THE RELATIONSHIP BETWEEN ADOLESCENT PERCEPTION OF COMMUNITY LEVEL VARIABLES AND ADOLESCENT PREMARITAL SEXUAL BEHAVIOR

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Submitted to the Faculty of the
Graduate College of the
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in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
July, 1997

THE RELATIONSHIP BETWEEN ADOLESCENT

PERCEPTION OF COMMUNITY LEVEL

VARIABLES AND ADOLESCENT

PREMARITAL SEXUAL

BEHAVIOR

Thesis Approved:

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ACKNOWLEDGMENTS

Pursuing this Ph.D. was not a solitary endeavor. It was a journey shared by many family members, friends, colleagues, and mentors. There were those who helped me get started, some who kept me going, others who helped me finish, and those who were by my side from the beginning to the end. My sincerest appreciation is extended to each and every person who contributed to the achievement of this dream.

I would like to say a special "thank you" to my major advisor, Dr. Beulah Hirschlein, who never wavered in her commitment to mentor and guide me through the Ph.D. experience. She always had my best interest in mind. Dr. Kay Murphy proved to be the realist in the group. I could always depend on her to provide me with a reality check when things seemed a bit too chaotic. I will be indebted to her for years for her poignant reminder, "the goal is to graduate." Dr. Robinson's insightful suggestions were always offered as just that -- suggestions. She encouraged me to assess and reassess my ideas without insisting that I adopt someone else's. Heeding one of her suggestions proved to be the most valuable learning experience in my Ph.D. program: taking a multiple regression course. Dr. Bill Warde's sense of humor sets him a part from others. I knew this dissertation could become a reality when he encouraged me to have "fun" with statistics and not take them too seriously.

Any written expression of gratitude seems inadequate for my dearest friends, Tammy Ritter and Scott Plunkett. They have taught me about friendship and unconditional love.

My husband and soul mate, George, and our precious daughter, Lacee, care for and support me in life. There is no greater evidence of this then in the multitude of sacrifices they made for me while I pursued my Ph.D. They always viewed the Ph.D. as a "family" dream and were committed to making it a reality. "I love you." And finally, my love and gratitude are extended to a very special man who *never* let me lose site of the end by repeatedly asking, "so when will you be finished?" Daddy, I'm finished.

To God Be The Glory!

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CHAPTER I

INTRODUCTION

Significance of Problem

The roots of America's sexual revolution first began to bear fruit in the Roaring Twenties (Janus & Janus, 1993; Reiss, 1960, 1990). The frivolity of the flapper and the fervor of the women's suffrage movement not only contributed to the liberation of women but also served as an impetus for change in America's sexual attitudes and behaviors. The sexual revolution was abruptly abated by the stock market crash and the onset of the Great Depression at the latter part of that decade. It was not until the end of World War II that the sexual revolution was rekindled and America was faced once again with society's evolving liberal and egalitarian sexual agenda.

The time period between 1900 and 1960 was characterized by a tenfold increase in the rate of sexual intercourse for unmarried adolescent females living in the United States (Bullough & Bullough, 1994). Furthermore, a growing permissiveness in premarital sexual attitudes and behaviors occurred between the late 1960s through the mid 1980s (Bell & Chaskes, 1970; Bell & Coughey, 1980; DeLamater & MacCorquodale, 1979; Earle & Perricone, 1986; Ferrel, Tolone, & Walsh, 1977; Glenn & Weaver, 1979; Janus & Janus, 1993; King, Balswick, & Robinson, 1977; Mahoney, 1978; Roche, 1986; U. S. Department of Health and Human Services, 1996). The most current data on national

trends of adolescent sexual behavior was collected in 1992 by the U. S. Department of Health and Human Services (1996). This data indicated that by age 13, approximately 10% of males and .02% of females had had sexual intercourse, and by age 20, approximately 80% of males and 75% of females had engaged in this behavior.

Although the incidence of premarital sexual intercourse among teens continued to increase in the 1980s and has followed suit in the 1990s, the changes have been less drastic than those in the previous decade (Janus & Janus, 1993; Miller & Moore, 1990). Some researchers propose that the rate of increase may be *slowing*, but not stopping, due to the consequences associated with *unprotected* intercourse (Bullough & Bullough, 1994; Chapple & Tolbot, 1989; Janus & Janus, 1993; U. S. Department of Health and Human Services, 1996). According to Bullough and Bullough (1994), in 1989 more than 50% of adolescent females and more than 75% of adolescent males had had unprotected sexual intercourse at least one time. Other researchers have indicated that in 1988, 43% of sexually active females ages 15-19 reported using no method of contraception (U. S. Department of Health and Human Services, 1996). While comparable data for males of this age were not available, data for males ages 17.5 to 19 indicated that in 1988 and 1991 20% and 21%, respectfully, reported not using contraceptives (U. S. Department of Health and Human Services, 1996).

Pregnancy is one of the most direct consequences of unprotected sexual intercourse. In the United States the rate of pregnancy for adolescents under 15 years of age is five times that of other developed countries, even though the rates of sexual intercourse are comparable. Each year during the 1980s and thus far in the 1990s, more than one million adolescent females ages 15 to 19, more than 30,000 under age 15, and as many

as 10,000 age 12 and under become pregnant (Janus & Janus, 1993; Reiss, 1990). A sexually active adolescent female between the ages of 15-19 in the United States has a greater than 20% chance of becoming pregnant in any one year (Janus & Janus, 1993; Reiss, 1990; U. S. Department of Health and Human Services, 1996).

Another direct consequence of engaging in unprotected sexual intercourse is the contraction of sexually transmitted diseases, including human immunodeficiency virus (HIV). According to data released by the Centers for Disease Control, approximately 1,000,000 Americans are infected with HIV, resulting in the United States leading all other countries in the number of persons diagnosed with Acquired Immune Deficiency Syndrome (AIDS) (personal communication, April 22, 1997). As of December 31, 1996, the Centers for Disease Control reported a cumulative total of 581,429 persons in the United States had been diagnosed with AIDS (personal communication, April 22, 1997). This total included 4,351 persons between the ages of 13 and 19. Furthermore, during this same reporting period, 62% of those diagnosed with AIDS had died. The direct consequences of adolescent sexual intercourse can be detrimental to the health and well-being of young people and cannot be ignored.

The sexual revolution was intended to bring sexual freedom, and it did; however, it did not come without cost. This irony is depicted in the increasing trends in adolescent premarital sexual intercourse which are accompanied by substantial consequences that impact both individuals and the society in which they live. For this reason, scholarly researchers must continue to strive toward an understanding of the factors influencing this phenomenon.

Problem Statement

In 1990, Miller and Moore conducted an extensive review of the literature from the 1980s regarding adolescent sexual behavior, pregnancy, and parenting. They organized the research findings into five categories of antecedents related to adolescent sexual intercourse. These categories described biological, psycho-social, family, peer, and socio-cultural antecedents. The studies identifying the various antecedents provided a wealth of information to further the understanding of the multiple factors related to adolescent premarital sexual behavior.

Recognizing the complexity of sexual behavior, researchers generously acknowledge that there are numerous factors that have not been examined. This was corroborated by Miller and Moore when they stated "potentially important variables are still unmeasured or inadequately measured" (1990, p. 1038). Individual and familial variables have received the most attention and study, whereas neighborhood and community variables have received the least (Atwood & Donnelly, 1993; Miller & Moore, 1990). This has translated into the design and implementation of prevention programs that only focus on the individual and familial level factors without giving consideration to other contributing factors. This narrow focus frequently results in minimal success in preventing the occurrence of adolescent premarital sexual behavior and the associated consequences (Atwood & Donnelly, 1993). Acknowledging that individual and familial level factors are essential in understanding adolescent sexual behavior, researchers must also acknowledge that these factors provide only a partial explanation of this phenomenon. Young people and society cannot afford the substantial consequences associated with such a limited focus. Therefore, it is imperative that researchers explore broader

contextual factors related to adolescent premarital sexual behavior.

Theoretical Framework

The adolescent sexuality research conducted prior to the mid-eighties tended to be atheoretical. It was mostly descriptive in nature, issue oriented, and relied on findings from previous studies. Towards the end of the decade researchers transitioned into using theoretical frameworks to guide their investigations (Miller & Moore, 1990). The theories used most often included problem behavior theory, social learning theory, social control theory, developmental theory, symbolic interactionism, bio-social theory, and exchange theory (Miller & Fox, 1987; Miller & Moore, 1990). This transition afforded researchers the opportunity to consider adolescent sexual behavior within a broader, explanatory context.

Relying upon the human ecological theory, Small and Luster (1994) simultaneously explored the multiple factors that had been identified in previous empirical studies as being related to adolescent sexual behavior. Human ecological theory is "a general theory that can be used to study a wide range of problems related to families and their relationships with various environments including diverse levels and kinds of external systems" (Bubolz & Sontag, 1993, p. 424). This theory developed from the recognition that humans are both biological and social beings. By virtue of their interaction and interdependence with their environment, humans are ecological organisms and, hence, they cannot be considered outside of their ecological context (Bubolz & Sontag, 1993; Bubolz & Whiren, 1984; Wright & Herrin, 1988).

Urie Bronfenbrenner is regarded as an advocate for "a contextual emphasis in

ecological research in human development" (Bubolz & Sontag, 1993, p. 423). In 1979, Bronfenbrenner introduced an ecological model of human development that considered individuals in relation to their environmental contexts. His model depicts the developing individual at the core, circumscribed by four environmental systems: micro, meso, exo, and macro (see Appendix A). Each system is imbedded in the next in relationship to their "immediacy with respect to the developing person" (Bubolz & Sontag, 1993, p. 423). Bronfenbrenner's model illustrates his premise that "the ecology of human development involves mutual accommodation between the person, the immediate settings, relations between these settings, and the contexts in which these settings are embedded" (Griffore & Phenice, 1988, p. 515).

Using Bronfenbrenner's ecological framework, Small and Luster (1994) were able to consider the different levels of factors and their respective relationships with adolescent sexual behavior. This process produced a cumulative ecological risk factor model for understanding some of the causes and correlates of adolescent premarital sexual intercourse. Since few researchers had attempted to integrate the multiple factors into a unified understanding (Billy, Grady, Moore, & Brewster, 1993; Day, 1992; Udry & Billy, 1987), Small and Luster's work contributed to advancing adolescent sexual behavior research from a contextual theoretical perspective. However, notably absent from their work were variables representing the meso, exo, and macrosystems. Bronfenbrenner and Crouter (1983) argue that few studies systematically consider cultural influences on adolescent development. They advocate the need for more empirical analysis of meso, exo, and macrosystem influences on adolescent development; specifically, (a) interactions among the subcultural components of family, church,

neighborhood, and community, (b) cohesiveness and values in neighborhoods, and (c) community influences. This researcher relied upon Bronfenbrenner's ecological framework to explore macro level contextual factors and their relationship with adolescent premarital sexual behavior.

Purpose and Objectives

After reviewing the 1980s literature regarding adolescent sexual behavior, Miller and Moore concluded that "in the next generation of studies, researchers need to examine some of the influences that have not yet been explored" (1990, p. 1038). The purpose of this study was to examine the relationship between perceived community level variables and adolescent premarital sexual behavior. This was accomplished through three primary objectives. The first objective was to develop and establish initial internal consistency reliability of a new scale to measure adolescent perception of community attitudinal norms regarding adolescent premarital sexual behavior. The second objective was to establish internal consistency reliability of a modified scale (Community Solidarity Index) on a different population (adolescent). The third objective was to assess the relationship between adolescent premarital sexual behavior and perceived community solidarity norms, perceived community attitudinal norms regarding adolescent premarital sexual behavior, and perceived community prevalence norms of adolescent premarital sexual behavior. This three step process provided an enhanced understanding of the relationship between perceived community level variables and adolescent premarital sexual behavior, as well as, rendered implications for prevention programming and future research.

Conceptual Hypotheses

This study was guided by the following five conceptual hypotheses:

1. There is a significant positive relationship between adolescents' age and adolescents' premarital sexual behavior.

2. There is a significant positive relationship between adolescents' gender and adolescents' premarital sexual behavior.

3. There is a significant negative relationship between adolescents' perceptions of community solidarity norms and adolescents' premarital sexual behavior.

4. There is a significant negative relationship between adolescents' perceptions of community attitudinal norms of abstinence for adolescents and adolescents' premarital sexual behavior.

5. There is a significant positive relationship between adolescents' perceptions of community prevalence norms of adolescent premarital sexual behavior and adolescents' premarital sexual behavior.

Conceptual Definition of Terms

Eight primary terms were utilized in the study.

1. Adolescent - adolescence refers to the biological and psychological changes that individuals go through at the end of childhood (Clarke-Stewart & Friedman, 1987). Hence, an adolescent is defined as "one that is in the state of adolescence" (Merriam-Webster's Collegiate Dictionary, 1993, p. 16). Adolescents in this study were defined as young people in grades nine through twelve, ranging in ages 14 through 18.

2. Adolescent Premarital Sexual Behavior - adolescent premarital sexual behavior was defined in two ways: (a) as a dichotomous variable (voluntary participation in sexual intercourse or not), and (b) as a continuum of sexual behaviors including no activity, french kissing, petting/fondling, oral sex, and sexual intercourse.

3. Community - community has been defined as "the people who reside within some geographically delineated bounds and/or have an identity, so that the people within it share some sense of being members of that community" (Oklahoma State University-College of Osteopathic Medicine: Prevention Resource and Evaluation Center, 1994, p. 1). This study defined community as the town or city in which the adolescent resided.

4. Perception/Perceived - Bronfenbrenner's theory is based on Kurt Lewin's idea that

> the environment of greatest relevance for the scientific understanding of behavior and development is reality not as it exists in the so-called objective world but as it appears in the mind of the person; in other words, he focuses on the way in which the environment is perceived by the human beings who interact within and with it. (Bronfenbrenner, 1979, p. 23)

Therefore, scholars utilizing Bronfenbrenner's model must rely upon research methodologies which identify children's interpretations of their environment instead of reporting on observable characteristics of the setting (Thomas, 1996). Accordingly, this research was based on adolescents' perceptions of their community, that is, their interpretation of what they perceived to be reality.

5. Perceived Community Normative Environment - sociologists have long agreed

that norms are the cultural standards that define appropriate and inappropriate behavior (Berger, 1963; Durkheim, 1895/1950). The perceived normative environment is constructed by such factors as community solidarity norms, community attitudinal norms, and community prevalence norms. Using this as a general definition, this study relied upon three concepts to define the overall construct: (a) adolescents' perceptions of community solidarity norms, (b) adolescents' perceptions of community attitudinal norms regarding adolescent premarital sexual behavior, and (c) adolescents' perceptions of community prevalence norms of adolescent premarital sexual behavior.

6. Perceived Community Solidarity Norms - solidarity has been defined as "unity that produces or is based on community of interests, objectives, and standards" (Merriam-Webster's Collegiate Dictionary, 1993, p. 1118). Community solidarity in this study was defined as adolescents' perceptions of a community's collective standards, interests, and objectives regarding issues related to (a) community spirit, (b) interpersonal relations, (c) family responsibility toward the community, (d) schools, (e) churches, and (f) areas of tension (Fessler, 1952 as cited in Miller, 1991).

7. Perceived Community Attitudinal Norms regarding Adolescent Premarital Sexual Behavior - this construct was defined as adolescents' perceptions of the prevailing attitudinal normative climate delineating the boundaries of what is acceptable and desirable behavior regarding adolescent premarital sexual behavior (Brewster, Billy, & Grady, 1993; Georgianna, 1984; Sprecher, 1989).

8. Perceived Community Prevalence Norms of Adolescent Premarital Sexual Behavior - this construct was defined as adolescents' perceptions of the percentage of adolescents in their community who had engaged in premarital sexual behavior

(DeLamater & MacCorquodale, 1979).

Content Overview of Subsequent Chapters

Chapter II begins with an historical overview of premarital sexual behavior research. An in-depth exploration of Bronfenbrenner's ecological model of human development is presented, as well as an explanation of how the model can be used to better explain the phenomenon of adolescent premarital sexual behavior. An extensive review of the existing literature and findings relative to antecedents of adolescent premarital sexual behavior are summarized and categorized according to Bronfenbrenner's model. This review concludes at the macrosystem with discussion of the three variables pertinent to the focus of this study.

Chapter III begins with a discussion of the research design and operational hypotheses. The pilot study is presented detailing the sample, the development of a new instrument, the modification of an existing instrument, as well as data analysis and results. As a result of the pilot study, revisions were made to the instruments and are detailed in this chapter. The sample used in the actual study, data collection, coding, and data analysis procedures are outlined. Chapter III concludes with a presentation of methodological assumptions and limitations.

Chapter IV reports statistical findings, interpretation, and discussion as applicable to the study's five hypotheses. Separate analyses are presented for adolescent premarital sexual behavior being measured as a dichotomous variable and as a continuous variable. Bivariate correlations and hierarchical multiple regression analyses are detailed for demographic variables, perceived community level variables, and adolescent premarital

sexual behavior.

Chapter V contains a summary of the study's theoretical overview, related literature, statistical results, and implications. The project concludes with specific suggestions offered for the environmental utility of the study and recommendations for future research.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The goal of this research was to examine potential community level factors in relationship to adolescent premarital sexual behavior from a human ecological perspective. The scholarly research literature is rich with studies which examine the phenomenon of adolescent premarital sexual behavior. This review begins with a discussion of pioneering contributions to the study of premarital sexual behavior, including the emergence of research focusing on adolescent premarital sexual behavior. Current theoretical and methodological research trends are outlined with attention given to recommendations offered by prominent scholars regarding future adolescent premarital sexual behavior research.

The next major section of this review focuses on the theoretical framework utilized in this study. A brief overview of human ecology theory and family theory are presented as a prelude to Bronfenbrenner's ecological model of human development (see Appendix A). After providing an overview of Bronfenbrenner's model, existing research is discussed and integrated into the specific components of the model. The literature is systematically organized by first considering factors within the individual and moving outward to those factors representing the macro level.

Factors considered at the organism level include age, self-esteem, and sexual maturation. In the microsystem, variables contained within the settings of home, peer group, school, and church are examined. The literature is notably void of studies considering meso level factors related to adolescent premarital sexual behavior; therefore, possible mesosystem factors worthy of research are posited. Studies which examine exosystem linkages and processes occurring between the home and parental work settings and their relationship to adolescent premarital sexual behavior are presented. The review concludes at the macrosystem with discussion of community level factors (community structural parameters and perceived community normative environment) associated with adolescent premarital sexual behavior.

History of Premarital Sexual Behavior Research

Pioneering Contributors

Premarital sexual behavior is a relatively young field of research with its origins in the early 1930s (Reiss, 1960). Between 1938 and 1959 five major studies were published and are professionally recognized as pioneer research in this area (Reiss, 1960; Sorenson, 1973). The Terman study, in 1938, was the first of these and considered the premarital sexual behavior of 800 married couples in California. The next two monumental studies were published in 1948 and 1953 by Alfred Kinsey and his colleagues at the Institute for Sex Research. Their research was based on interviews with 12,000 married and single people from all over the United States. The Kinsey studies were met with great resistance from social scientists and theologians; however, they were considered the most reliable and extensive studies of that time (Reiss, 1960;

Sorenson, 1973). In 1953, Burgess and Wallin conducted a premarital sexual behavior study with 1,000 engaged couples from Chicago, and did a follow-up with those who later married (Reiss, 1960). The fifth major study was published in 1959 by Winston Ehrmann. His research included 1,000 single Florida college students (Reiss, 1960). Collectively, these five historic studies focused on, and generally depicted, the premarital sexual *behavior* of American adults at that time (Reiss, 1960).

In 1960, Ira Reiss advanced premarital sexual behavior research by publishing *Premarital Sexual Standards in America* in which he examined *standards* in concert with the behavior. This published work was the first to progress beyond solely describing the behavior in terms of trends (Reiss, 1960). According to Reiss, premarital sexual behavior can not truly be understood without considering the accompanying sexual standards. Reiss is regarded as a guru in the research of premarital sexual behavior, consistently contributing to its development through his studies, manuscripts, and books. Other researchers in the field repeatedly rely upon Reiss' four notable books published in 1960, 1967, 1986, and 1990 (DeLamater & MacCorquodale, 1979; Miller & Fox, 1987; Sorenson, 1973).

DeLamater and MacCorquodale are also professionally recognized as contributing scholars in the field of premarital sexual behavior research. In 1979, they published their study, *Premarital Sexuality.* This study utilized previous research findings, as well as new empirical data gathered from young adults between the ages of 18 to 24, to develop a conceptual model which synthesized the various factors related to premarital sexual behavior.

Emergence of Adolescent Premarital Sexual Behavior Research

The majority of the pioneering research on premarital sexual behavior focused on adults over the age of 18 (Reiss, 1960; Sorenson, 1973). Researchers tended to shy away from studying adolescents due to the precedence of excluding this group, necessity for parental permission and the accompanying high refusal rate, subject accessibility, and adolescents' concerns about confidentiality and their propensity to respond in a socially desirable manner. In addition to these methodological issues, researchers expressed ethical concerns about prematurely stimulating adolescents' sexual curiosity, as well as adolescents' sensitivities to the subject matter (Sorenson, 1973).

