2.94880325	0.25101880	0.9675
M	98	9.44897959	2.95715958	0.29871823	

Variances	T	DF	Prob > T
Equal	1.5987	234	0.1112

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Thrill-seeking					
F	140	11.02142857	1.84456369	0.15589409	0.0686
M	98	11.09183673	2.18281354	0.22049746	

Variances	T	DF	Prob > T
Equal	-0.2686	236	0.7885

Sex	N	Mean	Std Dev	Std Error	P > F
Variable: Safe or unsafe habits					
F	140	7.06428571	2.57606781	0.21771747	0.1676
M	98	7.05102041	2.25842044	0.22813492	

Variances	T	DF	Prob > T
Equal	0.0411	236	0.9673

Items 5, 7, 10, 13, 14, 15, 18 and 19 also showed an association between gender and risk-taking at the .05 level of significance with the chi-square analysis. When respondents were asked if they ever take chances or do dangerous things for the fun of it, (Item 5), over three times as many males (76%) said "yes" as compared to 24% of males responding "no." Forty-two percent of the females stated that they did not take chances or do dangerous things for the thrill of it, $X^2(1, N = 238) = 8.52$, at .05 level of significance.

Seventy percent of the females said they did not usually drive 75 or above on the interstate highway (Item 7) as compared to 48% of the boys. In the total sample, 61% responded "no" on that item, $X^2(1, N = 238) = 11.20$.

Significantly more boys than girls would like to or have sky-dived or hang glided (Item 10), $X^2(1, N = 237) = 5.02$, $p \leq .05$. Eighty-five percent of the boys as compared to 44% of the girls have driven a motorcycle (Item 13), $X^2(1, N = 238) = 39.54$, $p \leq .05$. More girls than expected and fewer boys than expected said "no" they have not driven a motorcycle, contributing the most to the significance.

Item 14, related to motorcycle ownership. Few of the respondents owned a motorcycle, but 25% of males did compared to 11% of the females, $X^2(1, N = 238) = 8.02$, $p \leq .05$.

Item 15 states "Would you or do you own a gun," $X^2(1, N = 237) = 37.36$, $p < .05$. Of the males, 86% said "yes" compared to 47% of the females.

Item 18 questioned respondents desire to pilot their own plane. Seventy-four percent of the males and 59% of the females said that they would like to pilot their own planes, $X^2(1, N = 238) = 6.43$, $p < .05$.

"When driving, do you generally pass most of the other cars on the highway," item 19, also revealed a significant association between gender and risk-taking. Seventy-one percent of the respondents that said "no" were females and 29% of the "no" respondents were male, $X^2(1, N = 238) = 10.14$, $p < .05$.

A chi-square analysis was also used with the 17 individual items on the Venturesomeness Scale. These include items 19-36 on the personality measure. Those indicating significance were items: 22, 23, 25, 26, 27, 33, 34, and 35.

A significantly higher percentage of males than females stated that:

-they quite enjoy taking risks (Item 22)

-they would enjoy parachuting (Item 23)

-hitchhiking is not too dangerous of a way to travel (Item 25)

-they like diving off the highboard (Item 26)

-they would like to pilot a plane (Item 27)

-life with no danger in it would be too dull (Item 33)

-they prefer diving straight into cold sea water as opposed to entering it gradually (Item 34)

-they would enjoy skiing very fast down a high mountain slope (Item 35).

Complete data for the above analysis may be found in Appendix E.

Family Cohesion and Gender

A t-test procedure was utilized to determine any differences between gender and adolescent perception of family cohesion. There was no difference at the .05 level of significance between males and females and their perceptions of family cohesion. See Table XI for data on the t-test analysis. The probability of t (0.5994) is not significant, therefore the null hypothesis is not rejected.

TABLE XI

RESULTS OF T TEST FOR FAMILY COHESION AND GENDER

Sex	N	Mean	Std Dev	Std Error	P > F
F	140	32.11428571	8.54112836	0.72185710	0.1747
M	98	31.55102041	7.50411907	0.75803050	

Variances	T	DF	Prob>T
Equal	0.5260	236	0.5994

Family Adaptability and Gender

A t-test procedure was also utilized to determine any differences between gender and the adolescent's perception of family adaptability. There was no difference at the .05 level of significance, between males and females and their perceptions of family adaptability. See Table XII for data on the t-test analysis. The probability of t (0.5189) is not significant, therefore the null hypothesis was not rejected.

