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**PREDICTING ADOLESCENT RISK-TAKING AND GOAL-ORIENTED BEHAVIORS:
AN ECOLOGICAL PERSPECTIVE**

by

JOSHUA TYNAN

DISSERTATION

Submitted to the Graduate School

of Wayne State University,

Detroit, Michigan

in partial fulfillment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

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Approved by:

Advisor

Date

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CHAPTER 1 Introduction

Adolescence is a key time for the development of future plans and goals. Cognitive development allows expansion of the ability to think through what the future holds. However, adolescence has also been well documented as a time in which individuals partake in the greatest amount of risk-taking behaviors. These behaviors often include having unsafe sex, drug and alcohol use, smoking and reckless driving. It is important to continue to study adolescent risk taking behaviors. The Youth Risk Behavior Survey (YRBS) developed by the Center for Disease Control and Prevention (2008) has indicated that adolescents partake in astounding amounts of risk-taking behaviors. The Survey tracked risk-taking behaviors in adolescents in high school. Some of the findings of the YRBS indicated the following: 47.8% of all students had engaged in sex at the time they were surveyed; 26% reported heavy drinking; 75% of all students surveyed had reported having had at least one alcoholic drink in their lifetime; 50.3% had indicated that they had tried cigarettes, and 35.5 had indicated that they had been in a physical fight in the past 12 months. These behaviors can lead to serious illness, injury, or death. On the other hand, goal oriented behaviors have been less well studied and has been selected to identify positive outcomes in adolescents, which will be reviewed throughout this paper.

For the purpose of the current study, goal oriented behaviors are described by academic involvement (e.g., grades) and involvement in after school activities (e.g., sports, academic enrichment clubs, and community activities such as church, community service, etc.). The purpose of the proposed study was to better understand which factors and combinations of factors most significantly predict both risk-taking behaviors and goal-oriented behaviors.

Research has been extensive in attempting to identify links between a variety of factors and risk-taking behaviors. These factors have ranged anywhere from biological (e.g., onset of

puberty and brain development; Price, 2005) to peers and family (Martin & Martin, 2000; Jaccard, Blanton, & Dodge, 2005) to low-self esteem (Trzesniewski et al., 2006). There is less research on predictors of goal-oriented behaviors. Past research on predictors of both adolescent risk-taking behaviors and goal-oriented behaviors has primarily isolated only one or a few factors at a time in an attempt to explain variance in outcomes. However, individuals are continuously interacting with a set of complex social relationships and within numerous life contexts. According to Bronfenbrenner (1989), the attributes of the person at a given time in his or her life are actually a combined function of the person's attributes and the environment over the course of that person's life up to that time.

Bronfenbrenner's (1977) Ecological Perspective of Human Development has four ecological systems. These systems constitute a model of interdependent, active structures. The systems are: microsystem, the mesosystem, the exosystem, and the macrosystem. They range from the proximal process, such as a mother child interaction in the family setting, to the more distal influences comprising broader social categories, such as government and culture (macrosystem). Each is contained in the other from the more immediate to the more remote. The nature of these systems is interactive; their influence operates in a reciprocal pattern. The relationship and the impact of each of these structures change as the individual develops. The infant is aware only of his or her immediate environment, the microsystem. However, for the adolescent who can reason beyond direct, personal experiences and think in terms of morals and ethics the exosystem and the macrosystem becomes increasingly important (Muuss, 1996). The microsystem, the mesosystem, and the exosystem are the three structures that will be primarily focused upon in the current study.

The microsystem of an adolescent involves a familiar social network of interpersonal relationships that involve direct face-to-face interactions. These interactions take place with people who have a relationship with the adolescent and who are influential in the adolescent's life. In turn, the adolescent influences those individuals in his or her microsystem. For example, the parent may influence the adolescent's behaviors but the adolescent may also influence the parent's behaviors. Some of the adolescent's microsystems may include family, peers, and church. Microsystems are continuously changing due to maturation and life experiences. What may be important to an individual at one point in his or her life may not necessarily be as important at another point in time. For example, the importance of parents may decline during adolescence while the importance of peers may increase (Muuss, 1996).

The mesosystem consists of the interaction of several microsystems. A basic ecological assumption is that what happens in a person's microsystem has an affect on what happens in his or her other microsystems (Muuss, 1996). Mesosystem interaction is the simultaneous multiple role participation of the adolescent as son or daughter, sibling, friend, student, part-time worker, teammate, youth group member; it places each individual in each microsystem in the proper context. With the individual adolescent playing one role (e.g., son/daughter, friend, sibling, etc.) it is implied that another person is playing the complementary role of father/mother, peer, teacher, coach, sister/brother, boss, etc. Bronfrenbrenner (1979) wrote that roles have the ability to alter how a person is treated, how they act, what they do, and how an individual may think and feel. This belief applies not only to the developing person but to other individuals in his or her world also. Roles have an altering effect on the developing adolescent as well as on all those with whom he or she interacts. If each microsystem shares similar values with each other then the adolescents' mesosystem is in alignment and can be a powerful reinforcement of positive

behaviors. However, if microsystems are in conflict with each other then problems may arise for the individual. For example, if parents' beliefs and church beliefs differ from the peer group's beliefs than the individual may experience conflict about which belief system to adhere to.

The exosystem is the larger community setting in which the adolescent lives. While the microsystem and mesosystem deal with proximal relationships and interactions, the exosystem deals with the more distal influences. The adolescent does not directly participate in the exosystem decision-making; however, the decisions made in the exosystem do have a direct and sometimes indirect influence on the life of the adolescent. Examples of the exosystem include an adolescent's parent's job determining where the adolescent lives and what items may be available to them based upon the parent's income. Another example is the board of education determining what school the adolescent will attend, what classes are available, and what extracurricular activities are available. In the media, an example is the showcasing of the latest fads (Bandura, 1977).

Other researchers have also developed multifactor models and some have explicitly focused on risk taking behaviors. For example, Prinstein, Boergers, and Spirito (2001) discussed a cumulative risk factor model on the effects of aggregated risk factors for adolescents. Their results suggested that the number of adolescents' risk factors, including peers' risk behaviors, family dysfunction, social acceptance, and depression, was strongly associated with the likelihood that adolescents engaged in risk taking behaviors. This model displayed an increased ability to identify concurrent health-risk behavior, with the probability of adolescents' risk behavior increasing twofold for each added risk factor. Clearly, a contextual model is an important guide for studying risk-taking behaviors.

The Role of Family in Goal Oriented and Health Compromising Behaviors

The family system is the most proximal influence on adolescent development and thus is an important microsystem level factor to consider. Several factors have been implicated in adolescent's behavior. The most prominent of these factors include parental communication with the adolescent, parenting style, parental involvement, and parental monitoring. While past literature has looked at each factor individually it is important to consider how they relate to adolescent behavior individually and collectively.

Parenting style. There are several factors to consider when thinking about parent-adolescent relationships. One of the key factors is parenting style. Parenting style is typically divided into four key components: Authoritative (warm and firm), authoritarian (firm but not warm), indulgent (warm but not firm), and neglectful (neither warm nor firm). These are comprised of combinations of responsiveness (warmth) and demandingness (control). Adolescents who were raised with an authoritative parenting style have been indicated to be more psychosocially mature, more academically competent, less prone to internalized distress, and less prone to externalizing problems than their peers who were raised with a different parenting style (Steinberg, Blatt-Eisengart, & Cauffman, 2006). Fletcher, Stienberg, and Williams-Wheeler (2004) reported that adolescents whose parents were warm, involved in their lives, and who inquired about their activities (e.g., where they were going and with whom, how do they spend their money, and what do they do with their free time) were less likely to engage in substance use. Additionally, adolescents whose parents provided higher levels of control over those activities were also less likely to engage in substance use. Similarly, these parenting practices had a protective effect in terms of decreased adolescent drug usage (e.g., smoking, alcohol, and marijuana use) (Macaulay, Griffin, Gronewold, Williams, & Botvin, 2005). Like

substance use, adolescents who are raised by parents who provide warmth and support are less likely to engage in risk taking behaviors (Leventhal & Brooks-Gunn, 2000; Barnow, Schuckit, Lucht, John, & Freyberger, 2002).

While certain parenting practices were indicated to decrease adolescent risk taking behaviors these same practices were indicated to show increased academic engagement. Lee, Daniels, and Kissinger (2006) reported that adolescents from authoritative families displayed higher math and reading scores than adolescents from authoritarian and neglectful parenting styles. Adolescents from the authoritarian and neglectful parenting styles displayed lower math and reading scores overall. Similarly, Attaway and Bry (2004) reported a negative relationship between African-American parents whose parenting style was authoritarian and their children's grades.

Parental monitoring. Research has not only indicated positive effects of warm, involved parents but it has also indicated the need for parents to monitor their adolescents' interactions with peers. Laird, Criss, Pettit, Dodge, and Bates (2008), reported a correlation between decreased levels of parents' knowledge of their child's peers and whereabouts and increased levels of risk behaviors and increased number of friends who are involved in risky behaviors. Similarly, Barnes, Hoffman, Welte, Farrell, and Dintcheff (2006), indicated that parental monitoring is an important factor in predicting alcohol abuse, drug use, and delinquency in adolescence. Likewise, they reported that parental monitoring is a deterrent to problem behaviors in older adolescence when problem behaviors are at high levels overall. Parental monitoring has not only been linked to decreased risk taking behaviors but it has also been linked to increased parent-adolescent enjoyment and increased time spent together (Laird, Pettit, Bates, & Dodge, 2003).

Parental monitoring has not only been linked to decreased delinquency in adolescents but it has also been associated with increased academic achievement. Henry, Merten, Plunkett, and Sands (2008) reported that Latino adolescents from immigrant families who saw their parents as having greater knowledge of their friends, whereabouts, and activities reported greater academic motivation and, in turn, showed higher GPA. Similarly, Annunziata, Hogue, Faw, and Liddle (2006) reported that when parental monitoring was high, within At-risk African American families, adolescents were more engaged in academics.

Parent communication. Research has indicated that parent-adolescent communication about life events is an important factor for adolescent development. Somers and Paulson (2000) reported that increased parent communication about sexuality has been indicated as a predictor of decreased risky behaviors such as sexual risk taking behaviors. Research has also indicated that adolescents engage in less sexually risky behaviors when their parents, who they perceive to have a certain level of expertise and trustworthiness, discuss the social and moral consequences of early sexual activity, as opposed to solely communicating the consequences of pregnancy and STDs (Guilamos-Ramos, Jaccard, Dittus, & Douris, 2006). Casual conversations between parents and adolescents about alcohol and drug use appear to happen more frequently than formalized conversations. Miller-Day (2002) reported that actual sit-down, parent-adolescent conversations about alcohol and drug use occurred less frequently than communication of intermittent messages mentioned by parents in a daily dialogue and that these messages from parents may be more important than actual sit-down talks. However, Miller-Day's research did not find statistically significant correlations between these types of talks and adolescent alcohol and drug use. It is important to understand the relations between parental communication and

adolescents' decision-making processes. Research on parental communication and adolescent academic achievement is needed.

Parental involvement. Parent involvement (commonly defined as helping with homework and involvement in extracurricular activities) is another important characteristic in looking at the parent-adolescent relationship and how that relationship may discourage risk-taking behaviors and support goal-oriented. Suldo, Mihalas, Powell, and French (2008) reported that increased parental involvement was positively associated with decreased adolescent substance use. Similarly, Bowman, Prelow and Weaver (2007) found that increased maternal involvement was related to decreased delinquency in female African-Americans; however, this relationship was not found for African-American males.

Parental involvement in their adolescents' schooling has not only been associated with lower amounts of risk taking behaviors but has also been associated with increased amounts of school engagement (Annunziata, Hogue, Faw, & Liddle, 2006) and academic competence (Steinberg, Blatt-Eisengart, & Cauffman, 2006). Increased family involvement has been positively linked to school engagement (Taylor & Lopez, 2005) and school engagement has been positively linked to lower levels of risk taking behaviors (Connell, Halpern-Felsher, Clifford, Crichlow, & Usinger, 1995). Hill et al. (2004) reported that adolescents whose parents were more involved in their academic achievements tended to do better academically and had higher levels of academic aspirations. Parental involvement in adolescents' academics appears to not only have a short-term effect but it appears to have a longer reaching effect. According to a study by Keith et al. (1998), adolescents whose parents were academically involved in the eighth grade continued to display higher academic achievement in the tenth grade than those who did not. This was true for both boys and girls. This path between variables needs further exploration.

Summary of parenting predictors. Thus far, much of this literature review has focused on studies considering the contribution that individual parenting predictors make toward the understanding of risk-taking behaviors and goal-oriented behaviors. However, it is likely that a combination of factors is interacting and thus must be studied simultaneously. There have been some studies that have examined combinations of these parenting variables; for example, Fletcher, Steineberg, and Williams-Wheeler (2004), looked at parenting style and parental monitoring and its association with adolescent delinquency and drug use. Mounts (2002) examined the association between parental practices, adolescents' peers, and adolescent substance use, but did not study adolescents' involvement and general parental communication. Similarly, Henrich, Brookmeyer, Shrier, and Shahar (2006) examined parental communication, peer supportiveness, and adolescent sexual activity; however, they did not take into account other risk taking behaviors such as alcohol and drug use. While there have been studies that looked at multiple parenting variables, there has not been research that has included all of the aforementioned variables to try and fully understand how parents influence adolescence risk-taking and goal-oriented behaviors. The goal of the current study was to expand the set of parenting variables studied for their roles in risk-taking behaviors and goal-oriented behaviors.

The Role of Peers in Health Compromising and Goal Oriented Behaviors

Peers have frequently been linked to being a powerful predictor of adolescent risk behaviors. One author has gone as far as indicating that 50% of the variance in adolescent personality is genetic in origin and the remaining 50% primarily reflects the influence of peers (Harris, 1998). Research has indicated that adolescents whose best friends are involved in risk taking behaviors such as smoking, drinking, drug use (Bahr, Hoffman, & Yang, 2005), deviant behaviors (Prinstein, Boergers, & Spirito, 2001), and the initiation of sex and oral sex (Prinstein,

Mead, & Cohen, 2003) are more likely to engage in risk taking behaviors than individuals who do not. However, Spoth, Redmond, Hockaday, and Yoo (1996) have indicated that adolescents' affiliation with goal-oriented peers is predictive of abstinence from alcohol use. Similarly, Prinstein et al. (2001) indicated that adolescents with high proportions of friends who engaged in goal oriented behaviors (e.g., assisting troubled teens, involvement in school activities, etc.) were less likely to engage in violent and substance use behaviors themselves.

Goal-oriented peers are not only associated with decreased delinquent behaviors but are also associated with increased academic success. LeCroy and Krysik (2008) reported a positive association with pro-academic peers and higher grade point average and greater attachment to school in Hispanic adolescents. Not only do peers with goal-oriented friends display increased attachment to school but also adolescents who engage in goal-oriented behaviors (e.g., academic clubs, sports, etc.) tend to seek out other goal-oriented peers where adolescents who do not participate in goal-oriented behaviors do not display the same support seeking behaviors (Fredricks & Eccles, 2005). Jaccard et al. (2005) also reported that their data did not support the notion of pervasive peer influence of an adolescent's closest friend with respect to health-risk behavior. They found that when it comes to risky behaviors, such as binge drinking and sexual intercourse, the influence of a close friend or other peers may be less important than commonly thought. The effects that they had found were congruent with the idea that peer influence is just one of a number of factors that contribute to adolescent risk taking behaviors.

The Role of Religion in Goal Oriented and Health Compromising Behaviors

Religion is another key socialization agent for many adolescents (Wallace & Williams, 1997). Religion may be associated with adolescent choices, both through a direct mesosystem level and potentially through both an exosystem or macrosystem level. Direct involvement in

religion at a mesosystem level is of focus in the current proposal. King and Furrow (2004) found that when adolescents rated religion as more important to them and they attended church more frequently they had increased moral outcomes this was suggested by the authors to be due, at least in part, to trusting interactions with adults, friends, and parents who share similar views. They also reported that religious involvement might aid in positive development through the potentially increased social resources (e.g., interested adults) available to adolescents. Rostosky et al. (2003) reported that religiosity (e.g., church attendance, attendance of church youth activities, and the overall view of religious importance) indirectly affects sexual initiation through one's sexual ideology or belief system founded on anticipated negative consequences from engaging in sexual intercourse. More specifically, the effects of religiosity on the odds of sexual initiation are slightly reduced after accounting for adolescents' beliefs that engaging in sexual intercourse will lead to negative emotional consequences such as guilt, loss of respect from one's partner, and/or the anticipation that having sex will emotionally upset one's mother.

Research on religion has indicated that many adolescents believe in God and are actively involved in some type of church affiliation. Religious beliefs have been affiliated with several pro-social behaviors including increased academic achievement (Regnerus & Elder, 2003), increased locus of control (Furrow & Wagener, 2000), better nutrition, exercise, and rest (Wallace & Forman, 1998). Sinha, Cnaan, and Gelles (2007) reported that adolescents who are more religious are less likely than their peers to engage in risk taking behaviors (e.g., carrying weapons, getting into fights, drinking and driving, and drug use). Involvement in religion has also been linked to increased academic achievement in sample of emerging adult black males (Byfield, 2008). Specifically, of those who are academically successful, living both in the

United Kingdom and the United States, a common factor was that most of the men were religious and believed in God.

The Role of Mass Media in Goal Oriented and Health Compromising Behaviors

According to Arnett (1995), media has many uses for adolescents such as entertainment, identity formation, coping, and culture identification. Media can also be a means for adolescents to disengage from stress, anxiety, and negative emotions (Larson, 1995). Brown and Witherspoon (2002) reported that 8 to 18 year olds spend an average 6 to 7 hours a day with some form of mass media, whether it is television, music, magazines, or the Internet. Adolescents use media for many reasons but with this much time devoted to media consumption it is important to understand how media may be related to adolescents' goal oriented and risk taking behaviors.

It is likely that the relations between media and goal-oriented behavior and risk-taking behavior are bidirectional nonetheless media consumption has been linked several risk taking behaviors such as greater sexual experience (Ward & Friedman, 2006), obesity (Vandewater, Shim, & Caplovitz, 2004), delinquency (Kremar & Greene, 2000), and adolescent females' poorer self-perceptions (Botte, 2000). In a recent longitudinal survey, Brown et al. (2006) reported that exposure to sexual content in mass media (music, movies, television, and magazines) accelerates Caucasian adolescents' sexual activity and increases their risk of engaging in early sexual intercourse. Similarly, Somers and Tynan (2006) reported that Caucasian adolescents' who were more exposed to television of a sexual nature were more sexually active and had a greater number of sexual partners. According to Kalodner (1997), magazines geared toward teen girls have been associated with body dissatisfaction. Television

has also been linked to obesity (Vandewater, Shim, & Caplovitz, 2004). With these findings on sexual activity, obesity, violence, etc. it is important to understand to what extent the mass media is related to adolescents' goal oriented and risk taking behaviors. While the mass media as a whole (music, movies/television, magazines, and internet) has been associated with risk taking behaviors there is a need for research on the relations between media exposure and goal oriented behaviors.

Summary and limitations of past research

Discussed throughout this chapter have been many studies that have examined individual relationships between various life contexts (e.g., family, peers, religion, and media) and both risk-taking and goal-oriented behavior. However, it is more likely that a larger combination of factors need simultaneous exploration in order to better understand variance in risk taking and goal-oriented outcomes. Indeed, as described earlier, there have been some studies that have utilized multi-factor models and hypotheses. However, the context and variables in this study extend on those in past studies. While past research has touched on various individual and some combinations of components that are likely related to adolescent risk taking and goal oriented behaviors, none have encompassed the multiple variables that this study will explore. Additionally, risk-taking behaviors tend to be of greater focus and research is needed that also considered goal-oriented outcome behaviors.

Purpose of the Current Study

Therefore, the purpose of the current study was to explore several key contexts that adolescents are concurrently exposed to, including peer relationships, family relationships, religion, and media. These contexts are part of the various systems of Bronfenbrenners' bioecological theory (2005). The outcomes of interest were risk-taking behaviors (e.g.,

unprotected sexual activity, smoking, drinking, truancy, speeding) and goal-oriented behaviors (e.g., academic achievement and involvement in teams, clubs).

It was hypothesized that adolescents would display greater risk-taking behaviors when pressured by peers and when they perceive that their peers are participating in similar activities. Within the family domain it was hypothesized that familial communication about risky behaviors and goal-oriented behaviors (e.g., sex, alcohol and drug use, and career aspirations) would be related to less risk-taking behaviors and more goal-oriented behaviors. Also, within the family domain it was hypothesized that adolescents whose parents are actively involved in their life show decreased amount of risk taking behaviors in comparison to adolescents whose parents are not as involved. It was hypothesized that adolescents who believe in a higher power and actively participate in a religion display less risk-taking behavior and more goal-oriented behaviors than adolescents who do not. Within the media domain it was hypothesized that adolescents who spend less time exposed to mass media display less risk-taking behaviors.

Ultimately the purpose of this study was to compile, through a multifactor model, the major influences of adolescent behavior in one comprehensive study, and examine their individual and combined contributions to behavior. This study also would be a mechanism for identifying correlational attributes within each domain that may be more strongly related to goal-oriented behavior in adolescents. This study was expected to fill the gap left by other multifactor model literature and answer questions that will significantly add to the current literature base.

Research Questions

Based on the above literature review and perceived limitations of prior research, the following research questions were posed (all research questions are included in Appendix A):

- 1) What are the relations between parenting behaviors (parenting style, monitoring, involvement, and communication) and adolescent goal-oriented behaviors and risk taking behaviors?
- 2) Is affiliation with peers who are risk-takers or goal-oriented related to adolescents' own risk-taking and goal-oriented behaviors?
- 3) What are the relations between religiosity (attendance, involvement, and importance) and adolescent risk-taking and goal-oriented behavior?
- 4) What are the relations between media consumption and adolescent risk-taking behavior and goal-oriented behaviors?
- 5) How much variance in risk-taking behaviors and goal-oriented behaviors is explained by parent, peers, religion, and media?

It was expected, based on the aforementioned theory and research, that the individual adolescent variables and the environmental variables proposed would explain a statistically significant proportion of variance in risk-taking behaviors and goal-oriented behaviors. Adolescents whose parents have authoritative traits and who are involved, who communicate, and who monitor their adolescents' activities were expected to engage in less risk-taking behavior and more goal-oriented behavior. Adolescents whose peers are involved in goal-oriented behaviors would display more goal-oriented behaviors. Adolescents who display religious beliefs were expected to engage in less risk-taking behavior and more goal-oriented behavior. Also, adolescents who had less exposure to risky television were expected to display

more goal-oriented behaviors and less risk-taking behaviors. However, it was expected that combining these individual and environmental factors (microsystems, mesosystems, and exosystem) would explain variance in goal-oriented behaviors and risk-taking behaviors more comprehensively. Finally, it was expected that the environmental factors of overall peer social support, parental academic support, religion, and media would significantly contribute to variance in risk-taking behaviors and goal-oriented behaviors.