Sorenson (1973) was one of the first researchers to take on the challenge of conducting a nationwide study of premarital sexual attitudes and behaviors of adolescents between the ages of 13-19. While recognizing, "Young people are not easy to study, and their sexuality is no exception" (1973, p. 9), Sorenson asserted that "we would understand sexual experience better if we understood the ground in which it begins: sexual *in*experience" (1973, p. 17). Sorenson's research was instrumental in facilitating a paradigm shift in premarital sexual behavior research. His work demonstrated to future scholars that adolescent premarital sexual behavior research not only could be done, but must be done in order to understand the early roots of sexual feelings and perceptions that serve as the foundation for later sexual attitudes and behavior.

Current Adolescent Premarital Sexual Behavior Research

The current adolescent sexuality research primarily represents two distinctive

orientations: (a) internally driven; biologically and psychologically based, and (b) socially learned; socio-culturally based (Chilman, 1990; Gagnon & Simon, 1973; Miller & Fox, 1987; Reiss, 1967, 1986; White & DeBlassie, 1992). The internally driven perspective has dominated research and emphasizes adolescent sexuality as non-normative and negative (Chilman, 1990). It is problem focused and considers the negative consequences such as pregnancy, sexually transmitted diseases, and parenting. Supporters of this approach view the problem as lack of personal control (Miller & Fox, 1987). Adolescents are seen as being unable to refrain from sexual behavior. Theories most often used in this perspective are developmental theory, problem behavior theory, and social control theory (Miller & Fox, 1987). The central question is "Why don't they?" instead of "Why do they?" This perspective promotes the belief that information, morals, and discipline can prevent adolescents from engaging in sexual activity.

The internally driven perspective received a generous amount of political and scholarly attention in the past decade due to the increase of HIV and AIDS (Chilman, 1990). In an attempt to combat adolescent sexual behavior from this perspective, Senator Jesse Helms authored a bill in 1987 that stated all federally funded educational materials had to explicitly stress abstinence and omit homosexuality (Reiss, 1990). The bill passed with majority of 94 to 2. However, according to Reiss (1990) this approach has no impact on preventing young people from engaging in sexual activity. He asserts that pregnancy, rape, sexually transmitted diseases, and so forth are *not* the problem, but they are the *result* of society being unwilling to adequately address sexuality. Furthermore, opponents of the internally driven perspective posit that the attitude associated with this perspective is damaging to adolescents, families, and society because

associated with this perspective is damaging to adolescents, families, and society because it encourages young people to covertly engage in intercourse without any pre-thought (Chilman, 1990; Reiss, 1990).

The socio-cultural perspective considers human sexuality a lifelong process of development and explains it from a life-span, ecological, multi-disciplinary context (Baltes, Reese, & Lipsitt, 1984; Chilman, 1990). Supporters assert that sexuality is influenced by all socio-cultural experiences including time in history, family, and religion (Chilman, 1990; DeLamater & MacCorquodale, 1979; Reiss, 1986). Human sexuality is viewed as a process that takes place from birth to death; it is considered natural, positive, and a critical component of physical, emotional, and social growth (Chilman, 1990; Maddock, 1989; Reiss, 1960, 1990). The theories most often used in this approach are the bio-social theory, symbolic interactionism, exchange theory, and human ecological theory (Miller & Fox, 1987). The socio-cultural approach does not necessarily purport that sexual intercourse is negative; instead, it postulates that it is dependent upon other factors such as the norms of family and peers, mutual satisfaction, developmental readiness, use or non-use of contraceptives, and the quality of the relationship (Chilman, 1990).

Data are very difficult to obtain in adolescent sexuality research due to political and social obstacles (Chilman, 1990; Reiss, 1990; Sorenson, 1973). National data on females aged 15-44 are available; however, data for young people 14 and under and data for males are very limited. Two primary dependent variables are most often used in adolescent sexuality research: (a) adolescents who have had sexual intercourse and those who have not, and (b) the degree of intimacy (i.e. petting, kissing, intercourse, etc.).

The primary independent variables are: (a) identifying negative consequences associated with adolescent premarital sexual behavior, and (b) identifying antecedents of the behavior (Miller & Moore, 1990).

The Future of Adolescent Premarital Sexuality Research

The future of adolescent premarital sexuality research appears to be promising. Suggestions for future research have been posited by prominent scholars in the field and are consistently similar. They propose: (a) utilizing theory to guide the studies, (b) conducting longitudinal studies, (c) using measurements other than self-report, (d) obtaining data for adolescents under 15 years of age and male adolescents, and (e) identifying those antecedents that have not been identified (Atwood & Donnelly, 1993; Chilman, 1990; Miller & Fox, 1987; Miller & Moore, 1990).

This researcher is heeding the advice of the prominent scholars. The study presented in this dissertation is based on the socio-cultural perspective and, as such, is guided by Bronfenbrenner's ecological model of human development. The focus is on identifying societal level antecedents, specifically community factors, which have been largely ignored (Atwood & Donnelly, 1993; Miller & Moore, 1990). Chilman (1990) corroborated a societal level focus, "More information is needed about differing goals, values, beliefs, attitudes and norms concerning human sexuality at differing life stages held by varying racial, ethnic, religious, regional, age, sex, and socioeconomic groups" (p. 129).

Human Ecology Theory

Overview of Human Ecology Theory

Human ecology theory is concerned with the study of the interrelations and interactions of organisms and their environments (Andrews, Bubolz, & Paolucci, 1980; Bubolz & Whiren, 1984). Its evolution has been a long and arduous process with roots that can be traced back to the philosophy of Plato and Aristotle, Darwin's Origin of the Species, and principles in the biological and social sciences as well as home economics. In the early 1900s the human ecology perspective became somewhat dormant in the face of numerous criticisms. During the late 1960s and early 1970s, after surviving the crucible of time, the politics of the women's suffrage movement, and subsequent discipline specific application and fragmentation, human ecology theory re-emerged in family studies as a viable theoretical framework from which to view families and their interactions within the environment (Bubolz & Sontag, 1993).

Family ecology theory is founded on three fundamental premises. The first premise is that a family interacts with its environment and therefore, is considered an ecosystem (Bubolz & Sontag, 1993; Wright & Herrin, 1988). Ecosystems are based on the concept of interdependency. A change in any part of the system affects the system as a whole as well as the parts of the system. This postulates that the whole system and the parts are interdependent and operate in relation to each other. Second, "a family carries out physical-biological sustenance, economic maintenance, and psychosocial and nurturance functions for its members, for itself as a collectivity, and for the common good" (Bubolz & Sontag, 1993, p. 425). And finally, an interdependent relationship between humans

and the environmental resources of the world constitutes the third premise (Bubolz & Sontag, 1993). The continuing ecological health of the world depends on decisions being made not only at the national level, but just as essentially, at the individual, family, and community level in order to preserve this interdependent relationship (Brown, Flavin, & Postel, 1989).

Bronfenbrenner's Ecological Model of Human Development

Urie Bronfenbrenner is regarded as a major contributor to the advancement of the human ecology perspective. Inspired by the work of Vygotsky and Lewin, Bronfenbrenner developed the ecological model of human development based on the concepts of the organism, microsystem, mesosystem, exosystem, and macrosystem (1979). During the last two decades, Bronfenbrenner has been reassessing, refining, and extending his original model (1979; 1989; 1993). Bronfenbrenner's (1993) model is depicted in Appendix A. He defines the ecology of human development as the

> scientific study of the progressive, mutual accommodation, throughout the life course, between an active, growing, highly complex biopsychological organism--characterized by a distinctive complex of evolving interrelated, dynamic capacities for thought, feeling, and action--and the changing properties of the immediate settings in which the developing person lives, as this process is affected by the relations between these settings, and by the larger contexts in which the settings are embedded. (Bronfenbrenner, 1993, p. 7)

His ecological paradigm of human development is a process-person-context model where individual socialization is a function of the synergistic effect produced by

individual characteristics and the environmental context. Bronfenbrenner asserts that individuals can never be completely understood outside the context of their environment.

Organism

Bronfenbrenner (1993) identifies four types of developmentally instigative characteristics as most likely to influence the course of individual cognitive development; namely, personal stimulus characteristics, selective responsivity, structuring proclivity, and directive beliefs. The first type, personal stimulus characteristics, refers to individual attributes such as temperament and physical appearance that invite or discourage environmental reactions. These characteristics are developmentally important by virtue of the reciprocal processes of interpersonal interaction they set in motion. The remaining three types emerge developmentally and become increasingly complex. Selective responsivity is concerned with differences in how individuals react to, are attracted by, and are motivated to explore certain aspects of the physical and social environment. Structuring proclivity describes the process that individuals use to elaborate, restructure, and create new dimensions of their physical, social, and symbolic environment. And finally, directive beliefs are defined as the ways in which individuals conceptualize their experiences which in turn impacts their perception of self in relation to the environment. Bronfenbrenner (1993) is careful to point out that these developmentally instigative characteristics are not deterministic in relation to developmental outcomes, but rather, these characteristics in conjunction with environmental influences are responsible for determining developmental outcomes.

Microsystem

The microsystem contains the individual in the most immediate settings in which development occurs (Bronfenbrenner, 1993). The microsystem is defined as

> a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given face-to-face setting with particular physical, social, and symbolic features that invite, permit, or inhibit, engagement in sustained, progressively more complex interaction with, and activity in, the immediate environment. (Bronfenbrenner, 1993, p. 15)

The home, peer group, and school are typically considered the primary settings. The face-to-face activities, roles and interpersonal relations within these settings constitute the developmental building blocks which promote or undermine individual development. The influence of these building blocks are not based on the "objective" or "real-life" experiences of the person, but rather, the person's perception of the experiences (Bronfenbrenner, 1979).

Mesosystem

Bronfenbrenner (1993) defines the mesosystem as

> the linkages and processes taking place between two or more settings containing the developing person. Special attention is focused on the synergistic effects created by the interaction of developmentally instigative or inhibitory features and processes present in each setting. (p. 22)

As compared to the microsystem, the mesosystem represents a more distal influence focusing on the linkages and processes *between* at least two settings rather than the

influence of a singular setting. The individual must engage in face-to-face interaction in each setting. The synergistic influences of multiple settings have both additive and interactive effects on the developing individual. When the individual moves into a new setting, the mesosystem extends by incorporating processes from both the new and existing settings; hence, creating a new synergistic relationship.

Exosystem

Bronfenbrenner (1993) defines the exosystem as

> the linkages and processes taking place between two or more settings, at least one of which does not contain the developing person, but in which events occur that indirectly influence processes within the immediate setting in which the developing person lives. (p. 22)

Similar to the mesosystem, the exosystem typifies linkages and processes between multiple settings; however, the individual does not directly interact within one of the settings. Although some settings may be remote to the individual, processes occurring in such settings influence processes in settings more immediate to the developing individual. For example, the linkage between the home setting and the parental workplace constitute an exosystem for adolescents. While directly interacting within the home setting, adolescents indirectly interact with the parental workplace via parents participation.

Macrosystem

Bronfenbrenner (1993) defines the macrosystem as

> the overarching pattern of micro- meso- and exosystems characteristic of a given culture, subculture, or other extended social structure, with particular reference to the developmentally instigative belief systems, resources, hazards, lifestyles, opportunity structures, life course options and patterns of social interchange that are embedded in such overarching systems. (p. 25)

The macrosystem is the most distal ecological level with respect to the developing individual. This system both influences and is influenced by processes in previous ecological levels, thus creating the blueprint a culture or subculture uses in rearing its children. Bronfenbrenner (1993) posits that "psychological development in all its aspects is a flow of history" (p. 289); therefore, a culture's ecological blueprint evolves from the social order of past and present generations and sets the stage for the future.

Utility of Model in Research

While it is clear that no specific theory or model can comprehensively explain adolescent premarital sexual behavior (Miller & Fox, 1987), Bronfenbrenner's ecological model of human development can assist "in efforts to generate hypotheses about causation, about unintended consequences, and about alternative avenues for intervening in social and personal problems" (Garbarino, Schellenbach, & Sebes, 1986, p. 297). As previously noted, existing research has primarily focused on the individual and familial level antecedents, with minimal attention directed towards community level antecedents (Atwood & Donnelly, 1993; Miller & Moore, 1990). The ecological perspective posits that for most behaviors there are multiple causes rather than single causes, and that they occur at all levels of the individual's social ecology (Small & Kerns, 1993). The

ecological model of human development can serve as a theoretical framework for proceeding beyond the conventional focus and offering a larger contextual understanding of adolescent premarital sexual behavior.

Reviewing Existing Literature According to Bronfenbrenner's Ecological Model of Human Development

The existing scholarly research contains numerous studies which focus on identifying factors related to adolescent premarital sexual behavior. This literature review will systematically present and discuss the previously identified factors by integrating them into the specific components of Bronfenbrenner's ecological model of human development. Additionally, three factors proposed by this researcher will be presented and discussed within the macro level of the model. The review will begin with those factors within the organism and proceed outward to those factors representing the micro-, meso-, exo-, and macrosystems (see Appendix B).

Organism

In Bronfenbrenner's model, the organism represents an individual and his/her "developmentally instigative characteristics" (1993, p. 11). Developmentally instigative characteristics are defined as "properties of the person rather than of the external world" (Bronfenbrenner, 1993, p. 15). Various studies have focused on identifying the organism level antecedents of adolescent premarital sexual behavior. Three factors have repeatedly been found to correlate with adolescent sexual behavior: specifically, age, sexual maturation, and self-esteem.

Age

Age has been determined to be one of the most important correlates of adolescent premarital sexual behavior (Christopher, Johnson, & Roosa, 1993; DiBlasio & Benda, 1990; Hayes, 1987; Hofferth, Kahn, & Baldwin, 1987; Lock & Vincent, 1995; Moore & Burt, 1982; Newcomer & Baldwin, 1992; U. S. Department of Health and Human Services, 1996; Zelnik & Kantner, 1980). Newcomer and Baldwin (1992) utilized the U. S. vital statistics to review the demographics of fertility-related behavior of young people ages 10-18. These researchers determined that age was distinctly the predominant predictor of adolescent sexual behavior. Data indicated that as adolescents age, they are more likely to engage in sexual intercourse. In a study of 564 predominantly black adolescent females, Lock and Vincent (1995) found that age had a direct effect on premarital sexual intercourse. Similarly, DiBlasio and Benda (1990) concluded that age was a strong correlate of sexual activity in their study of 1,610 adolescents ranging in age from 12 to 18 years who attended private schools of various sizes located throughout the United States. Results showed that the older the age group, the higher the percentage of adolescents who had engaged in sexual intercourse: specifically, 13 years, 8%; 14 years, 16%; 15 years, 22%; 16 years, 31%; 17 years, 43%; and 18 years, 54%.

The results from these studies depict a clear pattern of the incidence of sexual intercourse rising with age. Since age is recognized as being intrinsically linked to other adolescent developmental tasks, these findings are not considered novel or abstruse (Santelli & Beilenson, 1992). However, the findings do serve as the impetus for an on-going debate about whether adolescent sexual behavior is influenced more by

chronological age or by sexual maturation (Miller & Moore, 1990).

Sexual Maturation

In a study conducted by Dornbusch and associates (Dornbusch et al., 1981), they determined that sexual maturation minimally contributed to explaining variance in dating behavior once age was taken into account. However, other researchers using levels of endogenous hormones, physical development, and menarche found sexual maturation to be highly correlated with sexual motivation and sexual behavior (Bingham, Miller, & Adams, 1990; Smith, Udry, & Morris, 1985; Udry, 1988; Udry, Billy, Morris, Groff, & Raj, 1985). Moreover, Udry et al. (1985) utilized a model which included age, pubertal development, and hormonal levels. The hormonal factor retained its effect while age and pubertal development did not. Zabin, Smith, Hirsch, and Hardy (1986) considered the age of physical maturation in relation to first intercourse in black adolescents. They concluded that the younger the age of sexual maturation, the earlier the age of first sexual experience. The debate between the relative influences of chronological age and sexual maturation on adolescent sexual behavior will most likely continue. Christopher et al. (1993) attempted to focus this debate when they asserted that progress in understanding the major influences on adolescent sexual behavior can only be made when researchers decrease the exclusive use of age and give more consideration to other developmental processes such as sexual maturation.

Self-esteem

Researchers have frequently studied self-esteem in relation to adolescent premarital

sexual behavior. Self-esteem is concerned with the individual's general feeling of self-worth (Day, 1992). Findings have been inconsistent and therefore inconclusive. In his review of research studies on adolescent sexuality, Hayes (1987) concluded that there was no significant relationship between self-esteem and sexual activity for adolescent males or females. Like many other researchers, Small and Luster (1994) hypothesized a negative relationship between self-esteem and adolescent sexual behavior in their study of 2,168 adolescents in a midsize Southwestern city. Their hypothesis was not supported when the analysis indicated low self-esteem was not related to either males or females being sexually experienced. Similarly, in a study of 141 male and 172 female adolescents of racial diversity, Robinson and Frank (1994) concluded that there were no differences in the self-esteem of males and females. Christopher et al. (1993) examined self-esteem levels and sexual behavior of 489 young Hispanic adolescents and also found no association between the two variables. Other studies have considered self-esteem in relation to pregnant and nonpregnant adolescent females. The results indicated that levels of self-esteem did not differentiate between the two groups (Barnett, Papini, & Gbur, 1991; Robinson & Frank, 1994; Vernon, Green, & Frothingham, 1983). The researchers concluded that there was no relationship between adolescent sexual activity and self-esteem. And finally, Lock and Vincent (1995) joined this growing body of research when they reported that self-esteem showed no significant impact on adolescent premarital sexual intercourse.

In contrast to the studies that found no relationship between self-esteem and adolescent sexual behavior, other researchers have found gender specific associations between the variables. In regard to females, Chilman's review of literature concluded

that low self-esteem was associated with early intercourse (1979). Orr, Wilbrandt, Brack, Rauch, and Ingersoll (1989) had similar findings, reporting lower self-esteem was related to sexual experience in girls, but not in boys. In an effort to better understand the relationship between females, self-esteem, and intercourse, Herold and Goodwin (1979) looked at the quality of the dating relationship of an all female sample. They reported self-esteem and sexual activity were positively correlated in an affectionate dating relationship, but found no correlation between self-esteem and sexual activity in an unaffectionate dating relationship. Furthermore, they did not find a significant correlation between self-esteem and the number of sexual partners. For males, it appears there is a positive correlation between self-esteem and early sexual experience (Flick, 1986). In their four year longitudinal study of 432 high school adolescents and 180 college students, Jessor and Jessor (1975) found that nonvirgin males had higher self-esteem than virgin males. Moreover, Irwin and Millstein's (1986) study indicated that sexually experienced male adolescents had higher self-esteem than those male adolescents who were not sexually experienced.

Other researchers have proposed that the relationship between self-esteem and adolescent sexual behavior is mediated by other factors. For example, Christiansen (1964) proposed that societal norms mediated the relationship between self-esteem and adolescent sexual behavior. This proposition was supported in a study that found a positive correlation between self-esteem and the number of sexual partners of sexually liberal students, but not sexually conservative students (Perlman, 1974). Similarly, Miller, Christensen, and Olson (1987) found a positive correlation between premarital sexual intercourse and self-esteem for adolescents who believed premarital sexual

experience was acceptable, and a negative correlation for those adolescents who believed it was unacceptable.

How, and if, self-esteem influences adolescent sexual behavior or adolescent sexual behavior influences self-esteem is unclear (Miller & Moore, 1990). The current scholarly literature illustrates the contradiction in findings of the relationship between self-esteem and adolescent sexual behavior. Because the findings are not definitive, and in fact are inconsistent and inconclusive, necessitates that researchers continue to explore the role of self-esteem as an individual level antecedent of adolescent sexual behavior.

Organism Summary

Bronfenbrenner (1993) posits that the "developmentally instigative characteristics do not *determine* the course of development; rather, they may be thought of as 'putting a spin' on a body in motion. The effect of the spin depends on the other forces, and resources, in the total ecological system" (p. 14). In applying this postulate to adolescent sexual behavior, the personal characteristics of age, sexual maturation, and self-esteem do not determine if an adolescent will or will not engage in sexual behavior; but rather, they are viewed as significant individual level antecedents that must be considered in combination with numerous antecedents at the broader ecological levels.

Microsystem

The microsystem contains the individual in the most immediate settings in which development occurs (Bronfenbrenner, 1993). The home, peer group, and school are typically considered the primary settings. The majority of research concerned with

identifying antecedents of adolescent premarital sexual behavior has focused on factors within the microsystem level. While it appears that family and peer factors have received the greatest amount of attention, researchers have also directed effort towards identifying the respective influences of school and church.

Home

Researchers have explored various mechanisms within the home setting which affect adolescent behavior. The relationships and interactions characterizing an adolescents' families are seen as important influences on their sexual behavior (Russell, 1994). Specifically, researchers have examined family structure, parental support, parental control, parental attitudes and values regarding premarital sexual behavior, and parent-child communication.

Family Structure. With few exceptions (Hovell et al., 1994), family structure has consistently been found to be a significant predictor of adolescent premarital sexual behavior. Findings suggest that adolescents are less likely to participate in premarital sexual experiences if they are reared in a two-parent family (Coles & Stokes, 1985; Flewelling & Bauman, 1990; Flick, 1986; Thornton & Camburn, 1987; Zelnik, Kantner, & Ford, 1981). Considering indirect and direct influences, Lock and Vincent's (1995) research indicated that family structure had a direct effect on adolescent premarital sexual intercourse; namely, adolescents who were from a two-parent family, and had positive sexual attitudes were less likely to engage in sexual intercourse.