The mean scores for family cohesion and family adaptability by gender (Appendix F) were not significantly different, however, females did have higher mean scores on both dimensions, perception of family cohesion and perception of family adaptability.

TABLE XII

RESULTS OF T TEST FOR FAMILY ADAPTABILITY AND GENDER

Sex	N	Mean	Std Dev	Std Error	Prob > F
F	138	25.02173913	6.31585583	0.53764135	0.7389
M	98	24.48979592	6.11444950	0.61765267	

Variance	T	DF	Prob>T
Equal	0.6460	234	0.5189

Overall, most adolescents participate in risk-taking behaviors, but on a few responses a majority chose a safe response. For example, 97% of the girls and 90% of the boys agreed that hitchhiking was too dangerous of a way to travel. Of the total respondents, 94% said "yes" and 6% said "no" when asked if hitchhiking were too dangerous.

When asked if they had ever experimented with dangerous drugs, 83% of the total respondents said "no." Eighty-two percent of the respondents said they do not smoke. Those respondents that said they would make sure they had another job before giving up the old one totaled 88%, which might be interpreted as a safe response. On the other hand, 90% of the respondents stated that they sometimes like doing things that are a bit dangerous.

Summary

The three family types (balanced, extreme, and mid-range levels) were used in an ANOVA analysis to determine any differences between family cohesion and family adaptability and the adolescent's degree of risk-taking behavior. Each of the three instruments measuring risk-taking (Lethal Behaviors Scale, Venturesomeness Scale and Impulsiveness Scale) were used in the ANOVA analysis. Results revealed no significant difference at the .05 confidence level.

A chi-square analysis of the individual items for cohesion and adaptability on the FACES III instrument did

reveal some significance between family cohesion and family adaptability and the degree of risk-taking behavior. Only the Lethal Behaviors Scale was used for this analysis to indicate the degree of risk-taking behavior. A significant number of adolescents that perceived their families as "disengaged" said "yes" to the question "Do you ever take chances or do dangerous things for the thrill of it?" Of the adolescents that responded "yes" to the items, "When driving, do you most often use seatbelts," and "Do you have physical checkups regularly," more than expected perceived their families as "enmeshed." Significantly more respondents perceived their families as "enmeshed" that had never driven a motorcycle, than respondents that had driven a motorcycle.

A chi-square analysis for the individual items on the adaptability dimension of the FACES III instrument revealed significance between level of adaptability and risk-taking on two items. "Would you like to pilot your own airplane," and "When driving, do you generally pass most of the other cars on the highway," were significantly associated with adaptability at the "chaotic" level. Eighty-two percent of adolescents that perceived their family as chaotic said "yes" they would like to pilot their own plane, and 74% that perceived their family as chaotic said "yes" they generally pass most of the other cars on the highway.

A Pearson correlation analysis revealed no significance between cohesion and adaptability, and lethality,

venturesomeness, and impulsiveness. T-tests revealed no significance between gender and cohesion or between gender and adaptability.

T-test procedures did reveal significance between gender and risk-taking. Males scored significantly higher than females on lethality and venturesomeness. There was no significant association between gender and impulsiveness.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

Introduction

Adolescence is a prolonged period of transition between childhood and adulthood. During this transition, adolescents frequently are faced with new sets of rules and expectations. Young people may be overwhelmed with the onslaught of possibilities and choices. There are a number of issues that confront adolescents: there is individuation, as it pertains to increasing independence from the family; there is occupational choice, sexuality, and acquistion of principles to live by (White & Speisman, 1977).

Adolescence is a social and developmental phenomenon. The adolescent period provides a mechanism for change--a vital need in a complex technical society. The adolescent who seeks, questions, and in part rejects existing order serves as a human institution for change (White & Speisman, 1977).

Research reports that if change occurs too rapidly the stability of the family may be threatened, but that the ability for change is necessary for growth and development (Becvar & Becvar, 1982). The family plays an important role in the adolescent's social development.

Olson et al. (1979) have postulated that a balance of cohesion and adaptability is related to adequate functioning in a family system. The family changes (morphogenesis) and it seeks stability (morphostasis). Development of families and its individual members implies change.