CHAPTER 2

Literature Review

Overview

Adolescence is a transition from childhood to adulthood. During this phase of development, the individual goes through numerous transformations. These transformations happen in a multitude of ways. Two key components of adolescent development include biological transformations and cognitive development. Biological changes within the adolescent include changes in growth and sexual maturation driven by changes in hormonal levels (Susman & Rogol, 2004). Changes in cognitive development are shown by the way in which adolescents' reason and process information (Keating, 2004). During these developmental transitions, it is important that the adolescent has social support systems (e.g., parents and peers) and exposure to environmental factors (e.g., religion and media) that provide positive feedback and opportunities to ensure the adolescent transitions into adulthood with limited cognitive interruptions.

As stated, adjustment through adolescence is multi-faceted, and it includes several interpersonal aspects such as parents and peers. Adjustment through this time frame is also involves exposure to environmental factors such as religion and media exposure. The most comprehensive way to examine these is through an ecological model, such as Bronfenbrenner's bioecological theory (1977), which emphasizes the interactions between interpersonal relationships and environmental factors. This proposed study is designed to examine several contexts of adolescents' lives including microsystems (interpersonal relationships of parents and peers), macrosystems (interactions between those relationships), and exosystems (religion and media exposure) and intrapersonal aspects of adolescents' lives including risk-taking behaviors and goal-oriented behaviors.

Bronfenbrenner's Bioecological Theory

Urie Bronfenbrenner's bioecological systems theory was developed to address the need for a broader perspective on human development that expounded upon contrived situations in a laboratory and naturalistic observations. Specifically, Bronfenbrenner sought to expand upon and to form a union of both the naturalistic and the experimental approaches to research (Bronfenbrenner, 1977). Up until Bronfenbrenner's theory, much of the research had been limited to a single setting, whether in a laboratory or in a naturalistic setting. Bronfenbrenner has stated that there is a reciprocal interaction between the individual and their environment (e.g., family, peers, and community) that directs development in a bidirectional manner (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 1998). The belief of the bioecological systems approach is that examination of the individual within multiple contexts, rather than in a single context such as a laboratory setting, helps to better understand their development.

There are four broad layers of environment within which the person interacts. These are the *microsystem*, *mesosystem*, *exosystem*, and *macrosystem* (Bronfenbrenner, 1977). Bronfenbrenner (2005) defines a microsystem as a pattern of activities, roles, and interpersonal relations experienced by the emerging individual in any given face-to-face setting that contains other individuals. When looking at who the adolescent has direct interaction with, it is important to not only take into account their relationship and social role, but also to identify that individual's temperament, personality, and/or beliefs. The adolescent's family is the primary microsystem, followed by peers in school clubs, sports, and church (Muus, 1996). When looking at how adolescents' parents influence their child's decision making, it is important to consider not only a broad generalization of the parenting process, but also to take a more definitive approach. It is important to take a more microscopic look at the category of parenting by

breaking it down into subcategories such as parenting style, parental monitoring, communication, and involvement.

Several microsystems interacting constitute a mesosystem. Bronfenbrenner (2005) defines a mesosystem as the interactions taking place between two or more settings containing the emerging individual (e.g., the relations between home and school, school and workplace). The mesosystem identifies the multiple roles that an individual may play. For the adolescent these roles may include son/daughter, friend, student, teammate, and youth group member. When the adolescent is in one role (e.g., son/daughter, friend, student, athlete, etc.), then it is assumed that another individual must be playing the corresponding role of father/mother, peer, teacher, coach, pastor, etc. Similar to the microsystem, the mesosystem focuses on interpersonal relationships but focuses particular attention on the interactions among different microsystems (Muus, 1996). If each of the different microsystems shares similar values then the adolescents' mesosystem is in harmony and this can be a powerful reinforcer for risk-taking or goal-oriented behaviors. However, if microsystems are in conflict with each other, then problems may occur for the adolescent.

The exosystem constitutes a more distal environmental influence. While the microsystem and mesosystem deal with interpersonal relationships and intertwined interactions, the exosystem deals with the more broad community. The decisions made in the exosystem can have a direct affect on the adolescent even though the adolescent does not directly affect the decisions made within the exosystem. The exosystem may hinder or enhance the quality of the adolescent's microsystems and mesosystems by affecting what an adolescent can or cannot do. Parents' workplace conditions, salary, and stability may have a significant impact on the environment in which the adolescent lives. Another facet of the adolescent's exosystem is media consumption.

The content of what is viewed and what it suggests is beyond the adolescent's control. To what extent this affects the adolescent's decision making is an important aspect to study. Media consumption also affects how families interact. Muus (1996) implies that television watching inhibits family leisure activities such as conversation, games, and even arguments, all of which are likely to enhance development.

The outer layer in Bronfenbrenner's model is the macrosystem. While the macrosystem does not directly affect the adolescent's daily functioning, it does have an impact upon the society within which the individual lives, and therefore has an impact upon the development of the individual (Muus, 1996). Bronfenbrenner (2005) indicated that the macrosystem identifies how the characteristics within a given culture, such as political systems (e.g., democratic or communist), overarching religious beliefs (e.g., Christian society or Muslim society), and opportunity structures (e.g., industrial society or agricultural society), affect the characteristics of the microsystem, mesosystem, and exosystems. Although an important part of the influences on human development, the macrosystem is not proposed to be examined in the current study.

In addition to the four broad layers of environment with which the person interacts, the bioecological theory involves five research models. These include *social address model*, *personal attribute model*, *person-context model*, *process-person-context model*, and *chronosystem model* (Muus, 1996, Bronfenbrenner, 2005). Both the social address model and personal attribute model are concerned with the most basic forms of looking at the individual. The social address model investigates the developmental outcome as a result of living in different environments. Common social address categories include: social class, family size, birth order, sex, nationality, religious affiliations, etc. This model works under the premise that the developmental impact of any given social address on one individual would be the same for

all individuals living within that address, irrespective of their biological or psychological makeup (Bronfenbrenner, 2005).

Similar to how the social address model accounts only for environmental factors, the personal attribute model accounts only for personal factors. The personal attribute model assumes that particular personal characteristics that are present early in life will have the same consequences for later development regardless of the environment in which later development takes place. An example of the personal attribute model would be intelligence. In this model, development becomes a function of personal attributes (e.g., intelligence) that a person had at an earlier age (Muus, 1996).

The person-context model takes into account the characteristics of both the person and the environment. While broader than the personal attributes model and social address model, the person-context model still only gets at surface level attributes. An example of the person-context model is the probability of a mother giving birth to a low birth weight baby increases when the mother lives in a low social economic area, is unmarried, has less than a high school education and is an African-American teenager. While these factors provide useful information, they do not account for situations where two women, who have the same variables mentioned, but one gives birth to a normal birth weight baby and the other to a low birth weight baby (Muus, 1996).

While the person-context model does not account for the variation among outcomes in scenarios such as the aforementioned, the process-person-context model does. The process-person-context model identifies that aspects of both the environment and the individual together affect developmental processes and outcomes. Drawing upon the low-birth weight example, individuals who are born with a low birth weight are at risk for developmental risks in a multitude of areas that include intellectual development, ability to use intellectual potential,

behavior problems, and school problems. However, research has indicated that the potential risks associated with low birth weight may be greatly reduced by the quality of maternal parenting (Muus, 1996). The difference between this model and the person-context model is the process-person-context model does not only look at attributes of the person and the environment but it also takes into account the context in which those attributes are applied.

In addition to taking into account the context, the person, and the environment the bioecological theory of development includes time. This is done through the chronosystems model. The chronosystems model works under the premise that developmental changes can be triggered by certain life events or experiences. These life events can be caused through a variety of different aspects whether environmental (e.g., birth of a sibling, entering school, divorce, etc.) or within the individual (e.g., puberty, illness, etc.). Certain life events or experiences can change a preexisting relationship between an individual and the environment, creating a situation that may prompt developmental change within the chronosystems model (Bronfenbrenner, 2005).

Each of the five mentioned models (social address model, personal attribute model, person-context model, process-person-context model, and chronosystem model) had influence upon the development of the proposed study because these models look at the interaction among variables of the individual such as age, gender, grade level and environmental outcomes. These models reflect components within the microsystems, mesosystems, and exosystems of the proposed study.

Discussion and definition of the bioecological model is not enough to drive a study. It is also important to identify how the theory has driven research. A study by Suldo, Mihalas, Powell, and French (2008) sought to identify ecological predictors of risk-taking behaviors in middle school students. An approach of identifying the influence of one microsystem upon

another microsystem was taken. The researchers had hypothesized adolescents' relationships with their parents and teachers indirectly influenced adolescents' decisions to use substances. The premise was that poor adult relationships influenced adolescents' decisions regarding negative peer selection and that, in turn, influenced their decision to use substances because their negative peer selection used substances. Participants included 451 middle school students (grades 6, 7, and 8) from a high social economic status community in the United States. The participants completed self-report measures of authoritative parenting, perceived social support from teachers, affiliation with rule-breaking and substance-using peers, and frequency of alcohol, cigarette, and drug use.

Results indicated that there was a large direct effect between affiliation with deviant peers and adolescent substance use. Adolescents' perceptions of authoritative parenting and teacher support on students' substance accounted for thirty-one percent of reported adolescent affiliation with risk-taking peers. Authoritative parenting had a moderate indirect effect on adolescent substance use while the indirect effect of teacher support on adolescents substance use was weak. An important aspect of the results of the study by Suldo et al. (2008) is that of all the substances measured (drank alcohol, gotten drunk, smoked cigarettes, used marijuana, used inhalants, used prescription drugs, and used over-the-counter medications) less than ten percent of the total sample reported using any substances in the past month and, of that percentage, it was primarily eighth graders use of alcohol. Considering the low levels of adolescent substance use and the moderate reported influence of adolescents' perceptions of parenting styles on association with risk-taking peers, further research is warranted to identify more specific aspects of influences upon adolescents' association with risk-taking peers and adolescents' substance use.

The following study by Benner, Graham and Mistry (2008) sought to apply the bioecological model to identify factors that are associated with adolescent goal-oriented behavior. Specifically, researchers examined the links among family and school characteristics, adolescent perceptions of parent–adolescent interactions, adolescent perceptions of school belonging, school climate, adolescent school engagement, and academic performance. Participants were an urban sample of 1,120 9th-grade students who participated in a longitudinal study of social adjustment from sixth to tenth grade. Of the students, ninety percent reported that they were ethnic minorities. Data was gathered through student surveys, teacher questionnaires, and examination of school records for grades.

Structural equation modeling (SEM) was used to test relations among the study constructs. The results of the analyses of the family microsystem reported that living in a two-parent family was associated with greater family support for academics and family monitoring. Living with both parents predicted more school engagement to the degree that adolescents perceived their parents helped them with their schoolwork. The higher the mother's education level, the greater the family support for academics. Increased levels of family support for academics were related to greater self-reported school engagement by the adolescents. Also having other relatives in the home was related to higher levels of family monitoring. However, higher perceived family monitoring was negatively related to adolescent-reported school engagement.

Results of the school microsystem analyses indicated that adolescent and teacher reported engagement were predictive of adolescents' grades at the end of the school year. Multiple factors were associated with school achievement. School diversity, school-wide achievement, school enrollment, and school social economic status predicted perceptions of school processes

(academic and general school climate). These school processes predicted school engagement as rated by both adolescents and their teachers. Both student and teacher engagement, in turn, predicted adolescents' GPA at the end of the school year.

The researchers also explored the extent to which characteristics within one microsystem might affect processes occurring within the other microsystem (the mesosystem influences). Results suggested that school characteristics did not influence family processes (parental monitoring and support for academics), nor did family characteristics generally influence processes within schools (academic and general school climate). The only significant mesosystem influences were the direct effects of other relatives in the home on perceived academic climate and school enrollment on family monitoring.

This study by Benner et al. (2008) examined the effects of structural characteristics of families and schools and explored their effects on adolescents' school engagement and later school performance. It included structural characteristics (e.g., Mother education and school achievement) and processes jointly (e.g., parental monitoring and school climate), as well as independent examination of structural characteristics and processes in two separate microsystems—families and schools. They identified that the structural characteristics of families and schools influenced students' proximal (school engagement) and distal (GPA) outcomes. However, while schools and families represent but only two microsystems in which adolescents are embedded, what the researchers failed to include were other pertinent microsystems, such as peers. This study also sought to identify a relationship between two microsystems (family and school), but did not identify broader influences such as religiosity and media.

Following is a detailed literature review on each of the sets of predictors proposed for inclusion in the current study: Family (parenting style, parental monitoring, parental communication, and parental involvement), peer involvement, religious involvement, and mass media consumption. Each section is structured so that studies on the relations between each particular variable and risk-taking behavior are covered first, followed by studies on the relations between each variable and goal-oriented behavior.

The Role of Family in Goal Oriented and Health Compromising Behaviors

The study of the relationships between the adolescent and his/her parents is an often studied topic. The relationship between the adolescent and his/her parents is also a key topic within Bronfenbrenner's bioecological model. This relationship can be seen as the most proximal in the adolescent's life that later has an influence on all other microsystems. Thus, when looking at the bioecological model and adolescence it is important to look at the adolescent's relationship with his/her parents. Several parenting factors have been implicated in adolescents' behavior. The most prominent of these factors include parenting style, parental monitoring, parental communication, and parental involvement. While past literature has looked at each factor individually it is important to consider how they relate to adolescent behavior not only individually but also collectively.

Parenting style. Parenting style is a highly studied aspect of parenting. The four common styles of parenting are: Authoritative, authoritarian, indulgent, and neglectful. These four styles are comprised of various combinations of two dimensions: responsiveness (warmth) and demandingness (control). The authoritative parenting style has been consistently associated with decreased levels of adolescent risk-taking behaviors and increased levels of goal-oriented behaviors, while indulgent and neglectful parenting styles have been associated with increased

levels of risk-taking behaviors and decreased goal-oriented behaviors. Each parenting style will be reviewed throughout the following sections.

Parents who are found to use an authoritative parenting style give priority to meeting and facilitating the adolescent's needs and abilities while at the same time applying age appropriate demands on them (Collins & Laursen, 2004). Essentially, authoritative parents are warm but firm. They set expectations for their child's behaviors that are consistent with the child's developing needs and abilities. Authoritative parents place a high value on the development of autonomy and self-direction while at the same time assuming responsibility for their child's behavior. They parent in a rational, issue-oriented fashion. When matters of discipline arise, these parents often engage with their child in discussion and explanations of their behavior (Steinberg, 2002).

A study by Steinberg, Blatt-Eisengart, and Cauffman (2006) was conducted in an effort to identify patterns of competence and adjustment among adolescent, juvenile offenders from authoritative, authoritarian, indulgent, and neglectful homes. Results indicated that adolescents who were raised with an authoritative parenting style were more likely to be socially mature, more academically competent, less prone to internal discomfort, and less prone to externalizing problems than their peers who were raised with a different parenting style. Additionally, Fletcher, Stienberg, and Williams-Wheeler (2004) reported that adolescents whose parents took an authoritative parenting approach were less likely to engage in substance use. Adolescents who are raised by authoritative households are less likely to engage in risk-taking behaviors in general (Leventhal & Brooks-Gunn, 2000; Barnow, Schuckit, Lucht, John, & Freyberger, 2002).

Unlike authoritative parents, authoritarian parents place a high value on obedience and conformity. The way discipline is applied is more punitive, absolute and forceful than

authoritative parents. Engagement in discussion and explanation with their child over matters of discipline is not common in authoritarian homes, because the belief of authoritarian parents is that the child should accept, without question, the rules and standards established by the parents simply because they are the parent. These parents tend to discourage independent behavior. They are intrusive and place a good deal of importance on restricting the child's autonomy. They believe adolescents should obey parents simply because they are parents, and therefore are unconditionally right. (Steinberg, 2002; Dusek, 1996).

A study by Bronte-Tinkew, Moore, and Carrano (2006) examined the father's parenting style as a predictor of adolescents' initiation of risk-taking behaviors. The authors used data from the National Longitudinal Study of Youth 1997, rounds 1 through 3, among two-parent homes. The sample included 5,245 adolescents. Adolescents' first initiation of risk taking behaviors was assessed through a large variety of different behaviors. Authoritative and authoritarian parenting styles were focused upon.

Results indicated that within the three-year sample, initiation of alcohol and initiation of marijuana use were the two most common risk-taking behaviors reported, fifty percent and twenty percent of the sample respectively had reported use. Overall, the parent-child relationship was reported to decline as the adolescent got older. However, compared to fathers' who practiced authoritarian parenting style, adolescents' who reported their father as having an authoritative parenting style were significantly more at risk for initiation of risk-taking behaviors other than substance use (e.g., carry a hand gun, belonging to a gang, destruction of property, stealing, running away, etc.). When looking solely at substance use, the risk of first use is mildly significant for adolescents with authoritarian fathers compared with adolescents with authoritative fathers.

Unlike authoritarian parenting style, indulgent parenting style takes a more accepting and passive approach toward discipline. While these parents are warm and supportive, they place relatively few demands on their child's behavior, giving the child a high degree of freedom to act as he or she wishes. These parents are, also, more likely to believe that limit setting is an intrusion on their child's freedom and that limit setting may interfere with the child's development. Instead of actively monitoring and adjusting their child's behavior, indulgent parents are more likely to view themselves as resources that the child may or may not draw upon (Steinberg, 2002; Dusek, 1996). A study by Steinberg et al. (2006) reported that adolescent juvenile offenders, whose parents were indulgent, were less academically competent and more prone to delinquency than those raised in authoritative homes. Additionally, adolescents from indulgent homes scored lower on several measures of psychosocial maturity.

Neglectful parents try to do whatever is necessary to minimize the time and energy that they must devote to interacting with their child. They know little about their child's activities or where they are when they are out of the home, show little interest in their child's experiences at school or with friends, rarely communicate with their child, and rarely consider their child's opinion when making decisions. Rather than raising their child according to a set of ideas about what is good for their child's development, like the aforementioned parenting styles, neglectful parents are primarily concerned with their own needs and interests. (Stienberg, 2002; Dusek, 1996).

Hoeve et al. (2008) investigated paths of adolescent delinquent development using the Pittsburgh Youth Study and examined the extent to which these different paths are predicted by parenting styles. The sample consisted of 503 participants. The results of the study associated

neglectful parenting style with an earlier age of onset of delinquency and increased seriousness of delinquency compared to other parenting styles.

Certain parenting styles have also been indicated to not only decrease risk-taking behaviors but to also show increased goal-oriented behavior. Lee, Daniels, and Kissinger (2006) reported that adolescents from authoritative families displayed higher math and reading scores than adolescents from authoritarian and neglectful parenting styles. Adolescents from the authoritarian and neglectful parenting styles displayed lower math and reading scores overall. Similarly, Attaway and Bry (2004) reported a negative relationship between African-American parents whose parenting style was authoritarian and their children's grades.

Parental monitoring. While research has indicated that authoritative parenting has a positive influence on adolescent development in many aspects, it is also important to identify more specific aspects of parenting. One such aspect is parental monitoring of their child's peer interactions, whereabouts, and activities. Decreased parental monitoring has been associated with a variety of negative outcomes. For example, Laird et al. (2008) reported a correlation between decreased levels of parents' knowledge of their child's peers and whereabouts and increased levels of risk-taking behaviors and an increased number of friends who are involved in risk-taking behaviors. Similarly, Barnes, Hoffman, Welte, Farrell, and Dintcheff (2006) indicated that parental monitoring is an important factor in predicting alcohol abuse, drug use, and delinquency in adolescence. Likewise, they reported that parental monitoring is a deterrent to risk-taking behaviors in older adolescence when risk-taking behaviors are at high levels overall. Parental monitoring has not only been linked to decreased risk-taking behaviors, but it has also been linked to increased parent-adolescent enjoyment and increased time spent together (Laird, Pettit, Bates, and Dodge, 2003).

While increased parental monitoring has been linked to lower levels of adolescent risk-taking behaviors, the results on the relations between parental monitoring and adolescent academic achievement have been less clear. A study by Henry, Merten, Plunkett, and Sands (2008) reported that Latino adolescents from immigrant families who saw their parents as having greater knowledge of their friends, whereabouts, and activities reported greater academic motivation and, in turn, showed higher GPA. Similarly, Annunziata, Hogue, Faw, and Liddle (2006) reported that when parental monitoring was high, within At-risk African American families, adolescents were more engaged in academics. However, higher perceived family monitoring was negatively related to adolescent-reported school engagement, suggesting that adolescents who felt their parents kept close tabs on their whereabouts were less invested in school work (Benner, Graham, and Ministry, 2008).

A study by Jacobson and Crockett (2000) applied an ecological perspective to their study of parental monitoring and adolescent adjustment. The study also examined not only risk taking behaviors but also goal-oriented behaviors congruently. The researchers examined whether higher levels of parental monitoring were associated with higher grade point averages in adolescents, lower levels of adolescent depression and lower levels of adolescent sexual activity and risk-taking behaviors, and whether these relations were moderated by gender, grade level, or mothers' work status. Participants were 424 adolescents in from a rural school district in central Pennsylvania. The sample included 197 boys and 227 girls in Grades 7 through 12. All adolescents were Caucasian and came from predominantly lower to middle class social economic status. A self-report questionnaire was administered in three sections over 3 separate days in school.

Results of the study indicated that higher levels of parental monitoring, two parent homes and higher levels of social economic status were associated with decreased risk-taking behaviors, decreased sexual activity, decreased depression, and increased grade point averages. On average, girls reported higher levels of parental monitoring than boys. However, among girls, the relation between parental monitoring and risk-taking behaviors was strongest for the youngest adolescents and weakest among the oldest adolescents. Among boys, the opposite was true. The relationships between monitoring and risk-taking behaviors were strongest among the oldest adolescents and weakest among the youngest adolescents. Parental monitoring was significantly associated with depressed mood, with higher levels of monitoring associated with lower levels of depressed mood. Higher levels of monitoring were associated with less sexual activity. Also, higher parental monitoring was significantly associated with less sexual activity among both boys and girls whose mothers worked full time, among boys (but not girls) whose mothers worked part time, and among girls (but not boys) whose mothers did not work.

While the study by Jacobson and Crockett (2000) reported that parental monitoring, two-parent homes, and social economic status were associated with decreased risk-taking behaviors, decreased sexual activity, decreased depression, and increased grade point averages, they looked solely at one microsystem and certain aspects of an adolescents' exosystem. Further research is needed to understand how various microsystems interact in an effort to more fully understand the adolescent's development and influences on that development. Continued research on parental monitoring and its relationship to adolescent academic achievement is also needed.

Parent communication. Another important aspect of parenting involves communication between the parent and the adolescent. While several studies have discussed the benefits of increased parent-adolescent communication, it is important to understand what is meant by

parent-adolescent communication and understand how it differs from parent-child communication and parent-adult child communication. As adolescents' evolve from childhood they seek out more autonomy. This does not mean that communication has to cease but rather it needs to shift. Laursen and Collins (2004) reported that adolescents and parents with a history of warm, responsive interactions and strong emotional relationships may experience only temporary communication difficulties, whereas those in poorer quality relationships are more likely to sustain disruption and unresolved issues.

Family communication is influenced by the frequency of parent-child interactions. Research has indicated communication, that includes the expressing of one's needs and discussion of problems between parents and children, can facilitate positive family relationships and positive adolescent development (Hillaker, Brophy-Herb, Villarruel, & Haas, 2008), protect against alcohol use and bingeing (Martyn, Loveland-Cherry, Villarruel, Cabriaes, Ronis, & Eakin, 2009), and provide adolescents with opportunities to learn appropriate interpersonal behaviors and appropriate ways to handle conflicts (Davidson & Cardemil, 2009). Overall, research suggests that children who come from families that practice open communication are better adjusted and more satisfied with their lives.