Female specific findings indicate that adolescent females from divorced families, living with single-parents or in female-headed families, are more likely to initiate sexual

intercourse earlier, have a higher incidence of sexual activity, have a greater number of sexual partners, and have a higher probability of becoming pregnant (Akpom, Akpom, & Davis, 1976; Forste & Heaton, 1988; Kantner & Zelnik, 1972; Miller & Bingham, 1989; Newcomer & Udry, 1987). When including race as a factor, studies have indicated that black adolescent females living in single-parent families were more likely to initiate early sexual experience (Hogan & Kitagawa, 1985; Murry, 1994; Robbins, Kaplan, & Martin, 1985). Moreover, other researchers have found that race was more important than the two-parent family in influencing sexual behavior; specifically, white females from two-parent families were less likely to be sexually experienced, but once they became experienced, they tended to engage in sexual activity more frequently than did black females from two-parent homes (Young, Jensen, Olsen, & Cundick, 1991).

The findings for male adolescents are consistent with the female specific findings. For example, a study conducted by Young et al. (1991) showed that adolescent males from two-parent families postponed first intercourse until an older age and were less sexually active than those male adolescents from single-parent families. When comparing males and females, Stern, Northman, and Van Slyck (1984) found that adolescents from father absent homes had higher rates of sexual behavior, and males were more likely than females to be sexually active.

Parental Support. The parental support construct is traditionally operationalized as the degree of nurturance, attachment, acceptance, affection, and love that parents provide to their children (Barnes & Farrell, 1992). When considering adolescent outcomes, researchers have generally reported a linear relationship between parental support and various outcomes. Studies indicate that the greater the support, the better

the adolescent outcome (Barnes, Farrell, & Windle, 1987; Gove & Crutchfield, 1982; Henry, 1994; Peterson & Leigh, 1990; Rollins & Thomas, 1979). Parental warmth has been conceptually equated to parental support (Peterson & Leigh, 1990). Some studies have found that adolescents who perceive their parents as warm and supportive are less likely to be sexually experienced (Jessor & Jessor, 1975; Simon, Berger, & Gagnon, 1972); however, this hypothesis was not supported by Christopher et al. (1993) in their study of Hispanic adolescents. They found no relationship between parental warmth and adolescent sexual involvement.

According to Brooks-Gunn and Furstenberg (1989), most researchers utilize parental support and warmth as indicators of the parent-child relationship when considering the association between adolescent premarital sexual behavior and the quality of the parent-child relationship. Barnett et al. (1991) asserted that adolescents whose families do not provide a sense of emotional connectedness may establish premature sexual activity in an effort to compensate for their feelings of isolation. Whitbeck, Conger, and Kao (1993) provided support for this assertion when they detailed an indirect effect between the parent-child relationship and the sexual behavior of adolescent females. They reported that poor parent-child relationships contributed to negative mood states which in turn resulted in female adolescents engaging in sexual behavior. Other researchers have considered mother and father specific relationships. Adolescent daughters who perceived positive relationships with their mothers were more likely to delay sexual intercourse (Inazu & Fox, 1980), and when they did initiate sexual activity, they were more likely to use contraceptives and have less sexual partners than those adolescents with poor mother-daughter relationships (Fox, 1981). In regard to

fathers, Landy and colleagues reported an association between poor father-daughter relationships and adolescent girls becoming pregnant at a young age; moreover, the father was often not physically present in the home (Landy, Schubert, Cleland, Clark, & Montgomery, 1983). While the current literature suggests a relationship between parental support and adolescent premarital sexual behavior, the specific nature of the association (i.e. direct v indirect) is still uncertain.

Parental Control. The parental control construct is commonly operationalized as the degree of discipline, punishment, monitoring, and supervision that parents provide to their children (Barnes & Farrell, 1992). Control attempts include both coercive actions such as hitting, threatening, and yelling, and inductive actions such as talking, reasoning, and explaining. Additionally, control attempts may include expectations and rules regarding such issues as curfew, homework, appearance, and dating (Barnes & Farrell, 1992). There appears to be a curvilinear relationship between parental control and adolescent adaptation. Researchers have found that inductive (authoritative) parental control is positively related to bonadaptation, whereas deductive (authoritarian) parental control is positively related to maladaptation (Gecas & Seff, 1990; Henry, 1994). Adolescent sexual behavior research focusing on parental control generally utilizes the concepts of monitoring and supervision to represent the overall construct (Hanson, Myers, & Ginsberg, 1987; Hogan & Kitawaga, 1985; Inazu & Fox, 1980; Jessor & Jessor, 1975; Miller, McCoy, Olson, & Wallace, 1986; Moore, Peterson, & Furstenberg, 1986; Murry, 1994; Small & Luster, 1994). Specific indicators include such behaviors as parental awareness of the adolescent's friends, activities, and whereabouts.

The scholarly literature is replete with studies indicating a significant correlation

between parental control and adolescent sexual behavior. One salient study conducted by Hogan and Kitawaga (1985) showed that adolescents whose parents monitored and supervised their dating hours, locations, and partners were less likely to be sexually active than those adolescents who did not receive parental control. This finding retained its significance after controlling for various other social risk factors. Similarly, other researchers have reported a negative correlation between parental control and adolescent sexual activity. Researchers found that adolescents whose parents knew most of their friends (Moore et al., 1986), and adolescents whose parents closely monitored their activities (Hanson et al., 1987; Small & Luster, 1994) were less likely to be sexually experienced.

Scholars have given attention to the timing of adolescents initiating sexual activity. Jessor and Jessor (1975), Henggeler and Borduin (1990), and Murry (1994) reported a negative correlation between parental control and the timing of adolescents becoming sexually active; namely, low parental control was associated with early initiation of sexual behavior. Miller et al. (1986) are recognized for their study which revealed a curvilinear association between the degree of parental control and early initiation of adolescent sexual behavior. They found that both excessive and minimal parental control were associated with adolescents engaging in sexual intercourse at an early age. However, the most sexually active adolescents were those who received the least amount of parental control. The adolescents most likely to postpone sexual activity were those who received moderate parental control.

In contrast to the numerous studies which indicated an association between parental control and adolescent sexual behavior, Inazu and Fox (1980) found no correlation

between female adolescents' sexual activity and the supervisory behaviors of their mothers. This finding was expanded and supported in a later study by Fox (1986a as cited in Miller & Fox, 1987) when she concluded that parents were opposed to monitoring and controlling adolescents' activities, and that the number of rules and the degree of supervision were not significantly correlated to adolescent sexual behavior. Though these findings are inconsistent with the majority of studies, they must be given consideration for their contribution to understanding the role of parental control as related to premarital adolescent sexual behavior.

Parental Attitudes and Values regarding Premarital Sexual Behavior. The development of attitudes and values concerning sexuality begins early in life and is influenced by one's environment. Parents serve a fundamental role in the formation of such values by providing role models, standards of sexual conduct, and a social and economic environment (Fox, 1981; Furstenberg, 1981; Herceg-Baron & Furstenberg, 1982). Thornton and Camburn (1987) proposed that parents' premarital sexual attitudes and values affect their parenting style, which subsequently influence their children's sexual behavior. For example, parents with more traditional and conservative values may structure their activities in a manner which will allow them to provide close monitoring and supervision of their child, resulting in less opportunity for the child to participate in sexual behavior. Parental attitudes and values regarding premarital sexual activity have been found to be significant predictors of adolescent premarital sexual attitudes, behaviors, and contraceptive use (Baker, Thalberg, & Morrison, 1988; DeLamater & MacCorquodale, 1979; Moore et al., 1986; Shah & Zelnik, 1981; Thornton & Camburn, 1987; Weinstein & Thornton, 1989; White, 1987).

Some researchers include both adolescents and parents in their studies, while others rely upon adolescents reporting their perception of parental premarital sexual behavior attitudes and values. In 1980 Thornton and Camburn (1987) conducted the fifth round of data collection in a longitudinal study that began in 1962. The 1980 data included independent responses from mothers and adolescents in 916 families. Findings indicated a positive relationship between individual parental attitudes regarding sexuality and individual adolescent attitudes. Adolescents whose mothers had conservative values, tended to also have conservative values. Furthermore, the sexual attitudes and values were correlated with the sexual behavior; namely, adolescents whose mothers had conservative values tended to be less sexually experienced. Moore et al. (1986) provided evidence to support these findings in their study which utilized both adolescent and parental data from the National Survey of Children. They concluded that adolescent females, having parents with traditional values and attitudes about sexuality, were less likely to participate in sexual activity than those adolescents with parents expressing a more liberal attitude, 9% and 20% respectively. The findings for males differed in that no association was found between parental attitudes and sexual behavior. Baker et al. (1988) interviewed 329 adolescents age 14-17, 286 mothers, and 184 fathers in their assessment of parental influences on adolescent sexual behavior and contraceptive use. Their findings concurred with Thornton and Camburn (1987) and Moore et al. (1986); however, they also concluded that of the six parental variables assessed, the best predictor of adolescent sexual behavior and contraceptive use was the parents' approval of the adolescent's sexual activity. More specifically, they found that the greatest proportion of variance was accounted for by the father's approval (Baker et al., 1988).

Studies relying upon adolescent *perceptions* of parental attitudes, rather than parental self-reporting, produced similar results. Researchers examining adolescent perception of parents approval or disapproval of premarital sexual behavior found that adolescents who thought their parents would disapprove were less likely to be sexually experienced (DiBlasio & Benda, 1990; Jessor & Jessor, 1975; Small & Luster, 1994). When Small & Luster (1994) included perceived parental values regarding adolescent sexual behavior into their cumulative risk factor model, it emerged as a significant risk factor for both male and female adolescents. Hovell et al. (1994) examined the relationship of ten family variables, including perceived mother's attitude regarding premarital sexual intercourse and adolescent sexual behavior. They reported that age and the degree to which mothers were accepting of premarital sex were the strongest bivariate correlates of adolescent sexual behavior. The more accepting the mother's attitude, the more sexually experienced the adolescent. The researchers reported that maternal attitudes emerged as a major contributor to the explained overall variance.

The current literature provides ample evidence of a correlation between parental attitudes and values regarding adolescent premarital sexual behavior and adolescent sexual behavior. Furthermore, the findings appear consistent regardless if the data are collected via adolescent perception or parental self-reporting. Nonetheless, the data are not sufficient to be considered an empirical generalization due to the various studies which negate a direct effect and suggest an indirect effect with parent-child communication (Fisher, 1985, 1989; Miller, Dyk, & Norton, 1990 as cited in Miller & Moore, 1990; Weinstein & Thornton, 1989).

Parent-Child Communication. Numerous researchers have explored the relationship

between parent-child communication and adolescent premarital sexual behavior. The majority of studies appear to focus on either general communication or sexuality specific communication. Some scholars have suggested that there are minimal sex specific discussions between parents and adolescents (Fox, 1986; Hayes, 1987), and when they do occur, mothers are more involved than fathers (Kahn, Smith, & Roberts, 1984), and the discussions typically focus on parental rule making and exertion of authority (Scales & Everly, 1977). Researchers examining general communication consistently reported a significant association between poor communication patterns and adolescents being at greater risk for engaging in premarital sexual behavior and for becoming pregnant (Barnett et al., 1991; Chilman, 1983; Fox, 1981; Furstenberg, Herceg-Baron, Shea, & Webb, 1984; Kantner & Zelnik, 1972).

Studies considering sexuality specific parent-child communication have produced mixed findings. Numerous studies have indicated that increased sex specific communication between parents and adolescents prevents, delays, or decreases adolescent premarital sexual activity (DeLamater & MacCorquodale, 1979; Fox, 1981; Lewis, 1973; Spanier, 1977). Furthermore, other researchers have concluded that adolescents who receive sex education or contraceptive information from their parents are more likely to use contraceptives, have fewer sexual partners, and be at lower risk for pregnancy (Fox & Inazu, 1980; Shah & Zelnik, 1981; Yarber & Greer, 1986). In contrast, some scholars have reported finding no correlation between parent-child communication and adolescent sexual behavior. Data indicated communication had no effect on the initiation of intercourse, the use of contraceptives, or the risk of pregnancy (Furstenberg et al., 1984; Hofferth, 1987; Kahn et al., 1984; Newcomer & Udry, 1984,

1985; Tucker, 1989). In a study consisting of Anglo and Latino, 14-16 year old males and females, Hovell et al. (1994) found no association between parental discussion of sexual issues and adolescent sexual behavior. They too concluded there was little evidence that parent-child communication influenced premarital adolescent sexual behavior.

Data suggest that the specific sexual content of the parent-child communication impacts adolescent sexual behavior. Murry (1992) and Scott-Jones and Turner (1990) found that when parents discussed topics such as menstruation, contraception, sexually transmitted diseases, and pregnancy, black adolescents were less likely to initiate sexual intercourse. These findings were only partially supported in another study conducted by Murry (1994). Specifically, when their parents discussed how pregnancy occurs, black adolescent females were more likely to postpone sexual intercourse until after age 18. However, contrary to the previous findings the identified topics of menstruation, contraception, and sexually transmitted diseases did not prove to impact the initiation of sexual intercourse.

Still other data indicate that the association between parent-child communication and adolescent premarital sexual behavior is gender specific. Researchers have consistently reported that parents are more likely to communicate with their adolescent daughters about sexuality than with their sons (Freeman et al., 1980; Kahn et al., 1984; Moore et al., 1986), and they tend to send double messages regarding expectations of son's versus daughter's behavior (Darling & Hicks, 1982). The female adolescent data are somewhat consistent in suggesting that increased communication is correlated with delay of sexual initiation, less frequent sexual behavior, less partners, less likely to

become pregnant, and more likely to use contraceptives (DeLamater & MacCorquodale, 1979; Fox, 1981; Fox & Inazu, 1980; Lewis, 1973; Murry, 1992, 1994; Scott-Jones & Turner, 1990; Shah & Zelnik, 1981; Spanier, 1977; Yarber & Greer, 1986). In comparison, the male data are not as consistent. For example, Kahn et al. (1984) reported increased communication between sons and mothers was associated with a lower likelihood of adolescent sexual behavior; however, the more sexuality topics discussed between fathers and sons, the more likely the son had engaged in sexual behavior. Similarly, Moore et al. (1986) found that parental discussions with sons in traditional households were related to increased sexual involvement. The investigators proposed that this finding may be attributed to parents increasing their communication with sons after they initiate sexual behavior (Moore et al., 1986). Based on the scholarly literature, it appears that the association between parent-child communication and adolescent premarital sexual behavior is dependent upon parental attitudes and values, content of discussions, and the adolescent's gender.

Peer Group

Historically parents and peers have been considered polarized in their relationships with adolescents; however, this polarized view is beginning to be dispelled (Gecas & Seff, 1990). Research findings suggest that parents and peers influence adolescents differently. Parents tend to influence adolescent behavior by providing normative standards regarding fundamental issues such as values, morals, educational goals, and life plans, whereas peers tend to influence each other through modeling styles, trends, appearance, and recreational behavior (Biddle, Bank, & Marlin, 1980; Billy & Udry,

1985a; Gecas & Seff, 1990; Reiss, 1967, 1970). As children develop into adolescents they become more autonomous from their parents and begin relying on their peers for social learning and support. It is within peer groups that adolescents experience friendship, intimacy, and further development of their self-concepts (Gecas, 1981). Data indicate that as adolescents get older, peer influence increases while parental influence simultaneously decreases (Berndt, 1979; Settlage, Baroff, & Cooper, 1973; Steinberg & Silverberg, 1986). Moreover, researchers have reported similar associations between age and parental and peer influences specific to adolescent sexual behavior (Treboux & Busch-Rosnagel, 1995).

Peer influence in relation to adolescent premarital sexual behavior has received copious attention from scholars. The literature represents two primary concepts: (a) peer conformity, and (b) dyadic relationship status. The term "peer" is a general label which is often used to describe persons of similar age who may or may not have a personal relationship with each other. When using the concept of *peer* conformity in regard to adolescent sexual behavior, researchers have operationalized the term as "friends" (Brown, Clasen, & Eicher, 1986; East, Felice, & Morgan, 1993; Small & Luster, 1994; Treboux & Busch-Rosnagel, 1995), "close friends" (DeLamater & MacCorquodale, 1979; Mirande, 1968; Whitbeck et al., 1993), and "best friends" (Billy, Rodgers, & Udry, 1984; Billy & Udry, 1985a, 1985b; Christopher et al., 1993; Lock & Vincent 1995; Newcomer, Udry, & Cameron, 1983; Rodgers & Rowe; 1990). When measured in these ways, peer conformity is considered a micro level factor. Dyadic relationship status is concerned with the different dating stages and commitment levels, as well as the relationship quality of the adolescent heterosexual couple.

Peer Conformity. Researchers have provided sufficient evidence indicating that friends' actual behavior, as well as *perception* of friends' behavior influence an adolescent's own sexual behavior. In fact, Hayes (1987) asserted that adolescents' beliefs and *perceptions* about friends' sexual behavior are more closely related to their own behavior than friends' actual behaviors. Data based on adolescent perception indicate that adolescents who perceive that their friends are sexually active are more likely to have engaged in premarital sexual intercourse (DiBlasio & Benda, 1990; East et al., 1993; Evans, 1987; Shah & Zelnik, 1981; Thornton & Camburn, 1989; Yawn & Yawn, 1993). Similar findings were indicated in studies of black (Lock & Vincent, 1995) and Hispanic (Christopher et al., 1993; Gibson & Kempf, 1990) adolescents. For example, in a study of 489 Hispanic adolescents, Christopher et al. (1993) utilized a multivariate approach to assess the explanatory value of individual, family, and peer variables related to premarital adolescent sexual behavior. Perceived best friend's sexual behavior was included in the final regression solution. After controlling for age and premarital sexual attitude, perceived best friend's sexual behavior emerged as a significant predictor for both males ($p < .0001$) and females ($p < .0001$). However, the relationship was stronger for males accounting for 42% of the variance as compared to 21% for females. These findings concurred with previous studies utilizing both non-Hispanic and Hispanic samples.

Other researchers have utilized actual rather than perceived responses of best friends (Billy et al., 1984; Billy & Udry, 1985a, 1985b; Rodgers & Rowe, 1990). In a study which matched responses of best friends, Billy et al. (1984) concluded that both black and white female adolescents tended to name friends whose sexual behaviors were

similar to their own. However, for male adolescents there was no significant relationship between best friends' sexual behavior, or any other deviant behavior. Using similar reporting methodology and adding a longitudinal component, Billy and Udry (1985a & 1985b) found somewhat different results. They reported that white male and female adolescents identified best friends whose sexual experience was similar to their own. White females tended to be influenced by the sexual behavior of their best friends, whereas white male adolescents appeared to choose their friends based on prior sexual experience rather than being influenced by their behavior (Billy & Udry, 1985a). Moreover, black adolescents, both male and female, were neither influenced by friends' sexual behavior nor chose their friends on that basis. Rodgers and Rowe (1990) also used similar reporting methodology and included best friends and siblings. They concluded that the actual sexual behavior of best friends and siblings predicted the sexual behavior of adolescents. Whether researchers utilize perceived or actual reports, it appears that there is a correlation between the sexual behavior of adolescent friends. That is, adolescents who are sexually experienced are more likely to have best friends who are also sexually experienced.

Dyadic Relationship Status. Dyadic relationship status is concerned with the different dating stages and the relationship quality of the adolescent heterosexual couple. Researchers have suggested that female adolescent sexual behavior is influenced by the emotional context (DeLamater, 1981; Udry, Talbert, & Morris, 1986) and the quality of the dyadic relationship (Gagnon & Simon, 1973); whereas male adolescent sexual behavior is usually approached recreationally and for peer group status (Gagnon & Simon, 1973). When considering the direct and indirect effect of several factors, Lock

and Vincent (1995) found that peer influence and commitment to partner each had direct effects on adolescent premarital sexual behavior, and when combined, they had the greatest effect.

Scholars have consistently reported a significant correlation between adolescent dating stages and premarital sexual experience (Christopher & Cate, 1985, 1988; DeLamater & MacCorquodale, 1979; Jessor, Costa, Jessor, & Donavan, 1983; Jorgensen, King, & Torrey, 1980; Miller, McCoy, & Olson, 1986; Small & Luster, 1994). Specifically, sexual intercourse is more likely to occur in a committed (going steady or engaged) relationship. Small and Luster (1994) considered numerous antecedents to adolescent premarital sexual intercourse in their cumulative risk-factor model. Their findings indicated that when only one risk factor was present, it was having a steady boyfriend or girlfriend. This finding was consistent for both males and females, suggesting that a committed relationship was the most common risk factor of adolescent sexual intercourse. Other researchers have reported an association between dating stage and the frequency of sexual experience (Jorgensen et al., 1980; Miller, McCoy, & Olson, 1986); namely, adolescents in a committed relationship are more likely to report the highest frequency of sexual experience. Jorgensen et al. (1980) considered commitment and frequency of intercourse relative to specific time periods. Using a sample of 147 females between the ages of 12 and 18, they concluded that commitment was not related to frequency of intercourse over all time, but it was related to intercourse frequency during the last six months.

Another dimension of dyadic relationship status is concerned with the quality of the heterosexual couple's relationship. Relationship qualities have been found to be a

powerful predictor of adolescent premarital sexual activity. Scholars have reported that such aspects as power differentials and communication skills (Jorgensen et al., 1980), expressing love and care (Christopher & Cate, 1984), and degree of intimacy (DeLamater & MacCorquodale, 1979) are all predictors of adolescent sexual interaction. Christopher and Cate (1988) concurred with the previous scholars when their findings indicated that adolescent premarital sexual behavior is the result of numerous dyadic relationship influences including love, conflict, ambivalence, satisfaction, and maintenance behaviors.