Change involves risks. Risk-taking behaviors are a normal part of adolescent development (Baumrind, 1987). However, if the behaviors are potentially dangerous physically and mentally, they may be socially and personally destructive.

The purposes of this study were: (a) to examine the adolescent's perception of family cohesion and perception of family adaptability and their relationship to risk-taking behavior and (b) to determine any gender differences related to adolescent perceptions of family cohesion and family adaptability and the degree of risk-taking behavior.

The primary research questions explored were: What are adolescents' perceptions of their families' cohesion and adaptability? Is there a relationship between these perceptions and the degree of risk-taking behavior?

The secondary research questions explored in the study were:

(1) Does gender influence risk-taking behavior?

(2) Do the perceptions of family cohesion and family adaptability differ according to gender?

The following hypotheses were tested:

Hypothesis 1. Individual scores on perception of

family cohesion will be significantly associated with scores on risk-taking behavior.

Hypothesis 2. Individual scores on perception of family adaptability will be significantly associated with scores on risk-taking behavior.

Hypothesis 3. The individual's score on risk-taking behavior will be significantly associated with gender.

Hypothesis 4. The individual's score on his/her perception of family cohesion will be significantly related to gender.

Hypothesis 5. The individual's score on his/her perception of family adaptability will be significantly related to gender.

Summary of Method

The research methodology used in this study was descriptive and correlational research. The sample for the study included 239 highschool juniors and seniors from three schools in southeastern Oklahoma.

The researcher contacted the schools by telephone and requested the schools' participation in the study. Administrators recommended the teachers for the researcher to contact. English classes were selected because English is required of all students.

The teachers recommended by the administrators, after agreeing to administer the questionnaire, selected which classes would participate in the study. They selected the

classes they felt were most representative of the student body. A total of 14 English classes were involved in the study. Participation in the study was voluntary.

Analyses used to test the hypotheses were t-test, analysis of variance, Pearson correlation coefficient, and chi-square. Frequencies were also reported in discussion of the results.

Conclusions

Demographic Characteristics

The sample consisted of 140 females and 99 males. Juniors comprised 53.1% of the sample, and 46.9% of the sample were seniors. The ages of the subjects ranged from 16-19 years of age. Fifty-eight percent of the subjects were from households that had both parents present. Single and step-parent families consisted of 38.3% of the sample.

Results of Hypotheses

Analysis of the primary research question concerning the relationship between an adolescent's perception of family cohesion and family adaptability and his/her degree of risk-taking behavior indicated that there was no significant association. An analysis of variance procedure was used to determine relationships between three family types: balanced, mid-range, and extreme levels of cohesion and adaptability; and the risk-taking behaviors measured by the Lethal Behaviors Scale (Thorson & Powell, 1987),

Venturesomeness Scale and the Impulsiveness Scale (Eysenck & Eysenck, 1978).

For Hypothesis 1, using Pearson correlation coefficient analysis, no significant associations were found between adolescent perception of family cohesion and adolescent risk-taking behaviors. However, when a chi-square analysis was used on the individual items of the Lethal Behaviors Scale, some significance was found. Four items on the Lethal Behaviors Scale (Items 1-19) had a significant association with the adolescents' perceptions of family cohesion. They were: (1) Do you ever take chances or do dangerous things for the thrill of it? (Item 5) (2) When driving, do you most often use seatbelts? (Item 6) (3) Do you get regular physical checkups? (Item 11) (4) Have you ever driven a motorcycle? (Item 13). In each instance the subjects with the "safe" response reported their families as more enmeshed than the subjects with the "higher risk" response. A greater percentage of subjects whose responses indicated higher levels of risk-taking were more likely to report perceiving their families as disengaged.

Using the Pearson correlation coefficient to examine Hypothesis 2, there was no significant relationship between adolescent perceptions of family adaptability and the degree of risk-taking behavior. As in Hypothesis 1, a chi-square analysis was used on the individual items of the Lethal Behaviors Scale to determine any association with the adolescent's perception of family adaptability. Two items

for which there was a significant association were: (1) Would you like to pilot your own plane? (Item 18) (2) When driving do you generally pass most of the other cars on the highway? (Item 19). A significantly higher percentage of subjects that perceived their families as chaotic responded with the "yes" response as opposed to those subjects choosing the "no" response, yet also perceived their families as chaotic.