A study by Guilamo-Ramos et al. (2007) suggested that just frequency of conversation between parents and adolescents may not be the best deterrent against risk-taking behavior but that content is also important. Their study identified adolescent sexual expectancies, parent-adolescent communication and intentions to have sexual intercourse among inner-city, middle school adolescents. The sample consisted of 668 mother-adolescent dyads. Self-administered questionnaires were used. The questionnaires consisted of sexual intercourse intentions, expectancies about sexual intercourse, measures of communication, and sexual behavior.

Traditional parametric methods were used for analysis (e.g., t-tests, Pearson correlation, ordinary least squares regression).

The results indicated that the more an adolescent perceived his/her mother talked with him or her about sexual behaviors and potential negative outcomes, the more the child formed expectancies that were congruent with refraining from sex with respect to that topic. However, the frequency of maternal discussions about general outcomes of sexual behaviors was unrelated to the adolescent's beliefs about that expectancy if there were strong correlates of adolescent intentions to engage in sexual intercourse (such as popularity). Guilamo-Ramos et al. (2007) also observed modest correlations between adolescent reports of frequency of communication and parent reports of frequency of communication. The research reported that it was adolescent reports of communication frequency that tended to produce the strongest correlations with their perceptions of the advantages and disadvantages of engaging in sex. The results of the study by Guilamo-Ramos et al. (2007) indicate that it is important to not only inform parents that they need to communicate more with their adolescent, but also that it is important to understand how they are communicating with them and to communicate in a way that their adolescent will be able to relate to, understand, and retain the desired information.

Parental involvement. When assessing factors associated with adolescents' goal-oriented behaviors, it is important to include parental involvement. Compared to the previously mentioned parenting factors, parental involvement is an oft discussed aspect of parenting when discussing children's school success. Based upon previous research there is good reason for this. Parental involvement has been identified as an important factor in several aspects of the adolescent's goal-oriented behavior. This includes: greater school achievement (Hill et al., 2004; Keith et al., 1998), increased amounts of school engagement (Annunziata, Hogue, Faw, &

Liddle, 2006; Taylor & Lopez, 2005), and stronger academic competence (Steinberg, Blatt-Eisengart, & Cauffman, 2006). The present study assesses adolescents' perceptions of their mother's and father's levels of involvement in their academics. Areas included are homework, course work, and school participation.

Different researchers have come up with different meanings of involvement and applications of involvement. Two worth mentioning follow. According to Epstein (1995), there are six types of involvement in a comprehensive program of school, family, and community partnerships for student academic success. These include the following: 1) Helping all families establish positive home environments for children; 2) Establishing two-way communication about school programs and children's progress; 3) Asking for parental involvement and organizing parent help at school, home, or other locations; 4) Providing information and ideas to families about how to help students with homework and other curriculum-related materials; 5) Having all parents serve as representatives and leaders on school committees; and 6) Identify and integrate resources and services from the community to improve school programs. While these six aspects have been indicated to have a strong relationship with student success, these take a school based approach. It relies upon the school system to be the antagonist for involvement.

Another aspect of parental involvement is presented by Grolnick and Slowiaczek (1994). They hypothesized that parental involvement is multidimensional according to the following three dimensions: Behavioral involvement, personal involvement, and cognitive/intellectual involvement. Behavioral involvement includes parental participation and consistent attendance at school functions, which models the importance of school. Personal involvement is comprised of the child's emotional experiences that reflect the positive feelings that a parent has conveyed to the child by his participation in and engagement in all aspects of schooling.

Cognitive/intellectual involvement includes exposing the child to cognitively and intellectually stimulating activities and materials such as brainteasers and engaging books. This definition of parent involvement is more aligned with the present studies approach.

A study by Hoang (2007) examined motivational outcomes, as predicted by parenting practices. Included in the study were relations among parental involvement and goal orientations and autonomy. Participants included 140 students from a northern California public high school. Most participants ranged in age from 14 to 17 years, with 3 participants being ages 18, 19, and 20. All participants completed a self-report survey that included 76 items. Variables within the survey included parenting style, parental involvement, behavioral involvement, goal orientations, and autonomy. Multivariate analyses supported a positive relation between behavioral involvement of the parent and a performance approach orientation which indicate that the student may be focused on performing a task for the purpose of outperforming others or getting a good grade. However, results from multivariate analyses also indicated a positive relation between students reporting behaviorally involved parents and a performance avoidance orientation, which implies that these students will avoid tasks that they perceive that they may fail at. There were no significant correlations found in that study between the student's level of autonomy and parental involvement.

Parent involvement is also associated with decreased risk-taking behaviors in adolescence. Suldo et al. (2008) reported that increased parental involvement was positively associated with decreased adolescent substance use. Similarly, Bowman, Prelow and Weaver (2007) found that increased maternal involvement was related to decreased risk-taking behaviors in female African-Americans; however, this relationship was not found for African-American males.

The Role of Peers in Health Compromising and Goal Oriented Behaviors

Based upon past theories and research it is obvious that peer relationships are an important microsystem of adolescent development. A common assertion of adolescent development is that peer relations during adolescence become increasingly important and occupy an increasing amount of adolescents' time. However, there are several aspects of adolescent development that make the study of adolescence and peer influence challenging. One aspect is that adolescents are frequently involved in more than one group of friends and that adolescent friendships are frequently changing. According to Brown (2004), fewer than half of reciprocated best friendships survive over a period of one year. Although the two may remain close friends, it is uncommon for a friendship group to remain completely intact over the space of one year or less. Another aspect of adolescent development that makes the study of peer influence in adolescence difficult is that the emotional needs in early adolescence are different than those in late adolescence. For example, in later adolescence there is more emphasis on romantic relationships than there is in earlier adolescence (Brown, 2004). Because of these reasons it is important to study the adolescent within multiple microsystems and to look at how those microsystems interact.

While there are many aspects to adolescents' relationships with peers, research has been consistent in indicating that adolescents who are involved with peers who participate in either risk-taking or goal-oriented behaviors tend to participate in those behaviors as well. Such studies have included smoking, drinking, drug use (Bahr et al., 2005), deviant behaviors (Prinstein et al., 2001), and the initiation of sex and oral sex (Prinstein et al., 2003) as outcome variables of interest. Similarly, studies have indicated that adolescents who are involved with peers who participate in goal-oriented behaviors are likely to participate in goal-oriented behaviors these

studies have included abstinence from alcohol (Spoth et al., 1996), decreased violent behaviors (Prinstein et al., 2001), and increased academic success (LeCroy & Krysik, 2008).

Fredricks and Eccles (2005) explored the relation between goal-oriented behaviors and indicators of positive and negative development across a range of activity contexts. The study included a sample included 498 primarily Caucasian adolescents (54% female and 46% male) in the 9th through 12 grades. The participants lived in 3 middle-class suburban communities. Adolescents filled out surveys in their classrooms with a range of constructs including items about school activity involvement, school engagement, academic performance, psychological adjustment, characteristics of the peer group, and risk-taking behavior.

The results indicated that athletic participation was associated with higher perceptions of school belonging, higher reports of alcohol use, more favorable attitudes toward school, lower rates of depression, and a higher percentage of goal-oriented peers than did adolescents who did not participate in athletics. Also, adolescents who were involved in school government, pep club, and cheerleading were associated with a higher sense of school belonging, higher perceptions of self-worth, a higher percentage of goal-oriented peers, lower levels of depression, and more positive attitudes toward school than adolescents who were not. Participants in the performing arts had lower rates of alcohol use and more favorable perceptions of their peer group than did nonparticipants. Participation in academic clubs (e.g., math club, debate club, chess club, etc.) was associated with lower alcohol use and more favorable perceptions of the peer group.

The study by Fredricks and Eccles (2005) indicated that participation in goal-oriented activities was associated with numerous positive outcomes. However, the study did not look at other factors associated with positive outcomes such as grade point average. The study also looked at the adolescent in only one microsystem. It is important to look at the individual in

multiple contexts in order to not make assumptions about singular activities having a causal effect.

On the contrary, Jaccard et al. (2005) reported that their data did not support the notion of pervasive peer influence of an adolescent's closest friend with respect to health-risk behavior. Their study used the Add Health database collected by Bearman, Jones, and Udry (1997). The Add Health database is a school-based sample of 20,745 adolescents in Grades 7 through 12 who reside in the United States. Of that sample the researchers chose 1,692 individuals who met certain criteria. Interviews were conducted in the participants' homes. The topics covered in the interviews included health status, health facility utilization, nutrition, peer networks, decision-making processes, family composition and dynamics, educational aspirations and expectations, employment experience, the ordering of events in the formation of romantic partnerships, substance use, and criminal activities. Participants were interviewed in two waves. Multiple regression and logistic regression models with adjustments to accommodate bias in standard errors caused by clustering and residual dependencies of unknown form were used. The researchers had special analytic issues arise because, as previously stated, adolescent friendships often are not long lived. Fifty-three percent of their sample failed to nominate their closest friend from Wave 1 as one of their friends (closest or otherwise) at Wave 2.

Jaccard et al. (2005) observed weak but consistent associations between changes in adolescent behavior and changes in peer behavior. Using a measurement system devised by the researchers, for every one full unit shift in the binge drinking behavior by a peer, the adolescent's binge drinking behavior corresponded to an estimated average shift of 0.07. These results indicate that adolescents' binge drinking nominally increased when their peers binge drinking increased. For sexual activity, the odds of the adolescent engaging in sexual intercourse across time were

about 1.65 times higher when the adolescent's closest friend had engaged in sexual intercourse as compared with when the adolescent's closest friend had not. Overall, the data did not support the idea of a pervasive peer influence with respect to adolescent risk-taking behaviors. This study indicates that the influence of a close friend and other peers alone may not be as strong as once purported. The effects observed in this study support the idea that peer influence may be just one of a number of factors to adolescent risk behavior. Further research is needed.

The Role of Religion in Goal Oriented and Health Compromising Behaviors

Another purpose of the proposed study is to identify religiosity in adolescents in three different ways. Previous research has defined religiosity through attendance in worship services, attendance and/or participation in a church group (e.g., bible study, youth group, etc.), and the importance of their faith. These three aspects cover a broad range of context within the ecological framework. The aspects touch upon the microsystem through direct involvement with the church, the mesosystem through its perceived influence on goal-directed behavior and the exosystem through the overarching belief of the religious affiliation.

Religious belief alone may not be enough to decrease risk-taking behaviors and to promote goal-oriented behaviors participation in religion may also be important. Religious participation can come from attendance at religious services and/or involvement in some sort of church activity. It is expected then, that the more adolescents attend services or participate in church related activities or both, the more likely they are to hear teachings about what is appropriate goal-oriented behavior. King and Furrow's (2004) study on religion as a resource for positive youth development reported that more religiously active youths were more likely to interact with, trust, and share similar views with a non-family member adult than were those who were only sometimes involved or not at all involved in religious activities. This study supports

the implication that adolescent's who are able to positively communicate their needs with individuals within their different microsystems, whether it be a parent, teacher, pastor, and/or coach, will be less involved in risk-taking behaviors and more involved in goal-oriented behaviors.

While religious belief alone may not be enough to decrease risk-taking behaviors and increase goal-oriented behaviors, neither is attendance alone. Adolescents may attend church for reasons other than importance of faith, such as occupying one's time or because their parents are enforcing attendance. A study by Milot and Ludden (2009) examined the implications of religious attendance and religious importance, as two separate variables, on well-being, substance use, and academic engagement in 683 adolescents from 13 rural schools in the Midwest. Hierarchical regression results revealed that religious importance was a more prominent protective factor than religious attendance against substance use even after accounting for parental support. Adolescents who reported that religion was important in their lives reported less school problem behaviors and higher academic motivation, although those with high religious attendance had higher grades.

A study by Rostosky et al. (2003) assessed adolescents' levels of religiosity using a similar definition to that of the proposed study (e.g., church attendance, attendance of church youth activities, and the overall view of religious importance). Rostosky et al. assessed the role of religiosity in age of intercourse initiation of adolescents. They analyzed data from waves one and two of the National Longitudinal Survey of Adolescent Health in-home interviews. The sample size was 3,691 adolescents. The two in-home interviews included measures of sexual behaviors, demographics, romantic relationships, religiosity, attitudes and beliefs about sexual intercourse, and pledge status (a vow to remain a virgin until marriage or not). A correlational

analysis to assess associations between independent and dependent variables for males and females separately was performed.

Results of hierarchical logistic regression analyses indicated that religiosity had both direct and indirect effects on age of onset of initiation of intercourse. The direct effects of religiosity, for both males and females, reduces the likelihood for age of initiation of intercourse even when controlling for demographic characteristics such as age, race, parent education, and the availability of romantic partners. Religiosity's indirect effect on coital debut appears through sexual ideology based upon anticipated negative consequences of engaging in sexual intercourse.

The Role of Mass Media in Goal Oriented and Health Compromising Behaviors

The study of media influence on adolescent decision making is not a new topic. Mass media is an ever present factor of an individual's life. As the advent of technology increases at an ever faster pace the availability of media becomes more and more present. Whether via a telephone, a handheld computer, television, radio, magazine, etc., media messages are only a moment away. Brown and Witherspoon (2002) reported that 8 to 18 year olds spend an average 6 to 7 hours a day with some form of mass media, whether it is television, music, magazines, or the Internet. Either directly or incidentally, the messages viewed during that time will depict and/or comment on violence, love, peace, war, politics, professions, beauty, sex, drugs, etc. (Roberts, Henriksen, & Foehr, 2004). It is important to understand the relationship between adolescent risk-taking and goal-oriented behaviors and media consumption.

A study by Roberts (2000) sought to describe youth's access to exposure to a full array of media (television, videotapes, movies, computers, video games, radio, compact discs, tape players, books, newspapers and magazines). The study was a cross-sectional random sample of 2065 youths from ages 8 through 18. Participants completed questionnaires about access, amount

of exposure, type of content consumed, and the physical and social context of media use was asked for each of the following: print (books, magazines, and newspapers), television, videos, motion pictures, audio media (radio, CD, and tape players), computers, and video games. Reported results indicated that more than 97% of the homes in the sample had televisions, VCRs, and audio systems; 70% had video game players, and more than two-thirds had personal computers. Two-thirds of the sample reported having a television in their bedroom, more than one-third had their own VCR, 15% had cable in their rooms, 96% contained a radio, 45% had a video game system and 21% had a computer. Given the availability of media, it is not surprising that Roberts (2000) reported that the participants reported almost 8 hours (7:57) of media exposure per day.

A study by Jackson, Brown, and Pardun (2008) went beyond looking at media consumption and availability of media outlets in the bedroom. The study examined association between bedroom television, media use, and adolescents' risk-taking behaviors. The study used a longitudinal design where 1,017 adolescents' ages 12 to 14 completed computer-assisted interviews at a baseline and a 2-year follow up. Participants were from three school districts in the southeastern United States. The participating schools were urban, suburban, and rural. The study assessed media devices in the bedroom, frequency of viewing television programs and movies at home, reasons for using television, identification with teenage actors on television and in movies, perceived parental oversight of television and movie watching, exposure to television programs and movies with mature content, perceived parental engagement, initiation of smoking, and initiation of sexual intercourse. Analysis of data consisted of T tests used to measure cross-sectional associations between bedroom television availability and media use practices. Chi-square tests were also used to measure the cross-sectional associations between having a

bedroom television and exposure to television programs or mature content. Logistic regression analyses were used for the main analyses.

The results indicated that a large percentage of both Caucasian and African-American households in the sample had three or more televisions in the household and that a large percentage of both Caucasian and of African-American adolescents had a television in their bedroom. Compared to peers without a television in the bedroom, Caucasian adolescents who had a television reported significantly more total exposure to television programs and home movies; more likely to use television as something to do or as a source of information on what other adolescents do; were more likely to identify with adolescents on television; and more likely to perceive that television depicts the real-life issues and concerns of adolescents. In addition, Caucasian adolescents who had a television in the bedroom reported that their parents had less oversight of their usage (knew what shows are about, has rule about kind of shows can be watched and has rule about time spent viewing) and less oversight of movies (knows what movies are about and has rules about kind of movies can be viewed). Caucasian adolescents who had a bedroom television at baseline were nearly significantly more likely to have ever tried smoking and to have ever had sexual intercourse after two years compared with peers who had no bedroom television.

The Jackson et al. (2008) study reported that having a television in the bedroom was associated with several negative media use practices, including less parental oversight of adolescent media use and regular viewing of mature content programs whether through television or movies. Having a bedroom television was associated with a greater tendency to initiate risk-taking behaviors over 2 years. However, this study also found that high parental engagement was associated with offsetting the initiation of those risk-taking behaviors. Given

the results of the study it is apparent that more research is needed examining multiple factors of adolescent development, also including parenting practices, peer affiliation, and religious beliefs.

Several studies have found similar implications. For example, Arnett (1995) reported that media has many uses for adolescents such as entertainment, identity formation, coping, and culture identification. Media can also be a means for adolescents to disengage from stress, anxiety, and negative emotions (Larson, 1995). Media consumption has been linked to several risk taking behaviors such as greater sexual experience (Ward & Friedman, 2006), obesity (Vandewater, Shim, & Caplovitz, 2004), delinquency (Kremer & Greene, 2000), and adolescent females' poorer self-perceptions (Botte, 2000). Somers and Tynan (2006) reported that Caucasian adolescents' who were more exposed to television of a sexual nature were more sexually active and had a greater number of sexual partners. According to Kalodner (1997), magazines geared toward teen girls have been associated with body dissatisfaction. Television has also been linked to obesity (Vandewater, Shim, & Caplovitz, 2004). Research is relatively plentiful regarding the relations between media and risk-taking behaviors in adolescence; however, research is lacking in how media is related to goal-oriented behaviors.

The amount of media consumed and its implied influences on adolescent behavior is an important facet to consider. However, taking an ecological model approach it is also important to consider the implications of media and the socializing effects it has on adolescents. With media being an important aspect of the exosystem, it is important to understand how media may directly or indirectly be involved with the micro- and mesosystems. Media may affect the amount of time spent interacting with family and peers. It may also impact the amount of time spent engaged in school.

In summary, the focus of the literature review was upon variables associated with adolescents' micro-, macro-, and exosystems. Many of the studies previously mentioned focused upon only one or two variables that are associated with adolescents' risk-taking and goal-oriented behaviors. Essentially, none of the aforementioned studies attempted to identify all the variables and interactions within the adolescent's life. Based on this review, the purpose of the proposed study is to identify multiple factors that are associated with adolescent development and to study the interactions of these factors.

CHAPTER 3

Method

Participants

A final sample of 323 students were the participants in this study. These were ninth through twelfth grade high school students from a suburban public high school district in the Midwestern United States. A total of 369 students from required classes were invited to participate. No students were excluded unless their parents disapproved of their participation or students themselves did not wish to participate in the study. A total of 46 students did not wish to participate, resulting in the final sample ($n=323$).

The participants were asked a number of demographic questions at the time of the study, including age, gender, race, and education level. Table 1 presents the personal demographic characteristics of the participants. The age of the participants ranged from 14 years old through 19 years old with the majority being 15 ($n=98$, 30.6%) and 16 ($n=87$, 26.9%) years of age. The gender of the participants was relatively equal with 45.8% ($n=148$) of the participants being female and 54.2% ($n=175$) being male. The majority of the participants identified themselves as either Caucasian ($n=133$, 41.3%) or Middle Eastern ($n=139$, 43.2%), with the remaining 15.5% percent made up of African-American ($n=22$, 6.8%), Asian ($n=5$, 1.6%), Hispanic ($n=13$, 4%), and other ($n=10$, 3.1%). Educational level was comparatively distributed among ninth, tenth, Eleventh, and Twelfth grades; however, the majority of respondents were in Ninth ($n=94$, 29.3%) and Tenth ($n=96$, 29.9%) grades.

Table 1
Demographics of participants – age, gender, race, grade, education level

Demographic	Frequency	Percent
<u>Age</u>		
14	64	20.0
15	98	30.6
16	87	27.2
17	51	15.9
18	17	5.3
19	3	.9
Total	320	
<u>Gender</u>		
Male	148	45.8
Female	175	54.2
Total	323	
<u>Race/Ethnicity</u>		
Middle Eastern	139	43.2
Caucasian	133	41.3
African-American	22	6.8
Hispanic	13	4.0
Asian	5	1.6
Other	10	3.1
Total	322	
<u>Grade</u>		
Ninth Grade	94	29.3
Tenth Grade	96	29.9
Eleventh Grade	73	22.7
Twelfth Grade	58	18.1
Total	321	

Measures

In addition to a demographic survey, all participants also completed measures of the following constructs: Risk-taking behaviors, goal-oriented behaviors (measured by overall grades, overall involvement in extracurricular activities), parenting style, parental involvement, parental communication, parental monitoring, peer engagement in risk-taking behaviors and goal-oriented behaviors, media consumption, and religiosity. All measures are included in Appendix B. The participant version of the measures is included in Appendix C.

Risk-taking behavior. To assess adolescents' perceptions of their own risk-taking behaviors the Adolescent Risk Questionnaire (ARQ) will be used (Gullone & Moore, 2000; Gullone, Moore, Moss, & Boyd, 2000). The ARQ consists of 22 items with four subscales: 1) Thrill seeking behaviors (7 items, i.e., inline skating); 2) Rebellious behaviors (5 items, i.e., taking drugs); 3) Reckless behaviors (5 items, i.e., having unprotected sex); and 4) Antisocial behaviors (5 items; i.e., cheating). Adolescents were asked to rate the frequency that they engage in the particular behavior. Items were rated on a five-point Likert scale, from never engaging in the risk behavior (1) to engaging in the behavior very often (5). To determine each adolescent's risk taking behavior an average composite mean score was calculated.

The ARQ was designed by Gullone, Moore, Moss, and Boyd (2000) to provide a reliable measure of adolescent risk-taking behavior. In developing the ARQ, Gullone, Moore, Moss, and Boyd (2000) calculated Cronbach's alpha internal consistency reliability for males, females, younger and older adolescents, and the entire sample. Cronbach's alpha exceeded .8 with the exception of the coefficients for antisocial behaviors in girls (.66) and antisocial perceptions in older adolescents (.67) (Gullone, Moore, Moss, & Boyd, 2000). The ARQ has been demonstrated to have adequate test-retest reliability over a one-week period suggesting that the subscales are stable. One-week test-retest reliability was reported to be .79 for risk judgments and .78 for risk behaviors (Gullone, Moore, Moss, & Boyd, 2000).

The ARQ has been shown to have convergent validity (Gullone, Paul, & Moore, 2000). Convergent validity of the ARQ was demonstrated through examining correlations between the behavior and judgment factors of the ARQ and the parent and peer factors of the Inventory of Parent and Peer Attachment (IPPA). The parent trust and communication factors of the IPPA significantly correlated negatively with all risk behavior factors of the ARQ except the thrill-

seeking factor in nondelinquent adolescents (rebellious risk behavior $r = -.23$ and $-.20$, $p < .01$; antisocial risk behaviors $r = -.33$ and $-.30$, $p < .001$; reckless risk behaviors $r = -.24$, $p < .001$ and $-.24$, $p < .01$; and thrill-seeking risk behaviors $r = .04$ and $-.01$). Discriminant validity of the ARQ was demonstrated through significant differences between the two groups on risk beliefs and behaviors.