Based on the current scholarly literature it is apparent that there is a correlation between adolescent sexual behavior and peer influence. In general, adolescents tend to have best friends whose sexual behavior is similar to their own, suggesting a peer conformity influence, and adolescents who are in committed relationships characterized by positive aspects such as love and intimacy are more likely to be sexually experienced. Hayes (1987) suggested that the role of peers in influencing sexual behavior is over estimated; however, the current research overwhelmingly negates this opinion and provides support for the inclusion of peer influence in a ecological perspective.

School

In addition to home and peer group, the school is typically considered a primary setting in which development occurs (Bronfenbrenner, 1993). However, unlike the previous two settings, scholars have given minimal attention to the role that school plays in influencing adolescent premarital sexual behavior. The available studies appear to either focus on the adolescent's attitude towards school (Russell, 1994), performance in

school (DiBlasio & Benda, 1990; Hayes, 1987; Hofferth, 1987; Miller & Sneesby, 1988; Robbins et al., 1985), or both (Small & Luster, 1994).

Russell (1994) used data collected from a longitudinal study to assess the antecedents of premarital conception in Great Britain. Among numerous antecedents, the researcher considered the correlation between school attitude and premarital conception. Russell reported a significant bivariate correlation ($p < .05$) for both males and females (1994). Specifically, individuals reporting positive attitudes towards school at age 16 were less likely to have reported premarital conceptions at age 23. In contrast, Small and Luster (1994) included school attitude in their cumulative risk factor model and found that school attitude was not a significant factor for adolescent males but was for females. Based on these two studies, the relative influence of school attitude on adolescent sexual behavior is unclear.

The majority of studies considering school influence on adolescent premarital sexual behavior have focused on school performance (i.e. grade point average). Researchers have consistently reported an inverse relationship between adolescents' school performance and sexual behavior (Abrahamse, Morrison, & Waite, 1988; DiBlasio & Benda, 1990; Hayes, 1987; Hofferth, 1987; Miller & Sneesby, 1988; Robbins et al., 1985; Small & Luster, 1994). Adolescent males and females who are not performing well in school are more likely to be sexually experienced. Researchers have suggested that adolescents performing poorly in school may choose to engage in sexual activity or become pregnant as a means to disengage from the devaluing school experience (Zelnik & Kantner, 1980).

Cumulatively these few studies suggest that the school setting is a viable factor that

should be considered in relation to adolescent premarital sexual behavior. However, much more research is needed in order to have a better understanding of its relationship with adolescent premarital sexual behavior. For example, attention should be directed towards understanding how sexual behavior, school attitude, and school performance differ for males and females and various ethnic groups. Moreover, the relative influence of school attitude and performance should be considered in relation to the other ecological factors contributing to adolescent sexual behavior.

Church

The church setting is recognized in the western culture as providing prescriptions for morality, values, attitudes, and behaviors. The role of religion in influencing attitudes and behaviors regarding premarital sexual behavior has received attention from scholars for several decades. Cochran and Beeghley (1991) reported that more than 80 studies are available providing evidence of direct or indirect effects of religion on premarital sexual attitudes or behaviors. Typically the religiosity construct is operationalized as religious affiliation, religious service attendance, and/or commitment to teachings.

Researchers have reported contradictory findings regarding the association between religious affiliation and premarital sexual attitudes and behaviors (Cochran & Beeghley, 1991; DeLamater & MacCorquodale, 1979; Forste & Heaton, 1988; Zelnik et al., 1981). For example, Zelnik et al. (1981) reported that adolescents without a religious affiliation had the highest level of premarital sexual behavior; however, for those young people who did identify with a religious group, the specific affiliation had minimal or no effect on premarital sexual behavior. In contrast, Cochran and Beeghley (1991) used a

nationally representative sample of persons 18 years and older and found that the effects of religious affiliation on nonmarital sexuality varied predictably according to each affiliations' official doctrine regarding premarital sexual behavior. Similarly in regard to young people, researchers have reported that adolescents who attended churches with a premarital sexual abstinence doctrine were significantly less likely to be sexually experienced than those adolescents who were affiliated with more liberal denominations (Miller & Olson, 1988; Thornton & Camburn, 1987). These findings concurred with DeLamater and MacCorquodale (1979) who had previously reported that young people who were affiliated with a specific religious group, fundamentalist Protestants, had less permissive attitudes and behaviors toward premarital sex than adolescents affiliated with other religious groups.

Forste and Heaton (1988) considered religious affiliation and premarital sexual behavior in conjunction with religious service attendance. Using the National Survey of Family Growth, Cycle III, Forste and Heaton (1988) reported that young people with no religious affiliation initiated sexual behavior earlier than those adolescents with a religious affiliation; however, when frequency of church attendance was controlled, adolescents *with* a religious affiliation were found to be more likely to initiate premarital intercourse by age 17 than those adolescents with no religious affiliation. This finding concurred with Jessor et al. (1983) who reported that early initiation of sexual intercourse was associated with less involvement in conventional behavior such as church attendance. Day (1992), relying upon data obtained from the National Longitudinal Survey of Labor Market Experience of Youth which included 11,725 young people between the ages of 14-21, reported that frequency of church attendance

was a significant variable in moderating the effects of early sexual behavior of younger teens. Similar findings have been reported for black adolescents. Murry (1994) concluded that frequency of church attendance was the second strongest predictor of the initiation of premarital sexual behavior among black adolescents in her study. Specifically, those adolescents who frequently attended church were more likely to delay initiation of sexual behavior. These studies are consistent in their reports of a significant correlation between religious service attendance and adolescent premarital sexual behavior, suggesting that frequency of church attendance is influential in determining when a young person initiates sexual intercourse.

Other researchers have hypothesized that adolescents' commitment to their religious teachings is significantly correlated to their sexual attitudes and behaviors (DiBlasio & Benda, 1990; Forste & Heaton, 1988; Hofferth, 1987; Thornton & Camburn, 1989). Adolescents who value religion are less likely to have permissive sexual attitudes or be sexually active than adolescents who do not value having religion in their life (Thornton & Camburn, 1989). Moreover, scholars have reported that adolescents' religious beliefs and adherence to the same are more important than their religious affiliation in influencing sexual behavior (Forste & Heaton, 1988; Hofferth, 1987). In their study of 1,610 adolescents in private schools, DiBlasio and Benda (1990) found religious commitment was significantly correlated with sexual frequency ($r = -.21$). They concluded that adolescents reporting lower religious commitment also reported increased sexual activity.

After reviewing numerous studies which found a significant relationship between religiosity and adolescent premarital sexual behavior, there appears to be an empirical

generalization that the two are significantly correlated. However, one must be cautious not to assume a linear relationship. Thornton and Camburn (1989) conducted an impressively thorough study of adolescent sexual behavior and religiosity. They included all three commonly used indicators, namely, religious affiliation, religious service attendance, and commitment to teachings. Their findings indicated a reciprocal relationship among the variables. Specifically, adolescents with greater religiosity were less likely to be sexually experienced, and adolescents who initiated sex at a young age were more likely to become less religious. Some scholars have speculated that religiosity serves as a social support for conservative attitudes and behaviors (Hayes, 1987), and as a social control of adolescent behavior (Forste & Heaton, 1988). While the exact role of religiosity in regard to adolescent sexual behavior may not be clear, the consistent findings provide the rationale of why religiosity must be considered as one of the many ecological factors associated with adolescent premarital sexual behavior.

Microsystem Summary

As compared to the preceding and succeeding ecological systems, the microsystem has received the preponderance of attention from scholars attempting to identify factors associated with adolescent premarital sexual behavior. Studies have indicated significant variables within the four primary settings, namely, (a) home - family structure, parental support, parental control, parental attitudes and values regarding premarital sexual behavior, and parent-child communication; (b) peer group - peer conformity and dyadic relationship status; (c) school - adolescent's attitude towards school and school performance; (d) church - religious affiliation, religious service attendance, and

commitment to teachings. Each of these factors have independently been shown to be associated with adolescent sexual behavior, as well as some in combination with others. Simply due to the number of studies focusing on this level, one might be tempted to conclude that the microsystem is more influential than the other ecological systems. However, one should be cautious in making such an assumption. In fact, while recognizing the valuable contribution of the numerous studies within this ecological level, scholars should begin considering factors within the larger ecological levels which have been less studied.

Mesosystem

The mesosystem is concerned with the linkages and processes occurring between two or more of the micro level settings in which the individual is directly involved (Bronfenbrenner, 1993). The interaction between the settings is assumed to influence the developing person's perceptions and behavior. Bronfenbrenner asserts that the "mere availability of data from or about more than one setting is a necessary but not sufficient criterion for defining a mesosystem" (1993, p. 21). The focus should be on the synergistic effect created by the interaction of the settings. In other words, how are the influences related (e.g., are they antagonistic, independent, or synergistic) and how does the relationship affect an individual's behavior (Steinberg & Brown 1989 as cited in Bronfenbrenner, 1993). Due to the methodological requirements involved in measuring synergistic effects, meso level factors are seldom studied (Bronfenbrenner, 1993).

In regard to adolescent premarital sexual behavior research, the majority of studies has focused on the microsystem influences of the home, peer group, school, or church

while the mesosystem that connects them has been ignored. In fact, in their decade review of adolescent sexual behavior research, Miller and Moore (1990) did not mention or identify a single study that considered a meso level factor. In contrast, their review contained antecedents within every other ecological level of Bronfenbrenner's model. One should not conclude that the scarcity of studies focusing on the mesosystem implies that this ecological level is not related to adolescent premarital sexual behavior, but rather, scholars have not given adequate attention to identifying meso level antecedents. For example, one might suspect that the linkage between the home and the school, the home and the church, and the home and the peer group would influence adolescent sexual behavior. These possible factors and others contained within the mesosystem are worthy of scholarly exploration.

Exosystem

Similar to the mesosystem, the exosystem is concerned with the linkages and processes taking place between two or more settings; however, they differ in that at least one of the settings does not contain the developing person (Bronfenbrenner, 1993). In the preceding ecological levels the developing person is physically and behaviorally interacting within each of the environments. In contrast, the exo level is the first level in which the developing person is only directly interacting with possibly one environment while simultaneously indirectly interacting via cognitive interpretation and response with the linkages between environments.

Adolescent premarital sexual behavior research focusing on the exosystem tends to be limited to the linkages and processes occurring between the settings of the home and

the parental workplace. Though the adolescent is not directly interacting with the parental workplace, this setting is linked to the home setting and influences the adolescent by regulating family income and parental availability. In regard to income, researchers have consistently reported that low socioeconomic status (SES) is associated with early sexual activity and early pregnancy (Hogan & Kitagawa, 1985; Leigh, Weddle, & Loewen, 1988; Norr, 1991; Panzarine & Santelli, 1987; Voydanoff & Donnelly, 1990). Some scholars have posited that this association may be the result of income determining access to medical and other community resources (Hofferth, 1987; Jolly, Nolan, Moller, & Vimpani, 1991), as well as the adolescent's most immediate peer group (Hovell et al., 1994).

Parental availability at home is also affected by the workplace setting. Researchers have suggested that increased maternal employment outside of the home has led to fewer parents being at home before and after school which in turn has led to less availability for parental monitoring (Lipsitz, 1983 as cited in Small & Eastman, 1991; Thornton & Camburn, 1987). This has ultimately resulted in more unsupervised adolescents (Lipsitz, 1983 as cited in Small & Eastman, 1991; Norr, 1991) and more opportunity for them to engage in sexual behavior (Thornton & Camburn, 1987). The opportunity factor was initially brought to light by adolescents in Sorenson's (1973) study who reported first intercourse most frequently occurred in the home of one of the partners. Moreover, Zelnik and Kantner's study (1980 as cited in Thornton & Camburn, 1987) replicated this finding.

Studying factors within the exosystem presents methodological challenges similar to those at the meso level. Hence, it is possible that these challenges have contributed to

the minimal exploration of exo level factors associated with adolescent premarital sexual behavior. While some researchers have given attention to the linkages between the home and the parental workplace, other possible linkages between settings have yet to be considered.

Macrosystem

According to Bronfenbrenner (1993), it is critical in every research design to assess the meaning individuals attribute to the macrosystem, specifically their perception of the processes, person, and context, to which they are exposed. These elements ultimately influence the developmental processes and outcomes of the individual. "Social classes, ethnic or religious groups, or persons living in particular regions, communities, neighborhoods, or other types of broader social structures" (Bronfenbrenner, 1993, p. 34) constitute a macrosystem whenever they share similar belief systems, social and economic resources, hazards, life styles, and so forth. Some researchers who have focused on sexual behavior and associated macrosystem factors have taken a societal level approach (Reiss, 1986; Schur, 1988; Sorenson, 1973), whereas other researchers have posited that factors at the community level are more appropriate in explaining adolescent sexual behavior (Billy, Brewster, & Grady, 1994; Billy et al., 1993; Billy & Moore, 1992; Brewster et al., 1993; Crane, 1991; Grady, Klepinger, & Billy, 1993; Hogan & Kitagawa, 1985; Ku, Sonenstein, & Pleck, 1993; Rubin, 1981). Chilman (1979) concurred with these scholars when she asserted that adolescent sexuality is shaped "by the particular community in which the individual lives and the cultural patterns of that particular place" (p. 7).

Community is generally defined as "the people who reside within some geographically delineated bounds and/or have an identity, so that the people within it share some sense of being members of that community" (Oklahoma State University - College of Osteopathic Medicine: Prevention Resource and Evaluation Center, 1994, p. 1). Jonassen (1965) proposed that community membership as defined by a geographical location provides a person with a reference group. Moreover, he asserted that communities serve the functions of production, distribution, consumption, socialization, social participation, social control, recreation, religion, and mutual support (Jonassen, 1965). Most scholars have consistently used a geographical definition of community when studying adolescent premarital sexual behavior; however, they tend to focus on two different types of mechanisms by which individual behaviors might be affected by the community: (a) structural parameters, and (b) perceived normative environment (Ku et al., 1993).

Community Structural Parameters

Researchers have posited that one mechanism by which a community may influence adolescent sexual behavior is through perceived social or economic opportunities (Brewster et al., 1993; Ku et al., 1993). It has been hypothesized that these perceived opportunities are determined by the community's structural parameters, and therefore, researchers have traditionally assessed and utilized community structural parameters as predictors of adolescent sexual behavior (Billy et al., 1994; Billy et al., 1993; Billy & Moore, 1992; Brewster et al., 1993; Grady et al., 1993; Hogan & Kitagawa, 1985; Ku et al., 1993).

Hogan and Kitagawa (1985) utilized census data on social, economic, and demographic characteristics to classify neighborhoods as high-quality, medium-quality, and low-quality. They reported that when social class and family structure variables were controlled, neighborhood quality provided a marginally significant contribution to the overall model. Adolescents from low-quality neighborhoods had one-third higher rates of pregnancies than adolescents from medium and high-quality neighborhoods. However, neighborhood quality did not have a significant effect on pregnancy rates once parental supervision of dating behaviors was entered into the model. This finding suggests that the effect of neighborhood quality is mediated by parental supervision. Hogan and Kitagawa (1985) concluded that black adolescents from "high-risk social environments," including being a member of a low-quality neighborhood, had pregnancy rates 8.3 times higher than girls from low-risk social environments.

Billy and associates have made valuable contributions toward understanding community effects on adolescent sexual behavior (Billy et al., 1994; Billy et al., 1993; Billy & Moore, 1992; Brewster et al., 1993; Grady et al., 1993). They have consistently utilized community structural parameters from both the county level and census-tract level to ascertain relative effects of community level variables on female sexual behavior. The structural parameter variables have included measures such as: (a) racial and ethnic composition, (b) gender ratio of never married, (c) median housing value, (d) % females age 16+ in the labor force, (e) % females age 15+ separated or divorced, (f) % females age 15+ currently married, and (g) % age 16-19 not in school or armed forces, and not high school graduate, (h) religiosity, and others. Using both census-tract level and county level data, Billy and Moore (1992) concluded that only census-tract level

variables remained in the best-fitting step-wise regression model for predicting fertility-related behavior of females. Brewster et al. (1993) considered the role of community in predicting the timing of first intercourse and the use of contraception during that specific experience. They reported that the transition to first intercourse was influenced by community social disintegration, community socioeconomic status, and community population composition. And finally, Billy et al. (1994) reported that first and subsequent intercourse experiences of adolescent females were influenced by several community characteristics including social disorganization, socioeconomic status, religiosity, female labor force participation, population composition, and family planning service availability. This collection of studies by Billy and associates utilized a national multi-stage, stratified probability sample of females between the ages of 15-44.

Similarly, Ku et al. (1993) focused on structural social and economic factors as related to sexual behavior; however, their subjects were adolescent males. Relying upon Billy and Moore's (1992) findings, Ku et al. (1993) utilized neighborhood data which was operationalized at the census-tract level. Variables included: (a) proportion black, (b) proportion Hispanic, (c) proportion in poverty, (d) proportion on welfare, (e) proportion female-headed households, (f) proportion dropouts, (g) unemployment rate, and (h) teen male / female ratio. These researchers examined the separate and combined effects of neighborhood and personal demographic characteristics on adolescent male sexual behavior. They concluded that both factors had effects; however, the two sets of factors were generally independent from each other. The personal characteristics of age and race were the overall strongest predictors, whereas the employment rate was the strongest neighborhood predictor of pregnancy and fatherhood.

The researchers suggested that this community level finding was associated with the male adolescent's discouraging perception of future career opportunities.

Collectively, these studies have utilized structural parameters as indicators of community influence. They are based on the assumption that the parameters are conceptually linked to adolescents' perception of social or economic opportunities afforded to them. Based on the existing literature, this assumption does not appear to have ever been empirically tested, and as such it invites scholarly critique and exploration. As previously noted, Bronfenbrenner's (1993) ecological model dictates that scholars assess the meaning individuals attribute to the macrosystem, specifically their perception of the processes, person, and context, to which they are exposed. While the structural parameter research is making the conceptual link to individual perception, this assumption is questionable both in terms of the basic assumption and inclusion in Bronfenbrenner's ecological model. It seems that perception of a phenomenon might best be measured by directly assessing a person via their own perceptual reporting.

Perceived Community Normative Environment

"All norms are learned through socialization, and an important aspect of adolescence in our society is the socialization of sexual expression" (DeLamater & MacCorquodale, 1979, p. 3). "Sexual norms, and more radically the perceptual and other cognitive distinctions that we make in regard to sex, do not come from nature but instead express the values of influential social groups (political, professional, whatever)" (Posner, 1992, p. 24). Adolescent sexual behavior is influenced by a prevailing normative environment that defines the boundaries of acceptable and unacceptable behavior (Billy et al., 1994).

This often occurs in adolescents' most immediate macro level environment--their community. The perceived normative environment is constructed by such factors as community solidarity norms, community attitudinal norms, and community prevalence norms.

Perceived Community Solidarity Norms. The unique and internal dynamics of a community influence the attitudes and behaviors of its members (Rubin, 1981). Solidarity represents the unity, cohesiveness, and attachment of members in a community. Solidarity can be defined as "unity that is produced or based on a community's interests, objectives, and standards" (Merriam-Webster's Collegiate Dictionary, 1993, p. 1118). A community's core values and norms are representative of its unity devoted to the furtherance of such issues as religion, education, community welfare, social standards, politics, vocations, sports, and cultural activities (Jonassen, 1965). The degree to which a person has been integrated into a community and the degree of that community's internal cohesion influences individual commitment to the community norms; hence, "an individual's behavior can be dramatically dependent upon the community of which he is a referent" (Rubin, 1981, p. 171). Ehrmann (1959) postulated that in a static, highly cohesive society, individual and societal norms would be identical. Based on this observation, one would expect to find analogous attitudes between the community and its adolescent members when the community is characterized by a high level of solidarity and strong social controls on adolescent premarital sexual behavior (DeLamater & MacCorquodale, 1979; Rubin, 1981).

Researchers seem to be conceptually suggesting that community solidarity norms are associated with community attitudinal and behavioral norms regarding adolescent

sexual behavior, thereby influencing individual sexual behavior. However, empirical evidence is notably sparse in the current literature. The few exceptions to this are those researchers who have reported finding higher rates of adult crime, juvenile delinquency, sexual activity, and drug use in neighborhoods or communities with low neighborhood attachment and high levels of community disorganization (Hawkins & Catalano, 1992; Moore et al., 1986). It appears that this potential variable as related to adolescent premarital sexual behavior is worthy of further empirical exploration.

Perceived Community Attitudinal Norms. Communities tend to establish normative attitudes regarding such issues as dating, romanticism, marriage, premarital sexual permissiveness, and out-of-wedlock pregnancies (Rubin, 1981). Perceived community attitudinal norms regarding adolescent premarital sexual behavior can be defined as adolescent perception of the prevailing attitudinal normative environment delineating the boundaries of what is acceptable and desirable behavior regarding adolescent premarital sexual behavior (Brewster et al., 1993; Georgianna, 1984; Sprecher, 1989). These attitudinal norms fall on a continuum ranging from abstinence to permissiveness (Billy et al., 1994). DiBlasio and Benda (1990) asserted that adolescents in a normative environment in which abstinence from premarital sexual behavior was expected would most likely adopt a similar attitude; whereas, a community attitudinal norm of extreme permissiveness would influence adolescents to adopt a permissive attitude. Based on the available literature it seems plausible that community attitudinal norms, as perceived by adolescents, would shape attitudinal norms of adolescents. Moreover, perceived attitudinal norms would most likely guide the behavioral norms (Billy et al., 1994; Chilman, 1983; Christensen ,1960; Christensen & Carpenter, 1962; DiBlasio & Benda,

1990).