A t-test analysis was used to examine Hypothesis 3. The test indicated a significant association between risk-taking behaviors and gender. Significance at the .05 level was indicated for two risk-taking variables, lethality and venturesomeness. Males were significantly higher risk-takers than females in both lethality and venturesomeness. Of the four factors in the Lethal Behaviors Scale, orientation to danger, bravery and adventure, thrill-seeking, and safe or unsafe habits, a t-test indicated there were no significant associations with gender. However, the Lethal Behaviors Scale and the Venturesomeness Scale each provided adequate evidence for a significant association between risk-taking and gender.

Hypothesis 4 examined the adolescent perceptions of family cohesion and the relationship to gender. Using a t-test analysis, there was no significant relationship between gender and the adolescent's perception of family cohesion. Likewise, using the t-test analysis for Hypothesis 5, there

was no significant relationship between gender and the adolescent's perception of family adaptability.

Hypothesis 3, there will be no significant association between risk-taking behavior and gender is rejected. Hypotheses 1, 2, 4, and 5 were not rejected. While some of the item analyses revealed significance, the relative number were few and could be contributed to chance alone. The evidence was not strong enough to reject the null hypotheses.

Implications

Frequently the risks that adolescents take inflict physical or mental injury upon themselves which severely impacts a family, both emotionally and financially. The risks also impact a community.

Adolescent risk-taking causes stress throughout a community. The energies of a community are often diverted toward the negative effects of adolescent risk-taking rather than toward the positive aspects of community growth and development. Preventing the loss of adolescent life and/or the optimization of their potential is a positive social goal.

If researchers, practicioners, and educators can identify the links between adolescent risk-taking and the family (structure, communication, dynamics, etc.), they can more wisely select and/or develop intervention strategies.

There is a need for future studies in the area of families and adolescent risk-taking behaviors.

Recommendations for Further Study

In light of the findings of this study, the following recommendations for further research are made.

(1) Further development of scales and instruments that reliably measure more contemporary risk-taking behaviors of adolescents in today's society; for example: hood surfing, pass out, quarters, body piercing, sexual asphyxiation, gang related behavior, bungee cord jumping, etc.

(2) Establish norms for the Lethal Behaviors Scale for adolescents and adults. The recent development of the scale has not yet provided enough data to establish norms.

(3) Examine differences between the family categories within the family types and the relationship to risk-taking behavior; for example, compare differences between the four extreme categories, chaotically-disengaged, rigidly-disengaged, chaotically-enmeshed, and rigidly-enmeshed.

(4) Examine other factors that may be associated with risk-taking behaviors, such as family structure, birth order, number of siblings, or parents' degree of risk-taking behaviors.

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APPENDIXES

APPENDIX A

FAMILY QUESTIONNAIRE AND PERSONALITY MEASUREMENT

INSTRUCTIONS FOR STUDENTS

This questionnaire contains two different measurements, each which takes only a few minutes to complete. One asks questions about your family, the other asks questions about you. First carefully read the different instructions that accompany each of the measurements. Then answer the questions.

The survey contains some items which may be regarded as sensitive. Answering any or all of the questions is voluntary.

DO NOT SIGN YOUR NAME ON ANY SHEET

It is important to answer each question honestly and without consulting other persons. Please answer all questions the best you can.

After you have completed the questionnaire, please turn it over on your desk so that it may be collected.

THANK YOU FOR YOUR COOPERATION!

BACKGROUND INFORMATION

1. My GRADE is: (Circle one) 11 12

2. My AGE is: _____years and _____months

3. My SEX is: (Circle one) Male Female

4. Living in My household I have: (Check the one most true for you)

   _____ A SINGLE PARENT

   _____ BOTH PARENTS

   _____ A GUARDIAN

   _____ ONE BIOLOGICAL PARENT AND ONE STEP-PARENT

   _____ OTHER (specify) _____

5. The number of children in My family household, including myself is/are: (check one)

   _____ one _____three

   _____ two _____four or more

6. In my family, I am: (check one)

   _____ the oldest child

   _____ a middle child

   _____ the youngest child

   _____ an only child

FAMILY QUESTIONNAIRE

Place the correct response in the blank provided to the left of each statement as it applies to your family.