Goal-oriented behavior. This was measured via both overall academic performance in school and overall involvement in extracurricular activities. School achievement was assessed using self-reported grade point averages (GPA). Adolescents were asked to assess their GPA by answering the question, “What grades do you most often receive?”, with the following response options: Mostly As, Mostly As and Bs, Mostly Bs, Mostly Bs and Cs, Mostly Cs, Mostly Cs and Ds, Mostly Ds, Mostly Ds and Es, or Mostly Es. The letter grades were coded as 1 (mostly A’s) through 9 (mostly E’s). In addition, students were asked to provide their most recent grades in each of the core academic areas: English Language Arts, History/Social Studies, Math, and Science. From those, a GPA was calculated. The two measures were compared for consistency. The GPA for overall academic performance was used in analyses.

Students were also asked to list all extracurricular activities they were involved in. Overall involvement in extracurricular activities was used in data analyses.

Parenting style and parental involvement. The Parenting Style and Parental Involvement Scales were used to measure adolescents’ perceptions of their parents’ parenting styles and their parents’ levels of parental involvement (Paulson, 1994). The scale consists of a total of 52 items with three subscales: 1) Demandingness (15 items, e.g., “My mother/father makes most of the decisions about what I am allowed to do”); 2) Responsiveness (15 items, e.g., “My mother/father seldom praises me for doing well”); and 3) Involvement (22 items, e.g., “My mother/father

usually goes to parent-teacher conferences”). Adolescents were asked to estimate the frequency with which their parents engage in each particular behavior. Adolescents responded to the instruments twice, once for each parent. Items are rated on a five-point Likert scale, from “very unlikely” that they would engage in the particular behavior (1) to “very likely” that they would engage in the particular behavior (5). A total score was calculated for each of the scales to determine a score for maternal and paternal demandingness, responsiveness, and involvement. Adolescents were instructed to respond to either a mother/father or mother-figure/father-figure (e.g., step-parent, guardian, etc.). Participants were instructed to speak to the researcher if they had any questions regarding who qualifies as a parent figure.

The Parenting Style and Parental Involvement Scales were designed by Paulson (1994) to provide measures of parenting style and parental involvement that assess the separate dimensions of parenting characteristics found most frequently in the literature. Parental demandingness and responsiveness were designed to align with two types of parenting styles: Control (demandingness) and responsiveness (warmth). The items for the demandingness and responsiveness measures were derived from an extensive literature review. Similarly, a review of the parental involvement literature was used in creating the parental involvement measure using subscales of values towards achievement, interest in schoolwork, and involvement in school functions.

In developing the Parenting Style and Parental Involvement Scales, Paulson (1994) calculated Cronbach’s alpha, assessing the reliability of the three scales, for both adolescents’ (boys’ and girls’) and parents’ (mothers’ and fathers’) reports of paternal and maternal demandingness, responsiveness, and parental involvement (comprised of three subscales). Cronbach’s alpha typically exceeded .7 on the adolescents’ reports of maternal and paternal

parenting with the exception of the School Functions subscale within the Parental Involvement Scale ($\alpha = .67$).

The Parenting Style and Parental Involvement Scales have been shown to have good construct and convergent validity. Correlations of the scales with existing measures of similar parenting dimensions were obtained to assess construct validity. Parents' reports of their own parenting were significantly, though only moderately, correlated with their adolescents' reports of parenting ($n = 247$; Maternal and Paternal Demandingness, $R = .38$ and $.36$, $p < .01$; Maternal and Paternal Responsiveness; $R = .39$ and $.36$, $p < .01$). Convergent validity was demonstrated through highly significant correlations found between the parenting scales and similar scales from the Children's Report of Parental Behavior Inventory (CRPBI; Schaefer, 1965) ($n = 247$; Maternal and Paternal Demandingness with adolescents' reports of parenting extreme autonomy, $r = .58$ and $.60$, $p < .01$; Maternal and Paternal Demandingness with adolescents' reports of parenting enforcement of discipline, $r = .60$ and $.64$, $p < .01$; Maternal and Paternal Responsiveness with adolescents' reports of parenting acceptance of individuation, $r = .76$ and $.79$, $p < .01$). Convergent validity was also demonstrated through adolescents' achievement being positively predicted from high levels of demandingness and responsiveness (authoritative parenting) and parental involvement ($r = .39$ and $.35$, $p < .01$ for maternal and paternal parenting, respectively).

Parental communication. Parental communication was assessed using the Parent-Child Relationship Survey (PCRS) developed by Fine, Moreland, and Schewebel (1983). The PCRS is a 24 item instrument designed to measure perceptions of their parent-child relationship. The mean age of the participants was 19.6 years with a standard deviation of 4.5 years. The PCRS comes in two forms, one for assessing the individual's relationship with the mother and the other

for assessing the individual's relationship with the father. For the purpose of the current study the subscales of interest were: 1) Father communication (n = 5 items, e.g., "How comfortable would you be approaching your father about a romantic relationship?"); and 2) Mother communication (n = 7 items, e.g., "How confident are you that your mother would not ridicule or make fun of you if you were to talk about a problem?"). Five items on the mother and father communication scales overlap. The two additional items on the mother communication scale are "How confident are you that your mother would not ridicule or make fun of you if you were to talk about a problem?" and "How confident are you that your mother would help you when you have a problem?" Items are rated on a seven-point Likert scale ranging from "not at all" (1) to "extremely" (7). A total mean score was calculated to determine the amount of communication between the adolescents and each of their parents.

The Parent-child relationship survey has strong reliability. Factor analysis was performed in order to assess and define more empirically the underlying constructs that the subscales measure. The four subscales (Positive Affective, Father Involvement, Communication, and Anger) for the father form were shown to have strong internal consistency, with coefficient alphas of .93, .94, and .89, respectively (Fine, Moreland, & Schwebel, 1983). The Anger subscale contains only one item. Similarly, the four subscales (Positive Affective, Resentment/Role Confusion, Identification, and Communication) for the mother form were shown to have strong internal consistency, with coefficient alphas of .94, .61, .84, and .88, respectively (Fine, Moreland, & Schwebel, 1983). Each subscale appeared to measure their respective constructs consistently.

Parental monitoring. The Parental Monitoring Instrument (PMI) (Cottrell et al., 2007) was used to assess the amount and type of monitoring adolescents feel their parents do. The PMI

was developed to gauge how frequently parents employ a variety of specific monitoring strategies. The PMI consists of 27 items from seven subscales. Those subscales are: Indirect monitoring, Direct monitoring, School monitoring, Health monitoring, Computer monitoring, Phone monitoring, and Restrictive monitoring. The adolescent is asked to indicate the number of times in the past four months their parents participated in a certain act (e.g., "How many times in the last four months has your parent asked to meet your friends?"). Items are rated on a four-point Likert, with 1 (0 times), 2 (1 to 2 times), 3 (3 to 4 times), and 4 (5-plus times). Response options are 0 times, 1 to 2 times, etc.). A total composite was calculated and used for analyses.

The Cronbach's Alpha for the seven subscales were: Direct monitoring alpha = .80, indirect monitoring alpha = .72, phone monitoring alpha = .78, and restrictive monitoring alpha = .69 (Cottrell et al., 2007). These indicate acceptable reliability.

Construct validity of the PMI was determined by looking at the relationships between the PMI factor scores and two measures that measure similar variables (parental knowledge scale and parent-adolescent communication scale). Through Structural Equations Modeling (SEM) direct associations were found between the PMI factor scores, and the data for the parental knowledge scale and parent-adolescent communication scale were an acceptable fit for the models for both adolescents and parents ($\chi^2 = 687.78$, $df = 366$, $p < .000$, RMSEA = .04 [90% CI = .04 to .05], CFI = .92 and $\chi^2 = 776.81$, $df = 360$, $p < .000$, RMSEA = .047 [90% CI = .043 to .052], CFI = .92, respectively). Indirect, direct, school, health, and computer monitoring were positively associated with open family communication ($r = .08$, $.09$, $.19$, $.17$, and $.08$ respectively). There was a negative relationship between the restrictive monitoring score and the parental knowledge and open family communication scores ($r = -.065$ and $-.081$), which suggests

that frequent use of restrictive monitoring strategies is associated with greater problem communication and lower parental knowledge and open family (Cottrell et al., 2007).

Peer behaviors. The Family, Friends, and Self Form (FFS) was used to measure adolescents' perceptions of their peer's behaviors (Simpson & McBride, 1992). The complete FFS consists of 60 items with three parts and numerous subscales. For the purpose of the current study the subscales to be included were: 1) Friends "conventional involvement" (n = 7 items, e.g., "How many of your friends do homework after school or at night?"); and 2) friends "trouble" (n = 7 items, e.g., "How many of your friends have been in trouble with the police because of alcohol or drugs?"). Adolescents were asked to rate and to estimate how many of their peers engage in each particular behavior. Items are rated on a five-point Likert scale, from "none engaging in the behavior" (1) to "all engaging in the behavior" (5). Each subscale was summed for analyses.

The FFS was originally designed by Hater and Simpson (1981) to measure social relationships and psychological adjustment of youth and was used as one of several standardized intake instruments in a statewide drug abuse prevention data collection program known as Prevention Intervention Management and Evaluation System. The original sample was relatively small (n = 154). Simpson and McBride (1992) reassessed the validity and reliability of the FFS on 700 Mexican American adolescents ranging in age from 13 to 18 years of age. Simpson and McBride's analysis indicated a coefficient alpha reliability of greater than .7. Specifically, coefficient alpha reliabilities for the peer trouble subscale, the peer activity subscale, and the conventional involvement subscale were .86, .82, and .73 respectively.

After varimax rotation, the original factors by Hater and Simpson were interpreted to represent four different dimensions: Trouble, peer activity, familiarity with parents, and

conventional involvement. Factor Analyses eigenvalues for these four dimensions were 4.09, 2.99, 2.61, and 2.40, respectively. However for the current study, the trouble, peer activity, and conventional involvement subscales are of interest. Construct validity was assessed by examining two components (social problem composite and criminal/legal involvement rating) created from counselor initial intake forms with the Friends, Family, and Self scales. The social problem composite was comprised of school performance, self-esteem, peer and parent/family relations, and criminal/legal involvement in the court system. These components had significant correlations with the Trouble scale ($r = .18$ and $.19$). The Conventional Involvement scale was negatively correlated with the drug composite scale ($r = -.26$).

Media. As an exploratory scale, developed for the purposes of this study, adolescents were asked to assess their media consumption by answering the following questions: “Approximately how many hours per week do you watch television?”, “Approximately how many hours per week do you listen to music?”, “How many hours per week do you read magazines?”, “How many hours per week do you spend on the internet?”, “Total hours per week spent on TV, music, magazines, and internet”, and “Approximately how many hours of the total time is spent with content you would not want your parents to know that you are seeing or hearing?” Participants were asked to estimate the number of hours spent doing each of the previously mentioned activities per week. Time spent per activity was used in data analyses, as well as a total of all types of media based upon the participants self-report. The answer to the final question about hours spent on content that parents would not have approved of was categorized as “time spent with negative media.”

This measure was created because of a lack of valid and reliable measures used in existing literature. Although media exposure has been studied, the way it is measured has been

inconsistent. Most of these coding methods are cumbersome and reliability and validity estimates have not been established. A study by Somers and Tynan (2006) asked adolescents to write down all the television shows they usually watch each day and night in a typical week. The amount of time viewing television was then added and recoded. For the purposes of this study, information about amount of time spent exposed to various forms of media was of interest. The four types of media selected (television, magazines, music, and internet) were chosen because they appear to have strong face validity. The four types of media selected appear to represent the major categories of media that adolescents are exposed to.

Religious involvement. Religious involvement was assessed using a religiosity scale created by Rostosky, Regnerus, and Wright (2003). The scale was created using information from the National Longitudinal Survey of Adolescent Health and a sample of 3,691 adolescents. The religiosity scale is a three-item instrument designed to measure the frequency of attendance at religious services, frequency of attendance at religious youth activities, and self-rated importance of religion. The religiosity assessment contains three questions. Two questions assess religious involvement and one question assesses perceived religious importance. The questions involving religious involvement are: 1) How often have you attended church/synagogue/mosque/religious services in the past 12 months?; and 2) Many churches, synagogues, mosques and other places of worship have special activities for young people-such as Bible classes, retreats, youth groups, or choir. In the past 12 months, how often have you taken part in such activities? Items are rated on a seven-point Likert scale ranging from “never” (0) to “more than one a week” (6). A total mean score is calculated to determine the amount of religious involvement. The third question is: 3) How important is your religious faith to you? This item is rated on a four-point Likert scale ranging from “not important” (0) to “more

important than anything else (3).” The first two items are later collapsed into a four-point Likert scale (0=0; 1 or 2 = 1; 3 or 4 = 2; 5 or 6 = 3). Each question was analyzed individually.

The religiosity scale demonstrated adequate internal consistency for the entire subsample as well as for girls and boys separately ($\alpha = .69, .70, \text{ and } .69$, respectively). The religiosity scale was also used in a study by Rostosky, Danner, and Riggle (2008) in which the relations among religiosity and alcohol use in sexual minority and heterosexual youth and young adults were explored. The scale was administered during two different waves (ten years apart). Cronbach’s alpha for this index was .80 at Wave 1 and .71 at Wave 3.

Procedure

Prior to the anticipated data collection schedule, a Parental School Information sheet detailing the study (i.e., the purpose, procedure, risks, benefits, confidentiality, and how to contact the researcher with questions) was sent home to all of the parents of the high school students in the participating district. This information sheet was mailed home, using first class mailing, approximately two weeks prior to the administration of the questionnaires. Parents had the opportunity to refuse their child’s participation in the study by signing the bottom of the information sheet and returning it to the principal investigator. A contact e-mail address, phone number, and fax number was also provided on the consent form if the parent/guardian wished to learn more about the study. Participation in the study was strictly voluntary.

On the day of administration, the principal investigator introduced the study and provided an information sheet (see Appendix D) to each student for him or her to keep. The information sheet was also read to the class to ensure their understanding of the study. It was also made clear that participation was strictly voluntary, and that their choice to participate or not had no influence on their grade in the class, and that their teachers would not be privy to individual

participation. Participants were reminded that all information was anonymous and they were informed not to write their name anywhere on the questionnaires. They were also told that they can refuse any questions or stop at any time during the survey time. Participants interested in completing the questionnaires were then asked to complete a behavioral assent form indicating voluntary participation in the study.

Interested students, whose parents did not decline their participation, were then asked to complete the questionnaire (Appendix C) during the class period. Data completion took approximately 30-45 minutes and was accomplished during one meeting. Those who refused to participate were provided with an alternate assignment or task at the teacher's discretion. For those who participated, the principal investigator distributed the packets containing the assent form, demographic form, and the six questionnaires (i.e., ARQ, FFS, etc). The questionnaires were placed in altered order. Directions were read aloud by the principal investigator and each student was directed to complete the questionnaires independently and honestly. The principal investigator answered any questions that arose by the participants.

The participants were instructed to cover their answers as they went along so that they felt that they could be honest and that their peers would not be able to see their responses. The participants were also told in advance that when they completed the questionnaires they were to place their responses into a large manila envelope so that neither peers nor examiners could identify individual responses. These provisions were small attempts that allowed us to trust their responses better. Upon turning in the completed record form the participants were offered a candy bar.

Analyses

The statistical packages PASW (ver. 18) and STATA (ver. 10) were used to analyze the data.

CHAPTER 4

Results

This chapter presents results of the data analyses that were used to address each of the research questions posed for the study. The purpose of this study was to explore several key contexts that adolescents are concurrently exposed to, including peer relationships, family relationships, religion, and media, using an ecological model, to expand the current understanding of factors that predict adolescent risk-taking and goal-oriented behaviors. The outcome variables of interest were risk-taking behaviors (e.g., unprotected sexual activity, smoking, drinking, truancy, speeding, etc.) and goal-oriented behaviors (e.g., academic achievement, attendance, involvement in teams and clubs, etc.). Environmental variables were family relationships and peer relationships (at the microsystem and mesosystem levels) and religion and media exposure (at the exosystem level). The results of the data analysis used to test the five hypotheses developed for this study are presented in this chapter. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05. Included in Table 2 are descriptive statistics for each independent variable.

Table 2

Descriptive Statistics – Independent Variables

Independent Variables	Mean	SD	Range	
			Minimum	Maximum
<u>Independent Variables</u>				
Parental Monitoring	2.17	.60	1.00	4.00
Mother Demandingness	3.26	.61	1.27	4.87
Father Demandingness	3.10	.74	1.00	4.93
Mother Responsiveness	3.25	.67	1.00	4.80
Father Responsiveness	3.12	.63	1.33	4.93
Mother Involvement	3.81	.63	1.77	4.86
Father Involvement	3.59	.65	1.77	4.82
Mother Communication	4.93	1.47	1.00	7.00
Father Communication	4.08	1.74	1.00	7.00
Goal-Oriented Peers	2.29	.63	.57	4.00
Risk-Taking Peers	1.11	.89	.00	4.00
Religious Attendance	2.12	1.67	0.00	5.00
Religious Involvement	1.37	1.63	0.00	5.00
Religious Importance	1.81	1.00	0.00	5.00
Hours of Television Viewed Per Week	12.85	18.21	0.00	130.00
Hours Spent Listening to Music Per Week	22.46	32.13	0.00	200.00
Hours Spent Reading Magazines Per Week	2.04	6.10	0.00	68.00
Hours Spent on the Internet Per Week	17.86	25.95	0.00	150.00
Total Hours Per Week With Media	44.26	50.65	0.00	300.00
Approx. Hours Per Week With Negative Media	10.35	27.90	0.00	205.00
<u>Dependent Variables</u>				
Thrillseeking Behavior	1.56	.60	1.00	5.00
Rebellious Behavior	1.76	.91	1.00	5.00
Reckless Behavior	1.37	.63	1.00	5.00
Antisocial Behavior	1.97	.81	1.00	5.00
Average Risk-Taking Behavior	1.70	.67	1.00	5.00
Extracurricular Activities	1.55	1.56	0.00	9.00
Overall Grades	3.17	1.77	1.00	9.00

Note. Possible ranges: Parental Monitoring – 1 to 4; Mother and Father Demandingness – 1 to 5; Mother and Father Responsiveness – 1 to 4; Mother and Father Responsiveness – 1 to 5; Mother and Father Involvement – 1 to 5; Mother and Father Communication – 1 to 7; Goal-Oriented and Risk-Taking Peers – 1 to 4; Television, Music, Magazines, Internet, Media Total, and Negative Media were self reported hours; Extracurricular Activities were self reported totals; Overall Grades – 1 to 9.

In regard to the parenting variables, the participants in this study indicated that they felt overall that their parents monitored their behaviors a relatively low number of times as shown by the mean score of 2.17 (SD = .60), with a range of possible scores of 1 to 4. The mean scores for

scores for mother's and father's demandingness, responsiveness, and involvement were all relatively similar and in the moderate range [$M=3.26$ ($SD = .61$), 3.10 ($SD = .74$), 3.25 ($SD = .67$), 3.12 ($SD = .63$), 3.81 ($SD = .63$), and 3.59 ($SD = .65$) respectively]. The possible range for these categories was 1 to 5. Mother communication and father communication were also in the moderate range [4.93 ($SD = 1.47$) and 4.08 ($SD = 1.74$)] with a range of possible scores of 1 to 7.

Participants rated their peers conservatively. The participants rated their peers who participate in risk-taking behaviors relatively low with a mean of 1.11 ($SD = .89$) with a possible range of 0 to 4. These results indicate that only a small portion of their friends participate in risk-taking behaviors. Goal-oriented behaviors peers were rated only slightly higher with a mean of 2.29 ($SD = .63$) with a possible range of 0 to 4. These results indicate that the participants perceive that their peers participate in goal-oriented behaviors with low frequency.

The participants identified religious involvement as being relatively infrequent with a mean score of 1.37 ($SD = 1.63$) and a range of 0 to 5. Religious attendance was also rated relatively infrequent with a mean score of 2.12 (1.67) and a range of 0 to 5. The religious attendance mean score indicates that most participants attended a church/synagogue/temple/mosque roughly only one time per month. However, religious importance was rated by the participants to be somewhat important to very important with a mean of 1.81 ($SD = 1.00$) and a range of 0 to 3.

Participants reported wider variability in media usage. Hours per week of music received the highest total with a mean of 22.46 ($SD = 32.13$), followed by hours spent on the Internet with a mean of 17.86 ($SD = 25.96$). Television viewed per week had a mean of 12.85 ($SD = 18.21$) hours. Hours spent reading magazines per week had a mean of 2.04 ($SD = 6.10$). Total media usage per week had a mean of 44.26 ($SD = 50.65$) hours and total negative media consumed per

week had a mean of 10.35 (SD = 27.90) hours. The upper end of these responses were greater than the number of hours possible per week in most cases. However, an analysis of the frequency distributions indicates that there were no explicit outliers. The adolescents' responses gradually increased from the lower end to the upper end of the range, with relatively equidistant gaps between responses, even at the upper end. The pattern of responses suggests that many students were not able to accurately estimate these hours, with many students well above not only the number of hours per week but the number of waking hours per week. Suggestions for improvement in measurement are made in the limitations section of the discussion section. Nonetheless, because there do not appear to be intentional outliers and the range of responses increases gradually, even at the upper end, the responses were all kept in the data set and considered as relative to each other and not absolute values.

Risk-taking behaviors that the participants were involved in were reported as relatively low. The average overall risk-taking mean was 1.70 (SD = .67) with a range of 1 to 5 indicating that, overall, the participants rarely participated in risk-taking behaviors. When looking at the subgroups of risk-taking behaviors, the mean scores were similar to the average overall risk-taking means. The thrill-seeking behavior mean was 1.56 (SD = .60), rebellious behavior mean was 1.76 (SD = .91), reckless behavior mean was 1.37 (SD = .63), and antisocial behavior mean was 1.97 (SD = .81). Each subgroup had a possible range of 1 to 5.

Goal-oriented behaviors were also rated quite average, with a mean of 3.17 (SD = 1.77) with a possible range of 1 to 9. A rating of 3 indicates that the participant received mostly B grades and a rating of 4 indicates that the participant received mostly B and C grades. The mean number of extracurricular activities was 1.55 (SD = 1.56).