Perceived Community Prevalence Norms. In combination with other contextual variables, the observed behaviors of others may directly influence individual behavior (Blalock, 1985). Perceived community prevalence norms of adolescent premarital sexual behavior can be defined as adolescent perception of the prevalence of adolescents in their community who have engaged in premarital sexual behavior. Researchers have made a clear distinction between premarital sexual behavior prevalence at the micro level and the macro level (Billy et al., 1994; DeLamater & MacCorquodale, 1979; DiBlasio & Benda, 1990). As previously reported in this literature review, micro level studies focus on the perceived prevalence or actual behaviors of "friends," "close friends," or "best friends." In comparison, scholars measuring macro level peer prevalence use indicators such as "knowledge of same-age peers participating in premarital sexual intercourse" (DiBlasio & Benda, 1990, p. 464), and the perception of the extent to which "others his or her age in the same community are engaging in various behaviors" (DeLamater & MacCorquodale, 1979, p. 134). These questions were asked specifically in an attempt to assess a larger contextual influence (DeLamater & MacCorquodale, 1979).

In a study conducted by Billy et al. (1994), adolescent nonmarital fertility rates were used as the indicator of perceived community prevalence norms of adolescent sexual behavior. This methodology is questionable in that the actual nonmarital fertility rate would only be influential if adolescents were aware of it. Hence, it seems that a more relevant measure would be adolescents' *perceptions* of the prevalence of nonmarital fertility. For example, DeLamater and MacCorquodale (1979) asked subjects what percentage of adolescents in their community did they believe were engaging in various

sexual behaviors. They found that the adolescents' perceptions of same age peers in their community were about equal to the individuals' own sexual attitudes and behaviors. DiBlasio and Benda (1990) also measured adolescents' perception of same age prevalence norms and found that this variable was a statistically significant predictor of adolescent sexual behavior. The findings from these two studies provide encouragement for future scholars to explore the relationship between adolescents' perceptions of community prevalence norms and their own sexual behavior.

Macrosystem Summary

The literature clearly substantiates the notion that groups to which people belong, including communities in which they live, mold their behavior, "even those as profoundly intimate as sexual activity" (Brewster et al., 1993, p. 735). It appears that this is accomplished by two mechanisms: (a) community structural parameters which influence perceived future social and economic opportunities and (b) perceived community normative environment which defines the boundaries of acceptable and unacceptable behavior (Billy et al., 1994). Though scholars persist in focusing their attention on organism and micro level factors, the empirical evidence indicates that a macrosystem approach provides further insight into the phenomenon of adolescent premarital sexual behavior.

Summary of Chapter

Premarital sexual behavior has been of interest to researchers over the course of the last six decades. More recently scholars have focused their attention on studying this

phenomenon in relation to adolescents. Researchers have taken two distinctive orientations (internally driven and socially learned), each with a set of accompanying theories, to study adolescent premarital sexual behavior. The socially learned orientation considers human sexuality from a life-span, ecological, multi-disciplinary context (Baltes et al., 1984; Chilman, 1990). This literature review relied upon the socially learned orientation and employed Bronfenbrenner's ecological model of human development to summarize and categorize the existing adolescent premarital sexual behavior literature. Appendix C illustrates the dynamic nature of this process-person-context model with respect to the multiple factors associated with adolescent premarital sexual behavior.

This account of the existing literature was not intended to be a comprehensive review of all factors that have been found to be associated with adolescent premarital sexual behavior. Instead, this researcher made the decision to exclude variables that had not been consistently researched and found to be significant. For example, Small and Luster (1994) considered adolescents' history of sexual abuse as an antecedent of voluntary premarital sexual behavior. They reported that sexually experienced males and females were more likely to have a history of sexual abuse than their non-sexually active peers. Feldman, Rosenthal, Brown and Canning (1995) were interested in predicting sexual experience of adolescent males by examining peer rejection and acceptance status during childhood. They concluded that rejection and acceptance status of sixth grade males were both associated with the number of sexual partners in grade ten, although through different pathways. East et al. (1993) examined the influence of sisters' and girlfriends' sexual and child bearing behavior on adolescent females' premarital sexual behavior. They found that those adolescents having both an adolescent sister who was a

teen mother and multiple girlfriends who were sexually experienced were more likely to have permissive sexual attitudes and be sexually experienced themselves. Newcomer et al. (1983) assessed adolescent popularity as related to adolescent premarital sexual behavior. Their data indicated a relationship between the variables. While these four studies all reported significant findings, empirical replication is warranted.

In reviewing the adolescent premarital sexual behavior literature within the framework of Bronfenbrenner's model, notable gaps were identified. Specifically, few variables have been assessed within the more distal ecological systems. For example, no studies were identified which considered meso level factors. Additionally, studies assessing the exosystem examined only one factor, linkages and processes between the settings of home and parental workplace. With regard to the macrosystem, a trend has emerged in which researchers are using community to define this ecological level when studying adolescent premarital sexual behavior. They hypothesize that adolescents' communities influence their sexual behavior via two mechanisms, perceived future opportunities and perceived normative environment (Billy et al., 1994; Billy & Moore, 1992; Brewster et al., 1993; Grady et al., 1993; Ku et al., 1993). It is important to note that these researchers used structural parameters as indicators of community influence but failed to provide empirical evidence of a link between structural parameters and adolescents' perception of their community's social and economic opportunities. This researcher concurs that community factors do indeed influence sexual behavior via adolescents' perceptions of their environment. However, it seems plausible that directly assessing adolescent perception through self-reporting is a more accurate measure of this phenomenon. The identified gaps at the meso-, exo-, and macrosystems confirm that

researchers must broaden the scope of inquiry beyond the proximal ecological levels (organism, microsystem) in order to gain a more comprehensive understanding of the myriad of antecedents associated with adolescent premarital sexual behavior.

CHAPTER III

METHODS

Research Design

"It is a truism that methods per se mean little unless they are integrated within a theoretical context and are applied to data obtained in an appropriately designed study" (Pedhazur, 1982, p. 3). Having grounded this research in a theoretical context, this investigator chose a correlational study as the appropriate research design. This study met the criteria of a correlational research design in that it detailed the relationships between the identified variables based on correlation coefficients (Isaac & Michael, 1995; Miller, 1986). Furthermore, the independent variables were not manipulated but rather, the investigator assumed that they had varying effects on the dependent variable. The dependent variable was identified as voluntary engagement in adolescent premarital sexual behavior. The five independent variables were (a) adolescents' age, (b) adolescents' gender, (c) adolescents' perception of community solidarity norms, (d) adolescents' perception of community attitudinal norms, and (e) adolescents' perception of community prevalence norms. According to Miller (1986), marriage and family research has "moved toward a scientific orientation that values going beyond description to the empirical testing of relationships" (p. 42). Family researchers most often rely on the correlational design because it enables them to empirically examine relationships

between variables (Miller, 1986).

Operational Hypotheses

This study empirically tested the following operational hypotheses:

1. Adolescents who are older in age will be more likely to engage in premarital sexual behavior.

2. Adolescent males will be more likely to engage in premarital sexual behavior than adolescent females.

3. Adolescents who score higher on the modified Community Solidarity Index will be less likely to engage in premarital sexual behavior.

4. Adolescents who score higher on the Community Attitudinal Norms of Abstinence Scale will be less likely to engage in premarital sexual behavior.

5. Adolescents who score lower on the Community Prevalence Norms Scale will be less likely to engage in premarital sexual behavior.

Pilot Study

This investigator conducted a pilot study to accomplish the following goals:

1. to establish initial internal consistency reliability of the Community Attitudinal Norms of Abstinence Scale;

2. to establish internal consistency reliability of the modified Community Solidarity Index on a different population;

3. to determine the relationships between the primary variables; and

4. to consider the feasibility and efficacy of the methodology utilized in the study.

Sample

In April 1996, 60 subjects voluntarily agreed to participate in the pilot study. With the exception of obtaining written consent, the procedures described in the Data Collection and Coding Procedures section of this manuscript were followed. Data were gathered from 60 adolescents enrolled in ninth through twelfth grades in a Northwestern Oklahoma community. Subjects ranged in age from 14 to 18 with the mean age being 16. The sample was divided by gender, 45% females and 55% males. The ethnic composition of the sample was divided disproportionately between Caucasian (93%), American Indian (3%), Hispanic (2%), and Other (2%).

Instrumentation

The Community Inventory: Adolescent Perception instrument was utilized in the pilot study. This five page, 41 item, self-report questionnaire consisted of demographic data, the modified Community Solidarity Index, the Community Attitudinal Norms of Abstinence Scale, Adolescent Self-Report of Sexual Behavior, and the Community Prevalence Norms Scale. Researchers have reported that adolescents accurately report their attitudes, feelings, and behaviors on self-report instruments assessing sensitive issues (Smart & Jarvis, 1981; Whitehead & Smart, 1972). Though these findings were based on drug and alcohol use, and not sexual behavior, it was expected that adolescents in this study would perform similarly on this self-report questionnaire.

Modified Community Solidarity Index

The original Community Solidarity Index was developed in 1952 by Donald R.

Fessler (Miller, 1991). This scale included eight major areas of community characteristics: (a) community spirit, (b) interpersonal relations, (c) family responsibility toward the community, (d) schools, (e) churches, (f) economic behavior, (g) local government, and (h) tension areas. Respondents rate 40 statements on a five-item Likert-type scale according to their judgment of how each statement applies to their community. The Likert-type responses range from 5 = *very true* to 1 = *definitely untrue*. The Index was originally designed to measure the degree of consensus among community members, thereby, suggesting that the greater the consensus, the greater the community solidarity. Specific reliability coefficients were not reported; however, the split-half *r* was described as being high.

For the pilot study this investigator modified five aspects of the original Community Solidarity Index. First, all 10 items related to Economic Behavior and Local Government were omitted. Second, six items were modified to eliminate terminology common in 1952 and replaced with 1990s language while maintaining the same conceptual meaning. For example, "Folks are unconcerned about what their kids do so long as they keep out of trouble" was changed to "Adults are unconcerned about what their kids do so long as they keep out of trouble"; "Most people get their families to Sunday School or church on Sunday" was changed to "Most families go to Sunday School or church on Sunday"; and "You are out of luck here if you happen to be of the wrong nationality" was changed to "You are out of luck here if you happen to be of the wrong race." Third, the five-item Likert-type response scale ranging from 5 = *very true* to 1 = *definitely untrue* was replaced with a six-item Likert-type response scale ranging from 1 = *strongly disagree* to 6 = *strongly agree*. This was done in an effort to provide conceptual equal distance

between the choices. Fourth, as a result of changing the Likert-type response scale it was necessary to modify the scoring. On the original scale the smaller the score, the greater the solidarity. In contrast, on the modified scale the greater the score, the greater the solidarity. Fifth, these changes necessitated modifying the instructions accordingly. These changes produced a modified Community Solidarity Index consisting of 30-items. Seventeen items were reverse scored yielding a score range of 30 to 180.

Due to the aforementioned modifications and the intention to administer the scale to a different population (adolescents), the instrument was pilot tested to establish its reliability. According to Carmines and Zeller (1979), Cronbach's alpha is the most commonly used reliability estimate for measuring internal consistency. This technique is considered to be a lower bound estimate of reliability, producing a conservative estimate (Carmines & Zeller, 1979). Cronbach alphas were calculated to establish initial reliability of the modified Community Solidarity Index scale, as well as its six subscales. Cronbach alphas for the subscales were as follows: (a) community spirit .76, (b) interpersonal relations .53, (c) family responsibility towards community .41, (d) schools .80, (e) churches .55, and (f) areas of tension .45. A Cronbach alpha of .88 was established for the overall scale.

Community Attitudinal Norms of Abstinence Scale

After a thorough review of the scholarly research literature and associated measurement tools, this investigator was unable to locate an existing scale measuring community attitudinal norms regarding adolescent premarital sexual behavior. Therefore, this investigator constructed an applicable scale. This scale consisted of five items with six

possible Likert-type responses ranging from 1 = *strongly disagree* to 6 = *strongly agree*. Three items were reverse scored giving this scale a score range of 5 to 30. The scale was pilot tested to assess initial reliability through the use of Cronbach Coefficients. A Cronbach alpha of .70 was established on this instrument.

Adolescent Self-Report of Sexual Behavior

The Adolescent Self-Report of Sexual Behavior consisted of a single item. Adolescents were asked to respond "yes" or "no" to the question "Have you ever voluntarily had sexual intercourse (i.e. "gone all the way," "made love," "had sex")?"

Community Prevalence Norms Scale

The Community Prevalence Norms Scale consisted of a single item. Adolescents were asked to respond to the question "In your opinion, what percentage of teenagers in your community have had sexual intercourse?" The score range was 0 to 100.

Analyses and Results

Using the SPSS computer program, descriptive statistics including reliabilities on the modified Community Solidarity Index and the Community Attitudinal Norms Scale, as well as Pearson correlations on all variables were performed. Individual subject scores on the modified Community Solidarity Index were derived by calculating the mean response of all items, resulting in an overall score ranging from one (low) to six (high). The same procedure was utilized to determine individual subject scores on the Community Attitudinal Norms Scale. Prior to conducting the data analysis, two dummy variables

were created to assign numeric values to the gender of adolescents (girls = 0 and boys = 1), and adolescent premarital sexual behavior (no sexual intercourse = 0 and sexual intercourse = 1). When variables are assigned dummy coding, they can be used in the bivariate correlation analysis (Cohen & Cohen, 1983). The means and the standard deviations on all variables are reported in Appendix D.

Pearson correlations were calculated on each pair of variables in order to examine the relationships between: (a) adolescents' age, (b) adolescents' gender, (c) adolescents' perceptions of community solidarity norms, (d) adolescents' perceptions of community attitudinal norms, (e) adolescents' perceptions of community prevalence norms, and (f) adolescents' premarital sexual behavior (see Appendix D). Results of the bivariate correlations showed significant relationships between the independent variables. Specifically, a significant positive correlation was found between perceived community solidarity norms and perceived community attitudinal norms of abstinence ($r = .38$, $p < .01$). Significant negative correlations resulted between the following pairs of independent variables: (a) perceived community solidarity norms and perceived community prevalence norms ($r = -.43$, $p < .01$), and (b) perceived community attitudinal norms of abstinence and perceived community prevalence norms ($r = -.47$, $p < .01$). Furthermore, significant correlations were found between female adolescents and perceived community prevalence norms ($r = -.31$, $p < .05$), and between male adolescents and perceived community attitudinal norms of abstinence ($r = .26$, $p < .05$). No significant correlations were found between the dependent variable and the independent variables; however, the direction of the correlations were as hypothesized.

The correlations between the independent variables allowed for the screening of

bivariate multicollinearity. Some researchers refer to multicollinearity as the existence of any correlation between independent variables while others researchers use the term to refer to "highly" correlated independent variables. High correlations between independent variables are problematic in the estimation of regression statistics (Pedhazur, 1982). There is no general agreement on the definition of "high" (Pedhazur, 1982); however, Tabachnick and Fidell (1983) proposed that independent variable correlations exceeding .70 introduce the possibility of multicollinearity. In this study no correlations exceeded .47, thereby eliminating multicollinearity concerns.

Discussion

The pilot study proved to be successful in achieving the identified goals. The first goal was to establish initial internal consistency reliability of an instrument constructed by this investigator. The Community Attitudinal Norms of Abstinence Scale yielded a Cronbach alpha of .70 which is within acceptable limits suggested for research purposes of this nature (Carmines & Zeller, 1979). As a result, this scale was used in the actual study.

The second goal was to establish internal consistency reliability of the modified Community Solidarity Index for use with an adolescent population. This scale yielded an .88 Cronbach alpha which exceeds acceptable levels of reliability for research purposes (Carmines & Zeller, 1979). Moreover, the subscale item-by-item analysis provided insight about the contribution of each item to the overall reliability of the scale. This information was used by the investigator to further strengthen the instrument for use in the actual study.

The third goal was to determine the relationship between the variables (see Appendix

D). The independent variables were found to be significantly correlated with each other. The dependent variable was not significantly correlated with the independent variables; however, the hypothesized directional relationships between these variables were substantiated. Therefore, it is possible that the small sample size generated low statistical power resulting in a Type II error (Isaac & Michael, 1995). The sample size in the actual study was increased, enabling the investigator to explore this explanation.

The fourth and final goal of this pilot study was to consider the feasibility and efficacy of the methodology utilized. The pilot study did in fact accomplish this goal. The investigator gained valuable information regarding time required to administer, code, and analyze the data. Additionally, following the administration of the instrument, this investigator dialogued with a small representative group of subjects. Feedback about the instrument indicated that the instructions were clear, the terminology was familiar, and it was easy to complete. Overall, the pilot study demonstrated that the methodology was well designed and appropriate for addressing the research questions at hand. The merit of these results provided the investigator with confidence to pursue the actual study.

Instrumentation

Utilizing the results of the pilot study, this investigator made revisions to the Community Inventory: Adolescent Perception to further strengthen the instrument. The revised instrument (see Appendix E) is a five page, 37 item, self-report questionnaire containing the following components: Demographic Data (items # 1-3), the modified Community Solidarity Index (items # 4-34, excluding # 11, 21, 24, 26, 32), the Community Attitudinal Norms of Abstinence Scale (items # 11, 21, 24, 26, 32), the

Adolescent Self-Report of Sexual Behavior (item # 35), and the Community Prevalence Norms Scale (items # 36-37). Refer to Appendix F for means and standard deviations of each item contained in the modified Community Solidarity Index and in the Community Attitudinal Norms of Abstinence Scale.

Modified Community Solidarity Index

Based on the information obtained from the pilot study, one item was deleted from four of the subscales in order to increase the reliability of each respective subscale and the overall modified Community Solidarity Index. The Tension subscale alpha increased from .5510 to .6140, the School subscale alpha increased from .4146 to .4761, the Spirit subscale alpha increased from .4541 to .7032, and the Family subscale alpha increased from .5325 to .6250. This resulted in an alpha increase from .8772 to .8994 on the overall modified Community Solidarity Index. When the modified scale was used in the actual study the overall reliability was .8860.

Community Attitudinal Norms of Abstinence Scale

The analysis from the pilot study indicated that all five items on this scale were correlated with an alpha of .7013. If any item were deleted from the scale the overall alpha would decrease; therefore, no revisions were made. In the actual study, results indicated that the scale produced a .5834 reliability.

Adolescent Self-Report of Sexual Behavior

When used in the pilot study, this scale consisted of a single item asking "Have you

ever voluntarily had sexual intercourse ("gone all the way," "made love," "had sex")?" Wording of this item did not take into consideration a continuum of sexual behaviors, and it left it up to the respondent to define sexual intercourse. Newcomer and Baldwin (1992) caution researchers that the concept of intercourse has often been misunderstood by adolescents, resulting in the reporting of intercourse when in fact, penetrative sex has not occurred. Heeding this warning, the question was revised (see Appendix E, item #35) to include a continuum of sexual behaviors with specific descriptions which should produce more accurate self reporting.

Community Prevalence Norms Scale

In the pilot study, this scale consisted of one item asking respondents, "In your opinion, what percent of teenagers in your community are sexually active?" In an effort to clarify and operationalize the question, wording was replaced with "In your opinion, what percent of teenagers in your community have had sexual intercourse?" Additionally, in order to assess adolescents' perceptions of the prior generational prevalence norms of adolescent sexual behavior in their community, item # 37 was added, "In your opinion, what percentage of adults in your community had sexual intercourse when they were adolescents?" This item was not used in this research study but was included for future analyses.

Sample

"The choice of sampling methods depends on the purpose of the research being conducted" (Kitson, et al., 1982, p. 968). The purpose of this research was to identify

potential significant variables which had not previously been studied in relation to adolescent premarital sexual behavior. Since it was not known if these variables were significant, and because of the sensitive nature of the dependent variable compounded by the age of the subjects, this investigator believed it would be more prudent and productive to utilize a non-probability sample for this initial study. Therefore, results are only generalizable to those groups with characteristics similar to the sample population.

The identified target population in this study was adolescents ages 14 to 18 in grades nine through twelve in Oklahoma public schools. The sample population consisted of adolescents ages 14 to 18 in grades nine through twelve in Oklahoma public schools located in three different communities (see Appendix G). In community one, demographic data for students enrolled in grades nine through twelve indicated a student population of 179 with 82% Caucasian, .09% American Indian, .08% Black, <.01% Hispanic, and <.01% Asian. According to the U. S. Bureau of the Census (1993), community one has a population of 502 citizens residing within the city limits. However, the school system located in this rural community also serves individuals living outside of the city limits. Town officials reported an approximate population of 800 individuals living within the school district. Demographic data for students enrolled in grades nine through twelve in community two indicated a student population of 105 with 84% Caucasian, 13% American Indian, and .03% Hispanic. The U. S. Bureau of the Census (1993) indicated a total population of 346 in community two. Community three demographics were markedly different from community one and two. The U. S. Bureau of the Census (1993) reported a community population of 18,074. Demographic data for students enrolled in grades nine through twelve indicated a student population of 1,457 with 81% Caucasian,

12.5% American Indian, .041% Black, .010% Hispanic, and .010% Asian.