1	2	3	4	5
Almost Never	Once in Awhile	Sometimes	Frequently	Almost Always

DESCRIBE YOUR FAMILY NOW:

____ 1. Family members ask each other for help.

____ 2. In solving problems, the children's suggestions are followed.

____ 3. We approve of each other's friends.

____ 4. Children have a say in their discipline.

____ 5. We like to do things with just our immediate family.

____ 6. Different persons act as leaders in our family.

____ 7. Family members feel closer to other family members than to people outside the family.

____ 8. Our family changes its way of handling tasks.

____ 9. Family members like to spend free time with each other.

____ 10. Parent(s) and children discuss punishment together.

____ 11. Family members feel very close to each other.

____ 12. The children make the decisions in our family.

____ 13. When our family gets together for activities, everybody is present.

____ 14. Rules change in our family.

____ 15. We can easily think of things to do together as a family.

____ 16. We shift household responsibilities from person to person.

____ 17. Family members consult other family members on their decisions.

____ 18. It is hard to identify the leader(s) in our family.

____ 19. Family togetherness is very important.

____ 20. It is hard to tell who does which household chores.

PERSONALITY MEASURE

Here are some questions regarding the way you behave, feel and act. After each question, circle the response that represents your usual way of acting or feeling.

1.	Do you enjoy watching movies or TV shows that have a lot of violence?	YES	NO
2.	If you saw a crime being committed, would you most likely try to interfere?	YES	NO
3.	Do you feel that you are a safe driver?	YES	NO
4.	Are you the kind of person who would enjoy mountain climbing?	YES	NO
5.	Do you ever take chances or do dangerous things for the thrill of it?	YES	NO
6.	When driving, do you most often use seatbelts?	YES	NO
7.	Do you usually drive 75 or above when you are on an Interstate Highway?	YES	NO
8.	Have you ever experimented with dangerous drugs?	YES	NO
9.	Do you smoke?	YES	NO
10.	Would you like to or have you ever gone sky-diving or hang-gliding?	YES	NO
11.	Do you have regular physical checkups?	YES	NO
12.	Would you or have you ever gone scuba-diving?	YES	NO
13.	Have you ever driven a motorcycle?	YES	NO
14.	Do you own a motorcycle?	YES	NO
15.	Would you\Do you own a gun?	YES	NO
16.	Are you the kind of person who would enjoy exploring a cave?	YES	NO
17.	When driving, do most of the other cars on the road pass you?	YES	NO
18.	Would you like to pilot your own airplane?	YES	NO

19.	When driving, do you generally pass most of the other cars on the highway?	YES	NO
20.	Would you enjoy water skiing?	YES	NO
21.	Usually do you prefer to stick to brands you know are reliable, to trying new ones on the chance of finding something better?	YES	NO
22.	Do you quite enjoy taking risks?	YES	NO
23.	Would you enjoy parachute jumping?	YES	NO
24.	Would you prefer a job involving change, travel and variety even though it might be insecure?	YES	NO
25.	Do you think hitchhiking is too dangerous a way to travel?	YES	NO
26	Do you like diving off the highboard?	YES	NO
27.	Would you like to learn to fly an airplane?	YES	NO
28.	Do you welcome new and exciting experiences and sensations even though they are a little frightening and unconventional?	YES	NO
29.	Would you make quite sure you had another job before giving up your old one?	YES	NO
30.	Do you prefer traditional to new, unusual and sometimes discordant music?	YES	NO
31.	Do you find it hard to understand people who risk their necks climbing mountains?	YES	NO
32.	Do you sometimes like doing things that are a bit frightening?	YES	NO
33.	Would life with no danger in it be too dull for you?	YES	NO
34.	Generally, do you prefer to enter cold sea water gradually to diving straight in?	YES	NO
35.	Would you enjoy the sensation of skiing very fast down a high mountain slope?	YES	NO
36.	Would you like to go scuba-diving?	YES	NO