To assess the potential for multicollinearity among predictor variables, Pearson product moment correlations were run. A correlation of .8 or greater was used as the cutoff for identifying multicollinearity. All decisions on the statistical significance of the findings were made using a criterion alpha level of .05. No issues of multicollinearity were identified. The results are in Table 3A. Pearson product moment correlations were also run for independent and dependent variables combined. The results are in Table 3B. Pearson product moment correlations were also run for dependent variables only. The results are in Table 3C

Table 3A

Pearson Product Moment Correlations – Test for Multicollinearity Among Predictor Variables

	Mother Demand	Father Demand	Mother Respond	Father Respond	Mother Involve	Father Involve	Mother Comm	Father Comm	Parent Mon.	Goal Peers	Risk Peers	Relig. Attend	Relig. Partic	Relig. Import	TV	Music	Mag	Inter	Total Med
Dad Dem	.31**																		
Mom Resp	-.06	.07																	
Dad Resp	.04	-.21	.29**																
Mom Inv	.27**	.12	.48**	.30**															
Dad Inv	.16*	.23*	.32**	.37**	.62**														
Mom Comm	.01	.14*	.57**	.13*	.42**	.29**													
Dad Comm	.08	-.06	.10	.43**	.21**	.38**	.35**												
Parent Mon.	.28**	.20**	.11	.17**	.36**	.30**	.26**	.25**											
Goal Peers	.14*	.11	.09	.13*	.23**	.23**	.10	.18**	.31**										
Risk Peers	-.26	-.16*	-.18**	-.12	-.28**	-.21	-.11	-.05	.06	-.03									
Rel. Attend.	.19**	.18**	.12*	.01	.17**	.14*	.22**	.16**	.27**	.13*	-.13*								
Rel. Partic.	.21**	.08	.13*	.11	.13*	.12	.13*	.17**	.33**	.22**	-.07	.55**							
Rel. Import.	.25**	.22**	.10	.09	.08	.06	.25**	.11	.24**	.17**	-.10	.44**	.33**						
Television	-.08	-.17**	.02	-.00	-.02	.01	-.09	-.10	-.12	-.09	.04	.03	-.09	.01					
Music	-.08	-.20**	-.00	-.10	.03	-.00	-.09	-.16**	-.07	-.07	.04	-.09	-.08	-.12*	.51**				
Mags	-.16**	-.18**	.05	-.01	-.09	.03	-.10	-.05	.08	.00	.15**	.03	.01	-.13*	.26**	.27**			
Internet	-.04	-.18**	.05	-.09	.01	-.03	-.03	-.11	-.10	-.11*	-.01	-.01	-.03	-.11	.62**	.64**	.28**		
Tot. Media	-.04	-.18**	-.02	-.06	-.02	-.04	-.12*	-.11	-.13*	-.10	-.03	-.09	-.07	-.08	.60**	.78**	.25**	.78**	
Neg. Media	-.02	-.04	-.07	-.12	-.03	-.07	-.15*	-.11	-.01	-.16**	.05	-.02	.01	-.10	.27**	.27**	.21**	.31**	.39**

*p ≤ .05; **p ≤ .01

Table 3B

Pearson Product Moment Correlations – Dependent and Independent Variables

	Overall Grades	Extracurricular Activities	Thrill-Seeking Behavior	Rebellious Behavior	Reckless Behavior	Antisocial Behavior	Total Risk-Taking
Mother Demand	-.11	.05	-.07	-.28**	-.29**	-.05	-.21**
Father Demand	.00	.02	.06	-.15**	-.12	-.10	-.10
Mother Respond	-.13*	.14*	.06	-.04	-.06	-.11	-.05
Father Respond	-.13*	.20**	.13*	.04	-.09	-.07	.00
Mother Involve	-.31**	.29**	.08	-.11	-.19**	-.02	-.08
Father Involve	-.33**	.32**	.15*	-.05	-.08	.01	.00
Mother Comm	-.04	-.05	-.03	-.03	-.04	-.03	-.04
Father Comm	-.05	.09	.04	.07	.01	.02	.04
Parent Monitor	-.09	.19**	.21**	-.03	.04	.17**	.12*
Risky Peers	-.25**	.27**	.14*	-.04	-.06	-.06	.00
Goal Peers	.27**	-.15**	.23**	.50**	.43**	.43**	.51**
Relig Attend	-.11*	.03	.00	-.24**	-.02	-.02	-.11
Relig Particip	-.05	.20**	.07	-.13*	-.02	-.02	-.03
Relig Import	-.04	-.08	-.03	-.27**	-.07	-.07	-.17**
Televis	.05	-.01	.05	.07	.18**	.18**	.11
Music	.01	.03	.05	.07	.13*	.13*	.10
Magaz	.00	.15**	.13	.14*	.04	.04	.15*
Internet	-.01	.03	-.01	.05	.06	.06	.04
Total Media	.03	.12	.07	.06	.06	.06	.05
Negative Media	.14*	.01	.03	.15*	.16**	.16**	.12*

* $p \leq .05$; ** $p \leq .01$

Table 3C

Pearson Product Moment Correlations – Criterion Variables

	Total Risk Behavior	Antisocial Behavior	Reckless Behavior	Rebellious Behavior	Thrill-Seeking Behavior	Overall Grades
Antisocial Behavior	.813**					
Reckless Behavior	.845**	.618**				
Rebellious Behavior	.793**	.491**	.632**			
Thrill-Seeking Behavior	.752**	.495**	.531**	.373**		
Overall Grades	.154**	.173**	.194**	.154**	-.008	
Extracurricular Activities	.140*	.058	.018	.078	.279**	-.408**

* $p \leq .05$; ** $p \leq .01$

Research question 1: What are the relations between parenting behaviors (parenting style, monitoring, involvement and communication) and adolescent risk-taking behaviors and goal-oriented behaviors?

H₁: Parenting behaviors will significantly explain variance in risk-taking behavior and goal-oriented behavior.

Multivariate linear regression analyses were conducted using the predictor variables of parental monitoring, mother demandingness, father demandingness, mother responsiveness, father responsiveness, mother involvement, father involvement, mother communication, and father communication. The seven criterion variables were average risk-taking behavior, thrill-seeking behavior, rebellious behavior, reckless behavior, antisocial behavior, extracurricular activities, and overall academic grades. Multivariate linear regression analysis was chosen for this research question because of the strong statistical equation for identifying predictor variables. R-squared statistics are included in Appendix E.

Total average risk-taking behavior was used as the criterion variable in the first multiple linear regression analysis. See Table 4. The results were not significant.

Table 4

Multivariate Linear Regression – Predicting Total Average Risk-Taking Behaviors.

Predictors	B	SEB	B
Parental Monitoring	.057	.076	.053
Mother Demandingness	-.105	.068	-.125
Father Demandingness	-.021	.055	-.022
Mother Responsiveness	-.070	.076	-.073
Father Responsiveness	-.007	.072	-.009
Mother Involvement	.126	.090	.126
Father Involvement	-.008	.078	-.001
Mother Communication	-.038	.033	-.099
Father Communication	.045	.027	.128
Peer Goal-Oriented Behavior	-.019	.060	-.017
Peer Risk-Taking Behavior	.453	.048	.625**
Religious Attendance	-.044	.030	-.113
Religious Involvement	-.013	.028	-.032
Religious Importance	-.012	.046	-.017
Hours of Television Viewed Per Week	.004	.003	.134
Hours Spent Listening to Music Per Week	.001	.002	.023
Hours Spent Reading Magazines Per Week	-.005	.005	-.069
Hours Spent on the Internet Per Week	-.001	.002	-.030
Total Hours Per Week With Media	-.001	.001	-.050
Approx. Hours Per Week With Neg. Media	.001	.001	.062

Note. * $p < .05$, ** $p < .01$, $F = 7.99$, $p = .000$, $R^2 = 52.6\%$

Thrill-seeking behavior was used as the criterion variable in the second multivariate linear regression analysis. See Table 5. Parental monitoring, mother demandingness, mother responsiveness, father responsiveness, father involvement, and father communication did not enter as statistically significant contributors. However, father demandingness (beta = .227, $p < .01$), mother involvement (beta = .270, $p < .05$), and mother communication (beta = -.224, $p < .05$) did enter as statistically significant contributors to the equation.

Table 5

Multivariate Linear Regression Analysis -- Thrill-Seeking Behaviors.

Predictors	B	SEB	B
Parental Monitoring	.124	.074	.150
Mother Demandingness	-.118	.066	-.160
Father Demandingness	.147	.054	.227**
Mother Responsiveness	.026	.074	.032
Father Responsiveness	.123	.070	.173
Mother Involvement	.215	.088	.270*
Father Involvement	-.078	.076	-.091
Mother Communication	-.073	.032	-.224*
Father Communication	.091	.027	-.003
Peer Goal-Oriented Behavior	.148	.058	.190*
Peer Risk-Taking Behavior	.147	.047	.264**
Religious Attendance	-.025	.029	-.085
Religious Involvement	.048	.027	.165
Religious Importance	-.044	.045	-.095
Hours of Television Viewed Per Week	.004	.003	.155
Hours Spent Listening to Music Per Week	-.001	.002	-.056
Hours Spent Reading Magazines Per Week	.001	.005	.015
Hours Spent on the Internet Per Week	-.001	.002	-.084
Total Hours Per Week With Media	.001	.001	.142
Approx. Hours Per Week With Neg. Media	-.001	.001	-.030

Note. * $p < .05$, ** $p < .01$, $F = 3.15$, $p = .000$, $R^2 = 30.4\%$

Rebellious behaviors was used as the criterion variable in the third multivariate linear regression analysis. See Table 6. Parental monitoring, mother demandingness, father demandingness, mother responsiveness, father responsiveness, mother involvement, father involvement, and mother communication did not enter as statistically significant contributors. However, father communication (beta = .168, $p < .05$) did enter as a statistically significant contributor to the equation.

Table 6

Multivariate Linear Regression Analysis -- Rebellious Behaviors.

Predictors	B	SEB	B
Parental Monitoring	-.086	.118	-.053
Mother Demandingness	-.196	.106	-.152
Father Demandingness	.106	.086	.090
Mother Responsiveness	-.045	.118	-.032
Father Responsiveness	.109	.111	.080
Mother Involvement	.225	.140	.152
Father Involvement	-.107	.121	-.073
Mother Communication	-.041	.051	-.070
Father Communication	.091	.042	.168*
Peer Goal-Oriented Behavior	.066	.093	.046
Peer Risk-Taking Behavior	.655	.075	.598**
Religious Attendance	-.073	.046	-.133
Religious Involvement	-.020	.043	-.033
Religious Importance	-.080	.071	-.080
Hours of Television Viewed Per Week	-.001	.004	-.016
Hours Spent Listening to Music Per Week	-.002	.003	-.098
Hours Spent Reading Magazines Per Week	.003	.008	.030
Hours Spent on the Internet Per Week	-.003	.003	-.104
Total Hours Per Week With Media	.003	.002	.140
Approx. Hours Per Week With Neg. Media	.003	.002	.099

Note. * $p < .05$, ** $p < .01$, $F = 7.24$, $p = .000$, $R^2 = 50.2\%$

Reckless behaviors was used as the criterion variable in the fourth multivariate linear regression analysis. See Table 7. Parental monitoring, father demandingness, mother responsiveness, father responsiveness, mother involvement, father involvement, mother communication, and father communication did not enter as statistically significant contributors. However, mother demandingness (beta = -.179, $p < .05$) did enter as a statistically significant contributor to the equation. Antisocial behaviors was used as the criterion variable in the fifth multivariate linear regression analysis. See Table 8. The results were not significant.

Table 7

Multivariate Linear Regression Analysis -- Reckless Behaviors.

Predictors	B	SEB	B
Parental Monitoring	.078	.079	.077
Mother Demandingness	-.152	.071	-.179*
Father Demandingness	-.044	.058	-.061
Mother Responsiveness	-.058	.079	-.061
Father Responsiveness	.026	.075	.028
Mother Involvement	.009	.094	.003
Father Involvement	.018	.081	.046
Mother Communication	-.036	.035	-.103
Father Communication	.004	.029	.022
Peer Goal-Oriented Behavior	.007	.062	.016
Peer Risk-Taking Behavior	.303	.050	.451**
Religious Attendance	-.012	.031	-.017
Religious Involvement	.001	.029	-.004
Religious Importance	-.014	.048	-.037
Hours of Television Viewed Per Week	.007	.003	.254*
Hours Spent Listening to Music Per Week	.003	.002	.149
Hours Spent Reading Magazines Per Week	-.002	.005	-.044
Hours Spent on the Internet Per Week	.001	.002	.024
Total Hours Per Week With Media	-.003	.002	-.262*
Approx. Hours Per Week With Neg. Media	-.002	.002	-.059

Note. * $p < .05$, ** $p < .01$, $F = 5.05$, $p = .000$, $R^2 = 41.2\%$

Table 8

Multivariate Linear Regression Analysis -- Antisocial Behaviors.

Predictors	B	SEB	B
Parental Monitoring	.177	.105	.144
Mother Demandingness	.035	.095	.021
Father Demandingness	-.126	.077	-.121
Mother Responsiveness	-.104	.106	-.096
Father Responsiveness	-.155	.100	-.147
Mother Involvement	.144	.125	.130
Father Involvement	.064	.109	.037
Mother Communication	.144	.046	-.079
Father Communication	.041	.038	.085
Peer Goal-Oriented Behavior	-.131	.083	-.114
Peer Risk-Taking Behavior	.401	.067	.457**
Religious Attendance	-.048	.041	-.116
Religious Involvement	-.020	.039	-.040
Religious Importance	.056	.064	.096
Hours of Television Viewed Per Week	.007	.004	.162*
Hours Spent Listening to Music Per Week	.001	.003	.063
Hours Spent Reading Magazines Per Week	-.017	.007	-.177*
Hours Spent on the Internet Per Week	.000	.003	.041
Total Hours Per Week With Media	-.001	.002	-.101
Approx. Hours Per Week With Neg. Media	.002	.002	.074

Note. * $p < .05$, ** $p < .01$, $F = 3.85$, $p = .000$, $R^2 = 34.9\%$

Extracurricular activities was used as the criterion variable in the sixth multivariate linear regression analysis. See Table 9. Mother demandingness, father demandingness, father responsiveness, mother involvement, father involvement, and father communication did not enter as statistically significant contributors. However, parental monitoring (beta = .183, $p < .05$), mother responsiveness (beta = .193, $p < .05$), mother communication (beta = -.371, $p < .01$) did enter as statistically significant contributors to the equation.

Table 9

Multivariate Linear Regression Analysis -- Extracurricular Activities.

Predictors	B	SEB	B
Parental Monitoring	.515	.237	.183*
Mother Demandingness	-.156	.213	-.064
Father Demandingness	-.142	.174	-.073
Mother Responsiveness	.492	.238	.193*
Father Responsiveness	.164	.225	.068
Mother Involvement	.390	.283	.143
Father Involvement	.377	.245	.157
Mother Communication	-.411	.104	-.371**
Father Communication	-.039	.086	-.036
Peer Goal-Oriented Behavior	.575	.188	.216**
Peer Risk-Taking Behavior	-.295	.151	-.145
Religious Attendance	-.160	.093	-.161
Religious Involvement	.196	.088	.196*
Religious Importance	-.271	.144	-.168
Hours of Television Viewed Per Week	-.002	.008	-.013
Hours Spent Listening to Music Per Week	-.005	.006	-.106
Hours Spent Reading Magazines Per Week	.026	.017	.124
Hours Spent on the Internet Per Week	-.007	.007	-.120
Total Hours Per Week With Media	.008	.005	.258
Approx. Hours Per Week With Neg. Media	-.003	.005	-.053

Note. * $p < .05$, ** $p < .01$, $F = 4.55$, $p = .000$, $R^2 = 38.8\%$

Overall academic grades were used as the criterion variable in the seventh multivariate linear regression analysis. See Table 10. Parental monitoring, mother demandingness, mother responsiveness, father responsiveness, mother involvement, father involvement, mother communication, and father communication did not enter as statistically significant contributors. However, father demandingness (beta = .181, $p < .05$) did enter as a statistically significant contributor to the equation.

Table 10

Multivariate Linear Regression Analysis -- Overall Academic Grades.

Predictors	B	SEB	B
Parental Monitoring	.217	.254	.084
Mother Demandingness	.014	.228	.013
Father Demandingness	.414	.186	.181*
Mother Responsiveness	-.307	.254	-.126
Father Responsiveness	.061	.240	.029
Mother Involvement	-.449	.302	-.154
Father Involvement	-.449	.261	-.198
Mother Communication	.212	.111	.199
Father Communication	-.013	.092	-.022
Peer Goal-Oriented Behavior	-.468	.201	-.185*
Peer Risk-Taking Behavior	.661	.161	.332**
Religious Attendance	.079	.100	.050
Religious Involvement	-.003	.093	-.009
Religious Importance	-.123	.154	-.058
Hours of Television Viewed Per Week	.002	.009	.039
Hours Spent Listening to Music Per Week	-.008	.006	-.171
Hours Spent Reading Magazines Per Week	-.013	.018	-.061
Hours Spent on the Internet Per Week	-.010	.007	-.162
Total Hours Per Week With Media	.013	.005	.389*
Approx. Hours Per Week With Neg. Media	-.000	.005	-.009

Note. * $p < .05$, ** $p < .01$, $F = 3.07$, $p = .000$, $R^2 = 29.9\%$

Research question 2: Is affiliation with peers who are risk-takers or goal-oriented related to adolescents' own risk-taking and goal-oriented behaviors?

H₂: Peer affiliation will significantly explain variance in risk-taking behavior and goal-oriented behavior.

Multivariate linear regression analyses were conducted using the predictor variables of peer-risk taking behaviors and peer goal-oriented behaviors. The seven criterion variables were average risk-taking behavior, thrill-seeking behavior, rebellious behavior, reckless behavior, antisocial behavior, extracurricular activities, and overall academic grades. Multivariate linear

regression analysis was chosen for this research question because of the strong statistical equation for identifying predictor variables. R-squared statistics are included in Appendix E.

All of the risk-taking variables had statistically significant results associated with peer risk-taking behaviors. Total average risk-taking behavior was used as the criterion variable in the first multivariate linear regression analysis. See Table 4. Peer goal-oriented behavior did not enter as statistically significant contributors. However, peer risk-taking behavior (beta = .625, $p < .01$) did enter as a statistically significant contributor to the equation. Thrill-seeking behavior was used as the criterion variable in the second multivariate linear regression analysis. See Table 5. Peer goal-oriented behavior (beta = .190, $p < .05$) and peer risk-taking behavior (beta = .264, $p < .01$) did enter as statistically significant contributors to the equation. Rebellious behavior was used as the criterion variable in the third multiple linear regression analysis. See Table 6. Peer goal-oriented behavior did not enter as statistically significant contributors. However, peer risk-taking behavior (beta = .598, $p < .01$) did enter as a statistically significant contributor to the equation. Reckless behavior was used as the criterion variable in the fourth multivariate linear regression analysis. See Table 7. Peer goal-oriented behavior did not enter as statistically significant contributors. However, peer risk-taking behavior (beta = .451, $p < .01$) did enter as a statistically significant contributor to the equation. Antisocial behavior was used as the criterion variable in the fourth multivariate linear regression analysis. See Table 8. Peer goal-oriented behavior did not enter as statistically significant contributors. However, peer risk-taking behavior (beta = .457, $p < .01$) did enter as a statistically significant contributor to the equation.

Both goal-oriented variables had statistically significant results associated with peer goal-oriented behaviors. Extracurricular activities were used as the criterion variable in the fifth multivariate linear regression analysis. See Table 9. Peer risk-taking behavior did not enter as

statistically significant contributors. However, peer goal-oriented behavior ($\beta = .216, p < .01$) did enter as a statistically significant contributor to the equation. Overall academic grades was used as the criterion variable in the sixth multiple linear regression analysis. See Table 10. Peer goal-oriented behavior ($\beta = -.185, p < .05$) and peer risk-taking behavior ($\beta = .332, p < .01$) did enter as statistically significant contributors to the equation.

Research question 3: What are the relations between religiosity (attendance, involvement, and importance) and adolescent risk-taking and goal-oriented behaviors?

H₃: Religious attendance, involvement, and importance will significantly explain variance in risk-taking behavior and goal-oriented behavior.

Multivariate linear regression analyses were conducted using the predictor variables of religious attendance, religious involvement, and religious importance. The seven criterion variables were average risk-taking behavior, thrill-seeking behavior, rebellious behavior, reckless behavior, antisocial behavior, extracurricular activities, and overall academic grades. Multivariate linear regression analysis was chosen for this research question because of the strong statistical equation for identifying predictor variables. R-squared statistics are included in Appendix E.

Total average risk-taking behavior was used as the criterion variable in the first multivariate linear regression analysis. See Table 4. The results were not significant. Thrill seeking was used as the criterion variable in the second multivariate linear regression analysis. See Table 5. The results were not significant. Rebellious behaviors were used as the criterion variable in the third multivariate linear regression analysis. See Table 6. The results were not significant. Reckless behaviors were used as the criterion variable in the fourth multivariate linear regression analysis. See Table 7. The results were not significant. Antisocial behaviors

were used as the criterion variable in the fifth multivariate linear regression analysis. See Table 8. The results were not significant. Extracurricular activities were used as the criterion variable in the sixth multivariate linear regression analysis. See Table 9. Religious attendance and religious importance did not enter as statistically significant contributors. However, religious involvement (beta = .196, $p < .05$) did enter as a statistically significant contributor to the equation. Overall academic grades were used as the criterion variable in the seventh multivariate linear regression analysis. See Table 10. The results were not significant.

Research question 4: What are the relations between media consumption and adolescent risk-taking behavior and goal-oriented behaviors?

H₄: Media consumption will significantly explain variance in risk-taking behavior and goal-oriented behavior.

Multivariate linear regression analyses were conducted using the predictor variables of hours of television viewed per week, hours spent listening to music per week, hours spent reading magazines per week, hours spent on the internet per week, total hours spent per week with all media, and approximate hours per week spent with negative media. The seven criterion variables were average risk-taking behavior, thrill-seeking behavior, rebellious behavior, reckless behavior, antisocial behavior, extracurricular activities, and overall academic grades. R-squared statistics are included in Appendix E.

Total average risk-taking behavior was used as the criterion variable in the first multivariate linear regression analysis. See Table 4. The results were not significant. Thrill-seeking behavior was used as the criterion variable in the second multivariate linear regression analysis. See Table 5. The results were not significant. Rebellious behavior was used as the criterion variable in the third multiple linear regression analysis. See Table 6. The results were

not significant. Reckless behavior was used as the criterion variable in the fourth multivariate linear regression analysis. See Table 7. Hours spent listening to music per week, hours spent reading magazines per week, hours spent on the internet per week, and approximate hours per week spent with negative media did not enter as statistically significant contributors. However, hours of television viewed per week ($\beta = .54, p < .05$) and total hours spent per week with all media ($\beta = -.262, p < .05$) did enter as statistically significant contributors to the equation. Antisocial behavior was used as the criterion variable in the fifth multivariate linear regression analysis. See Table 8. Hours spent listening to music per week, hours spent on the internet per week, total hours spent per week with all media, and approximate hours per week spent with negative media did not enter as statistically significant contributors. However, hours of television viewed per week ($\beta = .162, p < .05$) and hours spent reading magazines per week ($\beta = -.177, p < .05$) did enter as statistically significant contributors to the equation. Extracurricular activities were used as the criterion variable in the sixth multivariate linear regression analysis. See Table 9. The results were not significant. Overall academic grades were used as the criterion variable in the seventh multivariate linear regression analysis. See Table 10. Hours of television viewed per week, hours spent listening to music per week, hours spent reading magazines per week, hours spent on the internet per week, and approximate hours per week spent with negative media did not enter as statistically significant contributors. However, total hours spent per week with all media ($\beta = .389, p < .05$) did enter as a statistically significant contributor to the equation.

Research question 5: How much variance in risk-taking behaviors and goal-oriented behaviors is explained by parent, peers, religion, and media?

H₅: Parental behaviors, peer affiliation, religiosity, and television relatedness will significantly explain variance in risk-taking behavior and goal-oriented behavior.