Two sampling techniques were employed in recruiting sample subjects. In community one and two approximately one week prior to data collection, school administrators distributed parental consent forms (see Appendix H) to all students grades 9-12 who were present on that day. Those students who were not present on the day the forms were distributed were given a parental consent form when they returned to school. In community one, 85 students returned parental consent forms resulting in a 47.4% return rate. In community two, 43 students returned parental consent forms resulting in a 40.9% return rate. This investigator speculates that those adolescents who did not return parental forms represent two groups: (a) those that did not remember to take them home and/or to return them, and (b) those that took them home and parents refused to sign. This investigator believes that the majority of non-participants represent the first explanation. Only one parent called the investigator to inquire about the research. After learning more about the project, the parent indicated she would allow her adolescent to participate.

Adolescents in attendance at school on the day of data collection, who had previously obtained written parental permission and who gave their own written assent (see Appendix I), served as sample participants. This resulted in 71 students from community one and 40 students from community two. Community one provided a second day of data collection in an effort to include the 14 students who were absent due to a school field trip or illness. The second day resulted in 11 students participating. Hence, final participation rates were 45.8% and 38.0% respectfully for community one and two.

A different sampling procedure was utilized in community three since school

administrators did not grant permission to collect data during school hours. Subjects were obtained by using the snowball technique. More specifically, an 18 year old adolescent in grade 12 was utilized as the primary recruiter. Seventy-five potential subjects were explained the purpose of the study as defined in the consent forms, provided with parental consent forms, and asked to be present on a specific day and time. A total of 40 subjects participated in the study on the designated non-school day.

Because this research was concerned with adolescents' perceptions of community influences, adolescents served as both the units of analysis and sampling units (Billy & Moore, 1992). Accordingly, this researcher combined subjects from community one, two, and three which produced a total of 162 sample participants. The study population consisted of 58% females and 42% males with a mean age of 16.35 (Appendix G). All subjects identified themselves as "single."

Data Collection and Coding Procedures

In community one and two, data collection was implemented as detailed below. However in community three, steps 1 and 2 were omitted, step 3 was modified by utilizing a selected adolescent to distribute the parental consent forms, and step 4 did not include obtaining school administrator written consent.

1. Approximately two weeks prior to the assessment day, this investigator obtained verbal consent for data collection from the identified school administrator.

2. Approximately ten days prior to the assessment day, this investigator provided parental consent forms to the identified school administrator with instructions for distribution to the students (see Appendix H).

3. Approximately one week prior to the assessment day, the school administrator distributed the parental consent forms to potential participants with instructions to return signed forms to the identified school administrator by a specified date.

4. On the day of data collection, this investigator obtained written consent from the school administrator (see Appendix J), and collected the signed parental consent forms.

5. Subjects with a signed parental consent form were gathered in a location conducive for effective assessment and this investigator provided verbal instructions regarding voluntary participation, confidentiality, directions for completion, and approximate time required.

6. Subjects signed student assent forms (see Appendix I) for participation which were then matched with consent forms signed by their parents.

7. One Community Inventory: Adolescent Perception questionnaire per subject was previously placed in a single 9" x 12" unsealed envelope with a #2 pencil. This investigator personally distributed one packet to each subject.

8. After receiving an envelope, subjects individually completed the questionnaire.

9. When subjects completed their questionnaires, they placed them back in the provided envelope and personally sealed it. Subjects personally placed their sealed envelope in a designated box.

10. The envelopes remained sealed until they were opened at a later date for coding by this investigator.

11. This investigator manually coded each completed questionnaire and transferred the information to a computer data base.

12. After coding, the questionnaires were stored in the investigator's office in a

locked filing cabinet where they will be kept for a minimum of five years (American Psychological Association, 1994).

Data Analyses

This study proposed to answer two fundamental questions: what are the relationships between the selected variables, and what proportion of the variance of premarital sexual behavior is accounted for by adolescents' age, gender, perception of community solidarity norms, perception of community attitudinal norms, and perception of community prevalence norms. The statistical procedures to best answer these questions were bivariate correlational coefficients and multiple regression. Three design requirements typically must be met when using multiple regression: (a) one criterion variable and two or more predictor variables, (b) the criterion variable and the predictor variables are continuous, and (c) at least ten times as many subjects as predictor variables (Shavelson, 1996). However, some statisticians and researchers assert that it is not necessary that the criterion variable be continuous when the skew in the criterion variable is less than or equal to 25-75 (Berk, 1983; Gillespie, 1977; Miller & Olson, 1988). Taking this into consideration, this study used two indicators of the criterion variable; namely, a dichotomous variable (no intercourse, intercourse) and a continuous variable ranging from no sexual activity to more intimate behaviors. Researchers have reported that couples usually initiate intimacy by first embracing and kissing, proceeding to fondling and petting, and subsequently engaging in more intimate behaviors including sexual intercourse (McCabe & Collins, 1984; Smith & Udry, 1985).

Multiple regression is based on four assumptions: (a) the absence of multicollinearity -

two or more independent variables are highly correlated, (b) singularity - the independent variables cannot be combinations of each other, (c) linearity - a linear relationship between the dependent variable and each of the independent variables, (d) normality - the scores on the dependent variable are normally distributed for each of the possible combinations of the independent variables, (e) homoscedasticity - the variances of the dependent variable for each of the possible combinations of the levels of the independent variables are equal, and (f) independence - the scores for any particular subject are independent of the scores of other subjects (Cone & Foster, 1993; Shavelson, 1996).

In the first phase of data analysis, individual subject scores on the modified Community Solidarity Index were derived by calculating the mean response of all items, resulting in an overall score ranging from one (low) to six (high). The same procedure was utilized to determine individual subject scores on the Community Attitudinal Norms of Abstinence Scale. Mean substitutions were used for missing data of individual subjects. The Community Prevalence Norms Scale yielded a single raw score ranging from 0 to 100. Bivariate correlational coefficients were calculated on all of the variables to determine their respective relationships, and to screen for bivariate multicollinearity between the independent variables. In the second phase of data analysis, the independent variables and the dependent variable were examined in hierarchical multiple regression equations. The computer program SPSS was utilized for data analyses.

Methodological Assumptions

Underlying this study were four methodological assumptions: (a) the sample subjects were representative of the sample population, (b) sample subjects understood the content

of the assessment instrument, (c) sample subjects responded honestly to the assessment instrument (Smart & Jarvis, 1981; Whitehead & Smart, 1972), and (d) no errors were made in the coding and data entry.

Limitations

Three methodological limitations are pertinent to this study. The first is concerned with the selected variables. While this research focused on three community level independent variables that had not previously been investigated in relation to the dependent variable, this study did not include statistically significant independent variables from previous studies. Since this study indicated that the three community level variables were statistically significant, future researchers can address this limitation by including the community level variables into a model which examines the relative contribution of *multiple* ecological factors in explaining the variance in adolescent premarital sexual behavior.

The second limitation pertains to the method of data collection. The Community Inventory: Adolescent Perception instrument is a self-report questionnaire and was the only source of data in this study. As a result, the quality of data might have been compromised by responses being left blank, questions being misunderstood, or subjects being illiterate (Miller, 1986). Two of these potential concerns were addressed by conducting a pilot study. The results indicated that only one of the sixty subjects left an item blank, and a small representative group of subjects agreed that the instructions and questions were straightforward and easy to understand. Though the literacy concern is not easily addressed when using questionnaires, they are simple, fast, economical, and

administered so that respondents can remain anonymous (Miller, 1986); therefore, this investigator believed that the benefits outweighed the potential limitations.

The third limitation is concerned with the personal nature of the questions regarding sexual behavior and the age of the respondents. This investigator acknowledges that studies focusing on sensitive issues such as sexuality are more likely to have sampling bias due to some potential subjects feeling uncomfortable and refusing to participate (Hovell et al., 1994). Furthermore, this limitation had a bearing on the sampling procedure and the level of consent required. This investigator asserted that it would be more prudent and productive to utilize a non-probability sample for this initial study since it was not known if these variables were significant. Therefore, findings are only generalizable to those groups with characteristics similar to the study sample. Additionally, this limitation increased the level of consent required. In traditional studies informed assent is only required from the participant. However, because of the age of the subjects in this study, two additional levels of consent were required; namely, school and parental. This introduced a potential reduction in those subjects who were eligible to participate.

CHAPTER IV

DATA ANALYSES

Results

Prior to conducting the data analyses, one dummy variable was created to assign a numeric value to the gender of adolescent (females = 0, males = 1). The use of the dummy variable for gender allowed for the use of the categorical variable in both the bivariate correlations and multiple regression analyses (Cohen & Cohen, 1983). One indicator of the criterion variable, adolescent premarital sexual behavior, was also dummy coded (0 = no intercourse, 1 = intercourse) for use in both the bivariate correlations and multiple regression analyses. Although there is discussion regarding the use of a dichotomous criterion variable in ordinary least-squares regression analysis, some researchers and statisticians (e.g. Gillespie, 1977; Miller & Olson, 1988) have contended that a dichotomous criterion variable is appropriate in ordinary least-squares regression when the skew in the criterion variable is less than or equal to 25-75 (for a synthesis of the literature see Berk, 1983). In the current study, 54% of the adolescent participants reported engaging in sexual intercourse resulting in a skew of 54-46 which is within the boundaries specified by Berk (1983). The criterion variable was also assessed as a continuous variable indicating the highest level of sexually intimate behavior experienced by an adolescent; no sexual activity (13%), french kissing (10%), petting/fondling (18%),

oral sex (5%), and intercourse (54%). The means and standard deviations of the variables are presented in Appendix K.

Bivariate Correlations

Bivariate correlations were calculated on each pair of variables in order to examine the relationships between: (a) adolescents' age, (b) adolescents' gender, (c) adolescents' perceptions of community solidarity norms, (d) adolescents' perceptions of community attitudinal norms, (e) adolescents' perceptions of community prevalence norms, and (f) adolescents' premarital sexual behavior. Adolescent premarital sexual behavior was assessed as both a dichotomous variable (0 = no intercourse, 1 = intercourse), and as a continuous variable (0 = no sexual activity, 1 = french kissing, 2 = petting/fondling, 3 = oral sex, 4 = intercourse). Results of the bivariate correlations are presented in Appendix K. Additionally, a summary of the bivariate hypotheses and corresponding results are presented in Appendix L.

Sexual Behavior as a Dichotomous Variable

Results of the bivariate correlations (see Appendix K) provided partial support for the hypotheses regarding the demographic variables in relation to adolescent premarital sexual behavior when defined as engaging in intercourse or not engaging in intercourse. More specifically, as stated in Hypothesis 1, age of the adolescent showed a significant positive relationship with adolescent premarital sexual behavior ($r = .25$, $p < .01$), indicating that older adolescents were more likely to engage in sexual intercourse. Contrary to Hypothesis 2, gender of the adolescent was not significantly related to

adolescent premarital sexual behavior in the bivariate correlations.

Support was also provided for each of the hypotheses regarding the perceived community normative environment indicators and adolescent premarital sexual behavior. Specifically, as stated in Hypothesis 3, a significant negative correlation was found between perceived community solidarity norms and adolescent premarital sexual behavior ($r = -.23$, $p < .01$). Hence, those adolescents who perceived their communities as presenting unified norms regarding beliefs, attitudes, and standards were less likely to engage in premarital sexual behavior. Similarly, Hypothesis 4 was supported, indicating a significant negative relationship between perceived community attitudinal norms of abstinence and adolescent premarital sexual behavior ($r = -.23$, $p < .01$). In other words, those adolescents who perceived that their communities believed adolescents should abstain from sexual activity were less likely to engage in premarital sexual behavior. Furthermore, as stated in Hypothesis 5, adolescents' perceptions of community prevalence norms yielded a significant positive correlation with adolescent premarital sexual behavior ($r = .36$, $p < .01$). Thus, those adolescents who perceived that a greater percentage of adolescents in their communities had engaged in sexual intercourse were more likely to engage in premarital sexual behavior.

Sexual Behavior as a Continuous Variable

Similar results were found in the bivariate correlations between the independent variables and the dependent variable regardless of whether adolescent premarital sexual behavior was measured as a dichotomous or as a continuous variable. Results of the bivariate correlations (see Appendix K) provided partial support for the consideration of

the demographic variables in relation to adolescent premarital sexual behavior ranging from no sexual behavior to sexual intercourse. As stated in Hypothesis 1, a significant positive relationship was demonstrated between age of the adolescent and adolescent premarital sexual behavior ($r = .28$, $p < .01$), indicating that older adolescents engaged in higher levels of sexually intimate behavior than did younger adolescents. Contrary to Hypothesis 2, gender of the adolescent was not significantly related to adolescent premarital sexual behavior in the bivariate correlations.

The hypotheses regarding the perceived community normative environment indicators and adolescent premarital sexual behavior were supported in the bivariate correlations. As stated in Hypothesis 3, significant negative correlations were found between adolescents' perceptions of community solidarity norms and adolescent premarital sexual behavior ($r = -.18$, $p < .05$). Hence, those adolescents who perceived unified community norms regarding beliefs, attitudes, and standards were less likely to engage in higher levels of sexually intimate behavior. Similarly, Hypothesis 4 was supported, indicating a significant negative relationship between adolescents' perceptions of community attitudinal norms of abstinence and adolescent premarital sexual behavior ($r = -.16$, $p < .05$). Thus, those adolescents who perceived a community attitude supporting adolescent abstinence from premarital sexual activity were less likely to engage in higher levels of sexually intimate behavior. Furthermore, as stated in Hypothesis 5, adolescents' perceptions of community prevalence norms yielded a significant positive correlation with adolescent premarital sexual behavior ($r = .32$, $p < .01$). In other words, those adolescents who perceived that a greater percentage of adolescents in their communities had engaged in sexual intercourse were more likely to

engage in higher levels of sexually intimate behavior.

Hierarchical Multiple Regression Analyses

In addition to examining the five independent variables and the dependent variable in bivariate correlations, the independent variables were entered as predictor variables in relation to the criterion variable (sexual behavior as a dichotomous variable = no intercourse or intercourse; sexual behavior on a continuum ranging from no sexual intimacy to intercourse) in two separate hierarchical multiple regression equations. Hierarchical multiple regression analyses were used to determine (a) the contributions of the sets of predictor variables (demographic variables, perceived community normative environment indicators) in explaining the variance in the criterion variable, and (b) the significance level of specific beta coefficients within each of the two models. The demographic variables (adolescent age and adolescent gender) were entered into the regression equation first to examine the extent to which the demographic variables alone explained variance in sexual behavior. In Step 2, the perceived community normative environment indicators (community solidarity norms, community attitudinal norms, community prevalence norms) were entered into the regression equation to allow for examination of the additional variance explained by the predictor variables after controlling for the demographic variables.

Two separate regression models examined the relationships between the demographic variables and the perceived community normative environment variables with adolescent premarital sexual behavior. All of the variables were entered into both hierarchical multiple regression equations using the default value of .10 as the low level of

tolerance. Results of the regression analyses using this tolerance level indicated that multicollinearity was not sufficient to be a problem in either of the two models (Cohen & Cohen, 1983). Results of the hierarchical multiple regression analyses are presented in Appendix M. Additionally, a summary of the regression hypotheses and corresponding results are presented in Appendix N.

Sexual Behavior as a Dichotomous Variable

In Step 1, partial support was provided for the hypotheses regarding the demographic variables and adolescent premarital sexual behavior. Support for Hypothesis 1 was confirmed by a significant positive beta coefficient ($\beta = .27$, $p < .01$) between adolescent age and adolescent premarital sexual behavior. Hence, results from this study indicate that older adolescents were more likely to engage in sexual intercourse. In contrast, the beta coefficient for adolescent gender and adolescent premarital sexual behavior failed to reach statistical significance; consequently, support was not provided for Hypothesis 2. Collectively, age and gender accounted for approximately 8% of the variance in adolescent premarital sexual behavior when measured as engaging or not engaging in sexual intercourse ($\Delta R^2 = .08$, $p < .01$).

In Step 2, support was found for only one of the three perceived community normative environment variables in relation to adolescent premarital sexual behavior. More specifically, Hypotheses 3 and 4 were not supported since the beta coefficients for perceived community solidarity norms and perceived community attitudinal norms were not significant in the hierarchical multiple regression equation. In contrast, Hypothesis 5 yielded a significant positive beta coefficient for perceived community prevalence norms

in relation to adolescent premarital sexual behavior ($\beta = .24$, $p < .01$). As such, adolescents who perceived that a greater percentage of adolescents in their communities had engaged in sexual intercourse were more likely to engage in sexual intercourse themselves. Collectively, the perceived community normative environment variables accounted for approximately 7% of the variance beyond that explained by the demographic variables ($\Delta R^2 = .07$, $p < .01$). The overall model (demographic variables, perceived community normative environment variables) explained a significant amount of the variance in adolescent sexual behavior when measured as a dichotomous variable ($R^2 = .15$; $F = 5.57$; $p < .01$).

Sexual Behavior as a Continuous Variable

Virtually identical results were found between the first (dichotomous outcome variable) and second (continuous outcome variable) regression equations (see Appendix M). In Step 1, partial support was provided for the hypotheses regarding the demographic variables and adolescent premarital sexual behavior measured as the level of sexual intimacy. Support for Hypothesis 1 was confirmed by a significant positive beta coefficient ($\beta = .25$, $p < .01$) between adolescent age and adolescent premarital sexual behavior. The results indicate that older adolescents were more likely to engage in higher levels of sexually intimate behavior than younger adolescents. In contrast, the beta coefficient for adolescent gender and adolescent premarital sexual behavior failed to reach statistical significance; therefore, support was not provided for Hypothesis 2. Collectively, age and gender accounted for approximately 6% of the variance in adolescent premarital sexual behavior when measured as a continuous variable

($\Delta R^2 = .06$, $p < .01$).

In Step 2, support was found for only one of the three perceived community normative environment variables in relation to adolescent premarital sexual behavior. More specifically, Hypotheses 3 and 4 were not supported since the beta coefficients for perceived community solidarity norms and perceived community attitudinal norms were not significant in the hierarchical multiple regression equation. In contrast, Hypothesis 5 yielded a significant positive beta coefficient for perceived community prevalence norms in relation to adolescent premarital sexual behavior ($\beta = .27$, $p < .01$). Hence, adolescents who perceived that a greater percentage of adolescents in their communities had engaged in sexual intercourse were more likely to engage in higher levels of sexually intimate behavior. Collectively, the perceived community normative environment variables accounted for approximately 11% of the variance beyond that explained by the demographic variables ($\Delta R^2 = .11$, $p < .01$). The overall model (demographic variables, perceived community normative environment variables) explained a significant amount of the variance in adolescent sexual behavior when measured as a continuous variable ($R^2 = .18$; $F = 6.70$; $p < .01$).

CHAPTER V

SUMMARY, RECOMMENDATIONS, AND CONCLUSION

Theoretical Overview

The purpose of this study was to examine the relationship between selected community level factors and adolescent premarital sexual behavior. This was accomplished within the context of Bronfenbrenner's ecological model of human development. Bronfenbrenner contends that individuals can never be completely understood outside their ecological context (1993). Moreover, the ecological perspective posits that for most behaviors there are multiple causes rather than single causes, and they occur at all levels of the individual's social ecology (Small & Kerns, 1993). Hence, Bronfenbrenner's model provided a suitable theoretical framework for considering broader ecological correlates (i.e. community variables) of adolescent premarital sexual behavior.

Bronfenbrenner and Crouter (1983) observed that few studies systematically consider cultural influences on adolescent development. They have encouraged researchers to pursue more empirical analysis of meso-, exo-, and macrosystem influences including: (a) interactions among the subcultural components of family, church, neighborhood, and community, (b) cohesiveness and values in neighborhoods, and (c) community influences. Bronfenbrenner and Crouter's assertions appear to be applicable to adolescent sexual

development, specifically, correlates of premarital sexual behavior. This researcher systematically reviewed existing adolescent premarital sexual behavior literature and integrated the identified factors into the specific components of Bronfenbrenner's ecological model of human development. The majority of studies focused on individual and micro level factors while notably absent were variables representing the meso-, exo-, and macrosystems. This researcher's observation appears to concur with prominent scholars who contend that adolescent premarital sexual behavior factors at the community level have been largely ignored and warrant the attention of future research (Atwood & Donnelly, 1993; Chilman, 1979, 1990; Miller & Fox, 1987; Miller & Moore, 1990).

In consideration of the recommendations offered by these prominent scholars, this researcher used Bronfenbrenner's ecological model of human development to consider three macro level antecedents (i.e. community level variables) in relation to adolescent premarital sexual behavior. This model dictates that researchers assess the meaning individuals attribute to their environment, specifically their perception of the processes, persons, and context, to which they are exposed. According to Billy et al. (1994), adolescent sexual behavior is influenced by a prevailing normative environment that defines the boundaries of acceptable and unacceptable behavior. The community normative environment is made up of both attitudinal and behavioral norms. Furthermore, the degree to which a person has been integrated into a community and the degree of that community's internal cohesion influences individual commitment to the community norms (Rubin, 1981). Therefore, the three specific macro level variables assessed in this study were: (a) adolescents' perceptions of community solidarity norms, (b) adolescents' perceptions of community attitudinal norms regarding adolescent

premarital sexual behavior, and (c) adolescents' perceptions of community prevalence norms regarding adolescent premarital sexual behavior.