37.	Do you long for excitement?	YES	NO
38.	Do you feel at your best after taking a few drinks?	YES	NO
39.	Do you save regularly?	YES	NO
40.	Do you often buy things on impulse?	YES	NO
41.	Do you generally do and say things without stopping to think?	YES	NO
42.	Do you prefer quiet parties with good conversation to 'wild' uninhibited ones?	YES	NO
43.	Do you often get into a jam because you do things without asking?	YES	NO
44.	Would you often like to get 'high' (drinking liquor or smoking marijuana)?	YES	NO
45.	Are you an impulsive person?	YES	NO
46.	Do you usually think carefully before doing anything?	YES	NO
47.	Do you often do things on the spur of the moment?	YES	NO
48.	Do you often enjoy breaking rules you consider unreasonable?	YES	NO
49.	Are you rather cautious in 'unusual' situations?	YES	NO
50.	Do you mostly speak before thinking things out?	YES	NO
51.	Do you often get involved in things you later wish you could get out of?	YES	NO
52.	Do you get so 'carried away' by new and exciting ideas, that you never think of possible snags?	YES	NO
53.	Do you get bored more easily than most people, doing the same old things?	YES	NO
54.	Would you agree that planning things ahead takes the fun out of life?	YES	NO
55.	Do you need to use a lot of self-control to stay out of trouble?	YES	NO

56.	Would you agree that most everything enjoyable is illegal or immoral?	YES	NO
57.	Are you often surprised to people's reactions to what you do or say?	YES	NO
58.	Do you get extremely impatient if you are kept waiting by someone who is late?	YES	NO
59.	Do you think an evening out is more successful if it is unplanned or arranged at the last moment?	YES	NO
60.	Do you get very restless if you have to stay around home for any length of time?	YES	NO

APPENDIX B

MEAN SCORES FOR ITEMS ON FACES III

TABLE XIII

MEAN SCORES FOR ITEMS ON FACES III

ITEM	MEAN	ITEM	MEAN
1	3.55	11	3.50
2	2.60	12	1.97
3	3.88	13	3.06
4	2.52	14	2.89
5	2.45	15	2.87
6	2.63	16	2.59
7	3.18	17	2.92
8	2.76	18	2.11
9	2.62	19	3.49
10	2.49	20	2.30

APPENDIX C

FREQUENCY RESPONSES TO ITEMS ON FACES III

TABLE XIV

FREQUENCY RESPONSES TO
ITEMS ON FACES III

Item	Response Alternatives: Almost Never (%)	Once in a while (%)	Sometimes (%)	Frequently (%)	Almost Always (%)
1.	3.8	8.8	31.5	39.9	16.0
2.	16.1	25.0	44.1	12.3	2.5
3.	4.2	7.1	23.1	27.7	37.8
4.	33.8	16.9	24.9	12.2	12.2
5.	14.7	22.3	38.2	17.6	7.1
6.	27.7	19.3	23.1	22.3	7.6
7.	13.4	17.6	27.7	19.3	21.8
8.	16.4	20.2	40.3	17.6	5.5
9.	23.9	23.5	26.9	17.6	8.0
10.	33.3	20.3	20.7	15.6	10.1
11.	8.8	14.7	23.5	22.7	30.3
12.	41.8	29.5	21.1	4.6	3.0
13.	15.5	16.0	30.7	22.3	15.5
14.	17.6	16.0	35.7	21.4	9.2
15.	18.5	20.2	29.4	20.2	11.8
16.	27.7	26.5	17.2	16.0	12.6
17.	16.4	21.8	29.0	19.3	13.4
18.	46.6	16.4	23.1	6.7	7.1

TABLE XIV (Continued)

Item	Response Alternatives: Almost Never (%	Once in a while %	Sometimes %	Frequently %	Almost Always %)
19.	8.4	12.2	31.5	18.1	29.8
20.	39.9	18.5	22.7	9.7	9.2

APPENDIX D

FREQUENCY RESPONSES TO ITEMS ON RISK-TAKING MEASUREMENT

TABLE XV

FREQUENCY RESPONSES TO ITEMS ON RISK-TAKING MEASUREMENT

N=239

Item	YES %	NO %	Unanswered or Unusable response %
1.	56.1	43.1	.8
2.	59.8	38.1	2.1
3.	88.7	10.0	1.3
4.	55.2	43.9	.8
5.	64.4	35.1	.4
6.	40.2	59.0	.8
7.	38.9	59.8	1.3
8.	17.2	82.4	.4
9.	18.0	81.6	.4
10.	61.1	38.1	.8
11.	43.1	56.5	.4
12.	64.4	35.1	.4
13.	60.7	38.9	.4
14.	17.2	82.4	.4
15.	62.3	36.8	.8
16.	79.1	20.5	.4
17.	14.2	83.7	2.1
18.	64.9	34.7	.4
19.	60.3	37.7	2.1
20.	84.9	14.6	.4