Testing of the significance of each predictor variable across two linear multiple regression equations simultaneously was conducted using multivariate regression as a follow-up procedure. While a separate regression analysis can be ran for each dependent variable, an advantage of estimating the series of equations as a single model, such as the current one, is that significance tests of regression coefficients across the different equations predicting different dependent variables can be ran simultaneously. Follow up hypothesis testing for each predictor was conducted to determine if each of the predictors had an effect in all regression equations simultaneously. Those tests are based on F statistics with a degrees of freedom $(p-1, n-k)$, where p is the number of dependent variables and k is the number of parameters (in a simultaneous equation setting, regression coefficients, correlations or covariances are parameters). All of the variables were included in this testing procedure (e.g., predictors and outcome variables) in a simultaneous setting, with each predictor's impact on all of the dependent variables tested holding the impact of the other predictors constant. The multivariate regressions were done using the "mvreg" procedure and then a follow up hypothesis test for each predictor was conducted using "test" procedure under the "mvreg" main procedure, using STATA software (Version 10.0). The dependent variables included thrillseeking behaviors, rebellious behaviors, reckless behaviors, antisocial behaviors, extracurricular activities and overall academic grades. The predictor variables included in this analysis were parental monitoring, mother demandingness, father demandingness, mother responsiveness, father responsiveness, mother involvement, father involvement, mother communication, father communication, goal-oriented peers, risk-taking peers, religious attendance, religious participation, religious importance, hours of television viewed per week, hours spent listening to music per week, hours spent reading magazines per

week, hours spent on the internet per week, total hours spent per week with all media, and approximate hours per week spent with negative media. See Table 11.

Table 11
Testing the Significance of Predictors Across Regression Equations Simultaneously.
 (df = 6, 144)

Predictors	F
Parental Monitoring	2.22*
Mother Demandingness	1.85
Father Demandingness	3.92**
Mother Responsiveness	1.15
Father Responsiveness	1.77
Mother Involvement	1.69
Father Involvement	1.30
Mother Communication	3.14**
Father Communication	1.19
Goal-Oriented Peers	3.93**
Risk-Taking Peers	20.24**
Religious Attendance	.88
Religious Involvement	1.84
Religious Importance	1.70
Hours of Television Viewed Per Week	1.73
Hours Spent Listening to Music Per Week	1.87
Hours Spent Reading Magazines Per Week	1.79
Hours Spent on the Internet Per Week	1.11
Total Hours Per Week With Media	4.53**
Approx. Hours Per Week With Neg. Media	1.70

Note. * $p < .05$, ** $p < .01$

Mother demandingness, mother responsiveness, father responsiveness, mother involvement, father involvement, father communication, religious attendance, religious importance, hours of television viewed per week, hours spent listening to music per week, hours spent reading magazines per week, hours spent on the internet per week, and approximate hours spent per week with negative media did not enter as statistically significant contributors to both regression equations. However, parental monitoring ($F = 2.22$, $p < .05$), father demandingness ($F = 3.92$, $p < .01$), mother communication ($F = 3.14$, $p < .01$), goal-oriented peers ($F = 3.93$, $p < .01$), risk-taking peers ($F = 20.24$, $p < .01$), and total hours spent per week with media ($F = 4.53$,

$p < .01$) simultaneously and significantly predicted the dependent variables across both equations.

CHAPTER 5

Discussion

Adolescence is an important period of development to study not only because adolescence has been documented as a time of greater risk-taking but also because it is a key time for the development of future plans and goals. Due to this interesting convergence of adolescent's participation in risk-taking behaviors and planning for their future it was important to explore several key environmental contexts that adolescents are concurrently exposed to, including family relationships, peer relationships, religion, and media. While many studies have examined some of these variables, this study used Bronfenbrenner's bioecological theory (2005) to drive the selection of a unique combination of these variables in an attempt to maximally explain variance in risk-taking and goal-oriented behaviors. The purpose of this study was to compile, through a multifactor model, major influences on adolescent behavior in one comprehensive study, and examine their individual and combined contributions to behavior.

It was expected that this combination of variables from several key life contexts would explain a statistically significant proportion of variance in risk-taking behaviors and goal-oriented behaviors among adolescents. Adolescents whose parents are more involved, who communicate more, and who monitor their adolescents' activities more were expected to engage in less risk-taking behavior and more goal-oriented behavior than adolescents whose parents did not display these same behaviors. It was hypothesized that adolescents whose peers were involved in goal-oriented behaviors would display more goal-oriented behaviors. Adolescents who displayed religious beliefs were expected to engage in less risk-taking behavior and more goal-oriented behavior. Also, adolescents who have less exposure to risky media were expected to display more goal-oriented behaviors and less risk-taking behaviors. However, it was expected

that combining these variables would explain variance in goal-oriented behaviors and risk-taking behaviors more comprehensively. Finally, it was expected that overall peer social support, parental academic support, religion, and media would significantly contribute to variance in risk-taking behaviors and goal-oriented behaviors. In general, the results of this study supported the hypotheses. Many of the variables (family relationships, peer relationships, religion, and media) accounted for significant amounts of variance in risk-taking and goal-oriented behaviors in adolescents, though not always as strongly as anticipated and in the direction expected. Presented next is a discussion of the results of each research question.

Research question 1: What are the relations between parenting behaviors (parenting style, monitoring, involvement and communication) explain a statistically significant proportion of variance in adolescent risk-taking behaviors and goal-oriented behaviors?

It was expected that parenting behaviors (parenting style, monitoring, involvement, and communication) would explain a statistically significant relationship among adolescent risk-taking behaviors and goal-oriented behaviors. Specifically, it was expected that adolescents whose parents were more responsive placed higher demands, were more involved, communicated more, and monitored their activities more were expected to engage in less risk-taking behavior and more goal-oriented behavior than adolescents whose parents did not display these attributes. The results showed that a significant proportion of variance in risk-taking behavior and goal-oriented behavior was explained by several parenting behaviors. In general, risk-taking behaviors in adolescents was positively associated with paternal demandingness, maternal involvement, and paternal communication and negatively associated with maternal communication and maternal demandingness. Goal-oriented behavior was positively associated with parental monitoring, maternal responsiveness, paternal demandingness and was negatively

associated with maternal communication. There were only two parenting behaviors that were not statistically significant with any type of adolescent risk-taking or goal-oriented behaviors. Those variables were paternal involvement and paternal responsiveness.

The findings for responsiveness and demandingness, which are two constructs of authoritative parenting style, indicated generally expected directions of relations between parenting and outcomes. For example, maternal demandingness was negatively associated with reckless behaviors while maternal responsiveness was positively associated with extracurricular activities. Paternal demandingness was positively associated with thrill-seeking behaviors and overall academic grades. These findings are similar to previous studies on authoritative parenting style, especially upon closer examination of key components of the thrill-seeking subscale, which actually contains several items that reflect involvement in extracurricular activities (e.g., frequency of how often adolescents engage in snow skiing, Tao Kwon Do, inline skating, and entering a competition). Therefore, the thrill-seeking subscale may be gauging extracurricular involvement more than negative risk-taking behaviors. Thus, paternal demandingness being positively linked to adolescent thrill-seeking behavior may not be as negative as it appears at face value but actually a reflection of goal-oriented behaviors.

The current study supports previous findings that adolescents who are raised in households with authoritative parenting (high demandingness and high responsiveness) display less risk-taking behaviors (Steinberg, Blatt-Eisengart, & Cauffman, 2006, Leventhal & Brooks-Gunn, 2000; Barnow, Schuckit, Lucht, John, & Freyberger, 2002). It also revealed associations between features of authoritative parenting style (demandingness and responsiveness) and goal-oriented behaviors in adolescents. Participants who identified that their parents displayed both higher levels of responsiveness and demandingness participated in more extracurricular activities

and achieved higher academic grades than those who do not. A balance of demandingness and responsiveness is key to effective (e.g., authoritative) parenting, which clearly continues to be an important facet of parenting for positive adolescent development. In this study, a consistent theme across criterion variables was that demandingness from at least one parent was a construct that most often entered the models as statistically significant contributors. This may suggest that parents having high expectations for their adolescents' behavior is linked to positive outcomes.

The second parental behavior explored in the present study was parental monitoring. Parental monitoring, as measured in this study, was not associated with any adolescent risk-taking behaviors, despite that past research found them to be correlated (Barnes, Hoffman, Welte, Farrell, & Dintcheff, 2006; Larid, Criss, Pettit, Dodge, & Bates, 2008). Relations between academic achievement and parental monitoring were also nonsignificant, whereas past research found them to be correlated (Jacobson & Crockett, 2000). However, parental monitoring was positively associated with goal-oriented behaviors. Specifically, parental monitoring was positively associated with adolescent involvement in extracurricular activities. Although the association was not strong, these results indicated that parental monitoring plays a role in some aspects of positive adolescent development.

Maternal communication was negatively associated with both the thrill-seeking subscale as expected and the extracurricular subscale, which was unexpected. The findings on communication are unexpected not only for the negative relationship but also the strength of the relationship. Mother communication was statistically the strongest overall predictor of adolescent outcomes when comparing all of the parenting variables included in this study. Paternal communication was positively associated with rebellious behaviors, which was unexpected. Maternal communication being negatively associated with the thrill-seeking

subscale was expected; however, these results may be more of a negative reflection on maternal communication than a positive reflection. As previously discussed, the thrill-seeking subscale may be more closely linked to extracurricular activities than traditional risk-taking behaviors based upon the items included in the subscale. Ultimately, the results showed that increased parental communication was associated with negative outcomes both in risk-taking behaviors (paternal) and goal-oriented behaviors (maternal). These findings were inconsistent with previous research by Somers and Paulson (2002) and Guilamos-Ramos, Jaccard, Dittius, & Douris (2006); however, both of their studies looked specifically at sexual risk-taking in adolescents and the present study did not find any statistical results in that category. One potential explanation for these unexpected directions of relations might be the types of communication questions asked. The present study's questions on communication were general (e.g., "How well do you communicate with your mother?", "How comfortable would you be talking to your father about a romantic problem?") and did not ask more specific questions in regards to risk-taking and goal-oriented behaviors. General communication may not be a critical variable in predicting risk-taking and goal-oriented behaviors in adolescents. Additionally, as these data are correlational and there is no way to determine which variables came first and which later, another possible explanation is that adolescents begin engaging in behaviors, which then necessitates parental communication because parents start to notice that conversations about "growing up" are needed.

Finally, the roles of paternal and maternal involvement were examined, and only maternal involvement was associated with adolescent risk-taking and goal-oriented behaviors. However, this was the strongest predictor variable of all of the parenting variables for thrill-seeking behaviors. There was a positive association with the thrill-seeking subscale. This

positive association may be due to the majority of the respondents being between the ages of fourteen and sixteen and their reliance upon a parental figure to take them to and from each extracurricular activity, thus requiring maternal involvement more out of need than it being an intentional parenting practice. The lack of relations between parental involvement and goal-oriented behaviors was not consistent with prior research (Gonzalez-DeHass, Willems, & Holbein, 2005; Keith, Keith, Quirk, Sperduto, Santillo, & Killings, 1998). However, research by Gonzalez-DeHass et al. (2005) defined goal-oriented behaviors through student motivation (school engagement, self-regulation, motivation to read, etc.), whereas the present study identified involvement in extracurricular activities and academic success as goal-oriented behaviors. Also, while the study by Keith et al. (1998) identified goal-oriented behavior as academic success, their study identified solely tenth grade students whereas the present study identified ninth through twelve grade students. The inclusion of a variety of grade levels in the current study may have played a role in the different outcomes between the two studies due to the needs of older adolescents being different from younger adolescents. As adolescents advance to higher grade levels the reliance upon parental involvement decreases and the need for autonomy increases; thus, the needs of eleventh and twelve grade students being less than ninth and tenth grade students may skew the results.

The results as a whole indicate that the parent/adolescent relationship is an important aspect at the microsystem level, and some aspects of the parent/adolescent relationship are more important than others to consider. The relationship between the adolescent and his/her parents can be seen as the most proximal in the adolescent's life, and as later potentially having an influence on all other microsystems. Thus, it is important to consider the adolescent's relationship with his/her parents. While the results did support previous research in some areas,

such as parenting style, and did not yield significant results in others areas expected, such as parental involvement, the overall results support the need to take a multifactor approach to identifying the role that parents play in adolescent development. Parenting is a complicated mix of multiple variables and if any certain variable is omitted the ability to understand the dynamics of how they interact may be missed which may impede a full understanding of parental impact on adolescents. This recommendation is due to the contributions that each of these parenting variables has made to either adolescent risk-taking or goal-oriented behaviors. The purpose of this study was to more comprehensively examine the roles of multiple parenting behaviors that are associated with positive adolescent development. Although parental communication likely needs to be studied further to determine what aspects of communication may be more related to adolescent behavior, several noteworthy themes were observed, as discussed above.

Research question 2: Is affiliation with peers who are risk-takers or goal-oriented related to adolescents' own risk-taking and goal-oriented behaviors?

It was expected that affiliation with more peers who are either risk-takers or goal-oriented would explain a statistically significant relationship in adolescents' risk-taking and goal-oriented behaviors. Specifically, adolescents who reported more goal-oriented peers were expected to report involvement in more extracurricular activities and higher academic grades. As expected, when adolescents were associated with more risk-taking peers, they also reported greater levels of each risk-taking construct (total average risk-taking, thrill-seeking, rebellious behavior, reckless behavior, and antisocial behavior). Based upon the significance of the current findings, peer risk-taking behavior was moderately strongly related with adolescent risk-taking. Also, interestingly, peers' risk-taking behavior levels were consistently significant across many criterion variables. These findings are consistent with previous research on factors associated

with adolescent risk-taking behavior with a specific emphasis on peers (Michael & Hasida, 2007; Owens & Bergman, 2010; Prinstein et al., 2001).

Unexpectedly, however, having more goal-oriented peers was positively associated with more frequent thrill-seeking behaviors. As previously reported, the thrill-seeking subscale items involve frequency of engagement in multiple extracurricular activities (e.g., entering a competition, Tae Kwon Do fighting, and snow skiing), which are not necessarily negative in the sense that is commonly referred to by the term “risk-taking behavior”. It is likely that this measurement idiosyncrasy causes the significant relations in the directions opposite than anticipated. Even goal-oriented students may engage in some levels of high-risk activities that reflect thrill seeking, which may be a part of normal adolescent development, but more self destructive risk-taking behaviors may be curtailed by associating with goal-oriented peers. In summary, results suggest that the thrill-seeking subscale may be more indicative of involvement in sports activities than actual risk-taking behaviors in the traditional sense and this may have skewed the results. Findings for goal-oriented behavior in adolescents was somewhat mixed. Results indicated that more adolescents associated with goal-oriented peers they were more likely to participate in extracurricular activities. These findings are consistent with previous research by Fredricks and Eccles (2005).

However, it was also unexpected that there were no significant associations between goal-oriented peers and academic success. This may be due to the power of individual academic potential or other factors affecting academics and simply having goal-oriented peers may not be enough. Surprisingly, positive associations were found among risk-taking peers and academic success. Based upon the beta value of this predictor variable, the more adolescents associate with risk-taking peers the greater their academic achievement will be. This finding may indicate that

there are several environmental factors, and not only peers, that influence an individual at any one time,

The relationship between the adolescent and his/her peers is the second most proximal microsystem in an adolescents' life. During adolescence, peer relationships become increasingly important and occupy an increasing amount of adolescents' time, which is evident through prior theories and studies. Therefore, it is important to examine the adolescent's relationship with his/her peers when looking at the ecological model and adolescence. The current study identified that having both risk-taking and goal-oriented peers are associated with both risk-taking and goal-oriented behaviors in adolescents. However, adolescent peer relationships are not as simplistic as saying that risk-taking adolescents associate with risk-taking peers and goal-oriented adolescents associate with goal-oriented peers. As evidenced by the current study, the adolescent/peer relationship is much more complicated.

While the findings on risk-taking peers being positively associated with academic success and goal-oriented peers being negatively associated with academic success were unexpected, it is possible that additional environmental variables are co-occurring. It is important for future research to understand what environmental factors contribute to adolescent academic success despite associating with risk-taking peers and to understand what factors contribute to adolescent academic failure despite association with goal-oriented peers. These findings support the need for extended research on the impact that other environmental factors have on adolescent development beyond looking at peer influence solely at the microsystem level.

Research question 3: What are the relations between religiosity (attendance, involvement, and importance) and adolescent risk-taking and goal-oriented behaviors?

It was expected that religious attendance, involvement, and importance would explain a statistically significant relationship among adolescent risk-taking and goal-oriented behavior. Religious attendance, involvement and importance were not associated with any risk-taking behaviors, despite that prior research did find some associations. Sinha, Cnaan, and Gelles (2007) identified less risk-taking behaviors in adolescents who were involved in religion and who found religion important. Religious involvement was associated with some aspects of goal-oriented behaviors. Specifically, adolescents who reported more religious involvement reported more extracurricular involvement. There was no association between religious involvement and academic grades.

Research on adolescents' religiosity and its relationship to risk-taking and goal-oriented behavior has been relatively scarce. The current results contribute to the small body of research on adolescent religious beliefs and risk-taking and goal-oriented behaviors. Overall, these religiosity factors were generally unrelated to risk-taking behaviors. The present study also did not yield significant results among adolescents' academic achievement and any of the three aspects of religiosity measured here, whereas past research found them to be correlated (Milot & Ludden, 2009). However, these findings are with merit in two ways. The results did indicate a mild relationship among religious involvement and increased extracurricular involvement. This is consistent with prior research that religion, in general, is associated with prosocial aspects of adolescent development (Hardy & Carlo, 2005; King & Furrow, 2004). Based upon the current findings and previous research, perhaps it is goal-oriented behavior that religiosity more explicitly has relations with and not necessarily protecting explicitly from risk-taking behaviors. The present study, along with prior research, indicates that religiosity is an important aspect to consider when looking at ecological factors associated with adolescent development.

Research question 4: What are the relations between media consumption and adolescent risk-taking behavior and goal-oriented behavior?

Although the measurement tools used in this study were newly developed and exploratory, it was expected that media consumption would significantly explain variance in risk-taking behavior and goal-oriented behavior in adolescents. There were several aspects of media consumption identified. These areas included hours of television viewed per week, hours spent listening to music per week, hours spent reading magazines per week, hours spent on the internet per week, total hours per week spent with all media, and approximate hours spent per week with negative media.

Mass media is an important factor in an individual's life so it is important to try and understand how it is associated with the developmental process. Research on media's impact on adolescent development is not a new topic; however, few studies have tackled measuring media consumption at all, let alone include media into a multifaceted model such as that here. Findings from the present study indicated that the more television viewed per week the more adolescents' participated in reckless and antisocial behaviors. Of the two construct variables that television viewing was positively associated with, reckless behaviors had the strongest relationship. These findings were consistent with prior research on reckless and antisocial behaviors in adolescents (Vandewater, Shim, & Caplovitz, 2004; Kremar & Greene, 2000; Somers & Tynan, 2006). Interestingly, antisocial behaviors (e.g., overeating, teasing, cheating, etc.) were identified to slightly decrease as hours spent reading magazines per week increased. The possible protective roles of media consumption were unexpected. Greater total media usage per week was negatively associated with reckless behaviors two fold and positively associated with academic success three fold. A potential explanation for this finding lies in the

measurement of reckless behaviors. The reckless behaviors subscale includes questions regarding drinking and driving and driving without a license; thus, it is probable that if an individual is spending more time at home with media there is less opportunity to partake in reckless activities.

The exosystem constitutes a more distal environmental influence and it is important to begin to understand to what extent media exposure and consumption is related to adolescents' decision making. Mass media is an example of an exosystem variable. It is a common factor in an adolescent's life and it is important to understand the relationship between adolescent risk-taking and goal-oriented behaviors and media consumption. Although specific media content consumed was not measured, results indicated that media is affiliated with adolescent risk-taking and goal-oriented behaviors in several ways. Media was not only associated with negative behaviors but was also associated with prosocial behaviors as well. Total media consumed was associated with higher academic grades and decreased risk-taking behaviors as was time spent with reading magazines. However, the amount of television viewed was associated with increased risk-taking behaviors. Based upon the current study's results, it is clear that media is related to adolescent risk-taking and goal-oriented behaviors. However, the current study did not control for what specific types of media are being consumed, such as negative media (e.g., sexually explicit or violent) or positive media (e.g. educational documentaries). Based upon the current study, which did not specifically identify content being consumed, it is important for parents and educators to realize that even the amount of time exposed to content in general may be related to adolescent risk-taking and goal-oriented behaviors.

There is a need for continued exploration of media's impact on adolescent risk-taking and goal-oriented behaviors. With the amount of media that adolescents are exposed to it is

imperative that media variables are included in ecologically-focused research on adolescent development. It has been reported by Brown and Witherspoon (2002) that 8 to 18 year olds spend an average 6 to 7 hours a day with some form of mass media, whether it is television, music, magazines, or the Internet. With media being an important aspect of the exosystem, it is important to continue to try and understand how media may directly or indirectly be involved in the lives of adolescents.

Research question 5: How much variance in risk-taking and goal-oriented behaviors is explained by parent, peers, religion, and media?

This research question was designed to take a more comprehensive approach to identifying factors associated with risk-taking behaviors and goal-oriented behaviors in adolescents than the previous questions. Each prior question had accounted for either the adolescent's microsystem or exosystem independent of other interacting factors. The current question attempted to simultaneously examine several different layers of the adolescent's environment including factors most commonly present in the microsystem and the exosystem. It is clear that the present results support the preponderance of literature that showed that the environment, as a whole, has an impact upon adolescent's risks and goals. It is the specific contributions of these variables that were of focus in this study.

Adolescents receive messages about their behavior from numerous environments; therefore, it is not possible to produce totally accurate predictions of their behavior, but looking at multiple predictor variables simultaneously allows us to identify a set of predictor variables which together provide a useful estimate of how to account for adolescent risk-taking and goal-oriented behavior. The current results when assessed as a whole present a different picture of what is explaining variance in adolescent behavior compared to when sets of variables are

considered individually, as was done in the previous four research questions. While all of the predictor categories (parenting behaviors, peer behaviors, religiosity, and media) displayed significant results, a consistent theme across all criterion variables was that association with risk-taking peers was the construct that most often entered the models as statistically significant contributors and most frequently had the strongest statistical significance. Interestingly, the second strongest predictor of adolescent behavior across all predictor variables was total media consumption. Specifically, total media consumption had the strongest relationship, out of all the predictor variables, with overall academic grades.

These results of the current study indicate that when looking at the interactions of an adolescent's environment, several factors are related to adolescent outcomes. Based upon these results, it is evident that there are multiple contributors to adolescents' decision making at any given time. It is important for educators to understand that adolescents receive messages on risk-taking and goal-oriented behaviors from multiple sources such as parents, peers, and media. When considering how to anticipate an adolescent's needs, it is evidenced, through this study, that it is not enough to consider one specific influence but rather assess what contributing environmental factors may be having the most profound impact on that adolescent's life at that given time.

Limitations

Several weaknesses of this study and suggestions for future research were made throughout the prior discussion. There are several additional limitations that require discussion. First, while every effort was made by the researcher to ensure confidentiality, the students completed the surveys at desks or tables in generally full classrooms, which may have impacted

the participants' ability to self-disclose entirely. Therefore, the results should be interpreted with this in mind.