Summary of Results

Researchers have assessed adolescent premarital sexual behavior as both a dichotomous variable and as a continuous variable. Those scholars who consider sexual behavior as a dichotomous variable have been criticized for overlooking the levels of intimacy leading up to sexual intercourse (Christopher et al., 1993; DeLamater & MacCorquodale, 1979; Hovell et al., 1994). Hence, this study examined adolescent premarital sexual behavior as both a dichotomous and a continuous outcome variable in bivariate correlations and in two separate regression models. The dichotomous indicator assessed whether or not the adolescent had engaged in sexual intercourse. A range of intimacy (no sexual behavior, french kissing, petting/fondling, oral sex, intercourse) was used as the continuous indicator of adolescent premarital sexual behavior. The findings for the demographic and perceived community normative environment variables were very similar in both the bivariate correlations and the hierarchical multiple regression equations, regardless of whether the outcome variable, adolescent premarital sexual behavior, was assessed as dichotomous or continuous.

Consistent with previous literature (Christopher et al., 1993; DiBlasio & Benda, 1990; Hayes, 1987; Hofferth et al., 1987; Locke & Vincent, 1995; Moore & Burt, 1982; Newcomer & Baldwin, 1992; U. S. Department of Health and Human Services, 1996; Zelnik & Kantner, 1980), and as hypothesized, this study found support for a positive relationship between the demographic variable of adolescent age and premarital sexual

behavior. Collectively, these studies indicate that age accounts for a significant amount of variance in explaining adolescent premarital sexual behavior, and as such, age should be used as a control variable when other predictor variables are being assessed. Conversely, gender of the adolescent was not found to be significantly related to adolescent premarital sexual behavior. The rejection of this hypothesis lends support to the notion that the proverbial double standard for males and females may be diminishing (Coles & Stokes, 1985; Jessor & Jessor, 1975; Moore & Rosenthal, 1992). However, since a clear pattern has not been established, future researchers should continue assessing how gender relates to adolescent premarital sexual behavior. Overall, the demographic variables accounted for a significant amount of variance in adolescent premarital sexual behavior in both of the regression models (dichotomous = 8%, $p < .01$; continuous = 6%, $p < .01$).

The current study found support for the inclusion of community level variables in models examining adolescent premarital sexual behavior. As hypothesized, all three community level indicators (perceived community solidarity norms, perceived community attitudinal norms, perceived community prevalence norms) were significantly related to adolescent premarital sexual behavior in the bivariate correlations. Specifically, perceived community solidarity norms and perceived community attitudinal norms of abstinence were negatively related, and perceived community prevalence norms were positively related, to adolescent premarital sexual behavior. In the hierarchical multiple regression analyses, perceived community solidarity norms and perceived community attitudinal norms were not statistically significant; however, perceived community prevalence norms were significantly related to adolescent premarital sexual behavior even after accounting

for the variance explained by the demographic variables. Although perceived community solidarity norms and perceived community attitudinal norms were not individually significant in the regression models, collectively all three community normative environment variables accounted for a significant amount of variance in premarital sexual behavior beyond the variance explained by the demographic variables (dichotomous = 7%, $p < .01$; continuous = 11%, $p < .01$). Perhaps the lack of significant findings associated with perceived community solidarity norms and perceived community attitudinal norms are due to the tenacious conceptual linkage between all three community level variables. Specifically, communities characterized by unity and cohesiveness are typically comprised of members who are committed to that community's attitudinal and behavioral norms (Rubin, 1981). It is plausible that entering these variables into a singular regression model emphasized their shared variance while confounding their relative contributions. Therefore, future researchers should consider entering each community level variable, along with the demographic variables, into separate regression models in order to assess their unique contribution to the variance in adolescent premarital sexual behavior.

Regardless of whether adolescent premarital sexual behavior was examined as a dichotomous or continuous outcome variable, both regression models yielded similar results. A possible explanation for these findings is that the variance in the continuous outcome variable explained by the predictor variables may actually be comprised of the variance due to either engaging or not engaging in sexual intercourse. In other words, the predictor variables may actually be related to the adolescents' reports of engaging in sexual intercourse and not the other levels of intimacy (e.g. kissing, petting/fondling, oral

sex). This explanation is plausible considering that two of the community level predictor variables assessed norms regarding sexual *intercourse* not levels of sexual intimacy. Future researchers can empirically test this explanation by separately examining each level of sexual intimacy in relationship to the community level predictor variables.

The present study clearly demonstrated that adolescents' perceptions of their community normative environment are indeed related to adolescents' premarital sexual behavior. A broader understanding of adolescent premarital sexual behavior could emerge by applying these community variables to an ecological framework in conjunction with the variables previously identified at the organism, micro, and exo levels, as well as mesosystem variables yet to be identified. For example, Small and Luster (1994) developed a three level ecological model for organizing risk factors related to adolescent premarital sexual behavior. The respective levels included the individual, the familial, and the extra-familial. This model posited that risks existed at all of the identified levels. These risks were considered to be cumulative, suggesting that the more risk factors present, the more likely an adolescent would be sexually experienced. Relying upon similar methodology, future researchers should incorporate variables from all ecological levels, including those examined in the current study, into a more comprehensive model. This process would discern the relative contribution of each ecological factor in explaining the variance in adolescent premarital sexual behavior.

Environmental Utility of the Current Study

The scholarly literature clearly establishes that adolescent premarital sexual behavior is shaped by a multiplicity of factors ranging from biological and psychological

characteristics of the individual to the broader social context of the community. Subsequently, strategic prevention opportunities are inherent in each level of the ecological system. Although each prevention strategy has value and merits exploration, the current research dictates a community level discussion of environmental utility.

Two prevention paradigms are typically associated with adolescent premarital sexual behavior, namely, abstinence and responsible sexuality. Abstinence is the more traditional paradigm and emphasizes adolescents abstaining from sexual behavior until adulthood. In contrast, the second paradigm acknowledges that human sexuality is a process that takes place from birth to death and is natural, positive, and a critical component of physical, emotional, and social growth (Chilman, 1990; Maddock, 1989; Reiss, 1960, 1990). Responsible sexuality is concerned with preparing adolescents to make healthy sexual choices based on respect for themselves and their partners, informed contraceptive use, and consideration of the consequences of various sexual behaviors.

Communities, like families, churches, and schools, tend to mix these polarized ideologies, thereby creating a confounded normative environment. Young people receive muddled and conflicting messages such as, "never have sex until you're married," "if you are having sex, I don't want to know," "it's o.k. to have sex as long as the girl doesn't get pregnant," "sex is o.k. if you are making responsible choices," and so forth. As long as communities persist in sending confounded messages regarding premarital sexual behavior, adolescents are invited to select the message that best represents their personal attitudes and behaviors.

Although it is unrealistic to expect an entire community to agree on a single paradigm, communities can engage in a mobilization process which can assist them in

determining, promoting, and reinforcing the prevention paradigm that best contributes to the personal and collective well-being of its members. The community mobilization process consists of six phases: (a) entry/initiating, (b) readiness, (c) assessment, (d) planning, (e) implementation, and (f) sustaining/reinforcing/replanning. This framework creates a conceptual map for the process of community transformation (Fream, 1993).

In the entry/initiating phase, a person or a group identifies the issue of concern and begins the process of developing a community coalition to address the identified issue. This involves contacting both formal and informal leaders representing all constituencies within the community including those groups which are often overlooked (youth, minorities, elderly, etc.). The readiness phase focuses on establishing a unified community vision. Community members share their individual perspectives of the issue and together agree on a common vision that is in the best interest of the community and its members. This vision is essential "for communities to go beyond reacting to the immediate problem or stresses," and "engaging in the more positively-oriented task of agreeing upon what they would like their community to be like in five years or ten years" (Fream, 1993, p. 15).

The assessment phase consists of determining the current community attitude concerning the issue, analyzing prevalence data, identifying existing resources including programming and activities, and reviewing research regarding effective prevention and intervention strategies. "The community should emerge from this stage with a preliminary picture of itself, and a heightened awareness of current conditions to compare with its vision of what it would like to be" (Fream, 1993, p. 15). The goal of the planning

phase is for the community coalition to systematically detail the specific steps necessary to move their community from its current status to their shared vision. This includes developing a written mission statement, goals, and objectives, identifying specific roles and responsibilities of constituents, as well as constructing a detailed timeline for each component of the plan.

During the implementation phase, the plan is put into action. This is often accomplished through delegating tasks to smaller work teams, conducting regular meetings, continuing assessment, gaining broad-based support, and celebrating and publishing successes. As a result, communities make tangible progress towards their goals, networking is enhanced, and the community begins a paradigm shift towards the common vision. The final phase, sustaining/reinforcing/replanning, can best be described as a cyclical process of assessment, evaluation, planning, and implementation. This community mobilization process is based on the notion that "as changes become institutionalized, the social fabric re-weaves itself; norms are once again agreed upon and adopted by most individuals in the community" (Fream, 1993, p. 16).

When communities engage in this mobilization process and become committed to their selected prevention paradigm regarding adolescent premarital sexual behavior (abstinence or responsible sexuality), clearer and more consistent messages will be communicated; hence, creating a more unified normative environment. Adolescents will then be challenged to examine their personal attitudes and behaviors relative to the normative expectation. When personal and community ideologies are congruent, the adolescent's attitudes and behaviors are reinforced. If the ideologies are incongruent, the adolescent will most likely experience social pressure to conform to the community

normative environment. When a respective paradigm is consistently supported and reinforced, it eventually emerges as the community attitudinal norm. Once this transformation occurs, corresponding behavioral norms naturally follow.

Conclusion

The goal of this study was to explore the role of community in shaping adolescent sexuality. Results clearly supported the assertion of a relationship between a community and the behavior of its members, even behavior as personally intimate as sexual behavior. Adolescent sexual behavior is an extension of the community normative environment; hence, communities must become more responsible and responsive to their young people. Adolescents can only be responsible *about* sexual behavior to the extent that communities are willing to teach and guide them through the course of sexual development. Finally, the results of this study should compel future scholars to expand the conceptual template through which they investigate the world to include the context of community. In so doing, communities may come to believe that the community normative environment is malleable and worthy of their collective effort.

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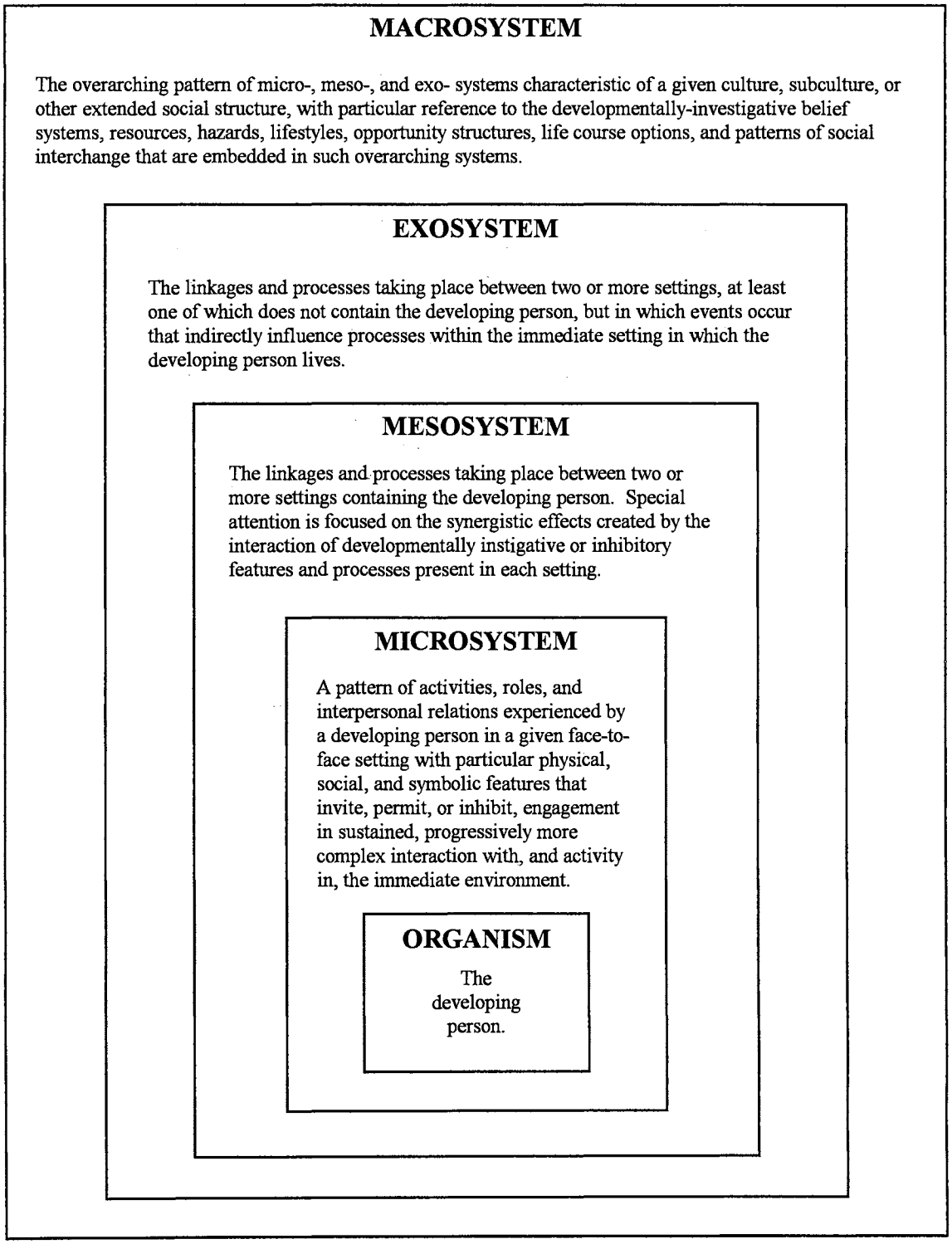
APPENDIXES

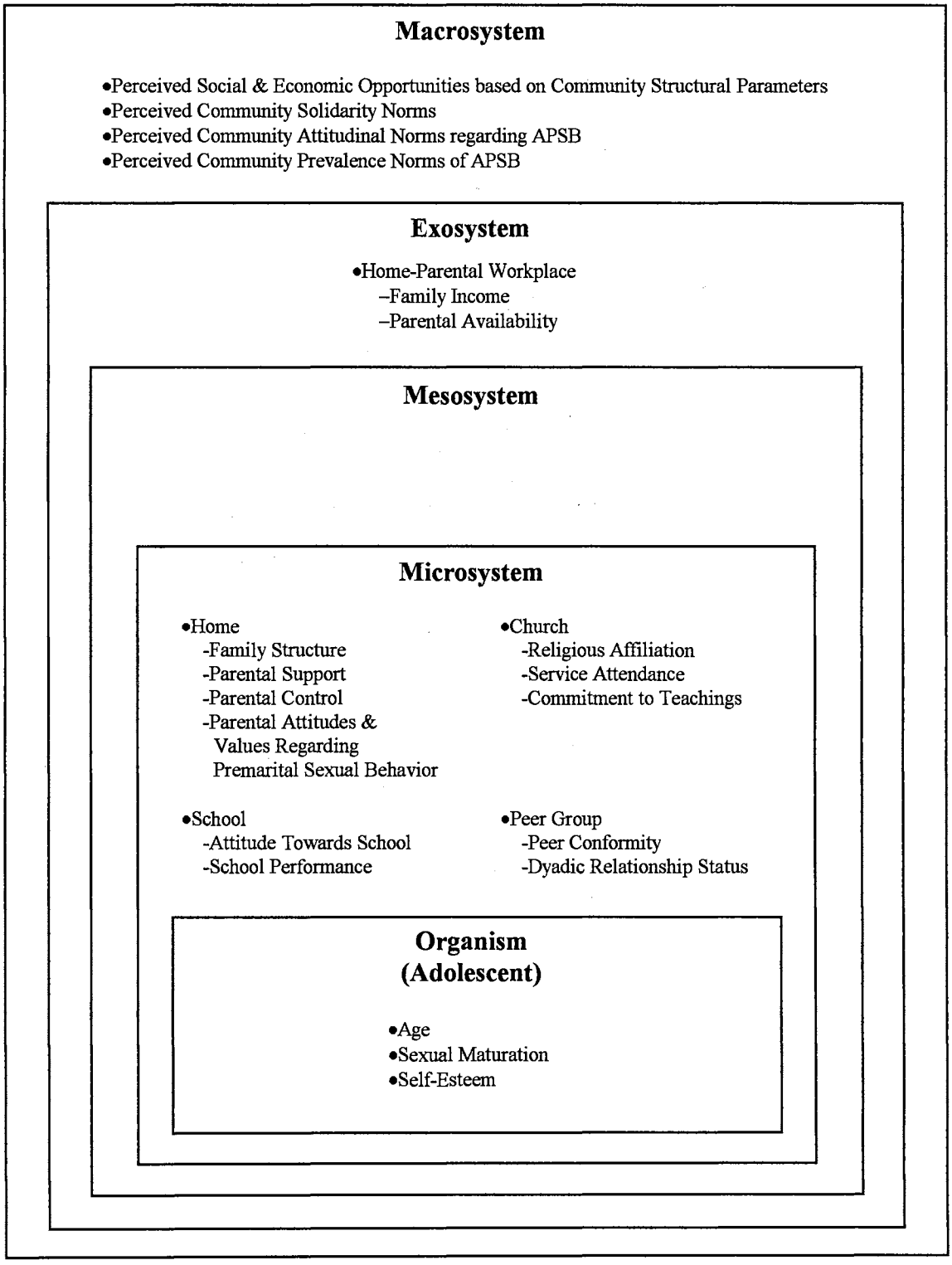
Appendix A

Figure 1. Bronfenbrenner's Ecological Model of Human Development (Bronfenbrenner, 1993, pp. 22-25)



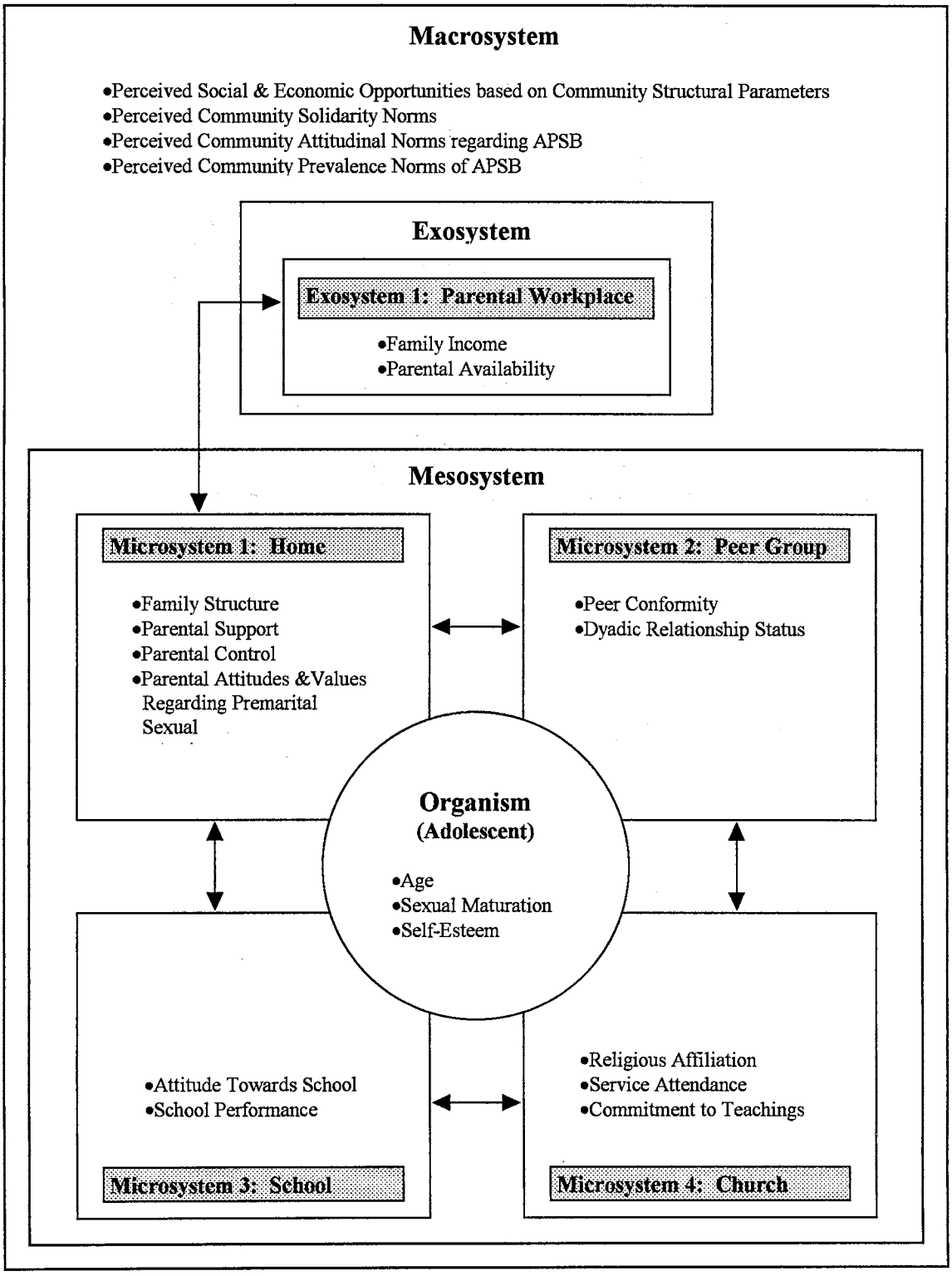
Appendix B

Figure 2. A Compilation of Variables Related to Adolescent Premarital Sexual Behavior as Depicted in an Ecological Model



Appendix C

Figure 3. Dynamic Nature of Multiple Ecological Correlates of Adolescent Premarital Sexual Behavior



Appendix D

Table 1. Pilot Study Bivariate Correlations, Means, and Standard Deviations (n = 60)

Variables	1	2	3	4	5	6
1 Age	1.00					
2 Gender[a]	-.08	1.00				
3 Community Solidarity Norms	.14	.17	1.00			
4 Community Attitudinal Norms	-.11	.26*	.38**	1.00		
5 Community Prevalence Norms	.08	-.31*	-.43**	-.47**	1.00	
6 Premarital Sexual Behavior[a]	.09	-.25	-.23	-.08	.21	1.00
Means	16.05	.55	3.77	3.86	55.54	.22
Standard Deviations	1.06	--	.61	.93	25.11	--
Ranges	14-19	--	1-6	1-6	0-100	--

[a]Dummy coding was used for gender (girls = 0, boys = 1) and premarital sexual behavior (has not engaged in premarital sexual intercourse = 0, has engaged in premarital sexual intercourse = 1).