TABLE XV (Continued)

Item	N=239 YES %	NO %	Unanswered or Unusuable response %
21.	54.4	44.4	1.3
22.	58.6	39.7	1.7
23.	60.3	38.9	.8
24.	48.5	50.6	.8
25.	92.9	5.9	1.3
26.	61.1	38.5	.4
27.	69.9	29.3	.8
28.	87.9	10.9	1.3
29.	87.4	11.7	.8
30.	34.3	64.0	1.7
31.	20.9	78.2	.8
32.	89.5	10.0	.4
33.	77.4	22.2	.4
34.	38.5	60.3	1.3
35.	66.9	32.6	.4
36.	74.9	24.7	.4
37.	82.0	16.7	1.3
38.	18.4	79.9	1.7
39.	54.4	44.8	.8
40.	59.0	39.7	1.3
41.	58.2	40.2	1.7
42.	51.5	46.4	2.1

TABLE XV (Continued)

Item	YES %	NO %	Unanswered or Unusable response %
		N=239	
43.	46.4	52.7	.8
44.	19.7	79.9	.4
45.	51.9	46.0	2.1
46.	59.4	37.2	3.3
47.	69.5	28.5	2.1
48.	54.4	44.4	1.3
49.	84.1	13.8	2.1
50.	49.0	49.0	2.1
51.	69.5	29.3	1.3
52.	51.0	46.9	2.1
53.	64.4	34.7	.8
54.	28.9	69.0	2.1
55.	32.2	66.9	.8
56.	15.5	83.3	1.3
57.	37.2	61.9	.8
58.	78.7	20.1	1.3
59.	47.3	50.2	2.5
60.	73.6	25.1	1.3

APPENDIX E

RESULTS FOR CHI-SQUARE ANALYSIS:

VENTURESOMENESS BY GENDER

TABLE XVI

RESULTS FOR CHI-SQUARE ANALYSIS (N=238, df=1): VENTURESOMENESS BY GENDER

Item Number	Item	X^2 Value	Prob
20.	Would you enjoy water skiing?	0.34	0.555
21.	Usually do you prefer to stick to brands you know are reliable to trying new ones?	0.05	0.814
22.	Do you quite enjoy taking risks?	4.92	0.027
23.	Would you enjoy parachute jumping?	12.49	0.000
24.	Would you prefer a job involving change, travel & variety even though it might be insecure?	1.13	0.287
25.	Do you think hitchhiking is too dangerous a way to travel?	5.83	0.016
26.	Do you like diving off the highboard?	18.45	0.000
27.	Would you like to learn to fly an airplane?	4.03	0.045
28.	Do you welcome new & exciting experiences & sensations even though frightening & unconventional?	0.31	0.579
29.	Would you make quite sure you had another job before giving up your old one?	1.96	0.162
30.	Do you prefer traditional to new, unusual & sometimes discordant music?	0.49	0.486
31.	Do you find it hard to understand people who risk their necks climbing mountains?	0.01	0.916

TABLE XVI (Continued)

Item Number	Item	X^2 Value	Prob
32.	Do you sometimes like doing things that are a bit frightening?	0.15	0.700
33.	Would life with no danger in it be too dull for you?	4.67	0.031
34.	Generally, do you prefer to enter cold sea water gradually to diving straight in?	8.02	0.005
35.	Would you enjoy the sensation of skiing very fast down a high mountain slope?	5.19	0.023
36.	Would you like to go scuba diving?	0.00	0.929

APPENDIX F

MEAN SCORES FOR COHESION AND ADAPTABILITY BY GENDER

TABLE XVII

MEAN SCORES FOR COHESION AND ADAPTABILITY BY GENDER

Measurement	Possible Scores	Males N=99	Females N=140	Total N=238
Cohesion Scale	10-50	31.5	32.1	31.85
Adaptability Scale	10-50	24.5	25.02	24.80

VITA

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Candidate for the Degree of

Doctor of Philosophy

Thesis: ADOLESCENTS' PERCEPTIONS OF FAMILY COHESION AND FAMILY ADAPTABILITY AND THEIR RELATIONSHIP TO GENDER AND RISK-TAKING BEHAVIORS

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