Second, the type of school from which the sample of students was collected was a single public, suburban school in the Midwest. This limitation makes it difficult to generalize to other types of schools that may vary in size, geographic location (urban or rural), and private versus public. Future research could focus on obtaining data from students in several different types of high schools who may be having different types of high school experiences. Related to this is the fact that the sample was half white and half Arab-American, which is likely not generalizable to the broader population.

Third, this study used an extensive self-report as the method of data collection. Even though the questionnaire method is a widely used and acceptable way to obtain adolescents' perceptions, no other method of data collection was used. Future researchers may want to obtain parents' and/or teachers' perceptions of the students and their environments along with the students' own perceptions in order to have a more comprehensive set of information.

Fourth, the adolescents' range of responses on each media variable indicated that they did not appear to be intentional responses but rather a poor estimate of the time available in a week. Although it is likely that the responses are a true indication of how frequent the respondents felt that they were involved in media consumption, and this is the rationale for having kept the responses in the study, in the future, it would likely be more advantageous to rely upon a likert type scale (e.g. 1 = 0-10 hours, 2 = 10-20 hours, etc.). Another option would be to ask respondents in what time frames during each 24 hour period they typically engaged in various types of media. This would put more realistic constraints on the amount of time available.

Implications and Recommendations

The results of the current study have made it clear that multiple factors in the adolescents' life, ranging from the microsystem level to the exosystem level, contribute to their risk-taking and goal-oriented behaviors. The most significant contributor to adolescent behaviors was peer behaviors. Several other factors contributed a lesser role to adolescent behaviors such as parenting behaviors, religiosity, and media. It is important for parents and educators to be aware of these combinations.

Several potential suggestions to educators and parents arise from the previously mentioned findings. When identifying interventions for adolescent success it is important to consider both parenting behaviors and peer influence. It is important for parents to not only inquire about and participate in their child's life but it is also important to place a certain amount of expectations upon them and to assist them in meeting those expectations. It is also important for parents to know about all aspects of their child's peer group. Also, based upon the current findings, media may have certain protective factors. It may be more important to monitor the types of media adolescents are exposed to rather than the content. This is not to say that monitoring of content has no merit but rather it is important to put limits on the type of media consumed per day.

Conclusions

Despite the limitations of this study, the results of this research may make a positive contribution to the existing body of research on predictors of adolescent risk-taking and goal-oriented success. These contributions are displayed in a multitude of ways. The present study adds to the literature on parenting behaviors, peer affiliation, religiosity, and media consumption.

Findings were not only consistent with prior research in multiple facets but also provided more information into the nature of peer influence and the influence of media consumption.

The purpose of this study was also to provide a more extensive picture about how various combinations and possible interactions of variables contribute to adolescent risk-taking and goal-oriented behaviors. This study used an ecological approach to more thoroughly understand variance in adolescent risk-taking and goal-oriented behaviors. While there have been several multifactor studies on adolescent development, none have been as far reaching to include not only parenting behaviors and peer involvement but also various aspects of media exposure and religiosity. By taking a multifactor approach, it was identified that there are multiple factors that influence adolescent behavior, such as peers, media, and parents. Although more research clearly needs to be done, the current study contributes new information that will likely benefit both researchers and practitioners alike.

APPENDIX A

Statistical Analysis

Hypothesis	Variables	Statistical Analysis
Research question 1: Do parenting behaviors (parenting style, monitoring, involvement and communication) explain a statistically significant proportion of variance in adolescent risk-taking behaviors and goal-oriented behaviors?		
H ₁ : Parenting behaviors will significantly explain variance in risk-taking behavior and goal-oriented behavior	<u>Criterion Variables</u> Risk-taking behaviors Goal-oriented behaviors <u>Predictor Variables</u> Parenting behaviors <ul style="list-style-type: none"> • Parenting style • Parental monitoring • Parental involvement • Parental communication 	Multivariate linear regression analyses
Research question 2: Is affiliation with peers who are risk-takers or goal-oriented related to adolescents' own risk-taking and goal-oriented behaviors?		
H ₂ : Peer affiliation will significantly explain variance in risk-taking behavior and goal oriented behavior	<u>Variables to be correlated</u> Risk-taking behaviors Goal-oriented behaviors Peer affiliation	Multivariate linear regression analyses
Research question 3: What are the relations between (attendance, involvement, and importance) and adolescent risk-taking and goal-oriented behaviors?		
H ₃ : Religious attendance, involvement, and importance will significantly explain variance in risk-taking behavior and goal-oriented behavior	<u>Variables to be correlated</u> Risk-taking behaviors Goal-oriented behaviors Religiosity	Multivariate linear regression analyses
Research question 4: What are the relations between media consumption and adolescent risk-taking behavior and goal-oriented behaviors?		
H ₄ : Media consumption will significantly explain variance in risk-taking behavior and goal-oriented behavior	1. <u>Criterion Variables</u> Risk-taking behaviors Goal-oriented behaviors <u>Predictor Variables</u> Media consumption <ul style="list-style-type: none"> • Television usage • Magazine usage • Music usage • Internet usage B) <u>Variables to be correlated</u> Risk-taking behaviors Goal-oriented behaviors Total media consumption	Multivariate linear regression analyses

Hypothesis	<u>Variables</u>	Statistical Analysis
Research question 5: How much variance in risk-taking behaviors and goal-oriented behaviors is explained by parent, peers, religion, and media?		
H ₄ : Parental behaviors, peer affiliation, religiosity, and television relatedness will significantly explain variance in risk-taking behavior and goal-oriented behavior	<u>Criterion Variables</u> Risk-taking behaviors Goal-oriented behaviors <u>Predictor Variables</u> Parenting behaviors <ul style="list-style-type: none"> • Parenting style • Parental monitoring • Parental involvement • Parental communication Peer affiliation Religiosity Media consumption	Multivariate linear regression analyses

APPENDIX B

Demographics

Please circle what grade you are currently in: 9 10 11 12

Please circle your gender: Male Female

Please indicate your age: _____

Please indicate your ethnicity:

Caucasian African-American Asian Arabic Hispanic Other: _____

Risk Behavior

Please estimate the frequency with which **you engage** in the following behaviors.
(1)=never to (5)= very often.

	<u>Never</u>	<u>Once in awhile</u>	<u>Very often</u>		
1. Underage drinking	1	2	3	4	5
2. Smoking	1	2	3	4	5
3. Getting drunk	1	2	3	4	5
4. Taking drugs	1	2	3	4	5
5. Staying out late	1	2	3	4	5
6. Drinking and driving	1	2	3	4	5
7. Stealing cars/going for joy rides	1	2	3	4	5
8. Having unprotected sex	1	2	3	4	5
9. Speeding	1	2	3	4	5
10. Driving without a license	1	2	3	4	5
11. Snow skiing	1	2	3	4	5
12. Tao Kwon Do fighting	1	2	3	4	5
13. Inline skating	1	2	3	4	5
14. Parachuting	1	2	3	4	5
15. Entering a competition	1	2	3	4	5
16. Flying a plane	1	2	3	4	5
17. Leaving school	1	2	3	4	5
18. Overeating	1	2	3	4	5
19. Teasing/ picking on people	1	2	3	4	5
20. Cheating	1	2	3	4	5
21. Talking to strangers	1	2	3	4	5
22. Sniffing gas or glue	1	2	3	4	5

School Achievement

Please circle what grades you receive most often? (Choose only one answer)

- | | | |
|---------------------|---------------------|---------------------|
| 1. Mostly A's | 2. Mostly A's & B's | 3. Mostly B's |
| 4. Mostly B's & C's | 5. Mostly C's | 6. Mostly C's & D's |
| 7. Mostly D's | 8. Mostly D's & E's | 9. Mostly E's |

Please estimate the grades you receive by circling one option below:

	A	B	C	D	E
1. What is your current grade in Math?	1	2	3	4	5
2. What is your current grade in Language Arts?	1	2	3	4	5
3. What is your current grade in History?	1	2	3	4	5
4. What is your current grade in Science?	1	2	3	4	5

Please list all of the extracurricular activities that you are involved in? (ex, Football, Chess Club, Cheerleading, Student Government, ect.)

Parent Demandingness

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

1. My mother has rules for me about watching TV. _____
2. I would describe my mother as a strict parent. _____
3. It is okay with my mother if I do not follow certain rules. _____
4. When I do something that is wrong, my mother usually does not punish me. _____
5. I think my mother disciplines me a lot. _____
6. My mother usually wants to know where I am going. _____
7. My mother gives me a lot of freedom. _____
8. My mother makes most of the decisions about what I am allowed to do. _____
9. My mother gives me chores to do around the house routinely. _____
10. My mother lets me do pretty much what I want without questioning my decisions. _____
11. My mother rarely gives me orders. _____
12. My mother has few rules for me to for me to follow. _____
13. My mother expects me to be home at a certain time after school or in the evening. _____
14. It does not really matter to my mother whether or not I do assigned chores. _____
15. My mother sometimes tells me that her decisions should not be questioned. _____

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

2. My father has rules for me about watching TV. _____
2. I would describe my father as a strict parent. _____
3. It is okay with my father if I do not follow certain rules. _____
4. When I do something that is wrong, my father usually does not punish me. _____
5. I think my father disciplines me a lot. _____
6. My father usually wants to know where I am going. _____
7. My father gives me a lot of freedom. _____
8. My father makes most of the decisions about what I am allowed to do. _____
9. My father gives me chores to do around the house routinely. _____
10. My father lets me do pretty much what I want without questioning my decisions. _____
11. My father rarely gives me orders. _____
12. My father has few rules for me to for me to follow. _____
13. My father expects me to be home at a certain time after school or in the evening. _____
14. It does not really matter to my father whether or not I do assigned chores. _____
15. My father sometimes tells me that his decisions should not be questioned. _____

Parent Responsiveness

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

3. My mother sometimes criticizes me for what I do. _____
2. My mother expects me to tell her when I think a rule is unfair. _____
3. My mother encourages me to look at both sides of an issue. _____
4. It is hard for my mother to admit that sometimes I know more than she does. _____
5. My mother does not think that I should help with decisions in our family. _____
6. My mother encourages me to talk with her about things. _____
7. My mother does not believe that she should have her own way all the time anymore than she believes I should have mine. _____
8. My mother would rather I not tell her my troubles. _____
9. My mother expects me to do what she says without having to tell me why. _____
10. My mother seldom praises me for doing well. _____

11. My mother believes I have a right to my own point of view. _____
12. My mother takes an interest in my activities. _____
13. My mother encourages me to talk to her honestly. _____
14. My mother usually tells me the reasons for rules. _____
15. My mother does not believe I should have a say in making rules. _____

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

4. My father sometimes criticizes me for what I do. _____
2. My father expects me to tell him when I think a rule is unfair. _____
3. My father encourages me to look at both sides of an issue. _____
4. It is hard for my father to admit that sometimes I know more than he does. _____
5. My father does not think that I should help with decisions in our family. _____
6. My father encourages me to talk with his about things. _____
7. My father does not believe that he should have his own way all the time anymore than she believes I should have mine. _____
8. My father would rather I not tell him my troubles. _____
9. My father expects me to do what he says without having to tell me why. _____
10. My father seldom praises me for doing well. _____
11. My father believes I have a right to my own point of view. _____
12. My father takes an interest in my activities. _____
13. My father encourages me to talk to him honestly. _____
14. My father usually tells me the reasons for rules. _____
15. My father does not believe I should have a say in making rules. _____

Parent Involvement

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

1. My mother tries to get me to do my best on everything I do. _____
2. My mother thinks that education is a very important part of adolescence. _____
3. My mother usually goes to parent-teacher conferences. _____
4. My mother usually sets high standards for me to meet. _____
5. My mother seldom looks at my tests and papers from school. _____
6. It does not really matter to my mother what grades I get. _____

7. My mother is not involved in school programs for parents. _____
8. My mother sometimes does volunteer work at my school. _____
9. My mother thinks homework is a very important part of school. _____
10. When I get poor grades, my mother encourages me to try harder. _____
11. My mother usually does not go to school functions. _____
12. My mother makes sure that I have done my homework. _____
13. My mother usually knows the grades I get. _____
14. My mother thinks I should go to college. _____
15. Hard work is very important to my mother. _____
16. My mother does not think that she should help me with my homework. _____
17. My mother has high aspirations for my future. _____
18. When I get poor grades, my mother offers help. _____
19. When I ask for help with homework, my mother usually gives it to me. _____
20. My mother thinks that getting ahead in life is very important. _____
21. My mother does not think I should be concerned about what kind of career I may have. _____
22. My mother usually goes to activities in which I am involved at school. _____

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

5. My father tries to get me to do my best on everything I do. _____
2. My father thinks that education is a very important part of adolescence. _____
3. My father usually goes to parent-teacher conferences. _____
4. My father usually sets high standards for me to meet. _____
5. My father seldom looks at my tests and papers from school. _____
6. It does not really matter to my mother what grades I get. _____
7. My father is not involved in school programs for parents. _____
8. My father sometimes does volunteer work at my school. _____
9. My father thinks homework is a very important part of school. _____
10. When I get poor grades, my father encourages me to try harder. _____
11. My father usually does not go to school functions. _____
12. My father makes sure that I have done my homework. _____
13. My father usually knows the grades I get. _____
14. My father thinks I should go to college. _____
15. Hard work is very important to my father. _____
16. My father does not think that he should help me with my homework. _____
17. My father has high aspirations for my future. _____
18. When I get poor grades, my father offers help. _____
19. When I ask for help with homework, my father usually gives it to me. _____
20. My father thinks that getting ahead in life is very important. _____

21. My father does not think I should be concerned about what kind of career I may have.

22. My father usually goes to activities in which I am involved at school. _____

Parental Communication

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Not at All to 7 Extremely for each item.

1. How confident are you that your mother would not ridicule or make fun of you if you were to talk about a problem?
1 2 3 4 5 6 7
2. How confident are you that your mother would help you when you have a problem?
1 2 3 4 5 6 7
3. How comfortable would you be talking to your mother about a problem at school?
1 2 3 4 5 6 7
4. How comfortable would be talking to your mother about a romantic problems?
1 2 3 4 5 6 7
5. How well do you communicate with your mother?
1 2 3 4 5 6 7
6. How well does your mother understand your needs, feelings, and behavior?
1 2 3 4 5 6 7
7. How well does your mother listen to you?
1 2 3 4 5 6 7

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Not at All to 7 Extremely for each item.

1. How comfortable would you be talking to your father about a problem at school?
1 2 3 4 5 6 7
2. How comfortable would be talking to your father about a romantic problems?
1 2 3 4 5 6 7
3. How well do you communicate with your father?
1 2 3 4 5 6 7
4. How well does your father understand your needs, feelings, and behavior?
1 2 3 4 5 6 7
5. How well does your father listen to you?
1 2 3 4 5 6 7

Parental Monitoring

Using the scale below, indicate the number which best describes in the past four months, how many times has your parents/guardians have done the following:

0 Times

1 to 2 Times

3 to 4 Times

5-plus Times

8. How many of your friends have been in trouble with the police because of alcohol or drugs? _____
9. How many of your friends have quit or want to quit school? _____
10. How many of your friends are in clubs or other organizations such as scouts? _____
11. How many of your friends have damaged other peoples' property on purpose? _____
12. How many of your friends like to read books after school? _____
13. How many of your friends have ever been stopped or picked up by the police? _____
14. How many of your friends do things that might get them into trouble at school? _____

Religious Involvement

To what extent do you participate in each of the following statements from 0 Never to 5 More Than Once a Week for each item.

Never	A Few/ Several Times	Once a Month	2-3 Times a Month	Once a Week	More Than Once a Week
0	1	2	3	4	5

1. How often have you attended (church/synagogue/temple/mosque/religious) services in the past 12 months? _____
2. Many churches, synagogues, and other places of worship have special activities for young people-such as Bible classes, retreats, youth groups, or choir. In the past 12 months, how often have to taken part in such activities? _____

Rate the following question from 0 Not Important to 3 More Important Than Anything Else.

Not Important	Somewhat Important	Very Important	More Important Than Anything Else
0	1	2	3

3. How important is your religious faith to you? _____

Media Consumption

Please estimate the number of hours you spend doing each of the following activities per week:

1. Approximately how many hours per week do you watch television? _____
2. Approximately how many hours per week do you listen to music? _____
3. Approximately how many hours per week do you read magazines? _____
4. Approximately how many hours per week do you spend on the internet? _____

5. Total hours per week spent on TV, music, magazines, and internet: _____
6. Approximately how many hours of the total time is spent with content you would not want your parents to know that you are seeing or hearing? _____

APPENDIX C

Please circle what grade you are currently in: 9 10 11 12

Please indicate your age: _____

Please circle your gender: Male Female

Please indicate your ethnicity:

Caucasian African-American Asian Arabic Hispanic Other:_____

Please circle what grades you receive most often? (Choose only one answer)

- 1. Mostly A's 2. Mostly A's & B's 3. Mostly B's
- 4. Mostly B's & C's 5. Mostly C's 6. Mostly C's & D's
- 7. Mostly D's 8. Mostly D's & E's 9. Mostly E's

Please estimate the grades you receive by circling one option below:

	A	B	C	D	E
1. What is your current grade in Math?	1	2	3	4	5
2. What is your current grade in Language Arts?	1	2	3	4	5
3. What is your current grade in History?	1	2	3	4	5
4. What is your current grade in Science?	1	2	3	4	5

Please list all of the extracurricular activities that you are involved in? (ex, Football, Chess Club, Cheerleading, Student Government, ect.)

Please estimate the frequency with which **you engage** in the following behaviors. (1)=never to (5)= very often.

	Never	Once in awhile	Very often		
1. Underage drinking	1	2	3	4	5
2. Smoking	1	2	3	4	5
3. Getting drunk	1	2	3	4	5
4. Taking drugs	1	2	3	4	5
5. Staying out late	1	2	3	4	5
6. Drinking and driving	1	2	3	4	5
7. Stealing cars/going for joy rides	1	2	3	4	5
8. Having unprotected sex	1	2	3	4	5

9. <u>Speeding</u>	1	2	3	4	5
10. <u>Driving without a license</u>	1	2	3	4	5
11. <u>Snow skiing</u>	1	2	3	4	5
12. <u>Tao Kwon Do fighting</u>	1	2	3	4	5
13. <u>Inline skating</u>	1	2	3	4	5
14. <u>Parachuting</u>	1	2	3	4	5
15. <u>Entering a competition</u>	1	2	3	4	5
16. <u>Flying a plane</u>	1	2	3	4	5
17. <u>Leaving school</u>	1	2	3	4	5
18. <u>Overeating</u>	1	2	3	4	5
19. <u>Teasing/ picking on people</u>	1	2	3	4	5
20. <u>Cheating</u>	1	2	3	4	5
21. <u>Talking to strangers</u>	1	2	3	4	5
22. <u>Sniffing gas or glue</u>	1	2	3	4	5

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

1. My mother has rules for me about watching TV. _____
2. I would describe my mother as a strict parent. _____
3. It is okay with my mother if I do not follow certain rules. _____
4. When I do something that is wrong, my mother usually does not punish me. _____
5. I think my mother disciplines me a lot. _____
6. My mother usually wants to know where I am going. _____
7. My mother gives me a lot of freedom. _____
8. My mother makes most of the decisions about what I am allowed to do. _____
9. My mother gives me chores to do around the house routinely. _____
10. My mother lets me do pretty much what I want without questioning my decisions. _____
11. My mother rarely gives me orders. _____
12. My mother has few rules for me to for me to follow. _____
13. My mother expects me to be home at a certain time after school or in the evening. _____
14. It does not really matter to my mother whether or not I do assigned chores. _____
15. My mother sometimes tells me that her decisions should not be questioned. _____

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very	More Unlike	Neither Like	More Like	Very
------	-------------	--------------	-----------	------

Unlike	than Like	nor Unlike	than Unlike	Like
1	2	3	4	5

1. My father has rules for me about watching TV. _____
2. I would describe my father as a strict parent. _____
3. It is okay with my father if I do not follow certain rules. _____
4. When I do something that is wrong, my father usually does not punish me. _____
5. I think my father disciplines me a lot. _____
6. My father usually wants to know where I am going. _____
7. My father gives me a lot of freedom. _____
8. My father makes most of the decisions about what I am allowed to do. _____
9. My father gives me chores to do around the house routinely. _____
10. My father lets me do pretty much what I want without questioning my decisions. _____
11. My father rarely gives me orders. _____
12. My father has few rules for me to for me to follow. _____
13. My father expects me to be home at a certain time after school or in the evening. _____
14. It does not really matter to my father whether or not I do assigned chores. _____
15. My father sometimes tells me that his decisions should not be questioned. _____

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

1. My mother sometimes criticizes me for what I do. _____
2. My mother expects me to tell her when I think a rule is unfair. _____
3. My mother encourages me to look at both sides of an issue. _____
4. It is hard for my mother to admit that sometimes I know more than she does. _____
5. My mother does not think that I should help with decisions in our family. _____
6. My mother encourages me to talk with her about things. _____
7. My mother does not believe that she should have her own way all the time anymore than she believes I should have mine. _____
8. My mother would rather I not tell her my troubles. _____
9. My mother expects me to do what she says without having to tell me why. _____
10. My mother seldom praises me for doing well. _____
11. My mother believes I have a right to my own point of view. _____
12. My mother takes an interest in my activities. _____
13. My mother encourages me to talk to her honestly. _____
14. My mother usually tells me the reasons for rules. _____
15. My mother does not believe I should have a say in making rules. _____

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very	More Unlike	Neither Like	More Like	Very
------	-------------	--------------	-----------	------

Unlike	than Like	nor Unlike	than Unlike	Like
1	2	3	4	5

1. My father sometimes criticizes me for what I do. _____
2. My father expects me to tell him when I think a rule is unfair. _____
3. My father encourages me to look at both sides of an issue. _____
4. It is hard for my father to admit that sometimes I know more than he does. _____
5. My father does not think that I should help with decisions in our family. _____
6. My father encourages me to talk with his about things. _____
7. My father does not believe that he should have his own way all the time anymore than she believes I should have mine. _____
8. My father would rather I not tell him my troubles. _____
9. My father expects me to do what he says without having to tell mewhy. _____
10. My father seldom praises me for doing well. _____
11. My father believes I have a right to my own point of view. _____
12. My father takes an interest in my activities. _____
13. My father encourages me to talk to him honestly. _____
14. My father usually tells me the reasons for rules. _____
15. My father does not believe I should have a say in making rules. _____

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

1. My mother tries to get me to do my best on everything I do. _____
2. My mother thinks that education is a very important part of adolescence. _____
3. My mother usually goes to parent-teacher conferences. _____
4. My mother usually sets high standards for me to meet. _____
5. My mother seldom looks at my tests and papers from school. _____
6. It does not really matter to my mother what grades I get. _____
7. My mother is not involved in school programs for parents. _____
8. My mother sometimes does volunteer work at my school. _____
9. My mother thinks homework is a very important part of school. _____
10. When I get poor grades, my mother encourages me to try harder. _____
11. My mother usually does not go to school functions. _____
12. My mother makes sure that I have done my homework. _____
13. My mother usually knows the grades I get. _____
14. My mother thinks I should go to college. _____
15. Hard work is very important to my mother. _____
16. My mother does not think that she should help me with my homework. _____
17. My mother has high aspirations for my future. _____
18. When I get poor grades, my mother offers help. _____
19. When I ask for help with homework, my mother usually gives it to me. _____

20. My mother thinks that getting ahead in life is very important. _____
21. My mother does not think I should be concerned about what kind of career I may have.