*$p < .05$; **$p < .01$.

Appendix E

Research Instrument

Community Inventory: Adolescent Perception

Your participation in this study is strictly voluntary. At anytime that you choose not to participate, you can stop immediately without being penalized. If there are specific items that you choose not to answer, please skip those items and continue answering the remaining questions.

Please answer the questions honestly. To ensure your privacy, please do not put your name on the questionnaire or envelope. The answers will only be seen by the researcher, Marla G. Sanchez and will not be given to any other person. The questionnaire will take approximately 15 minutes to complete. When you have completed the questionnaire, place it inside the large envelope and return it directly to Ms. Sanchez.

Thank you for answering the questionnaire.

Community Inventory: Adolescent Perception

Personal Information

Instructions: Please answer the following questions.

1. How old are you? _____
2. Are you married? ☐ Yes ☐ No
3. What is your gender? ☐ Male ☐ Female

Community Information

Instructions: Think of your entire community when you read the following statements. Community includes everyone who lives in your town, both adults and youth. After each statement, place an "X" in the appropriate box that you believe best describes your community. PLEASE MARK THE ANSWER THAT FIRST OCCURS TO YOU. Do not go back and change your answers.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
4. Real friends are hard to find in this community.						
5. Our schools do a poor job of preparing young people for life.						
6. Almost everyone is polite and courteous to you.						
7. The different churches here cooperate well with one another.						
8. Families in this community keep their children under control.						
9. A lot of people here think they are too good for you.						

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
10. The community is very peaceful and orderly.						
11. People in this community believe it is o.k. for teenagers to have sex as long as the girl doesn't get pregnant.						
12. Our schools do a good job of preparing students for college.						
13. People around here show good judgment.						
14. People won't work together to get things done for the community.						
15. Parents teach their children to respect other people's rights and property.						
16. Most of our church people forget the meaning of the word brotherhood when they get out of church.						
17. People give you a bad name if you insist on being different.						

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
18. Youth in our community take an active interest in making the community a better place in which to live.						
19. Adults are unconcerned about what their kids do so long as they keep out of trouble.						
20. The community tries hard to help its young people along.						
21. Teenagers in my community are expected to wait to have sex until after they are married.						
22. The churches are a constructive factor for better community life.						
23. I feel very much that I belong here.						
24. Almost all the teenagers in my community are sexually active.						
25. You must spend lots of money to be accepted here.						
26. People in this community tend to ignore the sexual behavior of teenagers unless the girl gets pregnant.						

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
27. Every church wants to be the biggest and the most impressive.						
28. Most of the students here learn to read and write well.						
29. People are generally critical of others.						
30. You are out of luck here if you happen to be of the wrong race.						
31. No one seems to care much how the community looks.						
32. If people in my community thought I was sexually active they would think less of me.						
33. If their children keep out of the way, parents are satisfied to let them do whatever they want to do.						
34. Most of our church goers do not practice what they preach.						

Behavior Information

Instructions: Please answer the following questions.

35. Have you ever *voluntarily* engaged in the following sexual behaviors with another person?

French Kissing (tongue to tongue contact)	☐ Yes	☐ No
Petting/Fondling (touching penis, breasts, or vagina)	☐ Yes	☐ No
Oral Sex (mouth on penis or vagina)	☐ Yes	☐ No
Sexual Intercourse (penis in vagina or anus)	☐ Yes	☐ No

36. In your opinion, what % of teenagers in your community have had sexual intercourse?

_____%

37. In your opinion, what % of adults in your community had sexual intercourse when they were adolescents?

_____%

Thank you for taking time to complete this inventory. Only the researcher will view your answers.

Appendix F

Table 2. Means and Standard Deviations of Individual Items in the Modified Community Solidarity Index and the Community Attitudinal Norms of Abstinence Scale

Item		Mean	Standard Deviations	Range
Modified Community Solidarity Index				
#4	Real friends are hard to find in this community	4.04	1.44	1-6*
#5	Our schools do a poor job of preparing young people for life	4.00	1.43	1-6*
#6	Almost everyone is polite and courteous to you	3.43	1.42	1-6
#7	The different churches here cooperate well with one another	4.21	1.32	1-6
#8	Families in this community keep their children under control	2.86	1.26	1-6
#9	A lot of people here think they are too good for you	3.43	1.39	1-6*
#10	The community is very peaceful and orderly	3.89	1.20	1-6
#12	Our schools do a good job of preparing students for college	4.08	1.36	1-6
#13	People around here show good judgment	3.46	1.24	1-6
#14	People won't work together to get things done for the community	4.01	1.32	1-6*
#15	Parents teach their children to respect other people's rights and property	3.80	1.38	1-6
#16	Most of our church people forget the meaning of the word brotherhood when they get out of church	3.18	1.37	1-6*
#17	People give you a bad name if you insist on being different	2.88	1.54	1-6*
#18	Youth in our community take an active interest in making the community a better place in which to live	3.03	1.26	1-6
#19	Adults are unconcerned about what their kids do so long as they keep out of trouble	3.51	1.33	1-6*
#20	The community tries hard to help its young people along	3.67	1.19	1-6
#22	The churches are a constructive factor for better community life	4.40	1.16	1-6
#23	I feel very much that I belong here	4.17	1.51	1-6
#25	You must spend lots of money to be accepted here	4.56	1.31	1-6*
#27	Every church wants to be the biggest and the most impressive	3.66	1.46	1-6*
#28	Most of the students learn to read and write well	4.37	1.23	1-6
#29	People are generally critical of others	2.68	1.19	1-6*
#30	You are out of luck here if you happen to be of the wrong race	3.46	1.65	1-6*
#31	No one seems to care much how the community looks	3.75	1.36	1-6*
#33	If their children keep out of the way, parents are satisfied to let them do whatever they want to do	3.69	1.24	1-6*
#34	Most of our church goers do not practice what they preach	3.15	1.45	1-6*
Community Attitudinal Norms of Abstinence Scale				
#11	People in this community believe it is o.k. for teenagers to have sex as long as the girl doesn't get pregnant	4.27	1.37	1-6*
#21	Teenagers in my community are expected to wait to have sex until after they are married	3.22	1.51	1-6
#24	Almost all the teenagers in my community are sexually active	2.51	1.20	1-6*
#26	People in this community tend to ignore the sexual behavior of teenagers unless the girl gets pregnant	2.84	1.50	1-6*
#32	If people in my community thought I was sexually active they would think less of me	3.63	1.50	1-6

*Note: Items were reverse scored.

Appendix G

Table 3. Demographic Characteristics and Response Rates

Demographic Characteristics	Community One		Community Two		Community Three		Total Sample	
	f	%	f	%	f	%	f	%
Age								
14	8	9.8	2	5.0	3	7.5	13	8.0
15	22	26.8	9	22.5	0	0.0	31	19.1
16	27	32.9	13	32.5	4	10.0	44	27.2
17	13	15.9	10	25.0	12	30.0	35	21.6
18	12	14.6	6	15.0	21	52.5	39	24.1
Mean	15.98		16.22		17.20		16.35	
Gender								
Males	36	43.9	17	42.5	15	37.5	68	42.0
Females	46	56.1	23	57.5	25	62.5	94	58.0
Sample Population								
Number of possible participants	179		105		75		359	
Total number participating	82		40		40		162	
Response rate	.46		.38		.53		.45	

Appendix H

Parental Consent Form

Parent Consent to Participate
in an
Oklahoma State University Research Study

Dear Parents:

We would like to request your voluntary participation in a study. This study focuses on understanding how community norms and solidarity influences adolescents to voluntarily engage in premarital sexual behavior. Adolescents between the ages of 14 and 18 from your school are being asked to participate. Only those adolescents with consent forms signed by themselves and their parents will be allowed to participate.

On the day of data collection, those adolescents with written consent will gather in a separate classroom to ensure their privacy. Participants will be given a 37 item questionnaire in an unsealed envelope which will take approximately 15 minutes to complete. They will be instructed to not put their name or any other identifiable information on the questionnaire. When participants complete their questionnaire, they will place it back in the provided envelope, personally seal it, and return it to the researcher. No school personnel will have access to the completed questionnaires. The envelopes will remain sealed and will be opened at a later date only by the researcher. The participants' anonymous responses will be entered into a computer database for analysis. The original questionnaires, containing no identifying information, will be maintained for a minimum of five years in the researcher's locked file cabinet.

"I understand the above procedures and guidelines for participation in this research. Furthermore, I understand that participation is voluntary, that there is no penalty for refusal to participate, and that at any time I can notify the researcher to withdraw my consent and participation without penalty."

"If I have questions I may contact Dr. Beulah Hirschlein at (405) 744-8347 or Marla G. Sanchez at (918) 227-4455. I may also contact Gay Clarkson, Institutional Review Board Secretary, 305 Whitehurst, Oklahoma State University, Stillwater, OK 74078; Telephone: (405) 744-5700."

"I have read and fully understand this consent form. I sign it freely and voluntarily. I understand that if I choose to participate I will be provided a copy of this signed form on the day of data collection."

_____
Name of Adolescent

_____	_____	_____(am/pm)
Parent or Guardian Signature	Date	Time
_____	_____	_____(am/pm)
Marla G. Sanchez, Doctoral Candidate	Date	Time

Appendix I

Student Assent Form

Student Assent to Participate
in an
Oklahoma State University Research Study

Dear Student:

We would like to request your voluntary participation in a study. This study focuses on understanding how community norms and solidarity influences adolescents to voluntarily engage in premarital sexual behavior. Adolescents between the ages of 14 and 18 from your school are being asked to participate. Only those adolescents with consent forms signed by themselves and their parents will be allowed to participate.

On the day of data collection, those adolescents with written consent will gather in a separate classroom to ensure their privacy. Participants will be given a 37 item questionnaire in an unsealed envelope which will take approximately 15 minutes to complete. They will be instructed to not put their name or any other identifiable information on the questionnaire. When participants complete their questionnaire, they will place it back in the provided envelope, personally seal it, and return it to the researcher. No school personnel will have access to the completed questionnaires. The envelopes will remain sealed and will be opened at a later date only by the researcher. The participants' anonymous responses will be entered into a computer database for analysis. The original questionnaires, containing no identifying information, will be maintained for a minimum of five years in the researcher's locked file cabinet.

"I understand the above procedures and guidelines for participation in this research. Furthermore, I understand that participation is voluntary, that there is no penalty for refusal to participate, and that at any time I can notify the researcher to withdraw my consent and participation without penalty."

"If I have questions I may contact Dr. Beulah Hirschlein at (405) 744-8347 or Marla G. Sanchez at (918) 227-4455. I may also contact Gay Clarkson, Institutional Review Board Secretary, 305 Whitehurst, Oklahoma State University, Stillwater, OK 74078; Telephone: (405) 744-5700."

"I have read and fully understand this consent form. I sign it freely and voluntarily. I understand that if I choose to participate I will be provided a copy of this signed form on the day of data collection."

_____	_____	_____(am/pm)
Adolescent Participant Signature	Date	Time
_____	_____	_____(am/pm)
Marla G. Sanchez, Doctoral Candidate	Date	Time

Appendix J

School Administrator Consent Form

School Administrator Consent to Participate
in an
Oklahoma State University Research Study

Dear Administrator:

We are respectfully requesting your consent to allow adolescents between the ages of 14 and 18 in your school to participate in a research study. This study focuses on understanding how community norms and solidarity influences adolescents to voluntarily engage in premarital sexual behavior. Only those adolescents with a consent form signed by themselves and their parents will be allowed to participate.

Approximately two weeks prior to the assessment day the researcher will distribute a parental and adolescent consent form to the potential participants at school with instructions to return the signed form to an identified school administrator by a specified date. On the day of data collection, we will need to gather those adolescents with written consent forms in a separate classroom to ensure their privacy. Participants will be given a 37 item questionnaire in an unsealed envelope which will take approximately 15 minutes to complete. They will be instructed to not put their name or any other identifiable information on the questionnaire. When participants complete their questionnaire, they will place it back in the provided envelope, personally seal it, and return it to the researcher. No school personnel will have access to the completed questionnaires. The envelopes will remain sealed and will be opened at a later date only by the researcher. The participants' anonymous responses will be entered into a computer database for analysis. The original questionnaires, containing no identifying information, will be maintained for a minimum of five years in the researcher's locked file cabinet.

"I understand and agree to the above procedures and guidelines of this research and grant the researcher permission to conduct this study in my school. Furthermore, I understand that student participation is voluntary, that there is no penalty for refusal to participate, and that at any time students can notify the researcher to withdraw their consent and participation without penalty."

"If I have questions I may contact Dr. Beulah Hirschlein at (405) 744-8347 or Marla G. Sanchez at (918) 227-4455. I may also contact Gay Clarkson, Institutional Review Board Secretary, 305 Whitehurst, Oklahoma State University, Stillwater, OK 74078; Telephone: (405) 744-5700."

"I have read and fully understand this consent form. I sign it freely and voluntarily and have received a copy."

_____	_____	
Name of School	Name of School District	
_____	_____	_____(am/pm)
School Administrator Signature & Title	Date	Time
_____	_____	_____(am/pm)
Marla G. Sanchez, Doctoral Candidate	Date	Time

Appendix K

Table 4. Bivariate Correlations, Means, and Standard Deviations (n = 162)

Variables	1	2	3	4	5	6	7
1 Age	1.00						
2 Gender[a]	-.06	1.00					
3 Community Solidarity Norms	-.10	.01	1.00				
4 Community Attitudinal Norms	-.06	-.11	.46**	1.00			
5 Community Prevalence Norms	.20*	-.15	-.38**	-.42**	1.00		
6 Premarital Sexual Behavior (Dichotomous)[a]	.25**	-.03	-.23**	-.23**	.36**	1.00	
7 Premarital Sexual Behavior (Continuous)	.28**	-.06	-.18*	-.16*	.32**	.89**	1.00
Means	16.35	--	3.67	3.29	65.32	--	2.77
Standard Deviations	1.26	--	.69	.89	23.36	--	1.50
Ranges	14-18	--	1-6	1-6	0-100	--	0-4

[a]Dummy coding was used for gender (girls = 0, boys = 1) and premarital sexual behavior (has not engaged in premarital sexual intercourse = 0, has engaged in premarital sexual intercourse = 1).

*$p < .05$; ** $p < .01$.

Appendix L

Table 5. Summary of Hypotheses and Results - Bivariate Correlations

Hypothesis	Premarital Sexual Behavior	r	Reject or Do not reject
H_1: There is a significant positive relationship between adolescents' age and adolescents' premarital sexual behavior.	Dichotomous	.25**	Do not reject
	Continuous	.28**	Do not reject
H_2: There is a significant relationship between adolescents' gender and adolescents' premarital sexual behavior.	Dichotomous	-.03	Reject
	Continuous	-.06	Reject
H_3: There is a significant negative relationship between adolescents' perceptions of community solidarity norms and adolescents' premarital sexual behavior.	Dichotomous	-.23**	Do not reject
	Continuous	-.18*	Do not reject
H_4: There is a significant negative relationship between adolescents' perceptions of community attitudinal norms of abstinence for adolescents and adolescents' premarital sexual behavior.	Dichotomous	-.23**	Do not reject
	Continuous	-.16*	Do not reject
H_5: There is a significant positive relationship between adolescents' perceptions of community prevalence norms of adolescent premarital sexual behavior and adolescents' premarital sexual behavior.	Dichotomous	.36**	Do not reject
	Continuous	.32**	Do not reject

Note: * $p < .05$; ** $p < .01$.

Appendix M

Table 6. Hierarchical Multiple Regression Analyses of Demographic Variables, Perceived Community Normative Environment Variables, and Adolescent Premarital Sexual Behavior (n = 162)

	Adolescent Premarital Sexual Behavior							
	Dichotomous Variable				Continuous Variable			
Predictor Variables	*B*	SE	β	ΔR^2	*B*	SE	β	ΔR^2
Step 1: Demographic Variables								
Age	.11	.03	.27**		.29	.09	.25**	
Gender[a]	-.05	.08	-.05	.08**	-.05	.23	-.02	.061**
Step 2: Perceived Community Normative Environment Variables								
Community Solidarity Norms	-.04	.06	-.06		-.17	.18	-.08	
Community Attitudinal Norms	-.01	.05	-.02		-.13	.15	-.07	
Community Prevalence Norms	.01	.01	.24**	.07**	.02	.01	.27**	.114**
Multiple R				.39				.42
R^2				.15				.176
Adjusted R^2				.12				.15
F Value				5.57**				6.70**

Note: *B* = unstandardized betas; β = standardized betas. ΔR^2 refers to the unique variance accounted for by all the variables entered in each step of the hierarchical multiple regression procedures beyond the variance accounted for in previous steps.

[a]Dummy coding was used for gender (girls = 0, boys = 1).

*$p < .05$; **$p < .01$.

Appendix N

Table 7. Summary of Hypotheses and Results - Regressions

Hypothesis	Premarital Sexual Behavior	β	Reject or Do not reject
H_1: There is a significant positive relationship between adolescents' age and adolescents' premarital sexual behavior.	Dichotomous	.27**	Do not reject
	Continuous	.25**	Do not reject
H_2: There is a significant relationship between adolescents' gender and adolescents' premarital sexual behavior.	Dichotomous	-.05	Reject
	Continuous	-.02	Reject
H_3: There is a significant negative relationship between adolescents' perceptions of community solidarity norms and adolescents' premarital sexual behavior.	Dichotomous	-.06	Reject
	Continuous	-.08	Reject
H_4: There is a significant negative relationship between adolescents' perceptions of community attitudinal norms of abstinence for adolescents and adolescents' premarital sexual behavior.	Dichotomous	-.02	Reject
	Continuous	-.07	Reject
H_5: There is a significant positive relationship between adolescents' perceptions of community prevalence norms of adolescent premarital sexual behavior and adolescents' premarital sexual behavior.	Dichotomous	.24**	Do not reject
	Continuous	.27**	Do not reject

Note: * $p < .05$; ** $p < .01$.

Appendix O

Institutional Review Board Approval Form

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 02-19-97 **IRB#: HE-97-037**

Proposal Title: THE RELATIONSHIP BETWEEN VOLUNTARY ENGAGEMENT IN ADOLESCENT PREMARITAL SEXUAL BEHAVIOR AND ADOLESCENT PERCEPTION OF COMMUNITY ATTITUDINAL NORMS OF ABSTINENCE AND COMMUNITY SOLIDARITY

Principal Investigator(s): Beulah Hirschlein, Marla G. Sanchez

Reviewed and Processed as: Full Board

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING, AS WELL AS ARE SUBJECT TO MONITORING AT ANY TIME DURING THE APPROVAL PERIOD.
APPROVAL STATUS PERIOD VALID FOR DATA COLLECTION FOR A ONE CALENDAR YEAR PERIOD AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Disapproval are as follows:

Signature: John H. Wyckoff Date: February 26, 1997

Chair of Institutional Review Board

cc: Marla G. Sanchez

VITA

Marla G. Sanchez

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE RELATIONSHIP BETWEEN ADOLESCENT PERCEPTION OF COMMUNITY LEVEL VARIABLES AND ADOLESCENT PREMARITAL SEXUAL BEHAVIOR

Major Field: Human Environmental Sciences

Biographical:

Personal Data: Born in Sapulpa, Oklahoma on October 7, 1964 to Gene and Patti Mayberry and brother, Paul. Married George Sanchez on June 30, 1990 and gave birth to Lacee Danielle Sanchez on January 11, 1992.

Education: Graduated from Sapulpa High School, Sapulpa, Oklahoma in May 1982; received Bachelor of Social Work degree from Northeastern State University, Tahlequah, Oklahoma in July 1989; received Master of Human Relations degree from the University of Oklahoma, Norman, Oklahoma in December 1992. Completed the requirements for Doctor of Philosophy degree at Oklahoma State University in July 1997.

Experience: Volunteered and employed in the social service field since 1985 providing prevention/intervention services covering an array of issues. Since June 1995, employed with Behavioral Health Associates of Tulsa as a Registered Psychological Technician and a Certified Behavior Analyst.

Certifications: Oklahoma Registered Psychological Technician, State of Oklahoma Behavior Analyst (CBA), State of Oklahoma HIV/AIDS Educator.

Professional Memberships: National Council on Family Relations, Oklahoma Council on Family Relations, Oklahoma Institute for Child Advocacy.