22. My mother usually goes to activities in which I am involved at school. _____

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Very Unlike to 5 Very Like for each item.

Very Unlike	More Unlike than Like	Neither Like nor Unlike	More Like than Unlike	Very Like
1	2	3	4	5

1. My father tries to get me to do my best on everything I do. _____
2. My father thinks that education is a very important part of adolescence. _____
3. My father usually goes to parent-teacher conferences. _____
4. My father usually sets high standards for me to meet. _____
5. My father seldom looks at my tests and papers from school. _____
6. It does not really matter to my mother what grades I get. _____
7. My father is not involved in school programs for parents. _____
8. My father sometimes does volunteer work at my school. _____
9. My father thinks homework is a very important part of school. _____
10. When I get poor grades, my father encourages me to try harder. _____
11. My father usually does not go to school functions. _____
12. My father makes sure that I have done my homework. _____
13. My father usually knows the grades I get. _____
14. My father thinks I should go to college. _____
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16. My father does not think that he should help me with my homework. _____
17. My father has high aspirations for my future. _____
18. When I get poor grades, my father offers help. _____
19. When I ask for help with homework, my father usually gives it to me. _____
20. My father thinks that getting ahead in life is very important. _____
21. My father does not think I should be concerned about what kind of career I may have.

22. My father usually goes to activities in which I am involved at school. _____

Using the scale below, indicate the number which best describes your MOTHER or MOTHER-LIKE-FIGURE from 1 Not at All to 7 Extremely for each item.

1. How confident are you that your mother would not ridicule or make fun of you if you were to talk about a problem?
1 2 3 4 5 6 7
2. How confident are you that your mother would help you when you have a problem?
1 2 3 4 5 6 7
3. How comfortable would you be talking to your mother about a problem at school?
1 2 3 4 5 6 7

4. How comfortable would be talking to your mother about a romantic problems?
1 2 3 4 5 6 7
5. How well do you communicate with your mother?
1 2 3 4 5 6 7
6. How well does your mother understand your needs, feelings, and behavior?
1 2 3 4 5 6 7
7. How well does your mother listen to you?
1 2 3 4 5 6 7

Using the scale below, indicate the number which best describes your FATHER or FATHER-LIKE-FIGURE from 1 Not at All to 7 Extremely for each item.

1. How comfortable would you be talking to your father about a problem at school?
1 2 3 4 5 6 7
2. How comfortable would be talking to your father about a romantic problems?
1 2 3 4 5 6 7
3. How well do you communicate with your father?
1 2 3 4 5 6 7
4. How well does your father understand your needs, feelings, and behavior?
1 2 3 4 5 6 7
5. How well does your father listen to you?
1 2 3 4 5 6 7

Using the scale below, indicate the number which best describes in the past four months, how many times has your parents/guardians have done the following:

0 Times	1 to 2 Times	3 to 4 Times	5-plus Times
1	2	3	4

1. Contacted your friends parent(s) to talk to them? _____
2. Contacted other parents to find information about friends? _____
3. Asked to meet your friends? _____
4. Asked your friends about activities they did with you? _____
5. Talked to other parents about your activities? _____
6. Talked to neighbors about your activities? _____
7. Checked to see if another parent or adult was with you for supervision? _____
8. Talked to you about what you had planned? _____
9. Asked you about specifics of planned activities? _____
10. Asked you what happened after planned activities? _____
11. Checked to make sure you completed homework? _____
12. Talked to teachers about your schoolwork? _____
13. Looked at your homework? _____
14. Talked to you about grades and schoolwork? _____
15. Checked on what you ate? _____
16. Checked on your exercise routines? _____
17. Talked to you about changes in mood? _____

18. Talked to you about eating habits? _____
19. Placed computer in an open area where it can be observed? _____
20. Limited the amount of time you spend on computer? _____
21. Used software to block certain web-pages? _____
22. Checked what websites you viewed through history or other method? _____
23. Set limits for phone calls? _____
24. Told you to end phone conversations? _____
25. Listened to your phone conversations? _____
26. Looked through your drawers or closets? _____
27. Read your personal notes or diary/journal? _____

Using the scale below, indicate the number which best describes your FRIENDS from 0 None to 5 All for each item.

None	A Few	Some	Most	All
0	1	2	3	4

1. How many of your friends like to play sports? _____
2. How many of your friends get all good grades at school? _____
3. How many of your friends like school? _____
4. How many of your friends do homework after school at night? _____
5. How many of your friends do things that might get them into trouble with the law? _____
6. How many of your friends have ever used a weapon (like a gun, knife, or club) in a serious fight? _____
7. How many of your friends want to go to college? _____
8. How many of your friends have been in trouble with the police because of alcohol or drugs? _____
9. How many of your friends have quit or want to quit school? _____
10. How many of your friends are in clubs or other organizations such as scouts? _____
11. How many of your friends have damaged other peoples' property on purpose? _____
12. How many of your friends like to read books after school? _____
13. How many of your friends have ever been stopped or picked up by the police? _____
14. How many of your friends do things that might get them into trouble at school? _____

To what extent do you participate in each of the following statements from 0 Never to 5 More Than Once a Week for each item.

Never	A Few/ Several Times	Once a Month	2-3 Times a Month	Once a Week	More Than Once a Week
0	1	2	3	4	5

1. How often have you attended (church/synagogue/temple/mosque/religious) services in the past 12 months? _____

2. Many churches, synagogues, and other places of worship have special activities for young people-such as Bible classes, retreats, youth groups, or choir. In the past 12 months, how often have you taken part in such activities? _____

Rate the following question from 0 Not Important to 3 More Important Than Anything Else.

Not Important	Somewhat Important	Very Important	More Important Than Anything Else
0	1	2	3

3. How important is your religious faith to you? _____

Please estimate the number of hours you spend doing each of the following activities per week:

1. Approximately how many hours per week do you watch television? _____
2. Approximately how many hours per week do you listen to music? _____
3. Approximately how many hours per week do you read magazines? _____
4. Approximately how many hours per week do you spend on the internet? _____
5. Total hours per week spent on TV, music, magazines, and internet: _____
6. Approximately how many hours of the total time is spent with content you would not want your parents to know that you are seeing or hearing? _____

APPENDIX D

Research Information Sheet

Title of Study: Adolescents' choices and perceptions of their environment.

Principal Investigator (PI): Joshua Tynan,
Department of Educational Psychology
313-655-4514

Purpose:

You are being asked to be in a research study on adolescent behaviors because you are an adolescent whose is in high school. This study is being conducted at Wayne State University.

Study Procedures:

If you take part in the study, you will be asked to complete a survey that takes approximately twenty minutes to complete. The information is confidential and there is no way you will be identified for your responses. The questions on the survey include your involvement in various behaviors such as risk behavior (e.g., drinking, smoking, stealing, speeding, and sex), your grades in school, your involvement in religion, what types of television and other media you watch, read, or listen to. The survey also includes questions about things your parents do and about your relationship with them. You have the option of not being involved in the study, completing as much of the survey as you feel comfortable, or completing the entire survey.

Benefits:

- As a participant in this research study, there may be no direct benefit for you; however, information from this study may benefit other people now or in the future.

Risks:

- There are no known risks at this time to participation in this study.

Costs:

- There will be no costs to you for participation in this research study.

Compensation:

- For taking part in this research study, you will be paid for your time through a gift certificate to McDonald's at the completion of the survey.

Confidentiality:

- All information collected about you during the course of this study will be kept without any identifiers.

Voluntary Participation /Withdrawal:

Taking part in this study is voluntary. You are free to not answer any questions or withdraw at any time. Your decision will not change any present or future relationships with Wayne State University or its affiliates.

Questions:

If you have any questions about this study now or in the future, you may contact Joshua Tynan at the following phone number (313) 655-4514. If you have questions or concerns about your rights as a research participant, the Chair of the Human Investigation Committee can be contacted at (313) 577-1628. If you are unable to contact the research staff, or if you want to talk to someone other than the research staff, you may also call (313) 577-1628 to ask questions or voice concerns or complaints.

Participation:

By completing the questionnaire you are agreeing to participate in this study.

APPENDIX E

Multivariate Linear Regression – Predicting Total Average Risk-Taking Behaviors.

Predictors	B	SEB	<i>B</i>	Part Correlations (r_p)	Contribution to R^2 (r_p) ²
Parental Monitoring	.057	.076	.053	.041	.0017
Mother Demandingness	-.105	.068	-.125	-.099	.0098
Father Demandingness	-.021	.055	-.022	-.018	.0003
Mother Responsiveness	-.070	.076	-.073	-.050	.0025
Father Responsiveness	-.007	.072	-.009	-.006	.0000
Mother Involvement	.126	.090	.126	.078	.0060
Father Involvement	-.008	.078	-.001	-.001	.0000
Mother Communication	-.038	.033	-.099	-.068	.0046
Father Communication	.045	.027	.128	.094	.0088
Peer Goal-Oriented Behavior	-.019	.060	-.017	-.015	.0002
Peer Risk-Taking Behavior	.453	.048	.625**	.536	.2873
Religious Attendance	-.044	.030	-.113	-.080	.0064
Religious Involvement	-.013	.028	-.032	-.025	.0006
Religious Importance	-.012	.046	-.017	-.013	.0002
Hours of TV Viewed Per Week	.004	.003	.134	.099	.0098
Hours Spent Music Per Week	.001	.002	.023	.013	.0002
Hours Spent Mags Per Week	-.005	.005	-.069	-.056	.0031
Hours Spent Internet Per Week	-.001	.002	-.030	-.018	.0003
Total Hours Per Week Media	-.001	.001	-.050	-.022	.0005
Hours Per Week Neg. Media	.001	.001	.062	.053	.0028

Note. * $p < .05$, ** $p < .01$, $F = 7.99$, $p = .000$, $R^2 = 52.6\%$

Multivariate Linear Regression Analysis -- Thrill-Seeking Behaviors.

Predictors	B	SEB	<i>B</i>	Part Correlations (<i>r_p</i>)	Contribution to <i>R</i> ² (<i>r_p</i>) ²
Parental Monitoring	.124	.074	.150	.117	.0136
Mother Demandingness	-.118	.066	-.160	-.126	.0158
Father Demandingness	.147	.054	.227**	.184	.0339
Mother Responsiveness	.026	.074	.032	.022	.0005
Father Responsiveness	.123	.070	.173	.123	.0151
Mother Involvement	.215	.088	.270*	.168	.0282
Father Involvement	-.078	.076	-.091	-.063	.0040
Mother Communication	-.073	.032	-.224*	-.155	.0240
Father Communication	.091	.027	-.003	-.002	.0000
Peer Goal-Oriented Behavior	.148	.058	.190*	.172	.0296
Peer Risk-Taking Behavior	.147	.047	.264**	.226	.0511
Religious Attendance	-.025	.029	-.085	-.060	.0036
Religious Involvement	.048	.027	.165	.127	.0161
Religious Importance	-.044	.045	-.095	-.069	.0048
Hours of TV Viewed Per Week	.004	.003	.155	.115	.0132
Hours Spent Music Per Week	-.001	.002	-.056	-.031	.0010
Hours Spent Mags Per Week	.001	.005	.015	.012	.0001
Hours Spent Internet Per Week	-.001	.002	-.084	-.048	.0023
Total Hours Per Week Media	.001	.001	.142	.062	.0038
Hours Per Week Neg. Media	-.001	.001	-.030	-.025	.0006

Note. * $p < .05$, ** $p < .01$, $F = 3.15$, $p = .000$, $R^2 = 30.4\%$

Multivariate Linear Regression Analysis -- Reckless Behaviors.

Predictors	B	SEB	<i>B</i>	Part Correlations (<i>r_p</i>)	Contribution to <i>R</i> ² (<i>r_p</i>) ²
Parental Monitoring	-.086	.118	-.053	.060	.0036
Mother Demandingness	-.196	.106	-.152	-.141	.0199
Father Demandingness	.106	.086	.090	-.049	.0024
Mother Responsiveness	-.045	.118	-.032	-.042	.0018
Father Responsiveness	.109	.111	.080	.020	.0004
Mother Involvement	.225	.140	.152	.002	.0000
Father Involvement	-.107	.121	-.073	.032	.0010
Mother Communication	-.041	.051	-.070	-.071	.0050
Father Communication	.091	.042	.168*	.016	.0003
Peer Goal-Oriented Behavior	.066	.093	.046	.014	.0002
Peer Risk-Taking Behavior	.655	.075	.598**	.387	.1498
Religious Attendance	-.073	.046	-.133	-.012	.0001
Religious Involvement	-.020	.043	-.033	-.003	.0000
Religious Importance	-.080	.071	-.080	-.027	.0007
Hours of TV Viewed Per Week	-.001	.004	-.016	.188	.0353
Hours Spent Music Per Week	-.002	.003	-.098	.083	.0069
Hours Spent Mags Per Week	.003	.008	.030	-.036	.0013
Hours Spent Internet Per Week	-.003	.003	-.104	.014	.0002
Total Hours Per Week Media	.003	.002	.140	-.116	.0135
Hours Per Week Neg. Media	.003	.002	.099	-.050	.0025

Note. * $p < .05$, ** $p < .01$, $F = 7.24$, $p = .000$, $\underline{R}^2 = 50.2\%$

Multivariate Linear Regression Analysis – Rebellious Behaviors.

Predictors	B	SEB	<i>B</i>	Part Correlations (<i>r_p</i>)	Contribution to <i>R</i> ² (<i>r_p</i>) ²
Parental Monitoring	.078	.079	.077	-.042	.0018
Mother Demandingness	-.152	.071	-.179*	-.120	.0144
Father Demandingness	-.044	.058	-.061	.073	.0053
Mother Responsiveness	-.058	.079	-.061	-.022	.0004
Father Responsiveness	.026	.075	.028	.057	.0032
Mother Involvement	.009	.094	.003	.095	.0090
Father Involvement	.018	.081	.046	-.051	.0026
Mother Communication	-.036	.035	-.103	-.048	.0023
Father Communication	.004	.029	.022	.123	.0151
Peer Goal-Oriented Behavior	.007	.062	.016	.042	.0018
Peer Risk-Taking Behavior	.303	.050	.451**	.513	.2632
Religious Attendance	-.012	.031	-.017	-.094	.0088
Religious Involvement	.001	.029	-.004	-.025	.0006
Religious Importance	-.014	.048	-.037	-.058	.0034
Hours of TV Viewed Per Week	.007	.003	.254*	-.012	.0001
Hours Spent Music Per Week	.003	.002	.149	-.054	.0029
Hours Spent Mags Per Week	-.002	.005	-.044	.024	.0006
Hours Spent Internet Per Week	.001	.002	.024	-.060	.0036
Total Hours Per Week Media	-.003	.002	-.262*	.062	.0038
Hours Per Week Neg. Media	-.002	.002	-.059	.084	.0071

Note. * $p < .05$, ** $p < .01$, $F = 5.05$, $p = .000$, $R^2 = 41.2\%$

Multivariate Linear Regression Analysis -- Antisocial Behaviors.

Predictors	B	SEB	<i>B</i>	Part Correlations (r_p)	Contribution to R^2 (r_p) ²
Parental Monitoring	.177	.105	.144	.112	.0013
Mother Demandingness	.035	.095	.021	.016	.0003
Father Demandingness	-.126	.077	-.121	-.099	.0098
Mother Responsiveness	-.104	.106	-.096	-.065	.0042
Father Responsiveness	-.155	.100	-.147	-.105	.0110
Mother Involvement	.144	.125	.130	.081	.0660
Father Involvement	.064	.109	.037	.026	.0007
Mother Communication	.144	.046	-.079	-.055	.0030
Father Communication	.041	.038	.085	.063	.0040
Peer Goal-Oriented Behavior	-.131	.083	-.114	-.103	.0106
Peer Risk-Taking Behavior	.401	.067	.457**	.392	.1537
Religious Attendance	-.048	.041	-.116	-.081	.0066
Religious Involvement	-.020	.039	-.040	-.031	.0010
Religious Importance	.056	.064	.096	.069	.0048
Hours of TV Viewed Per Week	.007	.004	.162*	.119	.0142
Hours Spent Music Per Week	.001	.003	.063	.035	.0012
Hours Spent Mags Per Week	-.017	.007	-.177*	-.144	.0207
Hours Spent Internet Per Week	.000	.003	.041	.024	.0006
Total Hours Per Week Media	-.001	.002	-.101	-.045	.0020
Hours Per Week Neg. Media	.002	.002	.074	.063	.0040

Note. * $p < .05$, ** $p < .01$, $F = 3.85$, $p = .000$, $R^2 = 34.9\%$

Multivariate Linear Regression Analysis -- Extracurricular Activities.

Predictors	B	SEB	<i>B</i>	Part Correlations (<i>r_p</i>)	Contribution to <i>R</i> ² (<i>r_p</i>) ²
Parental Monitoring	.515	.237	.183*	.143	.0204
Mother Demandingness	-.156	.213	-.064	-.051	.0026
Father Demandingness	-.142	.174	-.073	-.059	.0035
Mother Responsiveness	.492	.238	.193*	.132	.0174
Father Responsiveness	.164	.225	.068	.048	.0023
Mother Involvement	.390	.283	.143	.089	.0079
Father Involvement	.377	.245	.157	.109	.0119
Mother Communication	-.411	.104	-.371**	-.256	.0655
Father Communication	-.039	.086	-.036	-.026	.0007
Peer Goal-Oriented Behavior	.575	.188	.216**	.195	.0380
Peer Risk-Taking Behavior	-.295	.151	-.145	-.124	.0154
Religious Attendance	-.160	.093	-.161	-.114	.0130
Religious Involvement	.196	.088	.196*	.151	.0228
Religious Importance	-.271	.144	-.168	-.123	.0151
Hours of TV Per Week	-.002	.008	-.013	-.009	.0001
Hours Spent Music Per Week	-.005	.006	-.106	-.059	.0035
Hours Spent Mags Per Week	.026	.017	.124	.101	.0102
Hours Spent Internet Per Week	-.007	.007	-.120	-.070	.0049
Total Hours Per Week Media	.008	.005	.258	.114	.0130
Hours Per Week Neg. Media	-.003	.005	-.053	-.045	.0020

Note. * $p < .05$, ** $p < .01$, $F = 4.55$, $p = .000$, $R^2 = 38.8\%$

Multivariate Linear Regression Analysis -- Overall Academic Grades.

Predictors	B	SEB	<i>B</i>	Part Correlations (r_p)	Contribution to R^2 (r_p) ²
Parental Monitoring	.217	.254	.084	.065	.0043
Mother Demandingness	.014	.228	.013	.010	.0001
Father Demandingness	.414	.186	.181*	.147	.0216
Mother Responsiveness	-.307	.254	-.126	-.086	.0074
Father Responsiveness	.061	.240	.029	.020	.0004
Mother Involvement	-.449	.302	-.154	-.096	.0091
Father Involvement	-.449	.261	-.198	-.138	.0191
Mother Communication	.212	.111	.199	.138	.0190
Father Communication	-.013	.092	-.022	-.016	.0003
Peer Goal-Oriented Behavior	-.468	.201	-.185*	-.168	.0281
Peer Risk-Taking Behavior	.661	.161	.332**	.285	.0810
Religious Attendance	.079	.100	.050	.036	.0013
Religious Involvement	-.003	.093	-.009	-.007	.0000
Religious Importance	-.123	.154	-.058	-.042	.0018
Hours of TV Viewed Per Week	.002	.009	.039	.029	.0008
Hours Spent Music Per Week	-.008	.006	-.171	-.095	.0091
Hours Spent Mags Per Week	-.013	.018	-.061	-.050	.0025
Hours Spent Internet Per Week	-.010	.007	-.162	-.094	.0089
Total Hours Per Week Media	.013	.005	.389*	.172	.0295
Hours Per Week Neg. Media	-.000	.005	-.009	-.007	.0001

Note. * $p < .05$, ** $p < .01$, $F = 3.07$, $p = .000$, $R^2 = 29.9\%$

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ABSTRACT**PREDICTING ADOLESCENT RISK-TAKING AND GOAL-ORIENTED BEHAVIORS:
AN ECOLOGICAL PERSPECTIVE**

by

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An important aspect of human development is adolescence. It has been well documented that adolescence is a time during which individuals partake in the greatest amount of risk-taking behaviors. These behaviors often include having unsafe sex, drug and alcohol use, smoking and recklessness. On the other hand, goal oriented behaviors are also developing, although these have been less well studied. The current study explored several key contexts that adolescents are concurrently exposed to, including parenting behaviors, peer relationships, religion, and media. The outcomes of interest were risk-taking behaviors and goal-oriented behaviors. Ultimately the purpose of this study was to compile, through a multifactor model, the major predictors of adolescent behavior in one comprehensive study, and examine their individual and combined contributions to not only risk-taking behavior but also goal-oriented behavior.

The participants in this study were 323 ninth through twelfth grade high school students (175 males and 148 females) from a suburban public high school district in the midwestern United States. Students' ages range from 14 to 19 (mean = 13.5). The majority of the participants identified themselves as either Caucasian or Middle Eastern, though African-American and Hispanic groups were also included. In addition to a demographic survey, all participants also

completed measures of the following constructs: Risk-taking behaviors, goal-oriented behaviors (measured by overall grades and overall involvement in extracurricular activities), parental demandingness and responsiveness, involvement, communication, and monitoring, peer engagement in risk-taking behaviors and goal-oriented behaviors, adolescents' media consumption, and adolescents' religiosity. All measures were taken from adolescents' perspectives.

Multivariate linear regression analyses were conducted using the variables from the four life contexts as predictors and risk taking and goal oriented behavior as criterion variables. combine prior and next sections. The results showed several themes, including that a significant proportion of variance in risk-taking behavior and goal-oriented behavior was explained by several variables. For example, risk-taking behaviors in adolescents was positively associated with paternal demandingness, maternal involvement, and paternal communication and negatively associated with maternal communication and maternal demandingness. Goal-oriented behavior was positively associated with parental monitoring, maternal responsiveness, paternal demandingness and was negatively associated with maternal communication. Paternal involvement and paternal responsiveness did not yield significant results. Adolescents who associated with more risk-taking peers were positively associated with each risk-taking construct. Goal-oriented peers were positively associated with risk-taking behaviors. Results indicated that adolescents who are associated with goal-oriented peers were more likely to participate in extracurricular activities. Religious attendance, involvement, and importance were not associated with any risk-taking behaviors. Adolescents who reported more religious involvement reported more extracurricular involvement. However, there was no association among religious involvement and academic grades. The more television viewed per week the more adolescents

participated in risk-taking behaviors. Risk-taking behaviors were negatively associated with hours spent reading magazines per week. Greater total media usage per week was negatively associated with reckless behaviors and positively associated with academic success.

Taken together, these results indicate that multiple environmental factors are impacting adolescents' decision making and behaviors at anyone time. The results indicated adolescents receive messages from a variety of variables such as parenting, peers, and media. It is important to study adolescent behaviors not from one environmental variable at a time but to consider multiple environmental variables.

AUTOBIOGRAPHICAL STATEMENT

Several positive environmental influences throughout my childhood reflect the person I am today. I was blessed to have been exposed to many wonderful facets from so many different experiences. A nurturing family, teachers and community members also contribute to these experiences. Setting goals and accomplishing them was a way of life. I now realize that it was these beliefs, along with determination, that became my motivation to succeed at whatever task that was set before me.